



सत्यमेव जयते

GOVERNMENT OF MAHARASHTRA

WORKING PLAN
FOR THE PERIOD 2014-15 TO 2023-24

VOLUME - I

CHANDRAPUR (NON BUFFER)
FOREST DIVISION CHANDRAPUR
CHANDRAPUR FOREST CIRCLE

BY

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**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

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Shri U.G.Kadlag, IFS
Conservator of Forests,
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INTRODUCTION

According to National Working Plan Code, Working Plan is a tool for scientific forest management. It is very useful for evaluating the status of forest resources of division, assessing the impact of past management practices and deciding about suitable interventions in the future management.

This Working Plan revises the Working Plan prepared by Shri S.S.Strivastava for the year 2003-04 to 2012-13. The tract dealt with in this Working Plan of Chandrapur (Non-Buffer) Forest Division of 5 Ranges. They are 1) Chandrapur, 2)Bhadravati, 3) Chichpalli, 4) Warora & 5) Saoli.

Enumeration of Forest has been done by Forest Resources Survey Scheme Unit, Gadchiroli in the year 2008-09 and the data has been analyzed from Chief Forest Statistician in the Office of the Principal Chief Conservator of Forests (HoFF), Maharashtra State, Nagpur. The stem analysis carried out in old plan and the data generated during previous plan period has been reproduced in this plan and used for yield calculations, etc.

The PWPR-I was submitted by Shri B.S.K.Reddy, IFS, Chief Conservator of Forests, Chandrapur. It was discussed in the State Level Committee Meeting held at Nagpur on dt.16th June, 2011 and sanctioned with suggestions/modifications by the various higher officers on the basis of approved PWPR-I the current PWPR-II has been prepared and the Chapters of the PWPR-II have been prepared according to the “National Working Plan Code-2004”.

The forest areas of Chandrapur (Non-Buffer) Forest Division are more or less in compact block and situated in the Northern part of the Chandrapur District. The forest type is having a great variety of species distributed throught the division. The quality of the forests varies from II to IVb and the density of the crop varies from 0.4 to 0.7. The present plan deals with an area of 62035.72 ha. in Non-Buffer Forest Division. The PWPR-II covers Reserved Forests, Protected Forests and Un-classed

forest areas of the Division. In Chandrapur (Non-Buffer) Forest Division the management system prescribed includes Selection-cum-Improvement Working Circle, Improvement Working Circle, Afforestation Working Circle and Fodder Improvement Working Circle. The Overlapping Working Circles are proposed for Bamboo, Wildlife Management, Joint Forests Management, Non-Wood Forest Produce and Forest Protection Overlapping Working Circle encompassing the entire forest area of the division. There are some significant modifications have been made in the plan by introducing Great Indian Bustard (GIB) Working Circle has been re-reported in Warora and Bhadravati Ranges of Non-Buffer area.

The Working Plan of Chandrapur Non-Buffer Forest Division was sanctioned by MoEF, Govt.of India for the period 20015-16 to 2024-25 vide letter No.12-1/2002/FOR/454, dt.9/11/2015. However, Addl.Principal Chief Conservator of Forests (Working Plan-East), Nagpur vide letter No.Desk-14/402/16-17, dt.20/7/2016 had requested Addl.Principal Chief Conservator of Forests (Central), MoEF, Govt.of India, Nagpur to make a suitable amendment in the Condition No.14 of the letter dt.9/11/2015.

The Addl.Principal Chief Conservator of Forests (Central), MoEF, Govt.of India, Nagpur vide his letter No.12-1/2002/FOR/782, dt.16/8/2016 has issued Corrigendum in this regard. Govt of India's letter dt.9/11/2015 conveying approval of the Central Govt.to the above mentioned Working Plan Condition No.14 & 42 stands amended as given under:

Condition No.14:- The exploitable girth of tree species and period of felling cycle shall not be lower than the approved in previous Working Plan. However, for Teak it will be 120 cm as decided by the State Level Committee.

Condition No.42:- Prescriptions for Wildlife Management will be provided under the Chapter. The Wildlife Management as per prescriptions given in Vol.III of Tiger Conservation Plan (Adjoining area) of Tadoba Andhari Tiger Reserve (TATR) instead of writing a separate Chapter on Wildlife Management (Overlapping) Working Circle and the same should be attached to the Working Plan at the time of final approval.

The submission of this Plan is slightly delayed due to certain changes in the technical ground which were unavoidable.

Shri M.Karunakaran, IFS, Addl.Principal Chief Conservator of Forests (Working Plan-East), Nagpur have rendered whole hearted guidance & directions in moulding the Working Plan in its present shape.

My sincere gratitude goes to Shri S.P.Thakare, IFS, Chief Conservator of Forests, Chandrapur, Shri Yatbon, IFS, Conservator of Forests, Working Plan, Nagpur for the continuous support, motivations and enthusiasm and his immense knowledge. Their guidance helped in the process of preparation of the plan.

I am thankful to Shri S.N.Puyad, Asstt.Conservator of Forests, Working Plan Division, Yavatmal, Shri Z.S.Shaikh Range Forest Officer, Shri A.L.Ghuge Ranger Surveyor, Shri G.G.Dakhole Steno, Shri V.J.Sonwane Surveyor, Shri Vilas Kamble Surveyor, the staff of Yavatmal Working Plan Division for their help and support in preparation of this plan.

Place: Yavatmal
Date :

U.G.Kadlag
Conservator of Forests
Working Plan, Yavatmal



PREFACE

Dr. Pravin D. Chavan, IFS

The part forest area of erstwhile Chandrapur Forest Division and some part of forest area in charge of Forest Development Corporation Maharashtra (FDCM) have been notified as Buffer area of Tadoba-Andhari Tiger Reserve (TATR) vide Govt. of Maharashtra, Revenue & Forest Department, Mumbai, Notification No. WLP 1009/CR 229/F-1, dated 5th May, 2010. Later, part forest areas of the Brahmapuri Forest Division was added to the Buffer and the Non-Buffer Forest Divisions vide Govt. of Maharashtra Resolution No. WLP-2012/C.No.256/F-1, Mumbai, dated 22nd August, 2012 and thus the bifurcation of original Chandrapur Forest Division was effected and two new divisions named Buffer (TATR) Forest Division under the control of Field Director, TATR and the Chandrapur (Non-Buffer) Forest Division under the administrative control of the Chief Conservator of Forests, Chandrapur Forest Circle, were created. Majority of the forest area (around 60%) of the erstwhile Chandrapur Forest Division has been constituted into the Buffer Forest Division. Special prescriptions need to be made in the working plan in consonance with the wildlife management and the guidelines issued by the National Tiger Conservation Authority (NTCA). Hence, the tract dealt with in this working plan comprises of both the Buffer (TATR) Forest Division and the Chandrapur (Non-Buffer) Forest Division. The Buffer (TATR) Forest Division comprises of 6 ranges viz., Chandrapur, Shivni, Palasgaon, Mul, Moharli and Khadsinghi. Forest area of 125.50 sq.km. in charge of FDCM, which was declared as a part of Buffer Forest division is now brought under the administrative control of the Field Director, TATR vide Govt. Resolution No.FDC

2013/C.No.63/F-5, Mumbai, dated 13th May, 2014, is also included in the plan area of Buffer (TATR) division. The Chandrapur (Non-Buffer) Forest Division comprises of 5 ranges viz., Chandrapur, Bhadrawati, Chichpalli, Warora and Saoli.

The previous plan of erstwhile Chandrapur Forest division was written by Shri S.S.Srivastava, IFS, for the year 2003-04 to 2012-13. For preparation of working plan Shri B.S.K.Reddy, IFS, Chief Conservator of Forests, Chandrapur prepared Preliminary Working Plan Report-I (PWPR-I). It was placed before the State Level Working Plan Committee Meeting and was accorded approval by the committee as per the PCCF's letter No.D-14/WP/CR-10/339, dated 16th June, 2011. On the basis of the approved PWPR-I the current PWPR-II has been prepared and the chapters of the PWPR-II have been prepared according to the "National Working Plan Code 2004".

The forest areas of both the Chandrapur (Non-Buffer) and Buffer (TATR) Forest Division are more or less in compact block and situated in the northern part of the Chandrapur District. These areas are situated within the civil territories of Chandrapur, Mul, Warora, Bhadrawati, Chimur, Sindewahi and Pombhurna tehsils. The forest type is having a great variety of species distributed throughout the divisions. The quality of the forests varies from II to IVb and the density of the crop varies from 0.4 to 0.7. The biotic factors seems to have altered the composition of the growing stock to a varying extent. The forest in the vicinity of the densely populated village have deteriorated considerably probably due to heavy harvesting and grazing. The state of natural regeneration of teak and miscellaneous species is satisfactory in the interior areas of the tract, whereas, it is unsatisfactory in plains and nearby human habitations. New recruits are not established due to frequent fires, soil compactness and excessive biotic pressure.

In the early period of working plan, the prescriptions were aimed at regulating the harvesting of timber on economic and sustained yield basis. In the later period of the working plan the prescriptions oriented towards protection of forests, regeneration, soil improvement, needs of people and meeting their demands, cattle grazing regulations and wildlife management. With the formulation of 1988 Forest Policy the emphasis has been oriented towards people's participation (JFM) in all the stages of forest management including watershed management, biodiversity conservation, sharing of harvested forest produce. The emphasis has also been given on the management of non-wood forest produce and providing maximum benefits to large number of people for all times.

The present plan deals with an area of 62035.72 ha. in Non-Buffer Forest Division and 69734 ha. in the Buffer (TATR) Forest Division. National Tiger Conservation Authority has issued guidelines for preparation of Tiger Conservation Plan. It has been observed that the habitat of Tadoba is highly productive in the context of tiger and due to a high turnover there is movement of tigers to the outer areas, with several sink populations thriving in the adjoining forest divisions of Brahmapuri and Chandrapur, making the area vulnerable to poachers as well. Providing ecologically viable sustainable livelihood options to local people, and fostering welfare schemes in the buffer area are important, besides day to day monitoring of tiger, address human-wild animals conflicts. There is also considerable tourism pressure with a scope for involving the local people in the same. Accordingly, the working plan prescriptions for forest areas in the Buffer Zone has to be implemented after duly main streaming wildlife concerns. Based on these the system prescribed to manage the forests in the Buffer (TATR) Forest Division is SCI WC covering 9100.65 ha., and Improvement WC covering 60055.74 ha. The Overlapping WC proposed are Bamboo, Wildlife management, Joint Forest Management, Non Wood Forest Produce and Forest Protection Working Circles encompassing the entire forest area

of the division as per the provision of National Working Plan Code. Prescriptions with respect to Eco-tourism activities in the Buffer Zone are also described in the plan. In Chandrapur (Non-Buffer) Forest Division the management system prescribed includes SCI WC (2420.10 ha.), IWC (30749.80 ha.), Afforestation WC (18606.93) & Fodder Improvement WC (8470.43 ha.). The Overlapping WC proposed are Bamboo, Wildlife management, Joint Forest Management, Non-Wood Forest Produce and Forest Protection Overlapping Working Circles encompassing the entire forest area of the division. Presence of Great Indian Bustard (GIB) has been reported in Warora and Bhadrawati ranges of Non-Buffer area. Measures are suggested for its protection and conservation separately under Wildlife Management WC.

The present plan has been prepared keeping in view the guidelines from Government of India, State Government and National Working Plan Code. The enumeration of growing stock has been carried out by the SOFR Unit, Gadchiroli in the year 2008-09 and the data has been analyzed from Chief Forest Statistician in the office of the Principal Chief Conservator of Forests, Nagpur. The stem analysis carried out in old plan and the data generated during previous plan period has been reproduced in this plan and used for yield calculations, etc.

I am extremely grateful to Shri A.K.Saxena, IFS, Head of Forest Force, M.S.Nagpur, Shri A.S.K.Sinha, IFS, Principal Chief Conservator of Forests (Production and Management) M.S.Nagpur, Shri Karunakaran, IFS, Additional Principal Chief Conservator of Forests (Working Plan-East), Nagpur for providing able and valuable guidance and encouragement in preparing this plan.

I express my thanks to Shri S.P.Thakare, IFS, Chief Conservator of Forests (T) Chandrapur, Shri G.P.Garad, IFS, Field Director, TATR

Chandrapur, for their valuable guidance and suggestions from time to time. My sincere thanks are also due to Shri G.P.Narwane, IFS, Deputy Director, Buffer (TATR) Division Chandrapur, Shri S.H.Patil, DFO, Chandrapur (Non-Buffer) Division, Shri R.T.Dhabekar, DFO (Vigilance) Chandrapur, Shri R.M.Pawar, ACF, Chandrapur Forest division for their timely help and co-operation in preparing this plan. I am also thankful to the entire staff of the Working Plan Division, Chandrapur for providing necessary information in time for preparing this plan.

I also express my sincere thanks to Shri D.J.Goche, ACF, Pandharkawada Forest Division for his timely help and valuable guidance in preparation of this plan. I put on record my special thanks to Shri G.G.Dakhole, Stenographer (L.G.), Working Plan Office, Yavatmal for his sincere and painstaking efforts throughout in preparation of this plan.

I am thankful to - Shri Z.S.Shaikh RFO, Shri M.B.Gawali RFO, Shri A.L.Ghuge Ranger Surveyor, Shri V.U.Kamble Surveyor, Shri V.J.Sonawane Surveyor, Shri C.M.Panchbudhe Accountant, Shri S.B.Lohakare Forest Guard, Shri N.V.Mote Forest Guard, Ku. P.R.Atram Forest Guard, Shri K.B.Sanap Driver, Shri R.V.Kale Forest Labour, Shri S.R.Nakhate Forest Labour, the staff of Yavatmal Working Plan Division for their help and support in preparation of this plan.

Place: Yavatmal
Date :

Dr.Pravin D.Chavan
Conservator of Forests
Working Plan Division, Yavatmal

Abbreviations Used In The Plan

ACF	:	Assistant Conservator of Forests
AWC	:	Afforestation Working Circle
AR	:	Artificial Regeneration
C.A.I.	:	Current Annual Increment
C.B.O.	:	Cut Back Operations
C.W.R.	:	Coppice With Reserve System
C.C.T.	:	Continuous Contour Trench
Cum	:	Cubic Meter
Compt.	:	Compartment
CCF	:	Chief Conservator of Forests
CF	:	Conservator of Forests
DF	:	Disforested
Dn.	:	Division
DFO	:	Divisional Forest Officer
Dy.C.F	:	Deputy Conservator of Forests
FDCM	:	Forest Development Corporation of Maharashtra
FLCS	:	Forest Labourer's Co-operative Society
FIWC	:	Fodder Improvement Working Circle
FP	:	Forest Policy
FS	:	Felling Series
FSI	:	Forest Survey of India
FV	:	Forest village
FRH	:	Forest Rest House
FYO	:	First Year Operation
gbh	:	Girth at breast height
gbhob	:	Girth at breast height over bark
gbhub	:	Girth at breast height under bark
IWC	:	Improvement Working Circle
MAI	:	Mean Annual Increment
NTCA	:	National Tiger Conservation Authority
NWFP	:	Non Wood Forest Produce
NR	:	Natural Regeneration
No	:	Number
PA	:	Protection Area
PF	:	Protected Forest
PPO	:	Pre Planting Operation
PWPR	:	Preliminary Working Plan Report
PYO	:	Preliminary Year Operation
RF	:	Reserve Forest
RFO	:	Range Forests Officer
SCI	:	Selection Cum Improvement
SYO	:	Second Year Operation
SMC	:	Soil and Moisture Conservation
TYO	:	Third Year Operation
WC	:	Working Circle
WP	:	Working Plan
TATR	:	Tadoba- Andhari Tiger Reserve

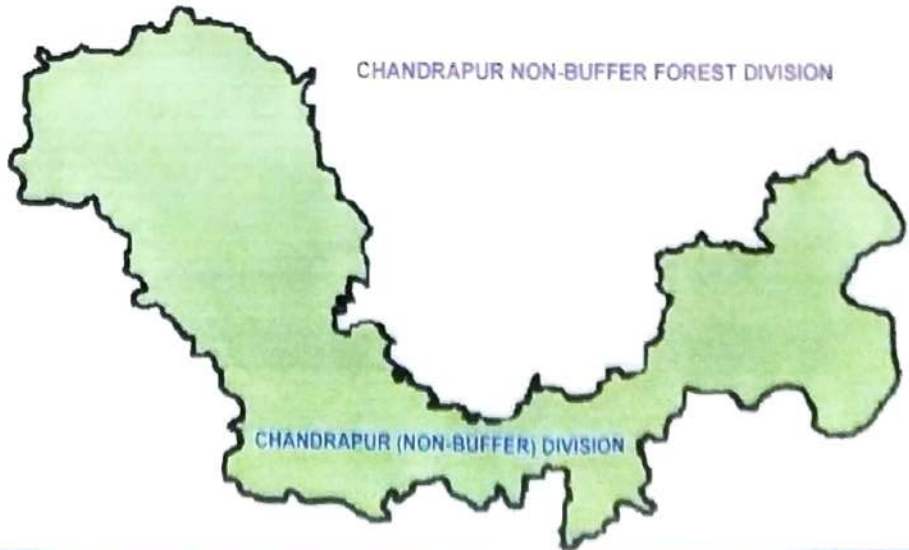
Glossary of Local Names

Adjat	:	Miscellaneous Species
Geru	:	Red Ochre Or Red Earth
Ghat	:	A Road With Steep Gradient
Gairan	:	A Place For Herding Cattle
Gaothan	:	A Site Kept Reserved For Housing
Gully	:	Channel
Jamindar	:	The Holder of Zamin i.e. land
Jhiras	:	Temporary Small Well Dug in Nalas During Summer
Jawari	:	A Cultivated Millet
Jungle	:	Forest
Kharif	:	Monsoon Crop
Khasara No.	:	Serial number given to any portion of land entered in land Records
Mouza	:	A Village Area
Murram	:	A Reddish Hard Soil
Naka	:	Barrier On Road For Checking Forest Produce In Transit
Nala	:	A Water Course
Nadi	:	River
Nistar	:	Forest Produce Required For Bonafide Agriculture Or Domestic Purposes
Padit	:	A Barren Or Waste Land
Patwari / Talathi	:	Village Revenue Officer
Pansthal	:	Waterhole
Patta	:	A Sanad Granted For Use Of Land.
Pucca	:	Permanent Construction
Pulla	:	Winter Crop
Rabi	:	Winter Crop
Rahadari	:	Transit
Ramna/Kuran	:	A Grass Reserved Close To Grazing
Regur	:	Black Cotton Soil
Rith	:	A Deserted Village Site
Taluka /Tahsil	:	A Revenue Administrative Block.

LOCATION OF NON-BUFFER FOREST DIVISION



MAHARASHTRA





Part - I

SUMMARY OF FACTS
ON WHICH PROPOSALS
ARE BASED

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

SUMMARY OF FACTS ON WHICH PROPOSALS ARE BASED

CHAPTER 1

THE TRACT DEALT WITH

SECTION 1.1 : NAME AND SITUATION

1.1.1 The part forest areas of erstwhile Chandrapur Forest Division have been notified as Buffer area of Tadoba Andhari Tiger Reserve vide Govt. of Maharashtra, Revenue & Forest Department, Mumbai Notification No. WLP 1009/CR 229/F-1, dated 5th May 2010. Then a reorganization of the forest divisions was effected vide Govt. of Maharashtra Resolution No.WLP-2012/C.No.256/F-1, Mumbai dated 22nd August 2012 by which some forest areas of Brahmapuri Forest Division were added to the buffer and non-buffer forest divisions. Thus a new forest division with the name of “Deputy Director, Buffer (T.A.T.R.) Forest Division, Chandrapur” is created and the old Chandrapur Forest Division is reorganised as “Divisional Forest Officer, Chandrapur Forest Division, Chandrapur” w.e.f. 01.01.2013. Thus, the reorganised Chandrapur Forest Division (Non-Buffer) comprises of the non-buffer forest areas of old Chandrapur Forest Division and the areas of Saoli Forest Range which is added to it after deleting it from Brahmapuri Forest Division and the Buffer area of old Chandrapur and Brahmapuri Forest Division now constitute the Buffer (TATR) Forest Division, Chandrapur.

This Working Plan deals with the forest areas of reorganised Chandrapur (Non-Buffer) Forest Division, Chandrapur (w.e.f. 01.01.2013) which come to a total of 620.35 sq.kms. These forest areas of newly organised Chandrapur Forest Division extend between latitudes 78:45:00 North to 80:00:00 North and longitudes of 19:45:00

East to 20:30:00 East approximately. The total geographical area of the Chandrapur district is 10695 sq.km.

1.1.2 The boundary of the area dealt with in this working plan in the North is bounded by Wardha district and in the East by Brahmapuri Forest Division, in the west by Yavatmal district & Wardha district and in the south by Central Chanda Forest Division.

1.1.3 Previous Working Plan of Dr. S.S.Srivastava covered an area of 89827 ha. of forest area. Out of this, an area of 53814 ha. was transferred to newly created Buffer (T.A.T.R.) Division vide Govt. of Maharashtra G.R.No.WLP-2012/C.No.256/F-1, Mumbai dated 22nd August 2012 and the remaining area of 36013 ha. remained in Chandrapur Forest Division (Non-buffer). The whole Saoli Range with a total area of 26022 ha. is also added to newly organised Chandrapur (Non-Buffer) Forest Division w.e.f. 01.01.2013 vide Govt. of Maharashtra G.R.No.WLP-2012/C.No.256/F-1, Mumbai dated 22nd August 2012. Thus the total area of reorganised Chandrapur (Non-Buffer) Forest Division covered under this working plan comes to 62035.72 ha.

The area statement of the **Chandrapur (Non-buffer) Forest Division** is shown in **Table-1**.

Table-1

Range	Reserved Forest (ha.)	Protected Forest (ha.)	Unclassed Forest (ha.)	Area of Working Plan (ha.)
Chandrapur	3149.28	1602.49	245.91	4997.68
Chichpalli	5399.13	5957.48	239.62	11596.23
Warora	6890.19	583.04	861.47	8334.70
Bhadravati	7007.15	3879.00	198.95	11085.10
Saoli	15699.00	10227.91	95.10	26022.01
Total	38144.75	22249.92	1641.05	62035.72

SECTION 1.2 : CONFIGURATION OF GROUND:

1.2.1 The greater part of the division is more or less flat or undulating, with three small regular hill ranges, namely, the Chimur, the Mul and the Pharsagarh hills. The Chimur hills start east of Chimur and

with one break of about five miles run southwards as far as Moharli, gradually diminishing in height from north to south. The range is twenty miles in length and six miles in breadth with an average elevation of 45 feet above the surrounding plain. In a basin of these hills lies, the Taroba lake. The Mul hills lie further to the south, passing three miles west of the village from which they take their name; they are eighteen miles from north to south and thirteen miles from east to west, with a height of 400 feet above the plain.

1.2.2 East of and parallel to the Chimur hills runs a range known as the Pharsagarh hills. This range extends for thirteen miles with an average height of 600 feet above the plain, and terminates in a scarp cliff named Satbahini, 1500 feet above the sea-level. East of the Wainganga stretches a tangle of highlands forming a tableland but no regular range. Several other small hills, occur, notably the Rajoli hills and the Linga Baradh.

1.2.3 The division comprises a series of valleys and watersheds running from north to south. The western portion lies in the valley of the Wardha river, which is separated from the central valley of the Wainganga by the watershed of the Mul and Chimur hills. The basins of the Wardha and Wainganga rivers are further subdivided into numerous smaller valleys of their tributaries. The tract is well drained by numerous water courses which flow into the Wardha, Erai, Andhari, Mul, Wainganga and Kobragarhi rivers.

SECTION 1.3 : GEOLOGY, ROCK AND SOIL

1.3.1 Chandrapur is rich in mineral wealth, including high grade iron ore, gondwana coal, chromite, limestone, clays and building stones.

The rocks of Archaean age include granites, gneisses, quartzites, brecciated quartzites and banded magnetic rocks with intrusives. Granites are coarse-grained and light pinkish in colour, primarily composed of biotite, felspar and quartz. The gneisses occupy a vast area, and show profound weathering resulting in their forming the plains covered by mantle of soils derived from them. The quartzites and

banded quartz-manganites which appear to belong to one cycle of sedimentation are remnants of the older metasediments (Dharwars) occurring as isolated hills and knolls within the gneisses. Brecciated quartzites stand out prominent at many points as isolated small hills and are intensely fractured, later filled up by the secondary silica.

1.3.2 The rocks of Cuddapah System in late pre-cambrian to upper Triassic age consists of shale's, limestone and quartzites. The quartzites are medium to coarse grained and show wide ripple marks at several places. The quartzite are overlain by gray, siliceous, massive, impure limestone. Most of the limestone are lateritic and some are siliceous and dolomite in character. The Vindhyan rocks of this area comprise sandstones, shales, limestones and conglomerates. The most persistent and well defined rock type of the Vindhyan system seen in the area are the vitreous sandstones. On account of their relative resistance to weathering they stand out as conspicuous hills and ridges. The shales are generally fine grained, thin bedded, light gray to light reddish in colour with development of a set of close vertical joints which make them fragmental. The limestones are thinly bedded, although in some places they are massive. The conglomerates have a limited lateral and vertical extent and are often partially removed by slumping of the jointed blocks. The pebbles are mostly of sandstone, vein quartz, quartzite, quartz-magnetite rock and chert fragments. The pebbles of sandstone are mostly light reddish colour, compact and fine grained. The forests found on these formations are mixed teak, mixed, salai, bhirra-ghonal and rohan.

The formations belonging to Gondwana System are Chikiala beds, Kota Maleri, Kamthis, Barakars, Talchirs. The Talchir series consist of a boulder bed at the bottom, followed by shales and sandstones successively. They occupy only a small area in the division and bear a poor miserable crop. In Barakars, the predominant rocks are the white felspathic sandstone, shales and clays along with coal seams. It has great economic value. The rocks in the Kamthi group are sandstones, shales, clays and conglomerates of which the sandstones and shales form the bulk of the series. The rocks of kotamaleri group

comprise sandstone, clays, limestones in the order of abundance. The Chikiala beds represent the youngest member of the Gondwanas of the Pranhita-Godavari basin and comprise conglomerates, sandstones, shales and clays.

1.3.3 The rocks of Cretaceous and Eocene age includes Lameta beds and Deccan traps and inter-trappean beds composed of clays and calcareous white sandstones. A considerable part of the area is covered by Deccan Traps and intertrappean beds. The Deccan Traps consist of layers of basaltic lavas, varying from amygdaloidal basalt to fine grained dolerite, at places, the amygdules being filled with various minerals, like quartz amethyst, calcite, agate, chalcedony and jasper. The trap is a natural home of teak and occurs in pure patches. Even where a soil depth is less, the teak is remarkably plentiful but of poor quality. The absence of bija is conspicuous. Interbedded with the traps are found at several places thin beds of limestone, sandstones, and shales, which in places have been converted to porcellanite and chert forming the inter-trappean beds. Laterite is found in the area at many places capping over the Deccan Traps and the gneisses at places. Laterite is a compact and vesicular rock essentially composed of hydrated oxides of aluminium and iron with small amounts of manganese oxides and titanium. Generally it is reddish brown in colour. The presence of pure patches of garadi are the remarkable features of well disintegrated laterite but the soil derived from laterite decomposition is well stocked both when overlying Kamthi sandy stones and the metamorphic rocks.

1.3.4 The bedrocks at several places, specially, the river valley areas of the region are covered by recent alluvium deposited by the streams and different types of soils derived from breaking up of the underlying rocks. At the time of settlement, nine types of soil has been recorded in the district viz. kali, bersi, kanhar, morand, khardi, wardi, retari, bardi, pandhari and kachhar. These are local names of soil types present.

The rock comprising Kamthi formations are (i) grits (ii) sandstone, coarse or fine grained (iii) sandstone argillaceous and ferruginous. The main type of forests found in these areas are either mixed teak or miscellaneous. The climbers are numerous and dense under growth of bamboo is noticeable.

Metamorphic rocks consist of granite and gneiss. The granite is typically composed of quartz, felspar, mica or hornblende. Gneiss consists of gneiss proper with schist or hornblende Quartz schist wherever present produces a stony infertile soil and bear scrub jungle. On gneiss with felspar, the forest is thorny conspicuous by the presence of Zizyphus species. The black loam overlying the gneiss and mainly derived from the decomposition of hornblende schist supports the pure teak forests without bamboos.

1.3.5 The typical soil derived from the Deccan trap is “Regur” or black cotton soil. They contain high alumina and carbonate of calcium and magnesium with variable amount of potash, low nitrogen and phosphorus. They are generally porous and swell considerably on addition of water and dry up with cracks on losing the moisture. The black soil areas have a high degree of fertility and do not require manuring for long periods. The black cotton soil is mainly associated with trap especially in Warora Range where it overlaps trap. The most of the black cotton in Chandrapur district has been derived from the disintegration of hornblende schist which is basically silica, aluminium, lime and oxides of iron.

The gneisses and other rocks of the Archaean age on weathering give rise to “Red Soil” which is most common in the area where those rocks are present. The red soils are less fertile than the black soils.

The forest cover where the underlying rock is metamorphic sandstone, while laterite also occurs frequently; the resulting soil is a sandy loam, changing to brown clay, with alluvium deposits of considerable depth in ravines. Wherever sufficient moisture exists, these soils are capable of supporting fairly dense mixed forests but the

excessive heat and dryness of the climate control the height growth and the vegetation is confined to monsoon months.

SECTION 1.4 : CLIMATE

1.4.1 The climate of this area is characterised by a hot summer, well distributed rainfall during the south-west monsoon season and general dryness except in the rainy season. The winter is moderately cool and is of short duration between December to February. This is followed by hot season from March to May. The South West monsoon season is from June to September, October and November constitute the post-monsoon season.

The mean daily maximum temperature in December is 38.6⁰ C and the mean daily minimum 23.6⁰ C. The mean daily maximum temperature in May is about 47.7⁰ C and the mean daily minimum is about 21.3⁰ C. The heat in summer is intense during the day especially in the northern parts of the district. The mean maximum/minimum temperature from 2003-04 to 2012-13 for Chandrapur station is given in the **Appendix No. II** of volume II of the plan.

The precipitation is received through South-West monsoon. About 89 per cent of the annual rainfall is distributed during June to September. The average annual rainfall in the district is 1366.52 mm. The rainfall in the district generally increases from the West towards the East and varies from 1141.47 mm at Chimur to 1594.54 mm at Mul. The details of the rainfall are furnished in the **Appendix No. III** of volume II of the plan.

SECTION 1.5 : WATER SUPPLY

1.5.1 The major river systems of the district are from west to east and includes the Painganga, the Wardha, the Wainganga and the Indravati. Numerous tributaries of these river systems drain the area of the district. The Wardha river flows mostly on the Western and Southern boundaries of the district. The Erai is non- perennial river, rising in the

hills of northern Warora and flowing almost due south till it joins the Wardha a short distance south of Chandrapur.

SECTION 1.6 : DISTRIBUTION OF AREA

1.6.1 Total forest area of the reorganised Chandrapur (non-buffer) division included in this plan is 62035.72 ha. distributed over five ranges. The whole Saoli Range of Brahmapuri Division is added to Chandrapur Forest Division after the reorganisation. The distribution of forest area is as follows :

TABLE

Sr. No.	Name of the Range	Reserved Forest		Protected Forest		Unclassed Forest		Total	
		No. of comptt	Area in ha.	No. of comptt	Area in ha.	No. of comptt	Area in ha.	No. of comptt	Area in ha.
1	Chandrapur	14	3149.28	23	1602.49	--	245.91	37	4997.68
2	Chichpalli	27	5399.13	167	5957.48	--	239.62	194	11596.23
3	Warora	23	6890.19	10	583.04	--	861.47	33	8334.70
4	Bhadravati	27	7007.15	59	3879.00	--	198.95	86	11085.10
5	Saoli	52	15699.00	375	10227.91	--	95.10	427	26022.01
	Total	143	38144.75	634	22249.92		1641.05	777	62035.72

The forest areas are covered in the 13 toposheets (scale 1:50000) of Survey of India. The toposheet numbers of Non-Buffer division are as below.

List of toposheets of SOI

Sr.No.	Scale 1:50000 toposheet No.
1	55 L/12
2	55 L/16
3	55 M/13
4	55 P/3
5	55 P/4
6	55 P/7
7	55 P/8
8	55 P/12
9	55 P/15
10	55 P/16
11	56 M/1
12	56 M/5
13	56 M/9

1.6.2 Statement showing the existing Range, Round & Beat is given in **Appendix No.VII** of volume II.

1.6.3 Statement showing range wise distribution of area details is given in **Appendix No.VII A** of volume II.

SECTION 1.7 : STATE OF BOUNDARIES

1.7.1 The boundaries are maintained under 1/5th boundary demarcation scheme. The existing cairns are not properly maintained and the boundary maintenance has to be improved.

The details of the areas demarcated so far are not available in the division office. The boundaries of these forests are not maintained properly. The pillars are missing at a number of places and have not been erected in the five year boundary demarcation programme. At most of the places these pillars do not bear a number. Measures have been prescribed under the chapter on Miscellaneous Regulations for following a uniform pattern for erecting the boundary pillars and also for correcting the miserable state of boundary demarcation and for keeping control on the work. The statement showing extent of natural and artificial boundaries is given in **Appendix No.XII**.

SECTION 1.8 : LEGAL POSITION

1.8.1 The forest dealt with under the plan were notified vide the Reserve Forest Act VII of 1879 under the central Provinces Gazette No. 917(I) dated February 24, 1879 and No. 3796 dated August 29, 1895.

1.8.2 The protected forests were declared after the abolition of proprietary rights. Out of these protected forest, some areas were declared as reserved forest under section 20 of Indian Forest Act, 1927 vide Notification no. WS-FOR-1(1975) Desk-9/2 dated July 15, 1978 and vide Notification No. FLD/3685/9220/CR-42/F3 dated May 5, 1992 the details have given in **Appendix No.X**. The details of the area disforested vide various State Government Notifications have been given in **Appendix No. IX**.

1.8.3 As per section 3 of Madhya Pradesh Abolition of Proprietary Rights (Estates, Mahals and Alienated Lands) Act of 1950 (I of 1951), the areas formerly belonging to Malguzars vested in the State Government on April 1, 1951 and were taken over by revenue department. Thereafter most of these areas were transferred to Forest Department from time to time as per instructions contained in MP. Revenue Department's No. 2249-286-XII, dated April 6, 1951 and No. 7277-CR.617-XXI, dated December 4, 1951. The transfers of these forests to the forests department was completed by the year 1954. The areas thus taken over by the forest department was 165453.122 hectares.

1.8.4 These forests were then declared as protected forests under section 29 of the Indian Forest Act of 1927 vide Government of Madhya Pradesh Notification No.3057-353-XI, dated June 4, 1955 and Notification No. FLD/4659-3313E-dated May 7, 1959.

1.8.5 In exercise of powers conferred by sections 30 and 32 of the Indian Forest Act, 1927, Notification reserving trees etc, were issued and rules were framed by the Government of Bombay vide its Resolution No. FLD-4657/103065-E, December,1958 and December CAPut!', 1958 respectively.

1.8.6 Notifications under section 4 of the Indian Forest Act, 1927, were issued in respect of all these forests vide Government of Maharashtra Nos. FLD-1258/II, 3314, E, dated August 20, 1959 and No. FLD-1258/8138-E, dated May 28, 1960.

1.8.7 In 1992 Government of Maharashtra declared 4518.440 hectare, area out of the total 22790.900 hectare of the protected forests, as reserved under section 20 of he Indian Forest Act, 1927 vide notification No. FLD/3685/9316/CR-42 F3, dated May 5, 1992.

1.8.8 A number of alterations and adjustments affecting the area of the reserved and protected forests have subsequently taken place. Full details of these are recorded in Code form No.1 register of Reserved Forests and Protected forests which also contain number of notification under which they have been affected. There is need to

examine the new proposals for declaring protected forest as reserved forests which were earlier omitted by Forest Settlement Officer while preparing the proposals for notification under Section 4 of the Indian Forest Act. By doing so, the protected forest which are rich in vegetation and quality shall be preserved and declared as Reserved.

SECTION 1.9 : RIGHTS AND CONCESSIONS.

(A) Reserved Forests.

1.9.1 There are no rights in the reserved forests except right to way and access to water. There is no commutation of nistar or paidwawar in the Chandrapur Forest Division. Various concessions have been granted from time to time to the agriculturists and others by the erstwhile Government of Madhya Pradesh and Government of Maharashtra. The following concessions are permitted:

- (i) The grazing of cattle belonging to the agriculturists of certain villages in the vicinity of the reserved forests, in accordance with the grazing rules in force.
- (ii) Agriculturists of villages in the vicinity of the reserved forests are given certain quantity of timber, bamboos and fire wood for their bona fide domestic use at concessional rates from the coupes under working. None of these concessions is a legal right and these can be withdrawn by the Government.

(B) Protected Forests:

1.9.2 Before the abolition of the proprietary rights all lands belonged to the proprietors. A village administration paper called "Wazibul-az" was prepared at every settlement and plots of land were separately recorded showing the Khasara numbers and area which was set apart for a particular purpose. Under section 202 of the Central Province Land Revenue Act 1917, a provision was also made for punishing the violation of any of the customs. Under the Provisions of the Madhya Pradesh Abolition of Proprietary Rights (Estates, Mahals,

Alienated Lands) Act, 1950 (I of 1951), all the communal and other waste land became the property of the Government while occupied lands continued to be private. In order to distinguish between the rights existing on the new Government Waste land and on the other lands, a provision was made in the new Madhya Pradesh Land Revenue code, 1957, prescribing the preparation of a Nistar Patrak and Wazib-ul-arz for every village. The Nistar Patrak deals exclusively with the management and use of Government land while the wazib-ul-arz deals with community and customs of user over private land.

1.9.3 The nistar enquiry had been conducted during the period 1954-56 and all the villages included in this scheme have been covered under it. The nistar officers have formed grazing and nistar zones by clubbing together surplus villages with deficit villages while self sufficient villages have been treated as individual zones. Villages assigned to particular zone can exercise their nistar rights within that zone.

1.9.4 The classification of the villages into surplus, deficit or self sufficient for the exercise of nistar rights was made on the following basis:

- (i) A village having tree clad area equal to half the occupied area was considered to be self sufficient.
- (ii) A village having tree clad area more than half the occupied area was considered to be surplus village.
- (iii) A village having tree clad area less than half the occupied area considered to be a deficit village.

1.9.5 **Misuse of Nistar:** The misuse of nistar is prohibited vide section 24(2) of the Indian Forest Act, 1927 and shall be punishable as provided under section 77 of the Indian Forest Act, 1927. However, misuse of nistar from the protected forest areas shall be dealt as per provisions contained in Maharashtra Land Revenue Code 1966.

1.9.6 **Grazing:** The basis for forming grazing zones was that each head of cattle in Cotton-Jowar tract should have 0.2 hectare grazing

area and that in other tracts it should have 0.4 ha. Villages in which the grazing lands are less than the above requirements were clubbed with the neighbouring village area which exceeds the above standard. In villages where grazing land was just sufficient for the needs of the cattle of that village no rights of person residing in other villages to graze their cattle have been recognised ready recorded in the wazib-ul-arz.

1.9.7 Villages clubbed as above constituted a grazing zone. The clubbing of the villages was done in such way that the villagers were not to take cattle to distance longer than the distance which the cattle can easily cover in a day. Within a specific zone all persons are at liberty to graze their cattle free until otherwise ordered by the Collector.

1.9.8 The grazing concessions are allowed as per "Grazing Policy" of Maharashtra State depending upon the cattle units and the carrying capacity of forests. The grazing policy was formulated vide G.R.No.MFP-1365/132211-Y dated 6th December, 1968. The Chief Conservator of Forests is empowered to close any road passing through a block by providing an alternative route.

1.9.9 As per directives of the Govt. contained in Land Reforms Dept. Ex-Madhya Pradesh Memorandum No.1290-1227-XXVII. Dt. 4th September 1953, sheep and goats are not allowed to graze in forests meant for production of big timber or in the forest area where villagers generally exercise their nistar rights.

1.9.10 Occupational Nistar: In nistar patraks, occupational rights of communities have been recorded and recognised in several villages and entries are found in the Wazib-ul-arz for each village. The nistar is required by the villagers for bonafide and agricultural purposes, forest nistar generally includes timber of certain species and sizes for agricultural implements, houses and cattle sheds, fire wood, bamboos, thatching and fodder grasses, fencing material bark, fiber, minor minerals and paidawar i.e. edible fruits, flowers and roots, honey, wax etc. The rights and concessions are governed as per the provisions made in the nistar patrak for each village, according to which,

agriculturalists and agricultural labourers and entitled to following kinds of forests produce for their nistar either free of charge or at concessional rates fixed by the Collector, from their nistar zones only.

1.9.11 In nistar patrak of each village khasara number set aside for nistar and grazing are recorded. The details regarding quantum of nistar, period during which it is to be allowed, payment if any to be made etc. are not given in the nistar Patrak in general. However, due to over exploitation of the forests for nistar in the past, unchecked illicit felling and over grazing. The ex-proprietary forests are no longer able to meet any of the nistar requirements of the people. Most of these forests are now in the denuded state and need immediate rehabilitation by placing a ban on all the nistar rights and afforesting them, otherwise these areas will be turned degraded in near future.

1.9.12 Concession to erstwhile forest villagers: Under the rules, framed by the Central Province Government, the forest villages were entitled to certain concessions purely for their bonafide use. However, these concessions are continued, even after they are declared as revenue village vide ADM 22/971 dated 31.4.71. The competent authority, subjected to their power of sanctioning, were competent to sanction free grants. They are eligible for the free supply of following forest produce.

- i) Wood and thorn for his agriculture work.
- ii) A reasonable amount wood and grasses for his house building and repairs.
- iii) Dead wood for fuel, bamboo and leaves, any edible fruits, flowers and roots required for his domestic purposes.

CHAPTER 2A

FOREST FLORA

SECTION 2.1 : COMPOSITION AND CONDITION OF THE CROP

2.1.1 As per the classification of forest types of India by Harry G. Champion and S. K. Seth, forests under this plan corresponds mostly to tropical dry deciduous forest and sub-group 5A/C3 Southern Tropical Dry Mixed Deciduous Forests which occupy the whole of Chandrapur Division.

2.1.2 Local variations are observed depending upon the soil topography and past treatment. Influence of altitude and aspect is negligible, well drained deep loamy and alluvial soil bear better quality forests. The quality deteriorates where the soil is shallow or water logged. The biotic factors which have often resulted in the degradation of forest are excessive grazing, unregulated fellings and frequent fires. The fellings are often concentrated on the species most valued for timber, furniture industry, building purposes and other important timber based industries. Seedling stages are particularly affected by excessive grazing and frequent fires. The species surviving owing to these biotic factors are resistant ones which can stand grazing and fire.

2.1.3 The forests are distinguished in to the following local sub-types as per Champion and Seth's revised classification of forest types which is illustrated in the following table.

TABLE

Type Rotation	Champion and Seth's classification
Sub-group 5 A. I. Climax types :- (1) 5 A/C1 (i) 5A/Cia (ii) 5A/Cib (2) 5 A/C-3	Southern Tropical Dry Deciduous Forests. Dry teak bearing forest Very dry teak forests Dry teak forest Southern dry mixed deciduous forests
II. Edaphic types :- (i) 5/E-2 (ii) 5/E-4 (iii) 5/E-5	Boswellia forest Hardwickia forest Butea forest
III. Degradation stages :- (i) 5/D S1 (ii) 5/D S2	Dry deciduous scrub Dry savannah forest
IV. Primary serial type :- 5/1S1	Dry tropical riverain forest

5A/C3-SOUTHERN TROPICAL DRY MIXED DECIDUOUS FORESTS :-

2.1.4 The forest type is having a great variety of species distributed throughout the division. The composition, distribution and stocking of the forest are mostly influenced by edaphic and biotic factors as topography and climatic factors are almost identical. The biotic factors seem to have altered composition of the growing stock to a varying extent. The forest in the vicinity of the densely populated village have deteriorated considerably probably due to heavy harvesting and grazing. The quality of the forests varies from II to IVb and the density of

the crop varies from less than 0.4 to 0.7. The forest can be grouped in to following two main groups.

(A) Teak bearing forests with bamboos

2.1.5 The best quality of these forests occur around Kolsa in Shivani Range and between Dewada and Junona Villages in Moharli Range over deep well drained sandy loam or alluvial along Andhari nala in small patches. Teak (*Tectona grandis*) in the overwood generally varies from about 15 to 20% and occurs in association with many other species in various degree of intensity. This type is also found on hill slopes in Moharli Range and narrow valleys where the percentage of teak varies from 20 to 80, but the quality deteriorates due to shallow soil and comparatively drier conditions. The very areas have stunted bhirra (*Chloroxylon swietenia*), Lendia (*Lagerstroemia parviflora*) gongal (*Cochlospermum gossypium*), salai (*Boswellia serrata*) etc.

In areas with deep sandy loam soils bamboo under lower canopy are of good quality and occupy total growing space to the total exclusion of undergrowth and regeneration. Semal grows in good proportion near Pangdi, Kolsa and Doni villages and tends to be gregarious in the forests lying between Pangdi and Doni. The quality falls in areas where these forest grow on dry hill tops and on heavy loamy soils. The main species occurring on heavy soil are Ain, Dhaora, Tendu, Bel, Khair, Hiwar, Ghoti and Ber, Rohan, Garari and occasional Bija appear on dry hill slopes. Bamboos are of poor quality and thin in size. Climbers such as Kukadranji, Eroni and Chilati are common and are a grave threat to regeneration at places. Heavy grazing, frequent fires and illicit felling are changing the vegetation to xerophytic on the fringes of the forest where the crop has become very open and stunted and blanks are created. Khair, Bel, Ber, Hiwar, Palas and Rohan predominate. On black loamy soils Garari appears.

i) Top Canopy : Teak (*Tectona grandis*), Bija (*Pterocarpus marsupium*), Dhaora (*Anogeissus latifolia*), Ain (*Terminalia tomentosa*) Semal (*Bombax ceiba*), Mahua (*Madhuca latifolia*), Tendu (*Diospyrus melanoxylon*), Lendia (*Lagerstroemia parviflora*), kusum

(*Schleichera oleosa*), haldu (*Adina cardifolia*) Kullu (*Sterculia urens*), Shirus (*Albizzia lebbek*) and Salai (*Boswellia serrata*). Koha (*Terminalia arjuna*) occurs along nalas.

ii) Second storey : The second storey is formed of the above species besides patches of Garari (*Cleistanthus collinus*), Char (*Bucchanania lanzan*), Moyen (*Lannea grandis*) Bhirra (*Chloroxylon swietenia*), Bel (*Aegle marmelos*), Ghoti (*Zizyphus xylopyra*), Aonla (*Emblica officinalis*), Gongal (*Cochlospermum religiosum*), Hirda (*Terminalia chebula*), Amaltas (*Cassia fistula*), Kumbhi (*Careya arborea*).

iiia) Bamboo (*Dendrocalamus strictus*). Upper and lower canopies are mostly uneven and merged in each other.

iii) Shrubs/Herbs : Kukadranji (*Calycopteris floribunda*), Kuda (*Holorrhæna antidysentrica*), Marorphal (*Helicteres isora*), Dikamali (*Gardenia resinifera*), Jilbili (*Woodfordia fruticosa*), Bhuichind (*Phoenix sylvestris*), Surya (*Xylia xylocarpa*), Chirchira (*Achyranthes aspera* and *Gardenia spp.*), Aroni (*Zizyphus oenoplia*),

iv) Grasses : Kusal (*Heteropogon contortus*), Chir (*Imperata officinalis*), Bhurbhushi (*Eragrostic tenalla*), Mushan (*Iseilema laxum*),

v) Climbers : Palas-vel (*Butea superba*), Mahul (*Bauhinia vahlii*), Gunj (*Arbus precatorius*), Ramdaton (*Smilax macrophylla*), Shataori (*Asparagus racemosus*), Chilati (*Acacia pinnata*).

B) Mixed forests without bamboo

2.1.6 These forests occur in Warora Range of Chandrapur Division. The quality varies from place to place depending upon soil and biotic factors which are very pronounced. The forests are composed of a number of species, important being Bija, Lendia, dhaora, Shiwan, Aonla, tinsa, Ain, Semal, Mahua, Tendu, Char and patchy Teak. In these forests grazing is heavy and illicit felling are common. Sheet erosion is in advanced stage and the undulating areas are cut up by nalas. Reproduction is scanty. Forests are scattered in small patches and are

mostly understocked. Their boundaries are not well defined on the ground. Heavy encroachments for cultivation have taken place in many places.

i) Top Canopy : Teak (*Tectona grandis*), Bija (*Pterocarpus marsupium*), Dhaora (*Anogeissus latifolia*), Ain (*Terminalia tomentosa*), Semal (*Bombax ceiba*), Mahua (*Madhuca latifolia*), Tendu (*Diospyrus melanoxyton*), Lendia (*Lagerstroemia parviflora*), Kusum (*Schleichera oleosa*), Haldu (*Adina cardifolia*), Kullu (*Sterculia urens*), Shirus (*Albizzia lebbek*) and Salai (*Boswellia serrata*), Moyen (*Lansea coromandelica*), Jamun (*Syzygium cumini*), Baranga/bhoti (*Kydia calycina*), Koha (*Terminalia arjuna*) occurs along nalas.

ii) Second storey : The second storey is formed of the above species besides patches of garari (*Cleistanthus collinus*), Char (*Bucchanania lanzan*), Moyen (*Lansea grandis*), Bhirra (*Chloroxylon swietenia*), Bel (*Aegle marmelos*), Ghoti (*Zizyphus xylopyra*), Aonla (*Embllica officinalis*), Gongal (*Cochlospermum religiosum*), Hirda (*Terminalia chebula*), Amaltas (*Cassia fistula*), Kumbhi (*Careya arborea*).

iii) Shrubs/Herbs : Kukadranji (*Calycopteris floribunda*), Kuda (*Holorrhena antidysentrica*), Marorphal (*Helicteres isora*), Dikamali (*Gardenia resinifera*), Jilbili (*Woodfordia fruticosa*), Bhuichind (*Phoenix sylvestris*), Surya (*Xylia xylocarpa*), Chirchira (*Achyranthes aspera* and *Gardenia spp.*), Aroni (*Zizyphus oenoplia*), Neel (*Indigoferra tinctoria*).

iv) Grasses : Kusal (*Heteropogon contortus*), Chir (*Imperata officinalis*), Bhurbhushi (*Eragrostic tenalla*), Mushan (*Iseilema laxum*).

v) Climbers : Palas-bel (*Butea superba*), Mahul (*Bauhinia vahlii*), Gunj (*Arbus precatorius*), Ramdaton (*Smilax macrophylla*), Shataori (*Asparagus racemosus*), Chilati (*Acacia pinnata*).

(C) Edaphic Type

(i) 5/E 2 Salai forests:- In these forests salai forms an over-wood, sometimes well grown medium to large trees occur on the flatter tops of the hills. It is generally 12-15 m high and 1.2 to 1.8 m in girth, the only species equalling it in size after being kullu. In these forests salai is found with gongal, dhaora, kullu, lendia, mowai and aonla. The type occurs on a variety of rocks, particularly crystalline, sometimes lateritic rocks and trap. The soil is usually bouldery or pebbly, shallow and dry. Hill tops, ridges and spurs, and well drained plateau are the usual sites. Reproduction of salai in such forests is scanty often non extinct.

(ii) 5/E 4- Anjan forests:- This type is found in small patches in the forest area where anjan is the predominant species. The soil is hard and gravelly overlying trap. The other species occurring with it are teak, salai and shisham. Most of the anjan trees are middle aged to mature and the regeneration is absent.

(iii) 5/E 5 – Palas forests:- This sub-type is found in the stiff badly drained clay soils or very dry clayey soils and particularly in black cotton soils in ill drained flats and depressions. On flat ground this type presents a savannah appearance with scattered stunted and very malformed trees or thickets standing over short grass or bare ground.

Teak and Geology:-

2.1.7 The occurrence of teak in the forest of Chandrapur Forest Division are dependent on geological formations. The studies show that the best teak is found on Vindhayan sand stones, shales and to some extent on Kamthi sand stones. The good teak occurs on metamorphic rocks when capped with laterite. Bamboo occurs only in sand stone areas. On sedimentary rocks other than Vindhayan sand stone the teak is absent. Teak is absent or poor in growth on sandy soils. Teak without bamboo is found where the drainage is good. In poorly drained soils teak is replaced by bamboos.

MEDICINAL PLANTS :-

2.1.8 The important medicinal plants found in this area are *Asparagus racemosus*, *Chlorophytum tuberosum*, *Equisetum sp.*, *Hygrophila auriculata*, *Bauhinia diffusa*, *Terminalia bellerica*, *Terminalia chebula*, *Emblica officinalis*, *Soymida febrifuga*, *Solanum violaceum*, *Glorisa superba*, *Pueraria tuberosa*, *Plumbago zexlamica*, *Iplengenia indica*, *Cassia absus*, *Holarrhena antidysenterica*. *Hemidesmus indicus*, *Helicteres isora*, *Evolvulus alsinoides*, *Vernonia cineria*.

SECTION 2.2 : INJURIES TO WHICH THE CROP IS LIABLE.

The forests are liable to the following injuries.

i) Fire:

2.2.1 Dry season from February to June is very long and during which the forests are susceptible to fires. Fires taking place by the end of winter and at the beginning of summer are not severe. Late fires in coupes closed to grazing are very damaging. The damage is serious when the freshly felled material is lying in the coupe and when it is regenerated. The young regeneration suffers a lot and crop like teak gets killed in the form of die back. Severe fires cause scorching leading to unsound and hollow stems which further render them to fungus and insect attack. Fires cause soil erosion indirectly, by destroying vegetal soil cover. Fires are set by people with an interest to collect flowers, fruits, good tendu flush and grass. Fires cause laterisation of soil due to destruction of silicate gel. The repeated fires have helped the teak in attaining the climax as it survives the low intensity fire while the miscellaneous seedlings are wiped out. The corky bark of full grown teak tree prevents damage to the timber due to fire. But fires cause loss of moisture in the soil which affects the growth and increment of the tree.

The number of fires which occurred during 2003-04 to 2013-14 is given in the following table.

TABLE

Sr.No.	Year	No. of cases	Area burnt (in ha.)
1	2	3	4
1	2003-04	124	2657.46
2	2004-05	26	884.00
3	2005-06	59	976.50
4	2006-07	78	479.00
5	2007-08	76	1005.00
6	2008-09	119	1031.11
7	2009-10	120	230.50
8	2010-11	125	939.99
9	2011-12	182	1334.70
10	2012-13	20	64.50
11	2013-14	26	92.95

ii) Illicit felling:

2.2.2 Illicit felling for timber, firewood, poles is a very common practice. Adiwasis presume it is their right to cut any tree in the forest. Mostly it is aimed at encroachment for cultivation, an activity to support household a recreational means like passing time while axing a tree and so on. Large scale illicit cuttings are for the benefit of land grab movement. The people are not interested in wood as such but in the land cleared for cultivation. The extent of illicit cutting in Chandrapur Forest Division is shown in the following table.

TABLE

Type of offence	No. of offence cases	No. of trees	Quantity in M³	App. cost in lac	Quantity of seized material in M³	Revenue obtained in lac	Remarks
1	2	3	4	5	6	7	8
2003-04							
Teak	546	337	23.772	2.47	15.726	2.07	
Non-teak		2304	73.157	1.85	17.692	1.14	
2004-05							
Teak	517	742	18.942	2.25	13.791	1.48	
Non-teak		2680	34.596	1.98	15.678	1.59	

1	2	3	4	5	6	7	8
2005-06							
Teak	388	467	18.302	1.24	16.061	1.71	
Non-teak		2559	27.067	1.01	14.377	0.55	
2006-07							
Teak	362	411	13.503	1.35	8.969	1.30	
Non-teak		2675	42.932	0.85	4.633	0.27	
2007-08							
Teak	420	1284	23.576	3.59	7.62	3.08	
Non-teak		10360	59.984	3.15	42.341	0.74	
2008-09							
Teak	578	367	16.374	0.42	4.125	0.35	
Non-teak		2916	129.388	0.71	9.153	0.25	
2009-10							
Teak	590	1240	45.242	2.26	12.764	1.70	
Non-teak		5348	238.40	3.29	40.405	1.03	
2010-11							
Teak	547	529	23.201	1.42	10.911	1.31	
Non-teak		2681	100.722	1.50	20.48	0.77	
2011-12							
Teak	443	224	8.018	.34	3.763	0.59	
Non-teak		1420	124.149	0.93	10.543	0.42	
2012-13							
Teak	195	146	7.584	0.26	1.375	0.62	
Non-teak		1221	77.333	1.24	6.953	0.35	

TABLE

Position of Forest Offence cases

Year	Fire	Grazing	Illicit Felling	Other	Total
2003-04	124	0	546	27	697
2004-05	26	0	517	124	667
2005-06	59	0	388	113	560
2006-07	78	0	362	30	470
2007-08	76	0	420	26	522
2008-09	119	1	578	40	738
2009-10	120	2	590	59	771
2010-11	125	1	547	43	716

Year	Fire	Grazing	Illicit Felling	Other	Total
2011-12	182	0	443	15	640
2012-13	42	2	282	44	370

iii) Encroachments:

2.2.3 Encroachments are quite common in Chandrapur Forest Division being near to the City as well as due to settlement of villages near and inside the forest areas. The encroachments are common on Protected Forest areas and less on Reserved Forest areas. The extent of land under encroachment in Chandrapur Forest Division (Non-Buffer) as confirmed by the divisional offices is 2216.21 ha. The Government of India has issued the directions to all the State Governments including State of Maharashtra to remove all the encroachments on forest lands. The State Government has granted the power under section 53, 53A and 54 of the Maharashtra Land Revenue Code 1966 to Forest Officers above the rank of Range Forest Officer to summarily evict the encroachments on the forest land.

iv) Grazing by cattle:

2.2.4 Excessive movement of domestic cattle population beyond the carrying capacity of forests leads to compaction of soil and enormously affects regeneration. It is common near the villages. Unauthorised grazing is common. The over and illicit grazings have become a great threat to the forest here. The maximum depletion occurs when the forests are near to a large inhabitation. After the depletion of the grasses, grazer starts lopping green foliage, especially of ain (*Terminalia tomentosa*), Sissoo (*Dalbergia sissoo*), Apta (*Bauhinia recemosa*), Kahu (*Terminalia arjuna*) in the month of February when new foliage arrives. There is no practice of stall feeding of grasses. The lopping of trees like ain, kadaka, Ficus sp. and apta has led to a degradation of the forests. Continuous and heavy grazing not only prevents regeneration of tree species, but also the young regeneration obtained during the period of closure, is lost soon after the area is opened to grazing. In areas with clayey soils, the trampling by cattle

results in hardening of soil and a reduction in the soil aeration. In sandy soils, heavy grazing results in accelerated erosion and denudation. The grazing on undulating lands loosen the soil, which results in the soil erosion. According to the directives issued by the Government contained in the land reforms Department Ex-Madhya Pradesh memorandum No. 1290-1227-XXVIII dated 4th September 1953, sheep and goats are not allowed to graze in forests meant for production of timber or in the forest areas where villagers generally exercise their nistar rights. But by a subsequent modification, the sheep grazing has been permitted in the specified area by the State Government free of cost and it is not uncommon to see goats grazing in timber forests.

v) Wild animals:

2.2.5 Chital damages the bark of young growth by rubbing their antlers. Chital, Sambhar and Nilgai browse seedling and coppice shoots. Bisons are more destructive, as they break sapling and poles in order to reach the first foliage. Some damage is caused by wild boar by uprooting young seedling and bamboo clumps. The plantation of bamboo is severely affected by wild boar. Even covering of bamboo rhizome by stones is not effective. Damage by porcupine is also reported. They usually eat outer bark of Haldu, Moha, Bhilawa and Amaltas near the base of the tree. Monkeys cause damaged to flower and fruit trees and to succulent bamboo culms in the forests. Chital eats bark of Shivan at the base thereby girdling the tree which results in death. Sometimes only the outer bark and cambium are eaten and the cambium is seldom entirely removed, few trees are killed but the grazing causes the scars and rough protuberance found on the base of nearly large Haldu and Moha and is partly responsible for unsoundness of these trees near the base. Bear dig the soil near the root of the tree in search of rodent. They also kill many amaltas trees digging of their roots for food in the hot season.

vi) Insects and fungi:

2.2.6 The attack of teak-skeletonizer (*Hapalia machaeralis*) and

teak-defoliator (*Hyblaea puera*) are common in teak patches and occur almost every year during that period. It has been pointed out by champion in his book "The problems of pure teak plantation" that the estimated loss of increment because of defoliation is about 10% in these forests. The leaves which suffer attack during early part of the season, are soon replaced by the new leaves and the trees remains in foliage for a longer time. Termites are found to attack the young seedling at the base of the collar especially in the degraded areas. Termites also attack the young pole crop of Dhaora (*Anogeissus latifolia*) and Aonla (*Embllica officinalis*) by girdling them at the base, Dhaora (*Anogeissus latifolia*) is attacked by bark eating caterpillars, *Indarbela quadrinotata*. It also has a tendency to become hallow which subsequently are colonized by a white insect. Teak seedlings in the nursery are attacked by white grub on a large scale. Termite also attack nursery seedling on large scale.

vii) Climbers and weeds:

2.2.7 These are common and infesting almost all the areas. Common amongst them are Mahul (*Bauhinia vahlii*), Palasbel (*Butea superba*), Nagbel (*Cryptolepis buchmanii*), Gorari (*Milletia auriculata*), Chilati (*Acacia pinnata*), Banda (*Clematis triloba*), Malkangni (*Celastrus paniculata*), Rhet bel (*Combretum ovalifolium*), Kharbel (*Ventilago madraspatane*), Kumbera (*Vitex auriculata*) and Gorbel (*Pueraria tuberosa*). The climbers girdle the timber trees destroying their market value.

viii) Parasites and epiphytes:

2.2.8 The following are the important epiphytic species present in this division. *Visum articulatum*, *Cusenta speciosa*, *Crinum spp.*, *Gloriosa superba*, *Nictetiana splumbaginifolia*, *Waltheria Indica*, *Smithia bigemna*. The loss caused by them is not substantial.

Table

Cattle population and grazing fee collected

Sr. No.	Cattle/Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
											Buffer Division	Non Buffer
1	Buffalo	3306	3926	3992	3967	3793	3692	1765	4491	3025	1022	1190
2	Cows & Bullocks	29878	28608	29392	29278	27638	28915	14748	34050	24910	14440	3133
3	Goats & Sheeps	1565	2650	2914	2640	2690	2629	40	2372	625	48	0
4	Other Animals	9019	7838	6359	6953	6215	5763	2077	9885	6419	3691	666
	Total	43768	43022	42657	42838	40336	40999	18630	50798	34979	19201	4949
	Cattle units	44152	42933	40895.50	43455.50	41428.50	42150.00	19478.50	51888.00	35528.50	19108	5384
	Grazing Fee Collected	44152	43452.50	42158.00	42508.50	38738.50	39209.00	19295.50	49797.00	34903.50	19161.50	5535.5

vii) Climbers and weeds:

2.2.9 These are common and infesting almost all the areas. Common amongst them are Mahul (*Bauhinia vahlii*), Palasbel (*Butea superba*), Nagbel (*Cryptolepis buchmanii*), Gorari (*Milletia auriculata*), Chilati (*Acacia pinnata*), Banda (*Clematis triloba*), Malkangni (*Celastrus paniculata*), Rhet bel (*Combretum ovalifolium*), Kharbel (*Ventilago madraspatane*), Kumbera (*Vitex auriculata*) and Gorbhel (*Pueraria tuberosa*). The climbers girdle the timber trees destroying their market value.

ix) Parasites and epiphytes:

2.2.10 The following are the important epiphytic species present in this division. *Visum articulatum*, *Cuscuta speciosa*, *Crinum* spp., *Gloriosa superba*, *Nictetia splendens*, *Waltheria Indica*, *Smithia bigemna*. The loss caused by them is not substantial.

x) Frost:

2.2.11 Frost does not occur here.

xi) Wind:

2.2.12 The damage is significant. On an average 1/10 of the yield of timber and firewood is contributed annually from wind fall material. Isolated trees get uprooted while large scale uprooting occurs in some pockets. teak is a shallow, rooted species and is unable to sustain wind pressure

xii) Drought:

2.2.13 It is common. It destroys young regeneration, especially teak seedlings which have a long growing season and need moisture to survive and grow. Much of the drought is physiological drought as rainfall is rarely tapped.

SECTION 2.3 : SOIL EROSION

2.3.1 It is sheet erosion and very common all over the areas. Gully erosion is common in hills. Erosion on banks of water courses is commonly seen. Sedimentary rocks get eroded easily.

CHAPTER – 2B

FOREST FAUNA

SECTION 2.1 : DISTRIBUTION OF WILDLIFE

2.1.1 In Chandrapur District large areas are covered with forest which form undisturbed tracts with a very sparse population, mostly of aboriginals. Naturally this forest with the luxurious vegetation are a favourable haunt of a large variety of wild animals. However, the wildlife habitat is being sacrificed in the name of expanding coal industry and also due to illegal encroachments for agriculture by the neighbouring villagers which adversely affects the propagation of wild animals in the non protected areas. Some times the villagers also kill the wild animals in order to protect their agricultural crops and /domestic cattle. The area dealt in this working plan (Buffer division & Non-Buffer division) is rich in wildlife with resident tiger populations and has a recurring human tiger interface problems.

2.1.2 Tadoba – Andhari Tiger Reserve (TATR), constituted as Tiger Project on 23rd February,1995 with Critical Tiger Habitat or Core notified on 27th December,2007 is a good tiger source area and is connected to the Indravati, Pench, Kanha Tiger Reserves as well as to the South Indian tiger landscape through the forests of Chandrapur (Non-Buffer) and Buffer Forest Divisions. Hence, for tiger conservation it is important to effectively manage the TATR tiger landscape. The habitat of Tadoba is highly productive in the context of tiger and due to a high turnover there is movement of tigers to outer areas, with several “sink population”, thriving in the adjoining forest areas of Chandrapur and Brahmapuri making the area highly sensitive in term of its vulnerability to poachers as well. Therefore, it is important to provide ecologically viable sustainable livelihood options to local people and fostering district level welfare schemes in the buffer area besides day to day

monitoring of tiger and addressing the human-tiger conflicts. There is also considerable Tourism pressure with a scope for involving the local people in the process.

2.1.3 The Forest have rich habitat to support wildlife and therefore, management of wildlife in this tract assumes significance. There are regular cases of conflict because of death/injuries due to wild animal attacks on human and also domestic livestock. Similarly, in certain areas, crop depredation due to Wild boar and Nilgai (Blue bull) is also a serious emerging problem. Therefore, mitigating man-animal conflicts is very crucial for management of wildlife in these tracts.

2.1.4 All India Tiger Estimation, 2010 conducted by the Wildlife Institute of India indicated presence of 69 (range) tigers in 2600 sq.km. of Tadoba landscape in Chandrapur district. It shows substantial rise over the previous estimation. Based on encounter rate of prey animals on transect during the same estimation process, there is abundance of herbivore species in Buffer area. The population estimates of wildlife in Buffer Forest Division as per Phase IV monitoring carried out in the year 2011-12 are as follows.

Sr.No.	Wild Animal	Numbers
1	Tiger	20
2	Leopard	19
3	Barking Deer	87
4	Chital	515
5	Sambar	113
6	Nilgai	214
7	Gaur	247
8	Langoor	984
9	Sloth Bear	85
10	Wild dog	78
11	Jackal	14
12	Wild boar	688
13	Porcupine	5
14	Jungle cat	30
15	Chausinga	2
16	Mongoose	25
17	Peacock	267
18	Hare	25

The Tiger bearing area as per Phase IV monitoring is given in the Section 15.1.1.

2.1.5 In the Buffer zone, as well as in the Chandrapur Non-Buffer area, census of wild animals are not carried out except the census of Tiger and Leopard being carried out every 4 year, so exact wild animal population figures are not available for these areas. Man-animal conflicts show increase in wild animal population in these areas. The following categories of animals are generally noticed to occur.

A. Carnivora :

Tiger (*Panthera tigris*), Panther or leopard (*Panthera pardus*), Jungle cat (*Felis Chaus*), Striped Hyena (*Hyena hyen(v)*), Jackal (*Canis aureus*), Fox (*Vulpes banghalensis*), Sloth bear (*Melursus ursinus*), Wild dogs (*Cuon alpinus*).

B. Herbivora :

The following are the herbivorous animals which inhabit these forests.

Flying squirrels (*Petromys fimbriatus*), Three striped palm squirrel (*Funambulus palmarum*), Spotted deer (*Axis axis*), Mouse deer (*Moschiola Memira*), Sambar (*Cervus unicolor*), Muntjac or barking deer (*Muntiacus muntjak*), Blue bul (*Bosephalus tragocamelus*), Indian wild boar (*Sus scrofa*), Common mongoose (*Herpestes edwardsi*), Pangolin (*Manis crassicaudata*), Indian porcupine (*Hystrix Indica*), Indian hare (*Lepus nigricauillis*), Common langur (*Presbytis entellus*), Indian ratel (*Mellivora capensis*), Bison (*Bibos gaurus*).

C. Snakes :

The ancient rulers of Chandrapur district were Gond Rajas and they worshiped the snakes particularly Cobra as they considered it the image of Mahadeo. The snakes are commonly seen in the forest and villages and also near the human habitats.

(a) Non poisonous snakes

- i) Typhleps sp.
- ii) Eryx conimo (Dutondyaon Malvan)
- iii) Eryx john (Sandlora)
- iv) Lycodon
- v) Oligodon
- vi) Python (Ajgar)
- vii) Ptyas mueosus (Dhaman)
- viii) Natrrix piseata
- ix) Natrrix staleta
- x) Dryophis nasutus (Harantal or Yelhi or sarpatol)

(b) Poisonous snakes

- i) Naja naja (Cobra)
- ii) Bungarus calrulens (Dandekar or Manyar)
- iii) Bangarus fasciatus (Ahirj)
- iv) Vipera russella (Ghonas)
- v) Echis carinatus (Dhul nagin)
- vi) Trimeresurus granimous (Leaf green snake)

D. Avifauna :

The presence of big water bodies like Erai dam, Chandai project, Chargaon, Moharli, Junona, Naleshwar tanks are the main visiting places for these winter visitors. The prominent visitors are coots, teals, pintails, bar headed geese, demoiselle cranes, pochards, mallards, widgeons, gadwal, shoveller are the regular visitors. Sarus cranes are reported in Junona tank area near Chandrapur. Besides these winter visitors there are variety of resident birds in wide range. Prominent among them are Peafowls partridges, jungli murgi or grey jungle fowl , spur fowl quails, green pigeon, tits, babblers, bulbuls, robins, flycatchers, shrikes, drongos, warblers, mynas, weaver birds, munias, buntings, wagtails, woodpecker, cuckoos, parakeets, bee-eaters, kingfishers, owls, vultures, egrets etc.

SECTION 2.2 : PAST MANAGEMENT OF WILDLIFE AND ITS RESULTS :

2.2.1 Before the forests were reserved in 1878 the local population indulged in unrestricted hunting over extensive areas. Attempts to regulate shooting in these forests were made as early as 1905. Special permits were issued from time to time for the hunting of carnivora. The forests were divided into regular shooting blocks in 1907. The Wild Bird and Animals Protection Act of 1912 was amended in 1935 and was applied to these areas. Formation of shooting blocks and limitation of the number of wild animal to be shot in each block resulted in some control over indiscriminate destruction of wildlife. Indian forest Act, 1927 provided for unlicensed shooting punishable. The Wildlife (Protection) Act, 1972 provided further protection to the wild animals and amendments to this Act from time to time totally banned the shooting of wild animals.

The first working plan was prepared by Shri F.J.Langome for Moharli Range and for Warora Range by Shri Poonaswami in 1897-98. Working plan for whole erstwhile North Chanda Division was prepared by Shri S.A.Wahid for period 1927 to 1937. Further these forests were worked under the working plan of Shri C.E.Hewton between 1936-37 to 1945-46, Shri Singh and Shri Majumdar between 1949-50 to 1963-64 and Shri Kartarsingh between 1977-78 to 1991-92. In all the working plans more emphasis was given on commercial aspect of silviculture and no special prescription for wildlife management were given.

2.2.2 Protection of Wildlife :

Besides the legal provisions under Wildlife (Protection) Act,1972, measures like timely payment of compensation as per the provisions for loss of livestock, injury and loss of lives have helped in protecting the wildlife. Due to awareness in public and grass root level forest staff about the importance of tiger and consequence of poaching, the protection of tiger has improved in last few years.

2.2.3 Human wildlife conflicts :

The human wildlife conflicts are at its top. The crop raiding by Wild Boars, Nilgai are common in all villages. The cattle killing by Tigers and Leopard is increasing, due to increased numbers of cattle and unabated grazing in all parts of forest area. The cases of Man-Animal conflict in Chandrapur Forest Division are given in statement below.

Year	No.of cattle killed	No.of cases	Compen-sation paid (Rs.in lac)	No.of persons			Compen-sation paid (Rs.in lac)
				Death	Injury	Total	
2003-04	414	414	10.89	1	17	18	6.15
2004-05	276	276	8.92	5	17	22	16.01
2005-06	440	440	14.49	3	14	17	8.62
2006-07	457	457	18.42	3	11	14	11.06
2007-08	429	429	17.42	7	19	26	22.55
2008-09	709	709	30.03	6	74	80	23.53
2009-10	348	348	11.21	7	49	56	24.45
2010-11	606	606	33.57	6	82	88	28.32
2011-12	481	481	28.98	0	27	27	7.33
2012-13	600	600	40.98	1	34	35	11.96
2013-14	507	507	41.32	3	6	9	18.13

SECTION 2.3 : INJURIES TO WILDLIFE :

2.3.1 The following agents are mainly responsible for the destruction of wildlife in these areas.:

2.3.2 **POACHING/SHIKAR** : Poaching and shikar by tribals though not recorded but this is the most important reasons for destruction and depletion of the wild animals in this area. The local tribal, particularly Madia is highly fond of meat and shikar. They go for shikar resulting into the fact that not even a monkey is seen in most part of this tract. Besides, in the past some poachers from outside the tract have also damaged the wild animals to a great extent.

2.3.3 FIRE : The forest fire is very frequent. Some areas might be exception to it but the remote areas, which are the ideal habitat, burns annually. The forest fire damages the natural habitat and drives animals towards human habitation to take shelter and thereby they become easy prey to poachers and local villagers.

2.3.4 WATER : Most of the streams, except a few big rivers, become dry during summer. Therefore, animals had to visit only a few waterholes. This fact makes the villagers and poachers easy to kill the wild animals

2.3.5 ENCROACHMENT : The encroachment of forest land upto 13th December, 2006 are in the process of regularization under Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006. The field staff should be vigilant to prevent further new encroachment on forest lands as encroachments result in fragmentation of habitat.

2.3.6 GRAZING : There is rise in cattle population and forests are getting degraded. The grazing pressure has increased manifold in last few years. The heavy grazing in forest area takes away the available fodder for wild herbivores and also spread diseases in wild animals beside affecting the habitat adversely.

2.3.7 ROAD ACCIDENTS : Major district roads pass through important forest areas and there are a few cases of death of wild animals due to speeding vehicles.

2.3.8 DEATH OF ANIMALS DUE TO FALLING IN WELLS/ CANALS : There are cases of wild animals falling in wells (without parapet walls) and irrigation canals.

SECTION 2.4 : GENERAL MEASURES SUGGESTED FOR THE PROTECTION CONSERVATION AND DEVELOPMENT OF WILDLIFE.

2.4.1 The general measures suggested are as follows.

- i) The area should be strictly and effectively protected from fire.
- ii) To keep vigilant watch on poachers/villagers.
- iii) Water pools, which provide water to wild animals during summer, should be kept under constant watch.
- iv) Informers should be promptly rewarded
- v) Salt licks should be developed.
- vi) Shelter and hiding places should be developed at the required places.
- vii) Construction of bunds, anicuts, forest tanks etc. on nalas at suitable places should be carried out for providing permanent water holes to the wild animals.

CHAPTER 3

UTILIZATION OF THE FOREST PRODUCE

SECTION 3.1 : AGRICULTURAL CUSTOMS AND NEEDS OF THE PEOPLE :

3.1.1 The Chandrapur Forest Division comprises of areas spread over Chandrapur, Mul, Bhadravati, Warora talukas of the districts. It is inhabited by Gond, Madia, Harijan, New Buddhist, Komti, Dhiwar, Madgi, Muslim, Chamar, Bengali who have settled in the villages also.

3.1.2 Important agricultural crops in this area are paddy, jowar, cotton, toor and soyabean. Adiwasis like Marias and Gonds practice cultivation of primitive type. Paddy is the main crop and once it is harvested, the fields are left fallow for the remaining period of the year. During non-agricultural season, they depend mainly on forest labour. Their living condition in recent years has improved substantially, though more efforts are needed to improve their socio-economic status. Electrification of all villages has been undertaken. In some villages people go for lift irrigation. Department of Agriculture has introduced some improved methods of cultivation, use of better quality seeds, manure etc. In this area, most of the people live in the thatched roof-huts built from stout posts of ain, garari or miscellaneous species and plastered with mud and cowdung.

3.1.3 Population : The total population of the Chandrapur Districts as per 2011 census is 2194262 spread over an area of 11443 Sq.Km. and distributed in fifteen talukas. The rural population is 1424000 (64.9%) and the urban population is 769000 (35.05%). The scheduled caste population is 14.34% and scheduled tribe population is 18.12%. As per 2001 census 44.94% of the population is labour, out of this 22.30% are agriculturalist, 20.48% are agricultural labourers, 1.59% are small artisans and 29.06% are engaged in other activities.

3.1.4 The Chandrapur district is having an area of 11443 Sq.km. and out of this 3519 Sq.km. area covered under forest i.e. 37.37% area of the district is covered under forest. The total number of villages 1791 and out of this 319 are deserted villages.

3.1.5 The irrigation facilities in the district need to be improved by taking up small to medium irrigation tanks. According to 2005-06 figures, 31.57% of the land under cultivation is irrigated and out of this 64.95% of the land is under Rice cultivation, 25.25% of land is irrigated through canals and 3.49% through wells.

3.1.6 As per the 2007 live stock census the live stock population of district is 1030423 out of this 55.02% are cows and bullocks, 8.74% are buffalos, sheep and goats 33.46% and others 4.51%. The population density of live stock is 83.94 per Sq.km.

3.1.7 The majority of the population of the district resides in rural areas which consists chiefly of agriculturalist and agricultural labourers, Most of the agriculturalist are small and marginal farmers. The forest play an important role in their daily lives for meeting their daily requirement of fire wood, fodder, building materials and other saleable minor forest produce.

3.1.8 The main requirements for which the people depend on the forest are as under.

i) Small timber : Poles of ain, dhaora, garari, dhaman, tendu, shiwan etc. are extensively used for construction of huts and agricultural implements.

ii) Fire wood : The demand for firewood is considerable, as it is used for providing light as well as warmth in the hut. Firewood is essential for cooking purpose. Fire is kept burning in and around the hut throughout the night, as a practice to keep the hut warm and keep away the wild animals.

iii) Bamboos : These are used for preparation of mats, baskets and construction of huts.

iv) Thatching grass : This is commonly used for thatching the roofs of the huts.

v) Grazing : Cattle from the village resort to daily grazing in the adjoining forest. Grazing incidence is light in eastern part which is thinly populated. Incidence is moderately heavy in the forest bordering the thickly populated villages.

vi) Fruits, flowers and leaves : Majority of the inhabitant being poor, resort to collection of mahua flowers and fruits of tendu, khirni and char for their bonafide consumption. Palas and Mahua leaves are used for preparation of patrawalies (leaf plates) and drona (Cups) either for bonafide use during their religious and customary functions or for sale to earn their livelihood.

vii) Fibres : Palas roots are dug and cured to obtain fibre for making ropes. Twining climbers and their bark are also put to similar use.

viii) Other Products : Edible tubers and roots are obtained by adiwasis for consumption. Tendu leaves are used for preparing chutta or bidi for local use.

SECTION 3.2 : MARKET AND MARKETABLE PRODUCE:

3.2.1 Local people utilize most of the forest produce to meet their domestic needs. The main consumption of the timber is in Chandrapur from where it is distributed elsewhere in the state. Most of the minor forest produce is consumed locally.

3.2.2 Marketable produces : Teak is the main timber in demand along with ain, kalam, salai, babul, behada, dhaora, bija. The other marketable produces are bamboo, tendu leaves and fruits, honey, gum, ber, mahua flowers and fruits, aonla, char, bel, and leaves for fodder

such as anjan. The forest department has established depot at Chichpalli, Chandrapur and Agarzari. The average lead from forests to this depot is about 20 to 30 km. There are some small occupation/industries in the villages and townships which depend on the forests. The important ones being the veneer and plywood factory, small furniture industries, and sawmills. Burads are also involved in making baskets, mats and other articles from bamboo. The list of sawmills present in the Chandrapur (Non-Buffer) division is given in **Appendix No.XX** of volume II.

3.2.3 i) Timber : Timber is utilized for construction, furniture and agriculture implements. Teak is the most valuable and preferred timber for building purposes, but due to its prohibitive cost or non-availability in sufficient quantity, other species such as bija, ain, tiwas, dhaora, bhirra, lendia, haldu, kalam and bamboo are generally used. The details of timber auctioned and revenue realized are given in the following table.

TABLE

Details of timber auctioned and revenue collected.

Sr.No.	Year	Timber (M³)	Revenue (Rs. in lac)
1	2003-04	380.260	20.91
2	2004-05	1773.660	94.62
3	2005-06	2040.196	112.82
4	2006-07	1223.320	72.08
5	2007-08	1546.610	88.36
6	2008-09	786.020	44.57
7	2009-10	3635.037	191.68
8	2010-11	3320.622	776.93

Sr.No.	Year	Timber (M³)	Revenue (Rs. in lac)
9	2011-12	631.646	126.33
10	2012-13	271.488	38.01
11	2013-14	266.589	35.81

ii) Fuel wood : With the availability of LPG gas, many people have started using it, but still fuel wood is the main cooking fuel for most of the villagers and small towns. As the demand exceeds supply, illicit lopping of the trees and carrying of head loads of lopped branches is frequently noticed. The information of fuel wood sold is given in the table below.

TABLE

Fuel wood auctioned and revenue collected

Sr.No.	Year	Timber (M³)	Revenue (Rs.in lac)
1	2003-04	3515.445	4.04
2	2004-05	7106.226	8.17
3	2005-06	7508.675	8.63
4	2006-07	7367.333	11.05
5	2007-08	5043.740	7.57
6	2008-09	8343.632	12.52
7	2009-10	9308.250	111.23
8	2010-11	8279.660	165.59
9	2011-12	1960.250	58.81
10	2012-13	830.750	24.92
11	2013-14	3334.500	101.52

3.2.4 Non-timber forest Produce : The following are the important non-timber forest produce.

1) **Bamboo** : Bamboo (*Dendrocalamus strictus*) is the major species of bamboo found here and harvested. It is scattered throughout the division. The bamboos are used by the burads for making mats, baskets and boxes. The bamboos are also utilized by the local people for fencing the agricultural field and kitchen garden. The bamboo are also supplied to Ballarpur Paper Mills on commercial terms. The quantity of bamboo extracted and revenue realised is given in the table below.

TABLE
Bamboo Extracted & revenue realised

Year	Forest produce	Quantity (Qtl.)	Amount (Rs.in lac)
2003-04	Long Bamboo	} 258987	6.85
	Bamboo Bundles		
2004-05	Long Bamboo	} 437873	11.80
	Bamboo Bundles		
2005-06	Long Bamboo	} 433178	11.56
	Bamboo Bundles		
2006-07	Long Bamboo	67933	6.68
	Bamboo Bundles	63843	4.15
2007-08	Long Bamboo	118631	4.16
	Bamboo Bundles	18410	2.15
2008-09	Long Bamboo	120134	6.07
	Bamboo Bundles	9930	3.70
2009-10	Long Bamboo	117105	12.47
	Bamboo Bundles	629299	71.05
2010-11	Long Bamboo	175117	49.63
	Bamboo Bundles	712287	268.30
2011-12	Long Bamboo	50400	5.04
	Bamboo Bundles	954714	15.74
2012-13	Long Bamboo	44085	5.29
	Bamboo Bundles	81954	14.75
2013-14	Long Bamboo	77245	10.95
	Bamboo Bundles	8289	2.98

Katang bamboo (*Bambusa arundinacea*) is also present in some pockets mostly along nala beds but the quantity obtained is very less and therefore has no appreciable commercial value.

2) **Tendu Leaves** : There is a large demand for tendu leaves for bidi manufacturer. The figures for sale of tendu units during the last ten years is given in the table below.

TABLE

Tendu leaves Std. Bags extracted & Revenue realised

Year	Forest Produce	Quantity No. of std. Bags	Revenue realised (Rs.in lac)
2003-04	Tendu leaves	40600	357.17
2004-05	-do-	34700	194.41
2005-06	-do-	35000	177.10
2006-07	-do-	33400	192.06
2007-08	-do-	34600	436.11
2008-09	-do-	34600	282.58
2009-10	-do-	34600	322.85
2010-11	-do-	34800	423.93
2011-12	-do-	34800	358.62
2012-13	-do-	33600	468.75
2013-14	-do-	20000	126.74

3) **Grasses** : The grasses are the indispensable association of any dry deciduous species. The area has plenty of grasses and fodder species. They are used mostly by the local villagers either for feeding cattle or thatching. Marvel (*Dichanthium annulatum*), Paona, (*Schima asculatum*), kunda (*Ischaenum pilosum*), Mushan (*Iseilema laxum*) are used as fodder. Kusal (*Heteropogon contortus*), Ghondad (*Themeda*

ciliata) are used for thatching. Information with respect to the quantity of grass extracted and revenue realized during last ten years was not available in the division office.

Seeing the importance and necessity of Fodder grasses the planting of such species is recommended. Strains of grass particularly leguminous grasses which have high nutritive value are suitable for planting under different soils and climatic conditions and should be preferred for planting.

4) Moha flower and seeds : There are plenty of Moha trees in the Chandrapur division. The moha flowers are used for making wine and if crushed, it is used as flour by the tribals during the period of scarcity. The seeds are used for extracting oil. The flowers are collected in the month of March-April and seeds in the month of June and July. The oil extracted from moha is used in soap industry. The quantity extracted and Revenue realised during last ten years is given in the table below.

TABLE

Moha flowers & fruits extracted & revenue realised

Year	Forest produce	Quantity (in Qtl)	Amount in Rs.	Forest produce	Quantity (in Qtl)	Amount in Rs.
2003-04	Moha flowers	253.85	154581	Moha seeds	N.A.	N.A.
2004-05	-do-	203.41	132585	-do-	N.A.	N.A.
2005-06	-do-	334.39	477792	-do-	N.A.	N.A.
2006-07	-do-	N.A.	N.A.	-do-	N.A.	N.A.
2007-08	-do-	1700.71	850355	-do-	N.A.	N.A.
2008-09	-do-	N.A.	N.A.	-do-	N.A.	N.A.
2009-10	-do-	N.A.	N.A.	-do-	N.A.	N.A.
2010-11	-do-	222.74	253834	-do-	N.A.	N.A.
2011-12	-do-	N.A.	N.A.	-do-	N.A.	N.A.
2012-13	-do-	N.A.	N.A.	-do-	N.A.	N.A.

5) Gum : The division as a whole is a unit where it is sold by public auction. The gum of various species is now a days is used for

various purposes- kulu (*sterculia urens*) is of commercial importance while dhaora (*Anogeissus latifolia*), is of medicinal importance. The tapping technique used by the labourers is not destructive. The quantity extracted and revenue realised during last ten years is shown in the table below.

TABLE

Gum extracted & revenue realised

Year	Forest Produce	Quantity (Qtl.)	Amount (Rs.)
2003-04	Gum	25.0	20250
2004-05	-do-	1.60	20250
2005-06	-do-	17.50	20400
2006-07	-do-	N.A.	N.A.
2007-08	-do-	16.80	25000
2008-09	-do-	20.75	30266
2009-10	-do-	N.A.	60000
2010-11	-do-	N.A.	N.A.
2011-12	-do-	N.A.	N.A.
2012-13	-do-	N.A.	N.A.

6) **Other forest produce** : Charoli, Honey, wax, edible fruits, roots, bark, leaves of mahua, fencing material etc. are the other produces derived and obtained from forest.

SECTION 3.3 : LINES OF EXPORT :

3.3.1 The entire area is well connected by the state highways and good road network and railway tract.

Railways : Chandrapur – Nagpur, Chandrapur – Gondia, Chandrapur – Kazipeth.

Roads : State Highways : Nagpur – Chandrapur Road

Major District Road : Warora – Chimur Road, Chandrapur
– Rajura- Asifabad, Chandrapur – Mul – Gadchiroli,
Chandrapur - Rajura- Adilabad.

Other District Roads : Chandrapur-Tadoba, Chandrapur-
Ballarpur- Allapalli

The roads are maintained by P.W.D. Forest Department is also maintaining the roads. All these roads and rail lines have important role in transportation of Forest material to the main market centers. **Appendix No.VI** shows the list of existing roads in Chandrapur (Non-Buffer) Forest Division.

SECTION 3.4 : METHOD OF HARVESTING AND THEIR COST :

3.4.1 Departmental harvesting is carried out in case of timber and firewood . Felling, logging, stacking and other works are done by department. Harvesting of Non-timber Forest Produce (NTFP) is done either through Forest or Tribal Department or agencies of contractors as the case may be.

3.4.2 METHODS OF FELLING AND EXTRACTION:

- (I)** Usually marking is completed upto the end of previous year and the felling starts after end of rainy season. Timber and pole are felled first. Cutting of trees and conversion into timber and poles is done by saw. Firewood is prepared with saw and axe. Dragging or carting of timber, poles and firewood upto jungle depot is done by bullock carts and tractors. Transport of the timber and pole from jungle depots to sale depots is done by Govt. haulage.
- (II)** Firewood is cut into billets and stacked in the coupe itself in the form of beats of size 2.0 m x 1.20 x 1.0 m It is stacked in the sale depot in appropriate lines of 1 m height and is recorded in terms

of number of beats. Thick billets are stacked separately and sold as chalk timber.

- (III) The trees are marked as timber or fuel depending upon the capability of producing timber, pole or firewood. The estimates of volume for timber and firewood are prepared by using local form factors.
- (IV) After felling and conversion into logs and poles, measurements are taken and are embossed at the butt end of the logs, with digit nails, along with the tree numbers and number of log. Besides, the marking of passing hammer is also made. Poles are classified into girth classes and their average volume is taken.
- (V) After arrival of the logs in the sale depot, they are given serial number and measured again. The difference between measurements at the jungle depot and at the sale depot are reconciled.
- (VI) All the logging operations are done by engaging local labourers in the departmental working and by the member of the FLCS in case of coupes worked by FLCS. Most of the items of work are done by job rates. The wage rates for various forestry operations are sanctioned every year by the Circle Wage Board Committee headed by the Chief Conservator of Forests, Chandrapur. The detail is given in **Appendix No.LXXXI** of volume II.

3.4.3 Tendu leaf trade is nationalized since 1969. Now the leaves are rarely collected departmentally and auctioned. There are separate rules for sale of tendu leaves. Tendu leave trade in the state is now regulated as provided under the Maharashtra Forest produce (Regulation of Trade) Act, 1969 and/or Maharashtra Forest Produce (Regulation of Trade in Tendu leaves) Rules 1969 and as per detailed notifications issued by Govt. of Maharashtra every year inviting offers for permission to collect and remove Tendu Leaves from the notified Tendu units by the appointed licensees. Tendu leaves are collected and tied into a puda or bundle each containing 70 leaves. These are then brought to the Phadi and handed over to the Phadi munshi. He, in turn pays the wages, as per rates approved by the Government from time to

time, for 100 numbers of Pudas are then arranged into lines for drying and then recorded, bagged and transported to the godown with valid permit. The list of tendu units present in the Chandrapur (Non-Buffer) division is given in **Appendix No.XXII**. The details of tendu auction and the revenue realized is given in the table below.

Table
Details of Tendu auction

Sr. No.	Year	No. of Unit auctioned	Standard Bags Collected	Revenue Earned (Rs.in lac)	Amount of Bonus Distributed to the tendu leaves collector	
					No. of beneficiary	Amount (Rs.in lac)
1	2003-04	17	39356.080	357.17	---	---
2	2004-05	17	34935.983	194.41	---	---
3	2005-06	17	28210.440	177.10	---	---
4	2006-07	17	27116.142	192.06	16845	118.52
5	2007-08	17	33915.620	436.11	17853	385.67
6	2008-09	17	34897.320	282.58	18904	227.71
7	2009-10	17	33261.900	322.85	21048	267.99
8	2010-11	17	26636.710	423.93	15936	360.21
9	2011-12	19	31632.120	358.62	15878	304.07
10	2012-13	19	32854.734	468.75	17718	416.11
11	2013-14	20	15591.870	126.74	13386	89.06

SECTION 3.5 : PAST AND CURRENT PRICES :

3.5.1 For all kinds of forest produce, there is a great demand. Wide gap between supply and demand results into keen competition amongst the purchasers. All the timber species are in good demand and their rates are increasing day by day, same is the case with charcoal and other forest products.

3.5.2 The revenue realised from timber during last ten years is given in the table below.

TABLE

Sr.No.	Year	Quantity (M³) Teak	Value (Rs.in lac)	Quantity (M³) Non teak	Value (Rs. in lac)
1	3	4	5	6	7
1	2003-04	69.510	11.66	277.950	14.17
2	2004-05	246.850	45.11	1482.500	52.05
3	2005-06	88.413	18.70	1889.100	71.16
4	2006-07	109.186	14.88	111.434	51.90
5	2007-08	162.275	22.82	1384.335	74.07
6	2008-09	17.317	4.73	681.107	58.59
7	2009-10	594.08	80.10	2854.06	212.74
8	2010-11	189.423	23.87	3115.179	37.38
9	2011-12	0	0	756.635	98.36
10	2012-13	13.924	3.41	257.564	33.79
11	2013-14	3.141	0.45	263.448	35.36

CHAPTER – 4

IMPACT OF ACTIVITIES OF FDCM LTD.

4.1.1 Forest Development Corporation of Maharashtra Ltd. (an undertaking of Maharashtra State) is having headquarter at Nagpur. It was initially constituted as Forest Development Board in 1969. Subsequently it was converted into Forest Development Corporation of Maharashtra Ltd. in 1974. The FDCM was constituted with a view to converting and developing the understocked and good quality forest area into productive forests by introducing valuable and production enhancing species. It follows the management plans for managing the forest areas.

**4.1.2 WEST CHANDA FOREST PROJECT DIVISION,
CHANDRAPUR :**

West Chanda Forest Development Board was constituted in 1969-70 and later in November, 1974 it was converted into West Chanda Forest Project Division, FDCM Ltd., with its headquarter at Chandrapur. Initially the West Chanda Forest Division was allotted 71 compartments with a total area of 20867.780 ha. vide GR No.FDC/107464746/F-5, dated 26/6/1978 for carrying out plantations. Later vide GR No.FDC/1094/C.N.578/F-5, dated 23/9/1987, 35 more compartments with an area of 37,039 ha. was added to the division. Out of the total area of the Project, 550 ha. area to TATR and 1 ha. area to the territorial forest division was given back. Thus total area left with West Chanda Project Division was 36,488 ha. comprising of 106 compartments, out of which an area of 12550.85 ha. was notified as buffer zone vide Government of Maharashtra Notification Revenue and Forest Department No.WLP.1009/C.R.229/F-1, Mumbai dated 5th May,2010 and later on handed over to TATR vide GR No.FDC-2013/C.N.63/F5, dated 13.6.2014. Thus presently total area left with the West Chanda Forest Project

Division is 23937.15 ha., covering 75 compartments. Range wise distribution of forest area under West Chanda Forest Project Division is given as below.

Sr.No.	Range	No.of Rounds	No.of Beats	No.of Comptt.	Total Area in ha.
1.	Junona	4	8	32	8634.68
2.	Mamla	3	4	17	4214.88
3.	Chichpalli	3	5	16	7202.74
4.	Khadsangi	3	4	10	3884.85
	Total :-	13	21	75	23937.15

4.1.3 To manage entire area on scientific lines a separate Management Plan written by Smt. Nina Khandekar, for the period 2006-07 to 2015-16 is under implementation. The Management Plan is a scientific document prepared on the basis of existing forest policies, various Acts, guidelines of Government and directions of the apex court from time to time. Following working circles have been formed for the treatment of forests.

- (i) Overwood Removal W.C.
- (ii) Teak Plantation Management W.C.
- (iii) Improvement W.C.
- (iv) Afforestation W.C.
- (v) Bamboo (Overlapping) W.C.
- (vi) Wildlife Management (Overlapping) W.C.

4.1.4 In overwood removal working circle the silvicultural system adopted is removal of overwood followed by raising plantations of genetically superior stock of teak. The thinning is prescribed in Teak Plantation Management Working Circle. The West Chanda Forest Project Division has taken up teak plantations on 6963.50 ha. of forest

area after clear felling it during the period from 1970 to 1987. Under Overwood Removal System the division has raised teak plantations on 1457.499 ha. area during the period from 2002 to 2014. Under the system of overwood removal followed by planting teak, the activities have been successfully carried out by the West Chanda Project Division and very good teak plantations are raised apart from generating revenue from harvesting and disposal of timber. As far as employment is concerned in the areas of FDCM, lot of employment is generated due to activities under overwood removal followed by teak plantations, thinning in old plantations and bamboo extraction works. The forest area of FDCM division is contiguous with the core area of the TATR and therefore is an asset for the dispersing wildlife population of the core of TATR. Resident tiger population has also been reported from this forest area of West Chanda Project Division. The various forestry activities and planting activity carried out by FDCM create a wildlife niche by fostering young successional stages and stand conditions. This attracts wild ungulates which prefers such edges eventually luring large carnivores like tiger. Therefore, from wildlife management point of view, it is important to stagger the areas before taking up planting activity and atleast a minimum distance of 200 m. should be maintained between two planting areas.

CHAPTER – 5

IMPACT OF FIVE YEAR PLANS

SECTION 5.1 : FOREST RESOURCES

5.1.1 India is one of the 12 mega diversity countries, commanding 7% of the world's biodiversity and supporting 16% of the major forest types, varying from tropical semi evergreen forest on western coast; to desert and thorn forests in Gujarat and Rajasthan; mangroove forest in West Bengal, Orissa, Maharashtra and other coastal areas and dry alpine forest in the western Himalayas. India has 45,000 identified plant species, including 15,000 flowering plants of which 5154 being endemic and 81,000 species of fauna. Though India has only 2.5% of the land mass and less than 2% of the world's forest area, but it support more than 7% of the varieties of flora and fauna. But nearly half of the area is affected by the problems of soil degradation and erosion. Nearly 79 million ha.of the country's land have been recorded as forests, including total forest and tree cover which is 24.01% of the geographical area of the country and is much less than the goal of 33% set forth by National Forest Policy. India has more than 16% of the world's population (125 crores by 2050) and 18% of the cattle population (45 crores) in the world. This is putting great pressure on the natural resources leading to the degradation of the forests.

5.1.2 It has been observed that the country's achievement in raising forestry plantations, in terms of area, has been impressive. Upto 1998, the total area under tree plantations was 2.838 crores ha., of which about 1.7 crores ha.were planted before 1990 decade. The current annual rate of plantation is about 0.12 crores ha. According to the Report of F.S.I., 2013, the total forest cover of the country is about 69.79 million ha.or 21.23% of the total geographical area of India, with very dense forest consisting only 2.54%, moderately dense forest accounting for 9.70% and open forest constituting 8.99%. Funding to the tune of Rs.6695

crores per year will be required in order to achieve one third forest cover, within next 20 years, whereas, Rs.1600 crores per year is available from both central and state budget, together to be allocated for afforestation. In 1993, the Government of India decided to start a new strategic planning process following the National Forestry Action Programme (NFAP) concept. The basic purpose of the NFAP is to establish direct linkages between National Forest Policy 1988 and the National Five Year Plans (FYPs). In the past, there was no comprehensive and constant programme structure for forestry. Every FYP has had its own programme structure, so it was difficult to get linkages and establish trends. Although plans had specific objectives and programmes, the main activity under most of them was tree planting. The brief account of the management during the past FYPs is given below.

5.1.3 FIRST FIVE YEAR PLAN (1951-56) :

During this period the forest was managed as per the Working Plan of Singh and Majumdar. The impact of the first Five Year Plan was not noticeable, as the flow of funds was never made available for requisite achievement of management prescribed in the Working Plan. The percentage share of forestry sector during this plan was 0.32 percent of the total outlay.

5.1.4 SECOND FIVE YEAR PLAN (1957-60) :

The second five year plan also emphasized rehabilitation of degraded forests, introduction of economic species, survey and forest demarcation. During this period the forest was managed as per the working plan of Singh and Majumdar. During this period systematic management of Forests was introduced. Silvicultural operation were given importance in forest management.

5.1.5 THIRD FIVE YEAR PLAN (1961-66) :

During this period also Singh and Majumdar's Plan was under implementation. Third five year plan emphasized on increasing

productivity of forest by taking up plantation of fast growing species and modern logging system. Scientific assessment, modern logging methods were adopted for extraction of timber. Plan funds were not allotted to any operation of forest management. The plantations were raised during this period under non-plan funds.

5.1.6 ANNUAL PLAN (1966 TO 1969) :

Singh and Majumdar's Plan was under implementation during this period. There was severe drought conditions and the local people were reeling under poverty as agricultural crops had completely failed, resulted in lack of employment to agricultural labourers. The main thrust of the Government was to provide work and civil amenities to people. Efforts were made to provide employment to the people in forestry operations.

5.1.7 FOURTH FIVE YEAR PLAN (1969 - 1974) :

Singh and Majumdar's plan was under implementation during this period. This five year plan aimed at increasing productivity of forests by introducing fast growing species in plantations, assessment of forests on scientific lines and modernising logging operations. During this period the administration of forest villages was brought under Revenue Department. New approach in forestry sector emerged to divert revenue for the development of forests. Forest Development Board was formed in 1969 and it was converted into Forest Development Corporation of Maharashtra Ltd in 1974. Many successful plantations were raised during this period and no direct funding was made available from the plan components.

5.1.8 FIFTH FIVE YEAR PLAN (1974 - 1979) :

Singh and Majumdar's plan continued in this plan period also. The forestry sector in this five year plan aimed at large scale plantations, social forestry and forest conservation. The State Government introduced Employment Guarantee Scheme (EGS) to provide employment to local people.

5.1.9 ANNUAL PLAN (1979 – 1980) AND SIXTH FIVE YEAR PLAN (1980-1985) :

Kartar Singh's plan was under implementation during this period. The decision for regularising encroachments on forest land from 1/4/1972 to 31/3/1978 was taken during this period. This decision has aggravated the problem of encroachment and many people resorted to encroachment keeping in mind that these encroachments would be regularised in future. Forest (Conservation) Act 1980 was enacted. Social Forestry wing was established during this period.

5.1.10 SEVENTH FIVE YEAR PLAN (1985-1990) :

During this period, Kartar Singh's Working Plan was under implementation. Massive afforestation was taken up under EGS and other plantations were taken up under district plan schemes. The infrastructural facilities like communication, transportation, buildings etc. were improved. Plan funds were allocated for the developmental activities under district plan scheme. The percentage share of forestry sector during this period was the highest i.e. 1.09% of the total outlay.

5.1.11 EIGHTH FIVE YEAR PLAN (1992-1997) :

During this Five year plan, Shri Kartar Singh's Plan was in force for implementation. This plan thrust areas included JFM, Eco-tourism, Biodiversity conservation, wasteland utilization programmes involving protection of forests against biotic interference, utilization of waste land for forestry activities, creation of awareness among people for forestry through JFM and conservation of biodiversity were undertaken. Various GRs were issued for implementation of JFM from time to time. Funds from district plan schemes were made available for the various activities like plantations, roads, buildings etc. Under EGS lot of funds were made available for plantations, soil and moisture conservation works.

5.1.12 NINTH FIVE YEAR PLAN (1997-2002) :

During this Five year plan, Shri Kartar Singh's Plan was in force. The World Bank Project was completed during this period. The plantations of both teak and miscellaneous species were taken up under various schemes.

5.1.13 TENTH FIVE YEAR PLAN (2002-2007) :

During this period Srivastava's Plan was under implementation. This five year plan gave thrust on JFM through Forest Development Agency. Biodiversity conservation was another important thrust area during this plan period.

5.1.14 ELEVENTH FIVE YEAR PLAN (2007-2012) :

During this period of Five year plan, Srivastav's Plan was under implementation. The thrust was on conserving biodiversity and to enrich degraded forest areas through soil and moisture conservation measures.

CHAPTER- 6

STAFF AND LABOUR SUPPLY

SECTION 6.1 : ADMINISTRATIVE SET UP

6.1.1 The Government of Maharashtra, vide Resolution No.WLP-2012/C.No.256/F-1, Mumbai dated 22nd August, 2012 sanctioned bifurcation of original Chandrapur Forest Division and new divisions named Chandrapur Forest Division (Non-Buffer) and Buffer (TATR) Forest Division with its headquarter at Chandrapur were created.

The Chandrapur (Non-Buffer) Forest Division is headed by the Divisional Forest Officer under the control of Chief Conservator of Forests (Territorial), Chandrapur Circle. The organisation set up of Chandrapur Forest Division is as follows.

TABLE

Sr.No.	Name of the Range	Range Headquarter	Rounds	Beats	Area in ha.
1	Chandrapur	Chandrapur	2	6	4997.68
2	Chichpalli	Chichpalli	4	16	11596.23
3	Warora	Warora	3	12	8334.70
4	Bhadravati	Bhadravati	3	11	11085.10
5	Saoli	Sindewahi	5	20	26022.01
Total :			17	65	62035.72

6.1.2 Staff : The existing staff in the Chandrapur (Non-Buffer) forest division and number of post alongwith their pay scales is given in the following table.

TABLE**STATEMENT SHOWING THE POSITION OF STAFF IN
CHANDRAPUR (NON-BUFFER) DIVISION**

Sr. No.	Category	No. of sanctioned post	Pay Scale
1	2	3	4
GAZETTED			
1	Divisional Forest Officer	1	PB-3 15600-39100
2	Asstt. Conservator of Forests	3	PB-3 15600-39100
3	Range Forest Officer	6	PB-2 9300-34800
NON-GAZETTED			
1	Chief Accountant	1	PB-2 9300-34800
2	Accountant	6	PB-1 5200-20200
3	Clerk	18	PB-1 5200-20200
4	Forester	34	PB-1 5200-20200
5	Forest Guard	102	PB-1 5200-20200
6	Forest Surveyor	1	PB-1 5200-20200
7	Wireman	1	PB-1 5200-20200
8	Driver	4	PB-1 5200-20200
9	Peon	2	-1S 4440-7440
10	Chowkidar	2	-1S 4440-7440
11	Dak-runner	1	-1S 4440-7440
12	Sweeper	1	-1S 4440-7440

6.1.3 The officers who have held the charge of the Deputy Conservator of Forests/Divisional Forest Officers of Chandrapur Forest Division are listed in the following table.

TABLE

Sr. No.	Name of Officers	Period of holding charge	
		From	To
1	Shri.Chandrashekhar Joshi	1.9.1983	30.4.1985
2	Shri. P.P. Ghule	1.5.1985	30.6.1985
3	Shri. B.R. Pachpor	1.7.1985	1.7.1987
4	Shri. S.D. Sontakke	2.7.1987	16.4.1990
5	Shri. N.B. Mujumdar	17.4.1990	17.7.1993
6	Shri. Samir Sahay	18.7.1993	9.8.1993
7	Shri. Dilip Singh	10.8.1993	8.10.1995
8	Dr. V.D.Chafekar	9.10.1995	12.4.1999
9	Shri. S.P. Thakare	13.4.1999	2.7.2003
10	Shri Yashvir Singh	2.7.2003	14.5.2007
11	Dr.Pravin D.Chavan	14.5.2007	5.8.2010
12	Shri R.T.Dhabekar	6.8.2010	15.8.2010
13	Shri P.Kalyankumar	16.8.2010	2.1.2013
14	Shri V.B.Thakare	2.1.2013	3.6.2013
15	Shri N.D.Chaudhari	4.6.2013	31.3.2014
16	Shri A.N.Dhote	1.4.2014	17.6.2014
17	Shri S.S.Patil	18.6.2014	till date

6.1.4 Rest House : There are five rest houses at Chandrapur, Tembhurda, Moharli, Chichpalli and Karwa, three inspection huts at Ghanta-Chouki, Mul,Chichpalli. The rest houses need to be maintained properly in order to encourage the field officers to discharge their functional responsibilities properly.

6.1.5 Forests Communication : Internal communication is by a network of fair weather roads. Bus service is adequate. Telephone communication is available at almost all range head quarters.

SECTION 6.2 : LABOUR SUPPLY :

6.2.1 Most of the labour required for forestry works is obtained from adjoining villages. Departmental works such as working of coupes, cutting back operations, 5 years survey and demarcation, road repairs, fire protection and plantation works are mostly carried out through the labourers of the villages adjoining the forest reserves. These labourers are quite skilful in such works. Large number of labourers come from other states also. During summer large number of labourers come from M.P. (Particularly Balaghat Distt.) for plucking tendu leaves. The labour camps and other welfare activities need to be taken up for the labourers working in the divisions. There is no paucity of labourers in the division.

CHAPTER – 7

PAST SYSTEM OF MANAGEMENT

SECTION 7.1 : GENERAL HISTORY OF THE FORESTS

(A) MANAGEMENT OF FOREST BEFORE 1951

7.1.1 The tract dealt with was formerly a part of the Ex-Aheri Zamindari of Chanda District. The Zamindari remained under the ownership of the Gond Kingdom of the Chanda till 1303. In the year 1303 the area came under the Muslim Rule, then under the domain of the Telangana Kings and again under the Muslim Rule of Delhi. The authentic history of lineage can only be traced to the days of Ramsha (1672 to 1735 A.D.). In the year 1698 the area was donated to Shri Jagpatirao and full proprietary rights over the area were given to him. In the year 1703 it was bestowed to Koksha. Bhimrao or Venkatrao, who succeeded Koksha, held Zamindari from the year 1772 to 1818. Mussamatbai succeeded Bhimrao and Bhujangrao succeeded Mussamatibai. The tenure of Bhujangrao commenced with crisis and there was a general revolt. The Bhujangrao succeeded by his son venkateshwarrao who died in 1851. The next successor was Laxmibai, widow of Bhimrao, who ruled firmly untill her death in 1861. The successors of Laxmibai were Mangarao (1861 to 1866), Savitribai (1866 to 1871), and Dharmarao (1873 to 1893). After the death of Dharmarao the estate descended to Bhujangrao in 1893. Bhujangrao proved to be incapable of managing the affairs of the estate and so in 1902, the estate was taken over by the court of Wards for management and it was subsequently handed over to Zamindars. The last Zamindar was Dharmarao Bhujangrao. In the year 1951, on passing the M.P. Abolition of Proprietary Rights Act of 1951, the ownership of these forests was vested in the State Government.

7.1.2 The forests of the tract dealt with under this plan, were managed during the Zamindari area without any systematic working system. Selection felling and shifting cultivation were carried out till the year 1902, which resulted in heavy damage to the forests due to felling for cultivation and annual fires. In the year 1902 Aheri estate was kept under the control of Court of Ward, and the shifting cultivation was stopped but owing to the poor financial condition of the estate, the heavy exploitation of forests for revenue continued till 1916.

7.1.3 The forests dealt with under the plan were reserved in 1879 under the Indian Forest Act (VIIth of 1878) vide the Central Province Gazette Notification No.917(i) dated 24th February, 1879. No description of the forest at the time of reservation is available but the absence of large sized, trees as observed by Shri.C.E.Hewetson in his plan 1936-37 to 1945-46, shows that the forests were subjected to maltreatment by shifting cultivation and illicit felling for meeting the local demand. Fire protection works were introduced in 1879 and were gradually extended over all the reserves.

7.1.4 Commutation system was introduced after reservation was in force upto 1888. The commuters could remove their requirements from any part of the forests convenient to them. Thereafter this system was replaced by extraction on licenses. The license holders used to select and cut the material from any part of the forest till 1893 after which timber, green fuel and bamboo were felled from localised areas. Grass, dry fuel, and minor forest produce were obtained from the forest, in general.

(B) MANAGEMENT OF FOREST AFTER 1951:

7.1.5 The forest dealt with under this tract remained under the Zamindari rights till the year 1951. The Zamindari system was abolished in the year 1951 under the provisions of Madhya Pradesh Abolition of Proprietary rights Act, 1951.

7.1.6 After passing of M.P. Abolition of Proprietary Rights Act, the forests were vested in the Government and were taken over by the Revenue Department. On September 6, 1952 the same were transferred to the Forest Department for management with an object of managing these forests on scientific lines. In the year 1955, a portion of the forests in surveyed villages were declared as Protected Forests under section 29 of the Indian Forest Act, 1927, vide Notification No. 3056-1216-XI, dated June 4, 1955. Remaining portion of the forests in surveyed and unsurveyed villages were declared as Protected Forests in the year 1959, vide Notification No. FLD/4659-3313-E, dated April 23, 1959. Further under section 4 of IFA 1927 the Government decided to constitute these forests as Reserved Forests and accordingly, proposals were formulated vide Gazette Notification No. FLD/1258-II, 3314-E, dated May 30, 1959. The proposed area was declared as Reserved Forests vide Gazette Notification No. FLD/3685/9316/CR-42/F-3, dated May 5, 1992 under section 20 of IFA, 1927.

SECTION 7.2 : PAST SYSTEM OF MANAGEMENT :

7.2.1 Prior to reservation of these forests in 1879, there was no regulation or control over the felling in the forests. The accessible forest areas were excessively harvested in a very irregular way. The reservation and commutation system was in force until 1888 thereafter it was replaced by the licence system. Upto 1893 purchasers were permitted to visit any parts of the forest and to select and cut their own material. From 1893 onwards, these indiscriminate felling were put a stop to and fellings of timber, green fuel and bamboos were permitted only from the restricted areas while other produce such as grass, dry fuel and minor produce could be collected from any part of the forest.

7.2.2 The first working plans were prepared by Shri. F. J. Langhorne (1897) for Moharli Range (Part of Chimur Range), Shri Poona Swami (1898) for Warora Range and was introduced between

1897 and 1900. These working plans had prescribed improvement felling all over the area. Forests were worked by petty purchasers who could remove any trees not marked as reserves. Forests, in which there was sufficient demand, were worked well but the value less inferior trees were not felled, while in the coupes where the demand was less, only best of the unreserved trees were removed. Owing to the limited demand and large proportion of inferior timber, the method of improvement fellings failed to attain completely the objectives set for but this system has certainly improved the condition of crop considerably by opening up congested crops and removing over mature trees. Subsequently, intensive cultural operations like thinnings, cleaning and climber cutting were carried out with great benefit to the forests. Fire protection works were carried out on more elaborate scale.

7.2.3 WORKING PLAN FOR NORTH CHANDA FOREST DIVISION, CENTRAL PROVINCES BY SHRI S.A. VAHID, IFS (1927-1937)

The working plan prescribes the intensive management and was written for a period of 10 years and the fundamental principles of management were-

- (i) to attain normalcy in the forest and
- (ii) to establish the regeneration to the normal extent

7.2.4 This was the first plan prepared after carrying out detailed inspection of forest, its classification into forest types and quality classes and showing the same on topo-sheets for prescribing intensive management. The entire forest area consisted of 45 blocks and the area was divided into 792 compartments comprising of two series namely eastern and western. The western series included the present Warora, Moharli, Chanda and Mul ranges and consisted of 519 compartments. The compartment boundaries mostly followed natural features. The forest was divided into four main types viz. teak, bija, bhirra and mixed

and these types were further subdivided into four quality classes viz. I,II,III & IV. The last quality class was again subdivided into IVa & IVb.

7.2.5 The principle object of management of these forest were on financial basis in order to secured the maximum revenue from these forest but at the same time it was also considered that the requirements of local people for timber, fuel, grazing and minor forest produce should also be satisfied. The conservation of water was also given priority with a view that maintenance of forests conserve the water supply better than any other system of land culture and the general objects of management of the forest were-

- (i) To obtain the largest possible sustained annual yield.
- (ii) To supply the local demand.
- (iii) To maintain the forest as a forest in the interest of the water-supply.
- (iv) To aim at the creation of a normal forest with a normal series of age classes and with normal regeneration.
- (v) With the minimum damage to the forest and the minimum hindrance to the realization of the above objects, to provide grazing for local cattle.

7.2.6 In order to meet the above objects of management the plan prescribed five working circles, viz. (i) High Forest Working Circle, (ii) Coppice-with-standard Working Circle, (iii) Low Forest Working Circle, (iv) Bamboo Working Circle, (v) Low Forest Unworked Circle.

(i) High Forest Working Circle :

7.2.7 The best quality teak, bija and ain forest capable of growing timber trees were placed under this working circle to be worked under conversion to uniform system. Nine felling series covering parts of existing Moharli Range and part of the Chimur Range were created.

(ii) Coppice with Standard Working Circle :

7.2.8 Forest of medium quality having bija and occasional teak were allotted, to coppice-with-standard working circle on 30 years' rotation. Teak, bija, ain, and haldu were prescribed as the most suitable standards. Eight felling series covering parts of existing Ranges were formed.

(iii) Low-Forest Working Circle :

7.2.9 Remaining areas excluding unworkable areas were allotted to this working circle. These were teak and mixed forests, considered unfit for large size timber production. Rotation of 30 and 40 years was fixed. Thirty eight felling series were formed. Prescription was clear felling where existing reproduction and resultant expected coppice were likely to restock the area. Provision was made to retain tree growth along nalas and over areas liable to erosion. Fruit bearing trees were preserved unless at the undue expense of silviculture. Climber cuttings, two & four years after the main fellings and mid rotation thinnings in all the felling series were prescribed. Importance was given to natural method of restocking blanks through natural regeneration.

(iv) Bamboo Working Circle :

7.2.10 Sixteen overlapping felling series were created with felling cycle of 4 years. No felling of culms under one year was prescribed. Bamboo were to be felled from the height of above 30 cm (12") but below 61 cm (24"). These rules were modified in 1930 in which the maximum height at which a culm was to be cut was kept 45 cm (18") and retention of 8 culms of over one year age was made obligatory. All dead bamboo were to be removed.

(v) Low Forest Unworked Circle :

7.2.11 Remaining poor areas and forest village areas were allotted in which no regular working was prescribed.

7.2.12 The degree of fire protection works were prescribed on the basis of working circles. High Forest, Low Forest and Coppice with Standard Working Circles were covered by special protection while the rest under the general.

7.2.13 Goats and sheeps were totally banned in A class Reserved Forests. By splashing the tree trunks with geru demarcation of outer boundaries of areas closed to grazing was prescribed and only listed villages were to be permitted.

7.2.14 The plan of Mr. Vahid needed revision at the end of 8th year. The failure to obtain natural regeneration in the High Forests of opening the over wood and the failure to recognize that vigorous bamboo allows little to exist in competition with it were the defects of this plan.

Results : In the working plan of Shri Vahid the forest were to be managed under high forest working circle, coppice with standard and low forest working circle. In all the three working circles main fellings were prescribed in 69 coupes, preparatory fellings in 11 coupes and thinnings in about 1500 acres of high forest and in 58 coupes in coppice with standard and low forest working circle, and total of 149 coupes under working each year. This was a large programme and therefore it could not be implemented as it was impractical also.

In this working plan, the high forest working circle included five felling series in the Warora, Bramhapuri and Sindewahi Ranges but after review it was found that only a small area was suitable for the growth of large timber and therefore these areas should have been placed under coppice with standard working circle. In Chanda, Moharli and Mul Ranges, the better quality forest allotted to coppice with standard working circle was fit to be retained in the high forest working circle because of its capacity to grow large size timber.

The heavy program of working in the high forest, Coppice-with standard and low forest working circle could not be fully

implemented. Hardly one third of the total area to be regenerated in P.B.I. (A) during 10 years from 1927 to 1936 could be regenerated till 1936. In P.B.I.(B) certain coupes were worked but the interpretation of felling rules were varied from heavy felling of over wood to light felling of under wood or bamboo. Thinning in other PBs were very light and selection felling over 3 feet girth were carried out.

In the coppice with standards and low forest working circle, main felling were carried out completely except in one coupe due to civil disobedience movement in 1930 and slump in fuel trade in 1931-32. No thinning was done since the results were not required and the demand for timber too, was sufficient.

7.2.15 WORKING PLAN FOR NORTH CHANDA FOREST DIVISION, CENTRAL PROVINCES AND BERAR BY C.E. HEWETSON, IFS (1936-37 TO 1945-46)

Shri. Vahid's Plan which was drawn up for 10 years was introduced in the year 1927-28 and was revised by Shri. Hewetson after it has run its course for eight years. The revised plan was brought into force in 1936-37.

7.2.16 The general objects of management of the forest under this working plan were to obtain the maximum sustained yield of all classes of forest produce and to meet the local demand. And consequent to this the methods of treatment to be adopted under this plan were –

- (i) The better quality forest were to be managed for the production of large timber and the rotation period will be 80 years and the regeneration will only be possible when advance growth is established under the mature crop.
- (ii) The poor quality forest were to be managed on rotation period of 40 years for the production of poles and fuels to the local people and the regeneration was to be obtained by coppice.
- (iii) Bamboos were to be worked on 4 year felling cycle

7.2.17 In the 1927 Vahid's Plan high forest working circle was proposed for Warora, Bramhapuri and Sindewahi Ranges aimed at the production of large size timber but it was found that only a small area was suitable for this purpose where as in Chanda, Moharli and Mul ranges the better quality forest formerly in the coppice with standard were capable of producing large size timber and therefore these areas had been placed under high forest working circle in this plan. Mr.Hewetson analysed Vahid's plan and concluded that clear felling was unsatisfactory for the areas having bamboo except where established regeneration of teak was sufficient to form future crop and that it was equally unsuitable for non-bamboo areas of low density where trees were either too large to coppice or were bad coppicers. Accordingly, Hewetson modified the prescriptions of Vahid's plan. Based on these observations the following working circles were formed.

(I) THE HIGH FOREST WORKING CIRCLE :

7.2.18 This working circle comprised of all compartments of Moharli, Mul and Chanda ranges with higher quality forest alongwith few compartments of Warora range. Only small area of same working circle in Vahid's plan suitable for growing large valuable timber and all highest quality areas of Coppice with Standard Working Circle were allotted to this working circle. Characteristics of the high forests were the deficiency of the lower girth classes, absence of advance growth and presence of dense bamboo. The silvicultural systems adopted was conversion to normal. The rotation period was fixed as 80 years. In the dense bamboo area deficient reproduction of tree species is observed so it was prescribed to fell bamboos some year in advance of main fellings and also postponement of over wood felling until sufficient advance growth had established itself. But the felling of bamboos was not properly attended during war years for want of labour. The subsidiary silvicultural operations included thinning, cutting back operations and removal of dead and malformed trees.

Results : In this working conversion to a normal series of age classes could not be completed and therefore the objectives set apart were not fully achieved. The subsidiary silvicultural operations could not be adhered to as per schedule and therefore the regeneration of the forest suffered. The operations in the unallotted block like thinnings combined with selection felling were not completed in a 20 years cycle as prescribed. The preparatory fellings in order to encourage the advance growth were not completed and therefore the regeneration could not establish.

(II) COPPICE WITH STANDARD WORKING CIRCLE:

7.2.19 Shri.Hewetson brought all the forests allotted to High Forest and Low Forest Working Circle of previous plan under Coppice-with-Standard Working Circle. The object was to meet the local demand for small timber and fuel. Rotation of coppice was fixed for 40 years; whereas no rotation for standards was fixed. Standards of semal and bija 120 cm (4') girth and teak, ain, shisham, siwan, bhirra and tinsa of 45 cm. to 60 cm (15''to 24'') in girth were prescribed to be retained for the production of large timber. Two main types namely, bamboo forests and forests with few or no bamboo were distinguished and accordingly silvicultural treatments were prescribed. The presence of bamboo was thought to be the one of the causes of failure of coppice regeneration. It was observed that bamboo recovered more vigorously than any coppice in situations when openings were made in tree forests. Hence it was prescribed that bamboos must be clear felled three years in advance of the main felling to allow the regeneration of tree species to become established. Controlled burning in the month of February and March in advance of felling was prescribed with the object of stimulating reproduction. The results of the treatment were satisfactory in non-bamboo forests, however, in bamboo bearing forests heavy fellings gave disappointing results.

Results : The coupes could not be regenerated successfully with few exceptions. The dense understory of bamboo discourages the coming up regeneration and therefore coppice reproduction was less than as expected. As the nature of the crop was irregular with varying proportion of different species the coppices could not respond well as respected. Due to bamboo infestation younger age classes could not come up and the advance growth was already deficient and therefore this system could not succeed properly. The rotation period was too long to achieve the satisfactory results and to review the silvicultural system

(III) BAMBOO WORKING CIRCLE :

7.2.20 This was overlapping with the high forest and coppice with standard working circle. Poor and under stocked areas, steep slopes, areas liable to erosion and strips along water courses were not to be worked. The felling cycle was of four years. The felling rules were relaxed in case of advance clear felling in coupes of high forest and coppice with standard working circle. Retention of minimum 8 culms over one year was prescribed in each clump. Bamboos were exploited regularly by the local villagers as well as purchasers. Owing to the large size of the coupes, supervision was difficult and felling rules were often violated.

Results : As this was an overlapping working circle each felling series comprised of several compartments and therefore it was very difficult for the subordinate staff to supervise the felling rules as per prescriptions and monitor control over the same. The clear felling of bamboo was prescribed in the high forest working circle and coppice with standard working circle but due to large areas clear felling of bamboos could not be completed which resulted in poor regeneration of other species. Results were satisfactory in the non bamboo forests.

(IV) MISCELLANEOUS WORKING CIRCLE :

7.2.21 Irregular working including removal of dead and dying trees and improvement or selection felling under the orders of the Conservator of Forests was prescribed. Some of these areas were worked heavily to meet the increasing demand of firewood and charcoal.

7.2.22 WORKING PLAN OF SHRI SINGH AND SHRI MAJUMDAR (1949-50 TO 1963-64)

This plan was prepared after intensive study of forests. Under this plan all A class forests were stock mapped showing the quality classes and types of forests. Forests having 15% and over of teak were shown as teak forests and the remaining were shown as mixed forest. Quality classes were fixed on the arbitrary limits or the heights. Under stocked areas and blanks too were indicated. The toposheets however, did not give any indication of density of the crop and the condition of regeneration

7.2.23 The objects of managements were as follows:

- (i) To obtain maximum sustained yield of all kinds of produce.
- (ii) To satisfy the local demand for small timber, firewood and other minor forest produce and conserve trees yielding edible fruits and flowers.
- (iii) To provide grazing to the maximum possible extent consistent with the silvicultural requirements for maintaining the forest perpetually productive and to maintain and improve the pasture in areas specially set apart for grazing purposes.
- (iv) To satisfy the demand of timber, bamboo and other products for industries.
- (v) To increase the proportion of valuable species by preferential treatment and by plantations.
- (vi) To combat the ill effects of soil erosion.
- (vii) To aim at creation of normal forests.

7.2.24 The forests were classified for the first time on the functional basis in the trees, minor, pasture and miscellaneous forests.

7.2.25 **Tree forests** were those which could produce timber, fuel and other forest produce and were main source of revenue. An average grazing incidence of 3 acres per cattle units was fixed. Better quality forests of North Sindewahi and South Sindewahi ranges were included in this class. The treatments prescribed were Conversion with artificial regeneration in case of better quality areas and Selection-cum-Improvement fellings on 40 year cycle in case of some other areas and coppice with Reserve system on a rotation of 50 years in case of inferior quality areas.

7.2.26 Forests which could not produce large size timber but grow medium sized timber, poles and firewood classed as **minor forest**. The chief object of management was to provide grazing to the maximum possible extent consistent with the management of these forests on the basis of sustained yield of smaller timber, firewood and fodder to satisfy the local demand. Grazing restrictions were laid down with the view to preserve and improve the forest growth and to provide grazing to the maximum extent. Grazing incidence of 2 acres per cattle units was fixed. Beside, periodic closures were prescribed. The treatment prescribed for these forests was Coppice with Reserve System on a rotation of 40 years with a provision of thinning at the age of 20 years.

7.2.27 Areas having no or little tree growth were classed as **pasture**. These lands were to be managed as grazing grounds to provide grazing to the maximum possible extent consistent with the maintenance of pasture. No fellings were prescribed, but tree growth could be sacrificed in the interest of pasture. Monsoon closure was prescribed to maintain and improve the pasture.

7.2.28 **Miscellaneous forests** comprised of grass 'birs' of the then Nagbhid and Warora ranges and forest areas of Ghorajhari Forest

village and Sonegaon Forest village. No working was prescribed in these areas. Grass birs were to remain closed to grazing.

7.2.29 Keeping in view the above classification, the following working circles were formed.

7.2.30 (i) Coppice-with-Reserves Working Circle :

This working circle covered practically the whole of the workable areas of the division. The forests are much varied in composition density and quality of growing stock. Few “minor forests” and few “trees forests”, which could not be conveniently separated for management were allotted to this working circle. In all, twenty four felling series were kept more or less the same as in the low forest Working Circle of Shri. Hewetson’s plan except that a few more felling series were constituted out of the unallotted compartments in old Bairagarh range. The chief object of management was to supply on sustained basis small timber, poles, firewood, fodder and grazing to the maximum possible extent. Rotation was fixed at 40 years and regulation of yield was by area.

7.2.31 Areas with steep and precipitous slopes, under stocked areas with density below 0.4 and 66’ wide strips on either side of main water sources were excluded from working. Dead, dying and over mature trees were however allowed to be removed from these areas.

7.2.32 Trees bearing edible fruits and flowers, *Gardenia latifolia*, all semal and bija below 4’-6’ (137 cm) in girth at breast heights, all advance growth below 9” (23 cm) at B.H. except garari were to be reserved all over. Besides, at least 30 reserves per acre up to 2’ to 3’ girth were to be retained in the well stocked areas, and their number was to be 40 to 50 per acre in the medium and low stocking forests. In the areas having bamboo, felling of bamboo three years in advance was prescribed to help the existing reproduction to establish. Density of over wood was to be kept dense where the reproduction was scanty to keep down bamboo, weeds and grass.

7.2.33 C.B.O. was prescribed in the year following the main felling. Cleanings in the 8th year after the working of the coupe and thinning were prescribed in the better quality teak and mixed forest in the 20th year after the main felling.

7.2.34 All coupes were closed to grazing for a period of seven years after main working. Further in moderately grazed areas three years closure was prescribed after the mid rotation. In heavily grazed areas, besides the above closures, monsoon were prescribed.

7.2.35 (ii) Plantation Working Circle :

This included better quality tree forests. The area from Chanda range specially Junona and Lohara Forests were allotted to this working circle.

7.2.36 The main object was to convert the high quality mixed forests to a normal series of age classes with new crops containing a high proportion of valuable species. Planting of annual area was prescribed as reproduction as advance growth of such species was scarce.

7.2.37 The areas were allotted to different periodic blocks and preferential treatments were proposed to achieve normal series of age classes of new valuable crop. Teak was the most favoured species followed by bija, semal, shisham, saja, bhira, dhaora and tinsa were other favourable species. Trees yielding edible fruits and flowers were to be retained. No felling was to be done along nalas and under stocked areas. Advanced growth and regeneration of valuable trees was to be retained.

7.2.38 (iii) Selection-cum-Improvement Working Circle :

Areas from Moharli, Mul and Chanda ranges were allotted to this circle. It comprised of all the better quality forests and the growing stock was characterised by presence of teak, bija, ain, shisham,

dhaora, bhira, surya etc. The treatment prescribed was to increase the proportion of teak and other valuable species. Intensive fellings were permitted in area with sufficient regeneration and advance growth. Felling was confined to trees over the selection girth only when silviculturally available. Thinnings were prescribed in congested areas in favour of teak and other valuable species.

7.2.39 (iv) Miscellaneous Working Circle :

It comprised the forests which were too remote to be exploited, in hilly areas with an open stocking and forest villages. No regular working was prescribed but dead, dying trees could be removed and selection-cum-improvement fellings were permitted under the orders of the Conservator of Forests.

7.2.40 (v) Pasture Working Circle :

The main object was to provide grazing to the maximum possible extent consistent with reservation and improvement of pasture. It prescribed the closure of one of the two sections during monsoon for four months from 1st July to 31st October every year in rotation so as to enable the cattle to graze during monsoon in the area open to grazing and the whole area for remaining eight months of the year. It proposed grazing incidence at one acre per cow unit.

7.2.41 (vi) Bamboo (Overlapping) Working Circle :

The major areas of Chanda, Mul and Moharli ranges were included in this working circle and were under commercial series and the bamboo was used for BILT. Rest of the areas were allotted to Nistar felling series. In order to meet the demand of local population 1/10 area of CBFS and rest of the NBFS was reserved for Nistaries. Felling cycle was of four years and compartment wise working was prescribed.

7.2.42 (vii) Semal (Overlapping) Working Circle :

The aim of creating this working circle was to meet the great demand for match and plywood industries and so to regulate its exploitation on a sustained basis.

Results : The irregular and uneven aged nature of the forest with varying composition of species proved detrimental to the establishment of coppices. The areas were badly hacked by the local people in order to meet their daily requirement of fuel wood from the neighbouring forest areas. The dense crop of bamboos also discouraged the coming up of natural regeneration and its establishment. Moreover grazing and fire could not be kept under check and therefore large areas were destroyed and coppices failed to come up. The areas were also rich in chital population who kept on browsing the coppices and therefore the coppices could not establish because of these biotic factors.

Cleanings in the 8th year are not being done. This has not materially affected the miscellaneous crop which is to yield fuel, but timber species have suffered. The silvicultural prescriptions and fire and grazing control could not be exercised and therefore the objectives were not achieved.

7.2.43 WORKING PLAN OF SHRI. KARTARSINGH (1977-78 TO 1991-92)

This working plan was prepared for 15 years of working spread over 33 blocks divided into 555 compartments running in two series. The one series covered forest of Warora, Chimur, Mohorli, Kolsa, Mul and Chanda ranges and other series comprised of Nagbhid range.

The general objects of management in this plan were as follows:

- (i) The preservation and improvement of "Tree Forests" for the production of big sized timber, specially teak to the extent possible and to provide for the maximum sustained yield.

- (ii) To increase the proportion of valuable species such as teak, semal, bija, shisham etc. by giving preferential treatment and by plantations.
- (iii) The preservation and improvement of “Minor Forests” on the basis of the maximum sustained annual yield of mainly firewood and poles.
- (iv) To aim at the creation of the normal forests.
- (v) To create grass reserves in the heavily populated areas.
- (vi) To arrest soil erosion.
- (vii) To reboise the under stocked patches.
- (viii) Consistent with the above to derive maximum revenue for the state.
- (ix) To raise concentrated plantations of Teak and other industrial wood to meet the demand of forest based industries.

In order to meet the above objectives following working circles were constituted.

7.2.44 (i) Conversion Working Circle :

This working circle was constituted out of better quality forests (III and IVa) for intensive management. All these areas were suitable for clear felling and raising of teak plantations. It covered the parts of Chandrapur and Moharli ranges. The main object was to convert the existing uneven aged crop containing large proportion of inferior species and irregular mixed forest to uniform even aged crop of valuable species mainly teak. The natural regeneration of teak was inadequate and hence it was prescribed to have clear felling and artificial regeneration of desired species, teak being the principal species. Conversion period of 80 years was fixed which was divided into four periodic blocks of 20 years each. The silvicultural system followed was conversion to uniform by clear felling and raising teak plantations all over the area. The yield was regulated by area. Separate marking rules were provided for each of the periodic blocks. The subsidiary silvicultural operations included weeding and replacement of casualties

in the plantations, cleaning, thinning, removal of dead and dying trees, removal of diseased and unsound trees if silviculturally available and are not likely to last till the next felling cycle. The soil conservation measures like gully plugging and construction of check dams was also prescribed.

Results : In the conversion working circle the conversion period had been kept as 80 years. Therefore the areas could not be as such fully converted. Four periodic blocks of 20 years felling cycle were formed. PBI areas were fully allotted and the rest were grouped to form unallotted PB. Out of the total area under PBI only 50% area was clear felled and planted with teak. High biotic pressure and casual approach in implementation of the plantation scheme by field staff resulted in poor survival of plantation. The PB unallotted is basically to accord the healthy silvicultural treatment to attain the growth. However, only part of it has been covered. Moreover, such conducive treatments have not been scrupulously followed. Therefore, the crop was highly irregular with great variation in ages and growth pattern. Bulk of these forests were worked under C.W.R. in previous plan with the rotation of 40 years. There has been no clear felling and planting due to ban imposed by the Govt. of India on clear felling in natural forest.

7.2.45 (ii) Coppice With Reserve Working Circle :

Bulk of these forests were worked under C.W.R. working circle with rotation of 40 years. It covered well stocked forest of inferior quality capable for producing small to medium sized timber, poles & firewood. The main object of constituting this working circle was production of firewood and small timber to meet the local demands and to meet the grazing and fodder requirements of local people to the maximum possible extent. The choice of the species was teak followed by bija, shisham, semal, ain, tinsa in selecting the trees for reservation. The subsidiary cultural operations included cutting back operations, cleanings and thinnings. No felling was prescribed in unworkable areas

except removal of dead trees and climber cuttings. In 'B' type areas clear felling was prescribed with some reservations. Restocking was expected from the resultant coppice and the advance growth already present. 'C' type areas were clear felled of all the trees except young healthy semal and planted with teak. In remaining area improvement felling was prescribed.

Results : As clear felling had been prescribed in areas of density 0.70 and above the bio-diversity was lost in favour of coppice and miscellaneous species having advance growth only. Further suitable areas of mixed forest have been clear felled except semal for raising teak, which have been mostly successful but it will take very long period to restore the status of the site. Improvement felling did not help to improve these areas. The rooted stock left after coppicing have constantly been hacked for firewood by local villagers and further destroyed by repeated fire. No plantations have been raised in this working circle and therefore it has become unproductive for production of timber and firewood.

7.2.46 (iii) Improvement Working Circle :

The areas allotted to this working circle were marginal areas which had failed to regenerate during the previous working plans due to heavy biotic pressure. The forest are degraded and liable to erosion. The forest areas are surrounded by heavy population and therefore illicit felling and grazing were rampant. Intention was to rehabilitate the degraded areas due to insufficient protection from grazing, fires & illicit cutting. The silvicultural system were improvement felling followed by artificial regeneration and tending operations. No rotation was fixed for this working circle. The subsidiary silvicultural operations prescribed were weeding and thinning.

The felling cycle was of 20 years and therefore 20 annual coupes were formed. In well stocked areas, following prescriptions were given.

- 1) All dead, dying and unsound hollow trees shall be marked for felling irrespective of their girth.
- 2) Patches containing advanced growth of teak over at least 1 or 2 ha. will be opened up by removal of over head canopy except that of semal.
- 3) Felling of Garari of 45 cm and above at b.h.

Results : This working circle comprised of marginal areas which have generally failed to regenerate due to adverse biotic factors in the last plan and included degraded miscellaneous forest and the areas were liable to erosion. These areas have high pressure of grazing & illicit cutting. However 20 years felling cycle was kept and yield was regulated. In the areas of density below 0.4 climber cutting was prescribed. The brushwood and bamboo were to be cleared to take pits for plantation of ain, sisoo, siris, khair, mahua. In the remaining areas, the improvement fellings were prescribed. Therefore, under stocked areas could not be improved. Further due to practice of calling the whole areas as unworkable the improvement in better areas was arrested. The plantations carried out in this working circle were not successful due to biotic pressure as these areas were close to habitations. Repeated fire, excessive grazing and illicit removal of pole crop by local villagers have deteriorated the crop composition.

7.2.47 (iv) Kuran Working Circle :

In this working circle, the grass reserves were prescribed to be formed. It was devised for meeting the local fodder demands. These grass reserves mostly lie near the metal road because easy transportation of grasses during the rainy season may be possible. The general character of the vegetation was of low quality and mostly miscellaneous species of varying composition. The main species found in these areas were ain, moyan, lendia, tendu, rohan, char, dhawda, bija and few patches of teak, bharati, lokhandi, dikamali, kharata and jilbili. The main grass found are bhurbhusi (*Andropogon contortus*), paonia,

pelki etc. The main objects of forming this working circle were to improve the quality of fodder grasses and to increase their yield and also to arrest the soil erosion by maintaining the adequate soil vegetation cover. Each kuran was divided into five coupes and every year one coupe was to be taken up for treatment. On the treatment map three types of areas were demarcated as follows:

(a) Areas suitable for introducing better fodder grasses. These types of areas were well drained, plain to gently sloping with 15 cm of depth of soil not less than 2 ha. in extent at one place and such type of areas were mostly under stocked or blank. The prescription involved cutting of grass reserved and complete closure to grazing and working of area on 5 year cycle. Along the contour ploughing of strips and planting of tussocks of sheda, paonia, mushan or marvel grasses. Also nala bunding & gully plugging were prescribed with uprooting of weeds and coppice shoots as 2nd and 3rd year operations.

(b) Areas in which heavy opening of trees needs to be done. such type of areas had dense growth of trees and shrubs. With the exceptions of trees having fodder values e.g. bija, gular, neem, pipal, siras, etc. uprooting of rest of the all trees along with bushes and climbers, gully plugging and nala bunding and cutting of inferior grasses before seeding was prescribed.

(c) Protection and unworkable areas : These included sloppy areas, nala banks and areas likely to be eroded. Removal of only dead trees, gully plugging was the treatment prescribed.

Results : This working circle had the objective of improving the quality and quantity of fodder grasses, which could hardly be done. Working plan prescriptions were not followed and heavy grazing without any improvement works resulted in further deterioration of pasture areas.

7.2.48 (v) Miscellaneous Working Circle :

It covered remaining areas which were not included in any of the previous working circles and such areas which were under the process of disforestation. No particular treatment was prescribed for this working circle.

7.2.49 (vi) Bamboo overlapping Working Circle :

This was an overlapping working circle comprising of areas spread over Warora, Chimur, Moharli, Kolsa, Mul and Nagbhib ranges. The entire working was divided into 11 nistar felling series and 2 commercial felling series. Some of the areas allotted to FDCM Ltd. from the bamboo bearing areas were excluded from working under this plan. The common variety of bamboo occurring in this division is *Dendrocalamus strictus* which forms understorey in the better quality forest and sometimes it is injurious to the establishment of teak regeneration. The objects of the management of this working were to meet the local as well as commercial demand of bamboo and the management of bamboo on scientific lines. The felling cycle of three years was provided and each felling series was divided into 3 annual coupes. The yield was to be regulated by area.

**7.2.50 WORKING PLAN OF DR. S.S.SRIVASTAVA
(2003-04 TO 2012-13)**

Shri Kartar Singh's working plan was revised by Dr.S.S.Srivastava. The details of prescriptions of working plan written by Dr.S.S.Srivastava for Chandrapur Forest Division and results of implementation are described below.

7.2.51 In this working plan 706 compartments of Chandrapur Forest Division were included out of a total of 923 compartments. The remaining 87 compartments are allotted to FDCM and 130 compartments were transferred to TATR. The general objects of management in this plan were as follows.

- (i) To preserve and enrich the growing stock and degraded areas of the forests with the help of soil and moisture conservation measures.
- (ii) Preservation and improvement of minor forest to obtain progressively increasing yield of small timber, firewood and poles in order to meet the demands of local people and to provide grazing to local cattles.
- (iii) To combat ill effects of soil erosion and to prescribe preventive measures.
- (iv) To increase the production of non-timber forest produce and to manage the same scientifically.
- (v) To increase the productivity and ensure progressively increasing yield of forest produce in demand.
- (vi) To achieve compatible wildlife management.
- (vii) To maintain and conserve the medicinal plants in the conservation area, to preserve and multiply the endangered species, to ensure sustainable and non-destructive harvest of medicinal plants, to cultivate and harvest medicinal plants in degraded forest treated in the JFM and to motivate the cultivation of medicinal plants.

7.2.52 On the basis of above objects, crop composition, site quality, crop density, type of the forest, soil type, topography and terrain of the area, need of the local population and their dependability on the forest produce, the following working circles were constituted.

1. Selection-cum-Improvement Working Circle.
2. Improvement Working Circle.
3. Teak Plantation Working Circle.
4. Bamboo (Overlapping) Working Circle.
5. Non Wood Forest Produce (Overlapping) Working Circle.
6. Wildlife (Overlapping) Working Circle.

7.2.53 The distribution of forest area in various working circles were as follows.

Sr. No.	Working Circle	Area (ha.)	No. of compartments	Percent of Forest
1.	Selection-cum-Improvement	21747.902	67	24.53
2.	Improvement	60914.062	629	68.71
3.	Teak Plantation	5986.770	10	6.75
4.	Bamboo (Overlapping)	51546.380	162	58.15
5.	Non Wood Forest Produce (Overlapping)	88648.734	706	100
6.	Wildlife (Overlapping)	88648.734	706	100

7.2.54 The details of coupes due and coupes worked under different working circles were as given below.

Year	Working Circle							
	SCI		IWC		TPWC		Bamboo	
	Due	Actual worked	Due	Actual worked	Due	Actual worked	Due	Actual worked
2004-05	18	00	56	03	04	01	00	00
2005-06	18	01	56	03	04	01	00	00
2006-07	18	01	56	03	04	01	10	08
2007-08	18	00	56	05	04	01	12	12
2008-09	18	02	56	19	04	02	12	07
2009-10	18	02	56	19	04	01	10	10
2010-11	18	02	56	18	04	00	12	12
2011-12	18	01	56	21	04	00	12	12
2012-13	18	00	26	00	04	00	09	09
2013-14	17	00	25	00	04	00	10	10
Total	179	09	499	91	40	07	87	80

7.2.55 Selection-cum-Improvement Working Circle :

The area included in this working circle was previously assigned to Improvement Working Circle. The area comprised of mainly Reserved Forest, however, some area of the Protected Forest having better site quality and crop density were also included. The total area allotted to this working circle was 21747.902 ha. divided into 18 felling series and 10 coupes in each felling series spread over mainly in Mul, Moharli and Shivni ranges. The forests included are mostly of miscellaneous species. The crop consists of mainly ain, dhaora, bija, aonla, tendu, mahua, lendia, garari, etc. Teak occurs in patches and the lower canopy is dominated by bamboo which is thick over most of the area. Reproduction of teak occurs in patches and that of other miscellaneous species is fairly good. The crop is mainly young to middle

aged with few mature patches with the site quality in general being III. The protected forests area included have mixed crop, with crop density 0.5 to 0.7 and dense bamboo crop. The kukadranji were widely spread throughout.

7.2.56 The chief object of management of this working circle was to improve and increase the proportion of valuable species by giving preferential treatment to natural regeneration and planting timber species mainly teak, produce large size timber and undertake soil and water conservation measures on watershed basis. It was prescribed to encourage natural regeneration by way of subsidiary silvicultural operations and rigid fire and grazing control measures. Gap plantation with teak and bamboo plantation in suitable sites in the 4th year after teak plantation was prescribed. The selection girth was fixed at 135 cm girth at breast height for Teak, bija, ain, shisham and Haldu, 120 cm for other timber species and 45 cm girth at breast height for Garari and Lendia. The felling cycle was fixed at 10 years. The average area of each coupe is 100-125 ha.

7.2.57 The treatment prescribed was no felling in protected area (A-type), planting of teak and other suitable species in B-type understocked area, thinning in the young pole crop to 1/3 of the height in C-type area and felling in D-type area as per the marking rule only when the stocking of the species to be felled is more than 1%. Silviculturally available trees above the selection girth were marked for felling. The percentage of marked trees is $\leq 50\%$ of the trees available above selection girth. Teak trees of coppice origin above harvestable girth were preferably marked for felling. Soil and moisture conservation works like contour trenching, nala bunding, gully plugging, etc. were prescribed in the year of marking of coupes in the area except D-type area. In areas deficient in natural regeneration planting of 50% teak and 50% miscellaneous species were prescribed. The subsidiary silvicultural operations prescribed includes CBO in the next year of felling, cleaning in the sixth year of main felling, fire protection

measures and closures of areas after main felling to grazing for a period of five years.

Results : Out of 180 coupes due for working 165 coupes were within 10 km radius of TATR and hence no working was done in these coupes. In remaining 15 coupes falling outside 10 km of TATR 8 coupes were worked till 2010-11. Under subsidiary silvicultural operations like CBO, cleaning and soil moisture operation works carried out during the plan period no information was provided by the DCF, Chandrapur hence could not analyse its effect on the crop condition. As per the information provided by the DCF, Chandrapur, study of status of regeneration in worked and unworked area reveals that worked area supports better regeneration than the unworked area. In general the objective of this working circle could not be achieved because harvesting and other silvicultural works could not be carried out in the coupes falling within the 10 km radius of TATR. Some of the areas included in this working circle infact should have been included in the improvement working circle as trees of harvestable girth were not available in these areas. As the areas were not worked the crop has become congested in coupes falling within 10 km radius of TATR. Moreover, the prevalence of climbers especially kukudranji has infested such areas which has resulted in suppression of natural regeneration in many patches of these areas.

7.2.58 Improvement Working Circle :

The area previously managed under Coppice with Reserve, Kuran and Improvement Working Circle of previous plan was included in this working circle. The total area allotted to this working circle was 60914.062 ha., site quality IVa / IVb, with rare patches of site quality III and density varies from 0.4 to 0.6. The crop is generally young to middle aged and consists mainly of ain, dhaora, bija, aonla, tendu, mahua, lendia and garari. Teak occurs in patches. Bamboo occurs in the lower canopy and is thick over most of the area. Regeneration of teak occurs in patches and that of miscellaneous species is scanty. The areas

are mostly open and under stocked due to heavy biotic pressure. The prime object of management was to give silvicultural rest to improve the crop and bring normalcy, to increase productive capacity of the soil by taking soil and moisture conservation works, to get maximum sustained out turn of small size timber and firewood to meet the local demands through nistars and to help the natural regeneration of various species to establish and supplement it by artificial regeneration in under stocked areas. The total number of compartments included in this working circle was 629, of which 154 were in reserved forests, 465 in protected and 10 in unclassified forest areas. The area have been divided into 56 working series having 10 coupes in each series. The average area of coupe is 100 ha. to 150 ha. The fellings are limited to improvement of the crop only and no yield regulation is prescribed. For treating the coupes the areas were divided into type A-protection areas, type B - under stocked area, type C - pole crop and old plantation area and type D - well stocked area. No marking was prescribed in A-type area. However, in type B and D area all dead, malformed trees after retaining two dead trees per hectare, all but one vigorously growing coppice shoot per stool and silviculturally available matured trees above 120 cm girth at breast height were prescribed for felling. Tending of natural regeneration supplemented with artificial regeneration was prescribed. In the plantations 50% teak and 50% of miscellaneous species were prescribed. In subsidiary silvicultural operations CBO, cleaning operations were prescribed. Under other regulations closure of coupes to grazing for a period of five years from the year of planting, implementation of annual fire fighting schemes and encouraging participation of local people in protection and afforestation of forest was prescribed.

Results : Out of 560 coupes due for working 313 coupes were falling within 10 km radius of TATR and hence no working was done in these coupes. In remaining 247 coupes falling outside 10 km radius of TATR in 40 coupes only silvicultural works and harvesting were carried out till

2010-11. Other silvicultural operations like CBO, cleaning and soil moisture conservation works carried out during the plan period no information was provided by DCF, Chandrapur. The study on status of regeneration in the worked and the unworked area shows that worked area support better regeneration than the unworked area. In general, the objective of this working circle could not be achieved since harvesting and other silvicultural works could not be carried out in the coupes falling within 10 km radius of TATR. Large blank areas were also included in this working circle. The areas in the immediate vicinity of human habitations due to heavy biotic interference like grazing and illicit cutting for firewood, the crop has been reduced to scrubby growth. The status of natural regeneration is poor. Heavy pressure of grazing has resulted in compaction and erosion of soil because of which some patches have become almost blank. The area falling within 10km radius of TATR have not been demarcated and worked due to which lot of congestion has taken place in the crop in some areas of these forests. Due to implementation of soil moisture conservation measures the soil erosion has been brought under control to some extent.

7.2.59 Teak Plantation Working Circle :

This working circle includes the PBI areas of Teak Conversion Working Circle, uncovered PBI areas, improvement working circle of Kartar Singh's working plan and all the teak plantations which have been taken in the previous plans from 1975 to 2000. The total area allotted to this working circle is 5986.770 ha., site quality II to Iva and the crop density varies from 0.5 to 0.7. The crop is generally young to middle aged and consists mostly of teak and its associated miscellaneous species such as ain, dhawda, bija, aonla, tiwas, mahua, lendia, garari, etc. Bamboo may or may not be present and mostly occurs on lower canopy. The natural regeneration of teak and other miscellaneous species is scanty. The teak plantations included are mostly successful with site quality IV to II. Due to non observance of the subsequent silvicultural operations after planting proportion of

miscellaneous species in the plantation is high. The chief objects of management in this working circle was to increase the percentage of teak in the forests, to convert existing uneven crop of inferior species into an even aged teak forest and to obtain maximum sustained yield of teak timber of commercial value. The total number of compartments included in this working circle was 10. The area have been divided into four felling series having ten coupes in each series. The silvicultural system prescribed in this working circle was clear felling followed by artificial regeneration of genetically superior stock of teak preferably by root shoot / stump planting. It was prescribed to clear fell and plant about 200 ha. of area every year. Each patch shall not exceed 20 ha. and in between two patches a natural strip of 5 mt. was to be retained on each side of the planted area. The marking rules prescribed includes no felling upto 30 m. on both sides of nalas, streams, patches containing advance growth of teak to be retained after removal of overwood, pole crops and fruit bearing trees to be retained and also trees of semal, khair, cassia fistula and other superior miscellaneous species to be retained upto 20 trees per hectare. The plantation area constituting a section shall not exceed 20 ha. at one place. It was prescribed to take bamboo plantation in teak plantation where thinning was carried. The subsidiary cultural operations includes thinning in 10th year, 15th year and thereafter on a 10 years cycle, cutting back operations in the year following main felling and cleaning in the 5th year from the year of main felling.

Results : Out of 40 coupes due for working 24 coupes were falling within 10 km radius of TATR and hence no harvesting and regeneration works was done in these coupes. In remaining 16 coupes falling outside the 10 km radius of TATR harvesting and regeneration works were carried out only in 7 coupes till the year 2009-10. Thinning and cleaning operations were carried out in some of the old plantations and it has shown positive incremental growth on selected retained stems. In general objectives of this working circle have been partly achieved

because harvesting and regeneration works could not be carried out in the coupes falling within buffer area of TATR. The mixed forests have been successfully converted into the high quality teak forests. Also control on soil erosion due to soil moisture conservation measures has been achieved to some extent.

7.2.60 Bamboo (Overlapping) Working Circle :

This working circle extend over the entire Chandrapur Forest Division, overlapping all the working circle. The total area allotted to this working circle is 51546.380 ha. There are 13 cutting series out of which 3 are commercial and 10 are nistar, cutting series. The common variety of bamboo occurring in this area is *Dendro calamus strictus* and it generally forms the understorey all over the area. The bamboo has gregariously flowered in 1982 and strict protection measures has led to profuse regeneration resulting in congestion thereby affecting the clump formation. The special object of management were to attain optimum increment in the growth of bamboo and to meet the nistar and commercial demand on sustained basis. A cutting cycle of 3 years was followed. No harvesting was prescribed between 15th June to 30th September. No culms below two years age was to be felled. Clumps containing more than 12 mature culms was considered fit for harvesting. During the plan period in mostly all due coupes bamboo working was done through BILT, contractors and departmental working was carried out in some coupes.

7.2.61 Non-Wood Forest Produce (Overlapping) Working Circle :

This is an overlapping working circle covering the entire forest area of division. The total area allotted to it is 88648.734 ha. The non-wood forest produce includes both minor forest produce and also the medicinal plants. The object of management was to manage scientifically and utilize existing potential optimally to enhance the productivity and provide employment to the local people. The objective

of this working circle was partly achieved because other non timber forest produce available in this tract could not be fully tapped.

7.2.62 Wildlife (Overlapping) Working Circle :

It covered the entire forest division area. The area included in this working circle is 88648.734 ha. The object of management includes sensitization of the local people about wildlife conservation, to provide viable habitat for wildlife sustenance and to promote the welfare activities for development and propagation of wildlife. Measures like sensitization of people and forest staff, regular monitoring of wild animals, increasing density of waterholes inside forest area, meadow development on limited scales and timely payment of compensation in conflict cases have been taken to mitigate the ever-increasing man-animal conflict situations.

SECTION 7.3 : SPECIAL WORK OF IMPROVEMENT UNDERTAKEN

7.3.1 A large number of plantations have come up all over the division during the previous years till date. Besides, new buildings, roads, wells and anicuts have been constructed at various places.

7.3.2 INFRASTRUCTURAL FACILITIES :

1. Roads : The road network in the division is fairly good, all the range headquarters, round headquarters, beat headquarters are very well connected with all weather roads. Many roads are maintained by P.W.D. and some of the roads are maintained by Zilla Parishad, whereas many short length roads constructed in order to connect small reserves to district roads are maintained by the forest department. Forest department constructs extraction paths and maintain some interior roads for the purpose of forest management. In buffer zone of TATR forest department construct and maintain road network for tourism and patrolling purpose. A list of forest roads are given in **Appendix No. VI**.

2. Buildings : Quarters have been constructed from time to time for field staff. Water hand pumps, solar water pumps apart from cement bandharas, vantalavs, wells are also constructed. List of buildings, wells is given in **Appendix No.V.**

3. Nurseries : Permanent forest nursery at Chandrapur, Moharli, Chichpalli has been established for providing planting stocks of teak and other species.

SECTION 7.4 : PAST YIELD

7.4.1 The statement showing the annual outturn from major timber and fuel-wood forest produce for the year 2003-04 to 2012-13 is given in the table below and in **Appendix No.XIX.**

TABLE

Year	Yield	
	Timber (M³)	Fuel-wood (No.of beats)
2003-04	347.460	3085.00
2004-05	1729.350	7061.00
2005-06	1977.513	7329.23
2006-07	220.620	7367.33
2007-08	1546.610	5044.00
2008-09	698.424	7808.40
2009-10	3448.140	10697.00
2010-11	3304.602	7278.00
2011-12	756.635	1906.25
2012-13	271.488	831.00
2013-14	266.589	3334.50

SECTION 7.5 : PAST REVENUE AND EXPENDITURE :

7.5.1 The figures for the gross revenue and year wise expenditure from 2003-04 to 2012-13 is given in **Appendix No.XXVI.**

CHAPTER - 8

STATISTICS OF GROWTH AND YIELD

SECTION 8.1 : STATISTICS OF RATE OF GROWTH OF TEAK AND MISCELLANEOUS SPECIES :

8.1.1 No study has been conducted with regard to the growth either of teak or miscellaneous species in this tract and therefore, statistics of previous plan is reproduced below.

GROWTH OF TEAK :

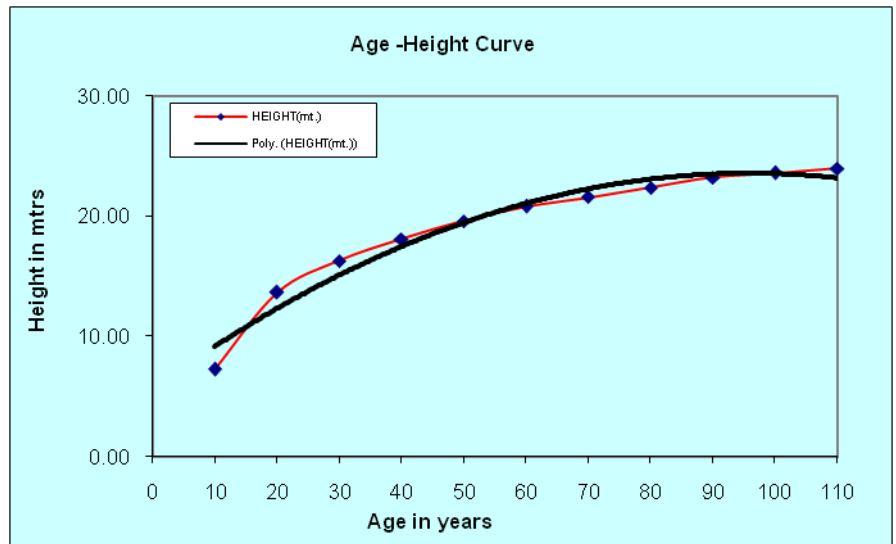
8.1.2 The stem analysis of teak trees in Chandrapur Forest Division was conducted by the then Deputy Conservator of Forests, Working Plan Division-2, Chandrapur in order to assess the statistics of growth and yield. The statistics of growth for site quality II, III and IV is reproduced as below.

TABLE
GROWTH DATA FOR TEAK (SITE QUALITY-II)

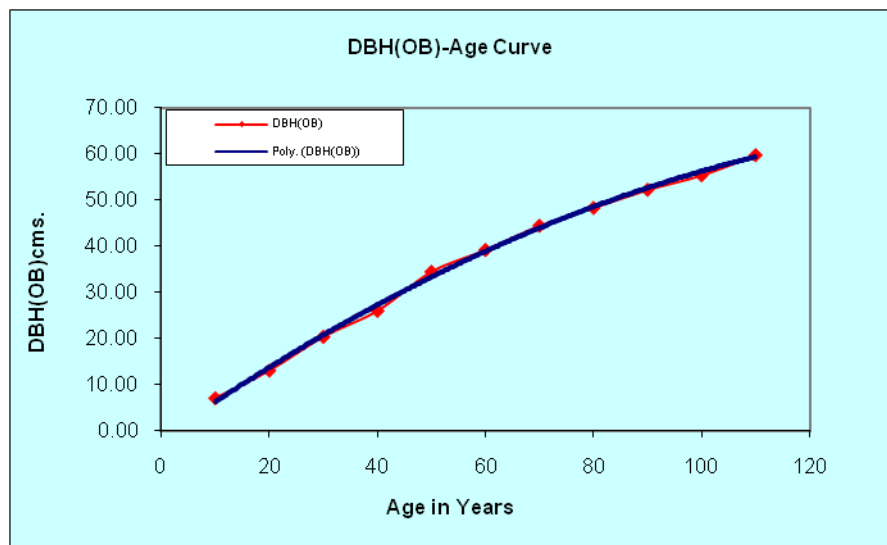
SR.NO.	AGE	HEIGHT(mt.)	DBH(OB)	GBH (OB)	MAI	CAI	VOLUME
1	10	7.24	7.00	22.15	0.00104	0.00104	0.01037
2	20	13.65	13.00	41.20	0.00328	0.00552	0.06556
3	30	16.30	20.32	64.30	0.00673	0.01365	0.20203
4	40	18.10	25.96	82.15	0.00957	0.01808	0.38284
5	50	19.60	34.42	108.92	0.01202	0.02179	0.60077
6	60	20.80	39.14	123.86	0.01483	0.02890	0.87972
7	70	21.60	44.40	140.50	0.01614	0.02399	1.12967
8	80	22.40	48.27	152.75	0.01731	0.02547	1.38450
9	90	23.24*	52.20	164.70	0.01850	0.02200	1.65010
10	100	23.60*	55.35	176.80	0.01950	0.01800	1.92000
11	110	24.00*	59.70	184.10	0.01750	0.01400	2.07000

* Figures with (*) mark shows that the same have been obtained after extrapolation of curves.

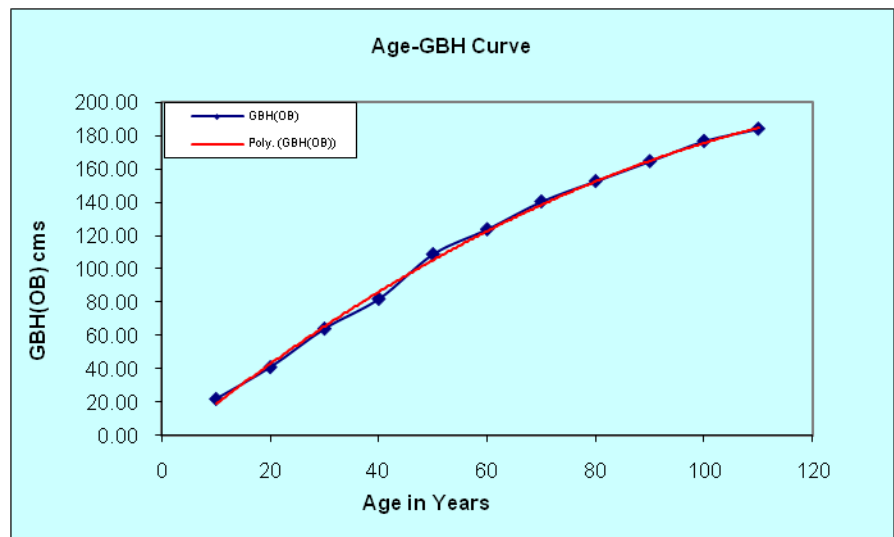
AGE	HEIGHT(mt.)
10	7.24
20	13.65
30	16.30
40	18.10
50	19.60
60	20.80
70	21.60
80	22.40
90	23.24
100	23.60
110	24.00



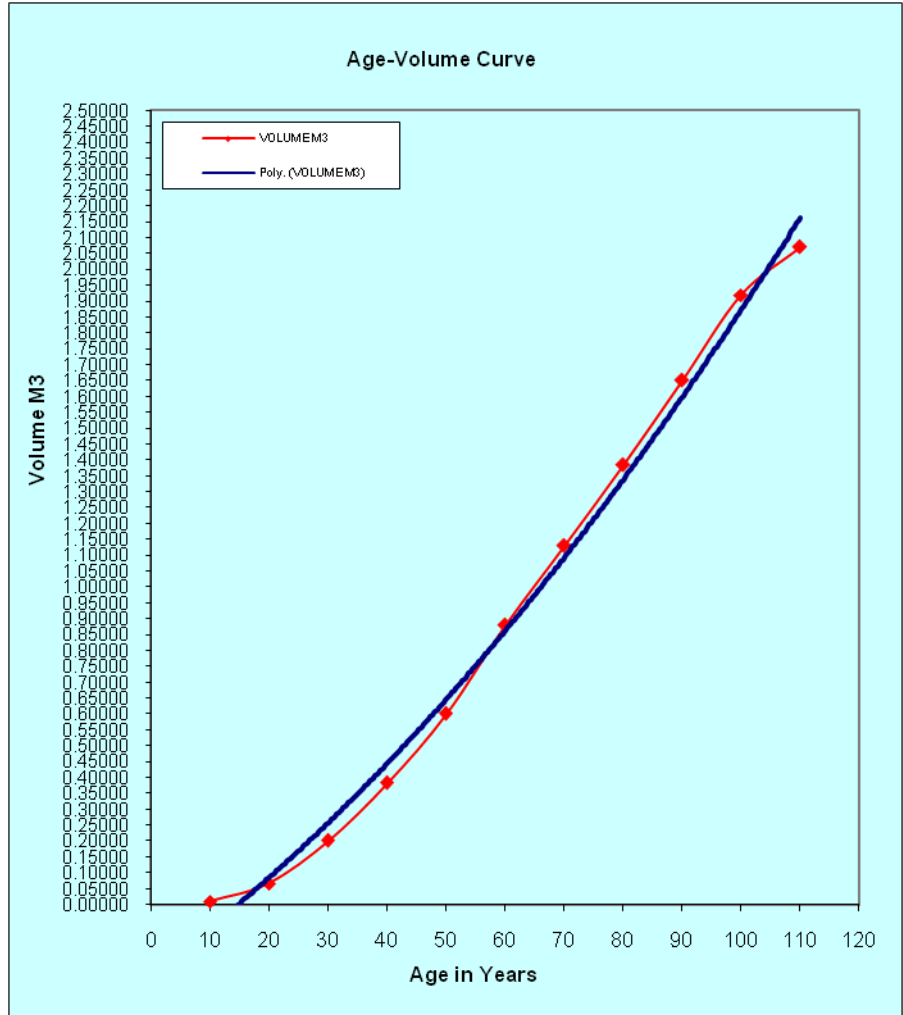
AGE	DBH(OB)
10	7.00
20	13.00
30	20.32
40	25.96
50	34.42
60	39.14
70	44.40
80	48.27
90	52.20
100	55.35
110	59.70



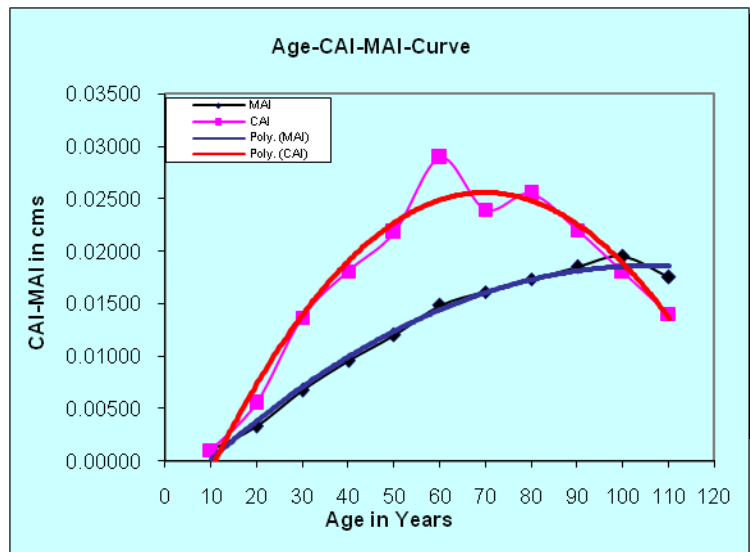
AGE	GBH(OB)
10	22.15
20	41.20
30	64.30
40	82.15
50	108.92
60	123.86
70	140.50
80	152.75
90	164.70
100	176.80
110	184.10



AGE	VOLUME M3
10	0.01037
20	0.06556
30	0.20203
40	0.38284
50	0.60077
60	0.87972
70	1.12967
80	1.38450
90	1.65010
100	1.92000
110	2.07000



AGE	MAI	CAI
10	0.00104	0.00104
20	0.00328	0.00552
30	0.00673	0.01365
40	0.00957	0.01808
50	0.01202	0.02179
60	0.01483	0.02890
70	0.01614	0.02399
80	0.01731	0.02547
90	0.01850	0.02200
100	0.01950	0.01800
110	0.01750	0.01400



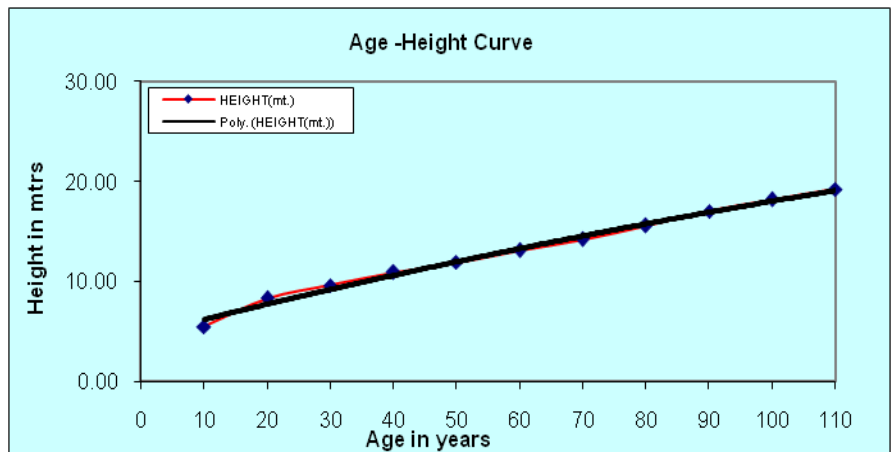
TABLE

GROWTH DATA FOR TEAK (SITE QUALITY-III)

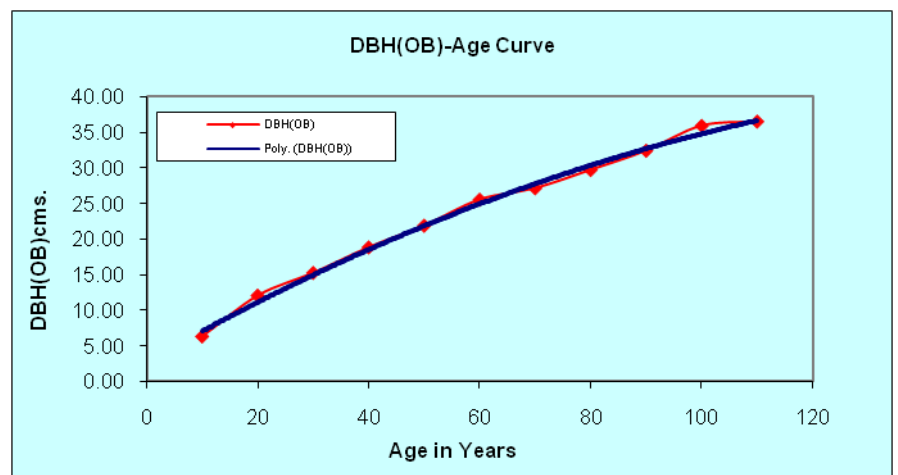
SR.NO.	AGE	HEIGHT(mt.)	DBH(OB)	GBH (OB)	MAI	CAI	VOLUME
1	10	5.50	6.30	19.94	0.000718	0.000718	0.007183
2	20	8.30	12.04	38.10	0.002075	0.003433	0.041511
3	30	9.60	15.23	48.19	0.002765	0.004026	0.081777
4	40	10.90	18.82	59.55	0.003424	0.005520	0.136972
5	50	11.90	21.87	69.20	0.004103	0.006820	0.205137
6	60	13.10	25.52	80.75	0.004810	0.006320	0.288338
7	70	14.20	27.13	85.85	0.005033	0.006400	0.352307
8	80	15.55	29.70	93.98	0.005530	0.007013	0.442830
9	90	17.00	32.40	102.53	0.006015	0.009869	0.541423
10	100	18.20	35.90	113.60	0.006614	0.011990	0.661423
11	110	19.20	36.50	115.50	0.006584	0.006281	0.724239
12	120	20.10*	37.10	117.00	0.00674	0.005080	0.808857

* Figures with (*) mark shows that the same have been obtained after extrapolation of curves.

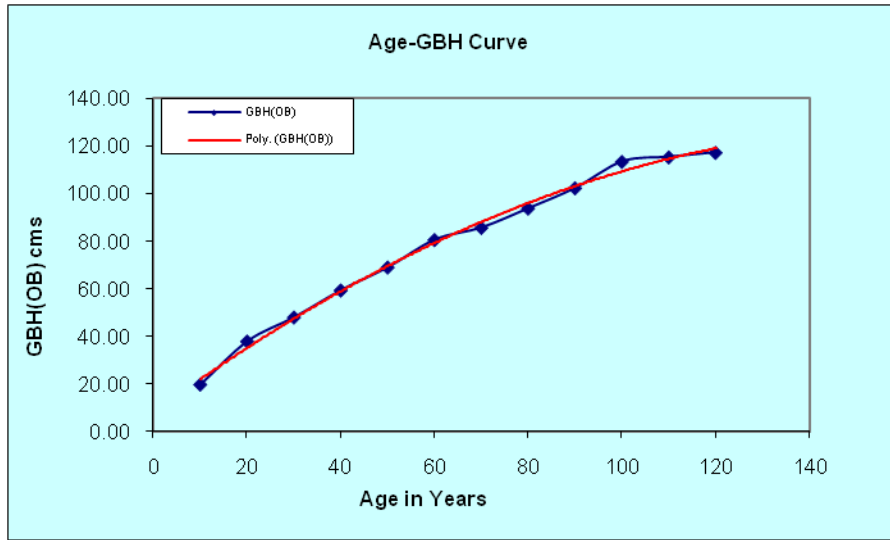
AGE	HEIGHT(mt.)
10	5.50
20	8.30
30	9.60
40	10.90
50	11.90
60	13.10
70	14.20
80	15.55
90	17.00
100	18.20
110	19.20
120	20.10



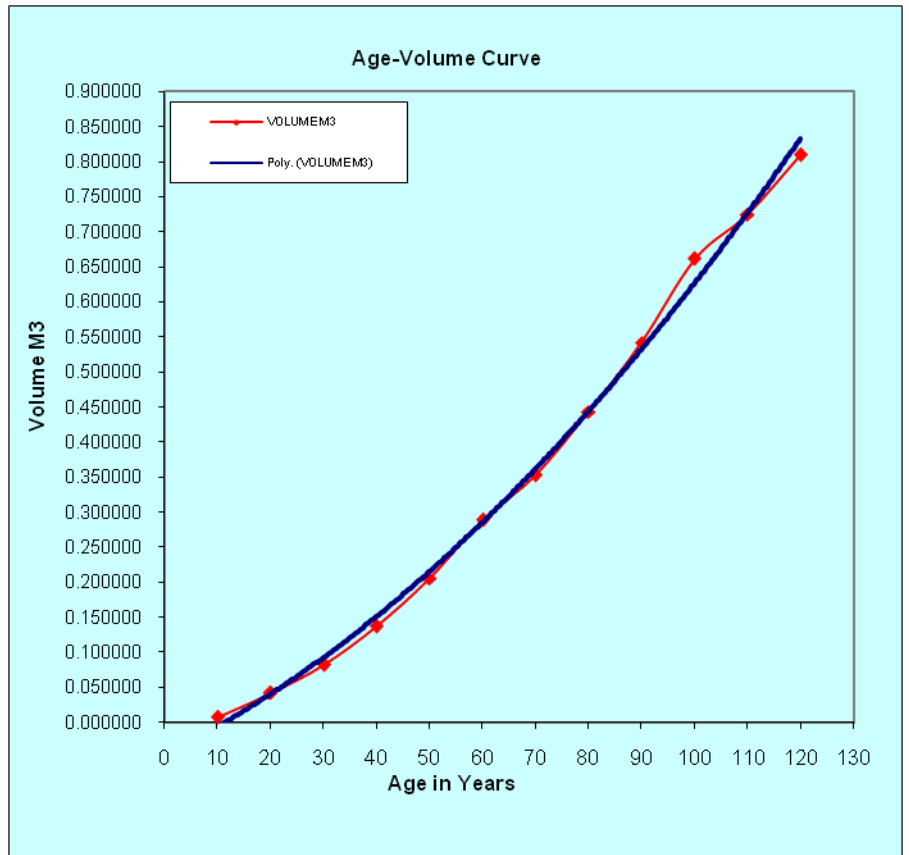
AGE	DBH(OB)
10	6.30
20	12.04
30	15.23
40	18.82
50	21.87
60	25.52
70	27.13
80	29.70
90	32.40
100	35.90
110	36.50
120	37.10



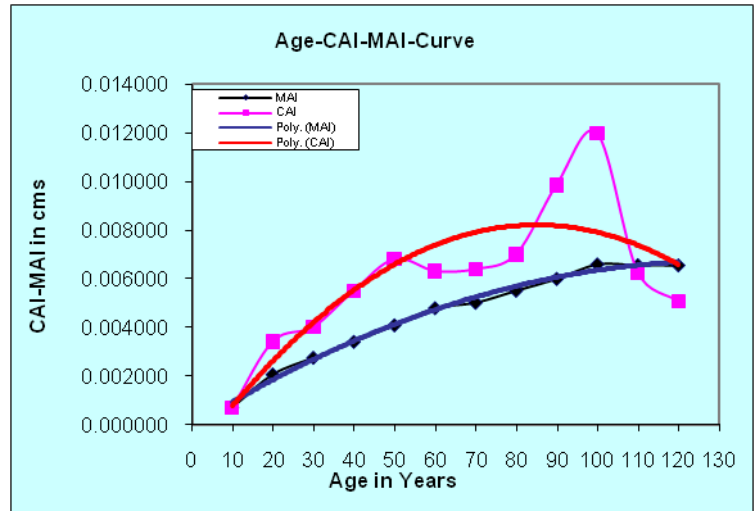
AGE	GBH(OB)
10	19.94
20	38.10
30	48.19
40	59.55
50	69.20
60	80.75
70	85.85
80	93.98
90	102.53
100	113.60
110	115.50
120	117.40



AGE	VOLUME M3
10	0.007183
20	0.041511
30	0.081777
40	0.136972
50	0.205137
60	0.288338
70	0.352307
80	0.442830
90	0.541423
100	0.661423
110	0.724239
120	0.808857



AGE	MAI	CAI
10	0.000718	0.000718
20	0.002075	0.003433
30	0.002765	0.004026
40	0.003424	0.005520
50	0.004103	0.006820
60	0.004810	0.006320
70	0.005033	0.006400
80	0.005530	0.007013
90	0.006015	0.009869
100	0.006614	0.011990
110	0.006584	0.006281
120	0.00657	0.005080



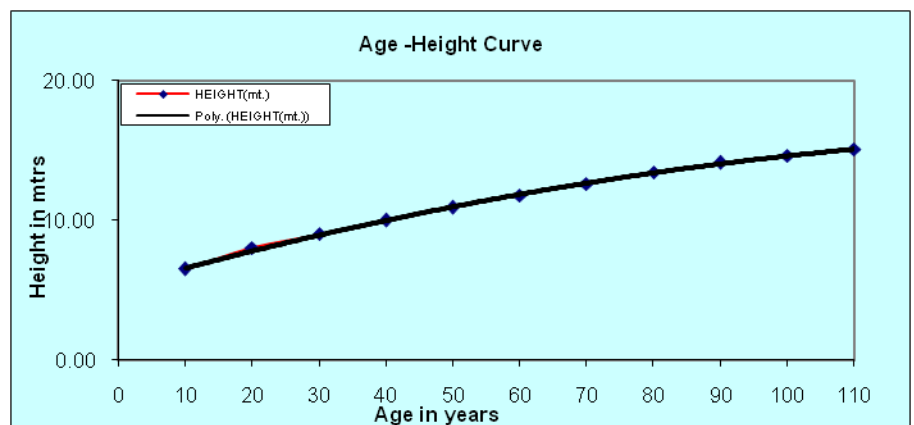
TABLE

GROWTH DATA FOR TEAK (SITE QUALITY-IV)

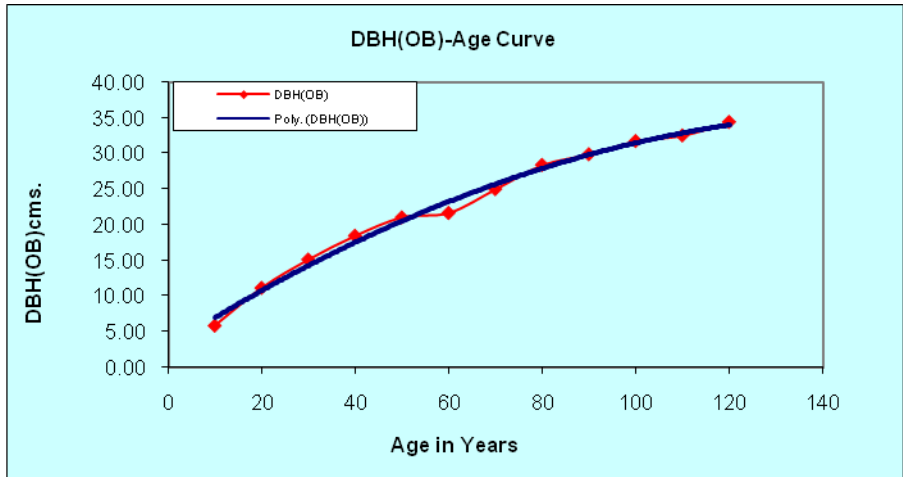
SR.NO.	AGE	HEIGHT(mt.)	DBH(OB)	GBH (OB)	MAI	CAI	VOLUME
1	10	6.50	5.85	18.51	0.0018620	0.0018620	0.018650
2	20	8.00	11.14	35.25	0.0022620	0.0026600	0.045240
3	30	9.00	15.12	47.84	0.0029840	0.0044300	0.089510
4	40	9.99	18.45	57.94	0.0033850	0.0045900	0.135420
5	50	10.90	21.03	66.55	0.0036590	0.0046180	0.182930
6	60	11.80	21.65	68.51	0.0032360	0.0051300	0.194180
7	70	12.60	25.00	79.11	0.0038140	0.0072800	0.266950
8	80	13.40	28.38	89.81	0.0045770	0.0099200	0.366180
9	90	14.10*	29.88	94.55	0.0048650	0.0071700	0.437830
10	100	14.60*	31.73	100.41	0.0050790	0.0038400	0.507930
11	110	15.10*	32.52	102.91	0.0049670	0.0035200	0.546370
12	120	15.40*	34.40	108.86	0.0052180	0.0033770	0.626140

* Figures with (*) mark shows that the same have been obtained after extrapolation of curves.

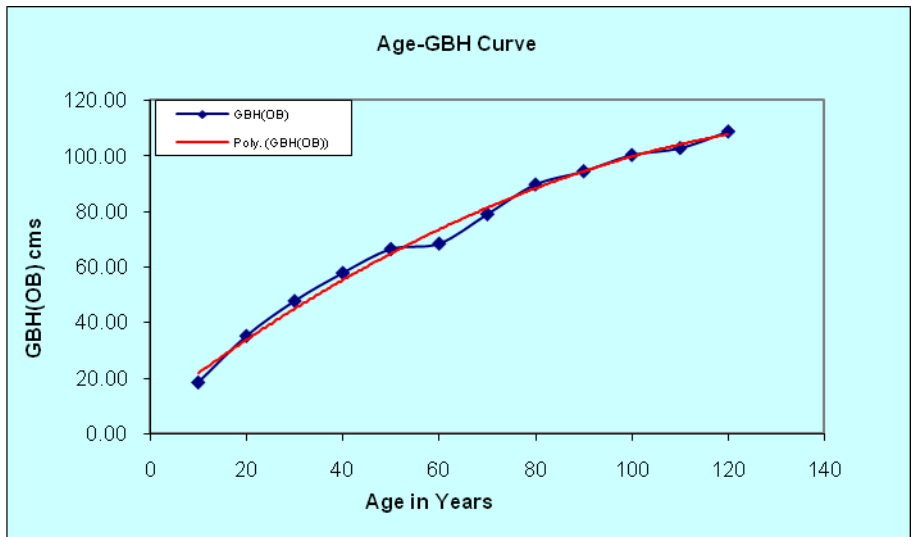
AGE	HEIGHT(mt.)
10	6.50
20	8.00
30	9.00
40	9.99
50	10.90
60	11.80
70	12.60
80	13.40
90	14.10
100	14.60
110	15.10
120	15.40



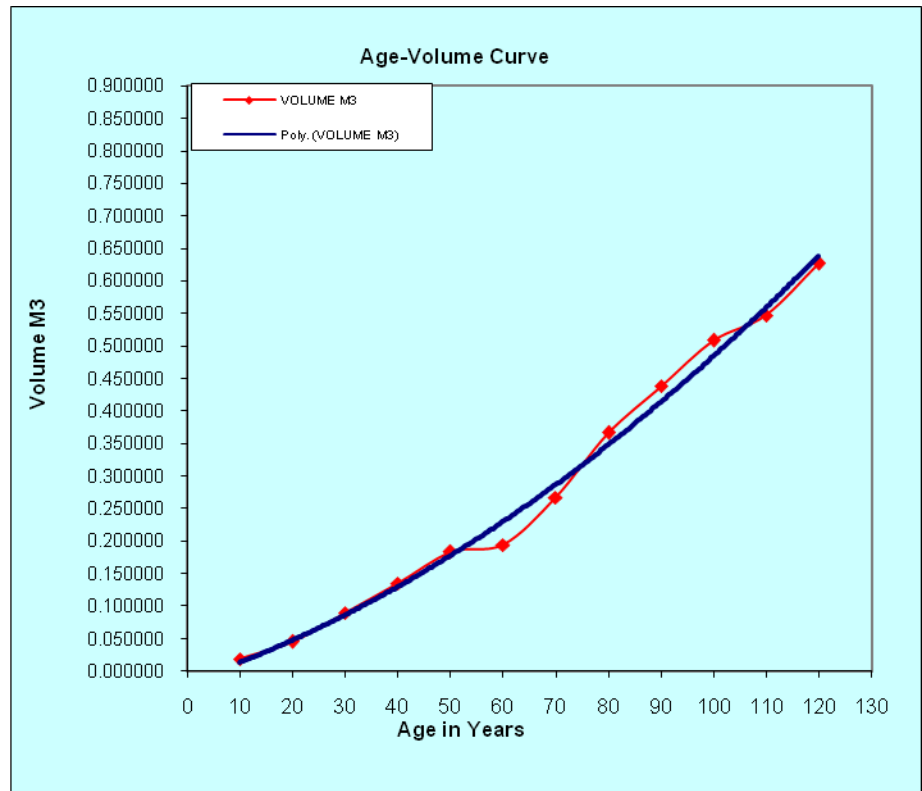
AGE	DBH(OB)
10	5.85
20	11.14
30	15.12
40	18.45
50	21.03
60	21.65
70	25.00
80	28.38
90	29.88
100	31.73
110	32.52
120	34.40



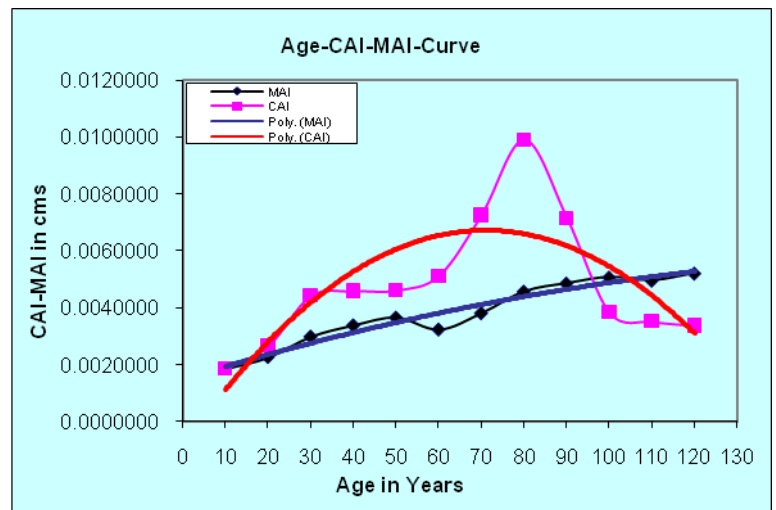
AGE	GBH(OB)
10	18.51
20	35.25
30	47.84
40	57.94
50	66.55
60	68.51
70	79.11
80	89.81
90	94.55
100	100.41
110	102.91
120	108.86



AGE	VOLUME M3
10	0.018650
20	0.045240
30	0.089510
40	0.135420
50	0.182930
60	0.194180
70	0.266950
80	0.366180
90	0.437830
100	0.507930
110	0.546370
120	0.626140



AGE	MAI	CAI
10	0.0018620	0.0018620
20	0.0022620	0.0026600
30	0.0029840	0.0044300
40	0.0033850	0.0045900
50	0.0036590	0.0046180
60	0.0032360	0.0051300
70	0.0038140	0.0072800
80	0.0045770	0.0099200
90	0.0048650	0.0071700
100	0.0050790	0.0038400
110	0.0049670	0.0035200
120	0.0052180	0.0033770



8.1.3 The analysis of the data given in the above tables shows that teak tree attains a girth (o.b.) of 140.50 cm in site quality II, of 115.50 cm in site quality III and of 108.86 cm in site quality IV over the years 70, 110 and 120 years, respectively. Since the teak trees in this area are in Site Quality II/III, IV and CAI/MAI curves intersect at the age

of 100 years, therefore it has been found that on an average the teak trees attain a girth of 120 cm in 100 years. However the site has potential to grow beyond 120 cm g.b.h. (o.b.) and therefore the harvestable girth for teak and other important timber trees species has been fixed as 120 cm. The CAI/MAI-Age curve, Age-Height Curves and Age-Volume Curves for site quality II, III and IV respectively are given in **Appendix No.XLIV and L** of volume II of the plan.

GROWTH OF AIN :

8.1.4 Growth data of ain given in the Working Plans of East Chanda, Bhandara divisions and of Jimalgatta range of Sironcha Division are reproduced in following table.

TABLE

Age in years	Mean g.b.h. (O.b.) in cms.		
	East Chanda	Bhandara	Jimalgatta
10	11.0	011.9	012.20
20	21.0	026.7	027.40
30	30.0	038.5	039.60
40	39.0	050.3	052.20
50	49.0	059.7	060.10
60	58.0	(070.2)	072.30
70	67.5	(080.0)	083.15
80	78.0	(091.0)	093.23
90	88.0	(102.0)	104.53
100	99.0	(112.0)	120.27

8.1.5 The results of stem analysis of bhirra, dhaora and tendu carried out by Shri Kartar Singh during the preparation of working plan of East Chanda Division are reproduced in the table below.

TABLE

Species	Girth b.h. in cm.	Diameter b.h. in cm.	Age in years
1	2	3	4
Bhirra	015	04.8	012
	030	09.5	024
	045	14.3	033

1	2	3	4
Bhirra	060	191	043
	070	23.9	055
	090	28.6	063
	105	33.4	079
	120	38.2	092
	135	43.0	108
	150	47.7	124
Dhaora	015	04.8	016
	030	09.5	028
	045	14.3	040
	060	191	052
	075	23.9	066
	090	28.6	080
	105	33.4	093
	120	38.2	107
	135	43.0	123
	150	47.7	142
Tendu	015	04.8	012
	030	09.5	026
	045	14.3	039
	060	191	052
	075	23.9	066
	090	28.6	081
	150	33.4	098
	120	38.2	120
	135	43.0	154
	150	74.7	--

GROWTH OF SEMAL :

8.1.6 Stem analysis of 29 trees of Semal was carried out by Shri Kartar Singh while preparing working plan for East Chanda division. Trees were selected of girth at b.h. between 105 to 150. It was found that the curves of C.A.I. and M.A.I. tend to intersect beyond 150 cm. g.b.h. The following table indicates the results of stem analysis of semal.

TABLE

Age in years	Height in m.	G.B.H.in cm.	Std. stem Timber Volume in cu.m.
10	05.18	018.76	0.0064
20	08.99	037.89	0.0329
30	12.50	057.05	0.0329
40	15.24	074.61	0.2234
50	17.88	091.77	0.4138
60	20.12	104.93	0.6068
70	22.25	116.99	0.7723
80	23.77	127.67	0.9730

GROWTH OF BIJA :-

8.1.7 Growth data obtained from stem analysis of bija trees in Bhandara Division carried out by Shri Sardar during the preparation of working plan of Bhandara Forest Division are reproduced in the table below.

TABLE

Age in year	Height in mt.	Dia (ub)bh. Cm.	Dia (ob)bh. Cm.	Std. stem timber volume	C.A.I. cu.m.	M.A.I. cu.m.
1	2	3	4	5	6	7
10	03.00	02.70	04.00	0.002	0.0002	0.00020
20	05.90	08.00	10.00	0.015	0.0013	0.00075
30	08.50	13.22	15.70	0.055	0.0040	0.00183
40	11.10	18.20	20.90	0.130	0.0075	0.00325
50	13.30	23.00	25.90	0.237	0.0107	0.00474
60	15.60	27.75	30.80	0.385	0.0148	0.00642
70	17.75	32.02	35.20	0.598	0.0213	0.00854
80	19.80	35.58	38.80	0.788	0.0190	0.00985
90	(21.80)	37.90	41.20	0.900	0.0112	0.00100

GROWTH OF SHISHAM :

8.1.8 The results of growth studies of Shisham in Sironcha Forest Division conducted in 1990 are given in the table below.

TABLE

Age in Years	D.B.H. (o.b.) in cm.
10	04.15
20	07.23
30	11.21
40	14.56
50	17.37
60	19.27
70	22.53
80	25.55
90	29.15
100	33.23
110	38.14
120	42.60

SECTION 8.2 : ESTIMATION OF GROWING STOCK :

(I) GENERAL VOLUME TABLE :

8.2.1 Forest Survey of India has conducted the Forest Resources Survey of Ballarshah catchment areas during 1971-75. During this survey data for felled tree, volume of teak and miscellaneous species was calculated and on the basis of which general volume equations were derived for the species for which felled tree data of at least 30 trees were available. Data of rest of the species were pooled together and one equation was derived for them.

The following types of regression equations were tried :

- i) $V = a + b D^2 H$
- ii) $V/D^2H = a + b/D^2H$
- iii) $V = a + b D^2 H + c (D^2H)^2$
- iv) $\text{Loge } V = a + b \text{ Loge } D + c \text{ Loge } H$
- v) $V/D^2 = a + b/D^2 + cH^2$

Where V = Volume (in cum under bark) upto 5 cm top over bark diameter.

D = Diameter (m.) at breast height (1.37 m from ground)

H = Height in metres.

8.2.2 Since the tract dealt with comes within the Wadsa catchment of the above study, the general volume and local volume equations derived by them are reproduced as follows :

(I) The following general volume equations shown in table below were selected taking into consideration, the standard error of the estimate, the multiple determination coefficient, applicability of the equation and meaningful interpretation of the equation for different species :

TABLE

S.N.	Species	General Volume Equations
1	Tectona grandis(37)	$V/D^2H = 0.30446 - 0.0023/D^2H$ for $D^2H < 1.5$
2	Terminalia alata(41)	$V = 0.08758 + 0.24432 D^2H$ for $D^2H > 1.5$ $V = 0.00012 + 0.20302 D^2H$
3	Pterocarpus marsupium(42)	$V = 0.03611 + 0.33714 D^2H$
4	Diospyros melanoxylon(34)	$V/ D^2H = 0.38217 - 0.00856/ D^2H$
5	Anogiessus latifolia (30)	$V = 0.00931 + 0.38507/ D^2H$
6	Phyllanthus emblica (23)	$V = 0.0124 + 0.34322 D^2H$
7	Lagerstroemia parviflora(26)	$V/ D^2H = 0.35949 - 0.00088/ D^2H$
8	Boswellia serrata (36)	$V/ D^2H = 0.36068 - 0.00761/ D^2H$
9	Lannea Coromandelica(33)	$V = 0.35751 D^2H$
10	Madhuca latifolia (43)	$V/ D^2H = 0.36089 - 0.00951/ D^2H$

S.N.	Species	General Volume Equations
11	Buchanania lanzan	$V = 0.01475 + 0.29820 D^2H$
12	Cleistanthus collinus	$V = - 0.00185 + 0.32352 D^2H$
13	Rest of species (111)	$V/ D^2H = 0.33352 + 0.00042/ D^2H$

8.2.3 Figures in brackets after the name of species denote the number of trees on which the equations are based.

8.2.4 On the basis of the above equations the general volume tables prepared for all above mentioned species are given in **Appendix No.II**.

8.2.5 (II) LOCAL VOLUME TABLE :- Forest survey of India, during their survey, volume of each sample tree was estimated using the general volume equation selected for a species. Taking this volume as dependent variable and the diameter at breast height (1.37 m above ground level) or its function as independent variable. The following types of regression equations were tried:

$$V = a + bD^2$$

$$V = a + b D + c D^2$$

$$V = a + b D + c D^2 + d D^3$$

$$V = a + b D$$

$$V/D = a + b/D + cD$$

$$V/D = a + b/D + c D + d D^2$$

$$V/ D^2 = a + b/ D^2$$

$$V/ D^2 = a+b/ D^2+c/D$$

$$V/ D^2 = a+b/ D^2+c/D + dD$$

$$\text{Loge } V = a + b \text{ loge } D$$

8.2.6 The following local volume equations shown in table below were selected for different species taking into consideration the same criteria as for general volume equations :

TABLE

S.No.	Species	Local Volume Equations
1	Tectona grandis(30)	$\sqrt{V} = - 0.106720 + 2.562418 D$
2	Terminalia alata(266)	$V/D = - 0.397340+0.011283/D$ $+ 4.704700D+2.369640 D^2$
3	Pterocarpus marsupium(59)	$V = 0.107059 - 1.010240D$ $+ 7.685670 D^2$
4	Diospyros melanoxylon(140)	$V/D = - 0.975148 +$ $0.033867/D + 8.255412D$
5	Anogiessus latifolia (112)	$V/D = - 0.36762 -$ $0.006854/D+4.5577D+5.25567D^2$
6	Phyllanthus emblica (49)	$V/ D^2 = 5.000428-0.013485/ D^2$
7	Lagerstroemia parviflora(39)	$\sqrt{V} = - 0.130340 + 2.824203 D$
8	Boswellia serrata (38)	$V/D = - 2.641645 + 0.153684/D+$ $15.056400D - 6.2061 D^2$
9	Lanea Coromandelica(44)	$\sqrt{V} = - 0.138286 + 2.729368D$
10	Madhuca latifolia (78)	$V = 0.074069 -1.23002D+7.726902D^2$
11	Buchanania lanzan (67)	$V = - 0.00767+0.2654D+1.0385 D^2$ $+ 7.527 D^3$
12	Cleistanthus collinus (320)	$V = - 0.019404+3.80207 D^2$
13	Rest of species (402)	$V/D = - 0.610255 +$ $0.020853/D+6.10823D+$ 0.637781 D^2

Where V = volume in cum.

D = DBH in meter.

8.2.7 Figures in brackets after the names of species denote the number of observations on which the equations for the species are based.

8.2.8 The conversion factors for drawing volume content in Chandrapur Forest Division Chandrapur for Teak, Teak-Miscellaneous and Miscellaneous Forest are given in **Appendix No. LII, Appendix No. LIII and Appendix No. LIV.**

(III) TREE ENUMERATION :

8.2.9 The tree enumeration was carried out by the unit of Survey of Forest Resource Gadchiroli, working under the control and guidance of C.F., W.P. Gadchiroli from December 2008 to March 2010. The entire Chandrapur Forest Division's area was considered for sampling enumeration plan. The object of the survey was to assess the local

growing stock of all species. All the species were enumerated in girth classes started from 15 cms to 120 cms and above girth at breast height (gbh). The results are given in **Appendix No.LXXXIV**.

SAMPLING METHOD :

8.2.10 The statistical sampling method (strip sampling) was used for tree enumeration. The plot size of 60 x 60 m was found to be suitable with the least standard error. The complete enumeration of trees, seedlings, coppices were carried out in these plots. Similarly qualitative measurements were also carried out.

(IV) EXISTING GROWING STOCK (CUBICAL CONTENTS) :

8.2.11 Scrutiny of data and stock per hectare was calculated with the help of computer programme. Working circle wise growing stock per ha. is given in **Appendix No.LXXIX, LXXX, LXXXI, LXXXII**.

8.2.12 Status of Natural Regeneration :

Regeneration survey was carried out by the SOFR Unit, Gadchiroli. As per the sample survey, total number of seedlings per ha.in R1 is 511.76 seedlings, in R2 217.56 seedlings, in R3 is 92.44 seedlings/ha. The average number of seedlings in R1, R2 & R3 may vary from range to range. Details of range wise average figures of regeneration are as given in **Table A**.

It is necessary to improve the edaphic conditions by intensive soil and moisture conservation works, tending of natural regeneration, subsidiary silvicultural operations, control grazing and fire. Site specific afforestation schemes should be drawn and species which are suitable to this area should be selected for success of plantations.

Table A
Chandrapur Non Buffer Division
Status Of Natural Regeneration
Average Number of Seedling Per Hectare

Sr. No.	Range	Total No. of Comptt.	R1 < 1mt height			R2 1 to 2m height			R3 > 3m height		
			Sample area	Total seedlings	Seedlings per ha.	Sample area	Total seedlings	Seedlings per ha.	Sample area	Total seedlings	Seedlings per ha.
1	2	3	4	5	6	7	8	9	10	11	12
1	Bhadrawati	42	99.00	51643.65	521.65	99.00	18049.21	182.32	99.00	8525.21	86.11
2	Chandrapur	16	40.68	28801.61	708.00	40.68	9923.69	243.95	40.68	3474.80	85.42
3	Chichpalli	42	66.60	41189.59	618.46	66.60	21285.17	319.60	66.60	9478.41	142.32
4	Warora	17	62.64	15988.43	255.24	62.64	9249.37	147.66	62.64	3381.46	53.98
	Total	117	268.92	137623.28	511.76	268.92	58507.44	217.56	268.92	24859.88	92.44

8.2.13 Stock Mapping :

During the revision of present plan stock maps have been updated with appropriate ground verification by the staff of the office of Deputy Conservator of Forests (Territorial), Chandrapur.

Result of Stock Mapping

Site Quality	Area in ha.	% area w.r.t. total area
III Teak	272.00	1.01
IV Teak	120.00	0.45
III Miscellaneous	3474.48	12.95
IV Miscellaneous	9798.70	36.53
Plantation	2103.00	7.84
Understocked	6515.71	24.29
Blank Area	398.48	1.49
Eroded & scrub/hillock	663.79	2.47
Encroachment	964.81	3.60
Cultivation/village Area	63.37	0.24
Water Bodies	595.77	2.22
Bamboo Area	1850.84	6.90
Total :-	26820.95	100

SECTION 8.3 : PRESERVATION PLOT AND SAMPLE PLOT :

8.3.1 The Maharashtra Van Sanshodhan Sanstha, Chandrapur has laid out some sample plots and preservation plot in the forest areas of Chandrapur Forest Division for various research trials. The list of sample plots and preservation plots is given in **Appendix No. XXVIII**.



Part - II

**FUTURE MANAGEMENT
DISCUSSED
AND
PRESCRIBED**

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

CHAPTER - 9

PROPOSALS FOR FUTURE MANAGEMENT

**SECTION 9.1 : RELEVANT POLICIES AND
PROGRAMMES :**

The following policies and programmes were considered while formulating proposals under various working circle for future management of forests of Chandrapur (Non-Buffer) Forest Division.

1. National Forest Policy, 1988.
2. National Forestry Action Programme.
3. National Wildlife Action Programme
4. National Bamboo Mission.
5. National Medicinal Plants Board.
6. Maharashtra Forest Policy 2008.
7. Maharashtra Eco-tourism Policy.
8. Biological Diversity Act, 2002.

**SECTION 9.2 : FACTORS INFLUENCING THE GENERAL
OBJECTS OF MANAGEMENT:**

9.2.1 The main factors influencing the object of management are listed below:-

- (i) The forests of this division were managed under the coppice with reserve system of previous plans and scheme have suffered due to heavy grazing, illicit felling and lack of coppice regeneration, with the result that bulk of forest areas have become under stocked and open and fail to regenerate. These forests may respond if they are restocked under afforestation scheme coupled with soil and moisture conservation works.

- ii) The increasing demand by local population for fire wood, small timber and fodder grass in thickly populated areas. Adequate Provisions have to be made in the plan for meeting the demands.
- iii) The state of natural regeneration of teak and miscellaneous is satisfactory in interior areas of the tract, where as it is unsatisfactory in plains, and nearby human habitations. New recruits are not established due to frequent fires, soil compactness and excessive biotic pressure. Provisions will have to be made in the plan for soil working and tending and protection of young natural regeneration which would help them to establish.
- iv) The forest tract of thickly populated area are opened, under stocked and degraded which need improvement in their stocking by tending natural regeneration supplemented by artificial regeneration.
- v) The forest areas of steep slopes, undulating areas and along water courses are liable for soil erosion hence provisions to be made in the plan to check the same.
- vi) There is increasing demand for the timber of teak and other important species in the market, lead to illicit felling, grazing, encroachment which has to be tackled for better protection and management of forests.
- vii) Owing to excessive cattle population the demand for fodder and grazing has increased.
- viii) Restoration of degraded environment is required to be tackled through different management schemes.
- ix) In this division the medicinal plant diversity and its abundance is required to be protected in pockets of their occurrence.
- x) NWFP species form a substantial proportion of the forest crop that contribute to a great extent to the livelihood of local people. The forest areas rich in NWFP requires special focus for their

sustainable management and use in the interest of local community by involving them through JFM committees.

- xi) The soil is highly compact due to heavy biotic pressure and is devoid of humus and sub soil moisture.
- xii) The Wildlife (Protection) Act, 1972 envisage that the buffer area around core needs to be managed to provide for habitat requirement for dispersal of tiger population, human- wildlife co-existence and mainstreaming wildlife conservation in the development of area. Hence, the population of wild animals needs to be conserved through habitat improvement measures and effective protection.

SECTION 9.3 : GENERAL OBJECTS OF MANAGEMENT :

9.3.1 Rapid depletion of growing stock due to different biotic interference is very important factor, which influences the objects of management. The following objectives of forest management are identified in consonance with the National Forest Policy 1988, other directives issued by the State and Central Government and rulings of the Apex Court.

- i) To preserve and enrich the growing stock in natural forests and to restock all under-stocked and degraded areas of the forests with the help of soil and moisture conservation measures.
- ii) Preservation and improvement of minor forest to obtain progressively increasing yield of small timber, fire wood, and poles in order to meet the demands of local people and to provide grazing to local cattle.
- iii) To combat ill effects of soil erosion wherever it has already started and to prescribe preventive measures.
- iv) To increase the production of non-timber forest produce and to manage the same scientifically.

- v) To increase the productivity and ensure progressively increasing yield of forest produce in demand.
- vi) To achieve compatible wildlife management.
- vii) To maintain and conserve the medicinal plants in the conservation area, to preserve and multiply the endangered species, to ensure sustainable and non-destructive harvest of medicinal plants, to cultivate and harvest medicinal plants in degraded forest treated in the JFM and to motivate the cultivation of medicinal plants.
- viii) To effectively protect the forests with the help of local people and provide ecological services to the area by protecting and improving the forests.
- ix) Habitat management and improvement activities in existing wildlife habitat through active involvement of local communities.
- x) Site specific eco-development initiatives based on participatory village level microplans for strengthening the livelihood of local communities so that the ecological status of the area is improved and maintained.

SECTION 9.4 : ANALYSIS AND VALUATION OF THE CROP:

9.4.1 The tree enumeration has been conducted by the SOFR Unit at Gadchiroli by using 1% strip sampling method by laying out plots at a distance of 600 m x 600 m of the size 60 m x 60 m and all the tree species were enumerated down to 15 cm girth class. The enumeration data has been analysed by using Dhabekar's software and also from the Chief Forest Statistician in the office of HoFF, Nagpur. The results of enumerations have been given in the **Appendix No. LXXXIV** of volume II of Non-Buffer division. Forest area to the extent of 17% belongs to site quality III and 37% area is of site quality IV with mostly miscellaneous species and 17% is understocked and rest about 29% areas are eroded, scrub and blank category.

SECTION 9.5 : TREATMENT PRESCRIBED :

Based on the requirement of the crop the following treatment is prescribed for the forests dealt with.

- (a) Suitable tending and soil working operations to promote natural and artificial regeneration.
- (b) Timber, if silviculturally available, will be extracted from dense forests capable of producing large timber on sustainable basis.
- (c) Traditional pasture and open forests will be managed with active participation of village communities and JFM committees.

The general approach of treatment is described below.

- (1) Forests on steep precipitous slopes will be protected from harvesting. 20 meter wide strip on both sides of streams and water courses will also be protected from harvesting.
- (2) Intensive soil and moisture conservation measures are prescribed to protect forests from soil erosion to restore ecological balance and ensure bio-diversity conservation.
- (3) The rivers falling in catchments and flow from such areas and forests susceptible for erosion shall be protected.
- (4) Preference will be accorded to natural regeneration and root stock management. Suitable tending operations will be carried out to promote natural regeneration and promoting coppice regeneration in order to stimulate growth and development. The areas having good natural regeneration of valuable species shall be protected from fire and grazing. Artificial regeneration is prescribed, if natural regeneration is inadequate as per the requirement of site.
- (5) The management practices of forests close to villages will give emphasis to meet the demands of local people for small wood, fire wood, pasture, NWFP etc. Local people especially members of JFM committees will be actively involved in forest management, forest protection, plantation and development of natural resources.
- (6) High priority will be accorded to special habitat management for wildlife conservation. Special emphasis shall be given for protection

and treatment of riparian zones and mesic sites, important for wildlife management. Adequate buffer will be provided to such sites while preparing treatment maps for coupe extraction. Snag, den trees and down logs shall be sufficiently protected to meet the habitat requirement of birds and small animals. Water hole management shall be given priority in forests as it is essential requirement of the wildlife.

- (7) Priority shall be given for reduction of biotic pressure on forests, especially illicit felling, unsustainable grazing, fires and encroachments.
- (8) Involvement of local people in managing forests and awareness among masses in and around forests for effective forest conservation.
- (9) Forests that are capable of producing large sized timber will be harvested under SCI System.
- (10) Boundary demarcation will be carried out in time bound manner for the area where new area added by Notification of bifurcation of Division to Non-Buffer Division.
- (11) The division will coordinate completion of data base of floral and faunal resources as well as ecologically fragile sites in the division.
- (12) As an offshoot of gregarious flowering in bamboo, the existing regeneration and congestion is to be tended for better productivity and is covered under Bamboo overlapping working circle.

SECTION 9.6 : FORMATION OF WORKING CIRCLE :

9.6.1 Based on the objectives of management and method of treatment, the working circles are prescribed. The Unit area is considered as area of the compartment. Past implementation of the prescriptions contained in Srivastva's working plan (2003-04 to 2012-13) has been critically examined. Other previous working plan prescriptions and experience was also considered while formulating future management details. Further various factors influencing sustainable management of forests, enhancing productivity and meeting the demand of forest produce, forest protection, and wildlife

management, role of forests in protecting water and soil resources, climatic changes, growing stock, expectations of people for problems faced by forestry sector, etc. were taken into consideration while formulating the working circle for future management. While assigning areas to various working circles the enumeration data, stock mapping and wildlife management issues have been taken into consideration. The following working circles are prescribed:

1. Selection- Cum- Improvement Working Circle.
2. Improvement Working Circle.
3. Afforestation Working Circle.
4. Fodder Improvement Working Circle.
5. G.I.B. Working Circle.
6. Miscellaneous Working Circle.
7. Bamboo (over lapping) Working Circle.
8. Wildlife Management (over lapping) Working Circle.
9. Joint Forest Management (over lapping) Working Circle.
10. Non Wood Forest Produce (over lapping) Working Circle.
11. Forest Protection (over lapping) Working Circle.

9.6.2 The area assigned to each working circle in Chandrapur (Non-Buffer) Forest Division is given in the following table. Details of range wise compartments allotted to various working circles and their area is given in the **Appendix No. XXXII** in volume II of this working plan.

NON-BUFFER FOREST DIVISION:

Sr. No.	Working Circle	Area in ha.	Percentage of area assigned	No.of compartments
1.	Selection-Cum-Improvement	2424.10	3.91	18
2.	Improvement	30749.80	49.60	192
3.	Afforestation	18606.93	29.99	265
4.	Fodder Improvement	6233.32	10.04	177
5.	G.I.B.	2237.11	3.60	5
6.	Miscellaneous	1784.46	2.87	120
7.	Bamboo (over lapping)	19470.20	31.40	92
8.	Wildlife Management (over lapping)	62035.72	100	777

9.	Joint Forest Management (overlapping)	62035.72	100	777
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Sr. No.	Working Circle	Area in ha.	Percentage of area assigned	No. of compartments
10.	Non Wood Forest Produce (over lapping)	62035.72	100	777
11.	Protection (over lapping)	62035.72	100	777

1. **Selection-Cum-Improvement W.C.:** In previous plan these area was treated under Improvement W.C., Teak Plantation W.C. It also includes unworked Selection-cum-Improvement W.C. of the previous plan. These areas basically constitute both good and degraded forests mixed together and capable of producing small size timber and fire wood. The basic aim of treatment is to improve the condition of crop by tending existing natural regeneration, supplement it by artificial regeneration. The silviculturally available matured trees (above harvestable girth) in well stocked patches will be harvested. To improve the site quality and crop condition, soil and moisture conservation measures are prescribed. This area will meet the demand of local people for small timber and fire wood.
2. **Improvement W.C.:** In this category the forests area which requires treatment for improvement of crop is included and this area may be switched over to SCI WC in future. These areas were previously managed under SCI WC, IWC, Teak Plantation and coppice with Reserves WC in the plans prior to Srivastava's plan.
3. **Afforestation W.C.:** In this working circle the major portion of forests were previously managed under IWC, SCI WC, Afforestation WC. The basic objective of treatment is to increase vegetation cover, both in quality and quantity and to meet the local demand for small timber, fuel wood, fodder and other forest produce by undertaking suitable plantations in blank and under stocked areas.
4. **Fodder Improvement W.C.:** It includes forest areas which was previously managed under Pasture WC, Kuran WC and IWC having sparsely stocked forests not capable of yielding timber. The main objective of this WC is to create grass ramnas and to provide fodder

of improved quality and in sufficient quantity to local cattle population.

SECTION 9.7 : COMPARTMENTS :

The total numbers of compartments in the erstwhile Chandrapur Forest Division was 706, out of which 221 compartments were in the reserved forest areas, 475 compartments in the protected forest areas, and remaining 10 compartments were in the Unclassed forest areas. As per Government of Maharashtra Notification dated 5th May, 2010 part of forest area of erstwhile Chandrapur Forest Division has been notified as Buffer of TATR. Thereafter, vide Government of Maharashtra G.R.No.WLP-2012/C.No.-256/F-1, dated 22 August, 2012, Buffer (TATR) Forest Division and Chandrapur (Non-Buffer) Forest Division were created. The distribution of Forest compartments working circle wise in Chandrapur (Non-Buffer) Forest Division is given in the table below.

CHANDRAPUR (NON-BUFFER) DIVISION:

Sr.No.	Working Circle	No.of Compartments			Total
		RF	PF	UF	
1.	SCI	8	10	--	18
2.	IWC	81	111	--	192
3.	AWC	36	229	--	265
4.	FIWC	06	171	--	177
5.	G.I.B.	05	--	--	05
6.	Miscellaneous	07	113	--	120
	Total	143	634	--	777

SECTION 9.8 : PERIOD OF PLAN :

The period of this working plan is 10 years and the implementation of this plan will commence from 2014-15 to 2023-24. The mid-term review can be under taken after 5 years if the situation demands and the proposal may be moved by CCF(T), Chandrapur Circle.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

CHAPTER –10
SELECTION-CUM- IMPROVEMENT WORKING CIRCLE

**SECTION 10.1 : GENERAL CONSTITUTION AND
VEGETATION.**

This working circle consists of areas which were earlier assigned to Improvement Working Circle, Teak Plantation Working Circle and areas of unworked Selection-Cum-Improvement Working Circle. Forest areas with density of 0.4 and above, which can produce medium and large size timber and poles are included in this working circle. Most of the crop under this working circle is of site quality IV and few patches of site quality III also occur. The forests included in this working circle are mostly of miscellaneous species. Teak constitute 39 trees/ha., about 11% of the total stock as per the enumeration data. Apart from teak, ain, bija, Shisham, haldu, garari, lendia, tiwas, dhawada, khair, moha, tendu, ghoti, etc. also occur in these forests. Bamboo occurs in the lower canopy and is thick over most of the area. Reproduction of teak occurs in patches and that of other miscellaneous species is fairly good. Age classes mostly vary from young to middle ages with a few mature patches. The mature trees are also widely scattered. The valuable trees form a very low percentage. The kukudranji is widely spread throughout. The soil is deep, loamy and capable of producing high quality timber. The total forest area included in this working circle in Chandrapur (Non-Buffer) Forest division is 2424.10 ha. The range wise allotment of area is given in the table mentioned below.

Table

Range wise area allotted to Selection-Cum-Improvement Working Circle in Chandrapur (Non-Buffer) Forest Division

Sr. No.	Range	Area allotted in ha.						Total No.of comptt.	Total Forest Area of Range in ha.	% of the area of the Range	% of the area of the Division.
		No.of comptt.	RF	No.of comptt.	PF	No.of comptt.	UF				
1	2	3	4	5	6	7	8	9	10	11	12
1.	Chandrapur	1	116.14	--	--	--	--	1	116.14	2.32	0.20
2.	Chichpalli	5	1011.72	7	719.33	--	--	12	1731.05	15.03	2.80
3.	Warora	--	--	--	--	--	--	--	--	--	--
4.	Bhadrawati	2	137.19	3	439.72	--	--	5	576.91	5.20	0.93
5.	Sawali	--	--	--	--	--	--	--	--	--	--
	Total	8	1265.05	10	1159.05	--	--	18	2424.10		3.93

SECTION 10.2 : SPECIAL OBJECTIVES OF MANAGEMENT.

The special objectives of management in constituting this working circle are as given below.

- (i) To improve the quality and to increase the proportion of valuable species by giving preferential treatment to naturally regenerated seedlings and by planting timber species mainly teak and its associate.
- (ii) To produce large size timber by utilizing the full potential of the site.
- (iii) To increase the stocking of Teak, bamboo and other valuable species.
- (iv) To promote and tend the available regeneration of all the valuable species.
- (v) To harvest matured trees and malformed trees to improve crop and enhance productivity of forests.

- (vi) To maintain and improve adequate soil cover in the forest areas as a safeguard against soil erosion and rapid runoff of the rain water by soil and water conservation measures on watershed basis.
- (vii) Habitat improvement for wildlife conservation.
- (viii) To protect forests from cattle grazing and fire.

SECTION 10.3 : COMPARTMENTS AND WORKING SERIES :

10.3.1 18 compartments have been allotted to this working circle and these are allotted to 2 working series each having 20 coupes, average area of coupe is 60 ha.to 70 ha. The working cycle is fixed at 20 years. The details of working series, compartments and coupes are given in **Appendix No.XXXIII, XXXIV, XXXV & XXXVI** in Volume II. The abstract of allotment of compartments to this working circle is given in the following table.

Table

Details of compartments allotted to SCI Working Circle in **NON-BUFFER FOREST DIVISION**

Sr. No.	Working Series	Name of Range	Compartment Nos.	Total Compartments	Total Area of WC (ha.)
1.	Shirala	Bhadravati	200B, 545A2, 902, 905A, 940A	05	576.91
		Chichpalli	528, 530, 614, 628	04	638.55
				09	1215.46
2.	Mahadwadi	Chandrapur	408	01	116.14
		Chichpalli	356, 438, 457, 551, 630, 633, 646, 714	08	1092.50
				09	1208.64
Total :				18	2424.10

SECTION 10.4 : ANALYSIS AND VALUATION OF THE CROP :

The stock mapping of the area was carried out through field inspections by the staff of the Chandrapur Forest Division and was verified with enumeration data. The result of the stock mapping for each compartment has been given in **Appendix No.LXXVIII to LXXXIV** in volume II of Non-Buffer division. The various signs and symbols used in stock maps have been given in **Appendix No. LXIII** in volume II of Non-Buffer division.

The enumeration data received from SOFR Unit, Gadchiroli was analysed and details are given below.

Growing stock of SCI (Species and girth distribution) based on enumeration data 2008-2010

Species	Stems per hectare in girth classes in cm									Total
	15/30	31/45	46/60	61/75	76/90	91/105	106/120	121/135	136 & above	
1	2	3	4	5	6	7	8	9	10	11
Teak	12.51	9.73	6.68	3.44	2.13	2.45	0.88	0.6	0.72	39.14
Ain	9.88	5.92	4.52	3.31	2.75	2.12	1.39	0.85	0.97	31.71
Bija	0.54	0.56	0.6	0.64	0.73	0.84	0.77	0.59	1.05	6.32
Shisham	0.52	0.99	1.24	0.79	0.52	0.32	0.16	0.06	0.07	4.67
Haldu	0.09	0.09	0.05	0.04	0.02	0.01	0.00	0.01	0.03	0.34
Total	23.54	17.29	13.09	8.22	6.15	5.74	3.20	2.11	2.84	82.18
Garari	13.67	9.61	5.34	2.94	1.68	0.68	0.18	0.1	0.07	34.27
Lendia	6.41	5.09	2.96	1.92	1.62	1.08	0.66	0.3	0.29	20.33
Total	20.08	14.70	8.30	4.86	3.30	1.76	0.84	0.4	0.36	54.60
Tiwas	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03
Dhawada	6.34	3.12	2.76	2.61	2.19	1.62	0.90	0.57	0.51	20.62
Khair	3.88	3.38	1.68	0.64	0.30	0.14	0.04	0.01	0.00	10.07
Shivan	0.15	0.11	0.03	0.02	0.01	0.02	0.01	0.00	0.00	0.35
Total	10.38	6.62	4.48	3.27	2.50	1.78	0.95	0.58	0.51	31.07
Aonla	1.62	1.14	0.64	0.51	0.35	0.19	0.13	0.03	0.02	4.63
Behada	0.45	0.38	0.33	0.31	0.29	0.25	0.17	0.12	0.38	2.68
Char	2.37	1.68	1.20	0.64	0.38	0.16	0.07	0.00	0.01	6.51
Hirda	0.08	0.08	0.05	0.06	0.04	0.02	0.01	0.00	0.01	0.35
Moha	2.13	1.89	1.93	1.98	2.09	1.89	1.46	1.17	1.74	16.28
Tendu	10.01	3.07	2.22	1.68	1.54	1.27	0.90	0.48	0.67	21.84
Dikamali	0.07	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.09
Ghoti	5.53	3.94	1.35	0.52	0.25	0.07	0.02	0.01	0.00	11.69
Total	22.26	12.19	7.73	5.70	4.94	3.85	2.76	1.81	2.83	64.07
Others	40.19	30.52	21.16	14.15	10.66	7.81	4.93	2.86	3.64	135.92
Total	40.19	30.52	21.16	14.15	10.66	7.81	4.93	2.86	3.64	135.92
G.Total	116.45	81.32	54.76	36.20	27.55	20.94	12.68	7.76	10.18	367.84

The comparative statement of enumeration data of the year 1998-1999 and 2008-2010 is given below.

Girth class	No. of trees/ha. General Utility Species		No. of trees/ha. Special Utility Species		No. of trees/ha. MFP Species		No. of trees/ha. Other Species		Total No. of trees/ha.	
	1998-99	2008-10	1998-99	2008-10	1998-99	2008-10	1998-99	2008-10	1998-99	2008-10
15-30	9.22	29.862	5.78	10.457	10.45	16.65	30.25	59.453	55.71	116.422
31-45	8.02	22.307	5.04	6.712	8.30	8.231	27.97	44.078	49.33	81.328
46-60	6.17	15.999	3.87	4.512	6.09	6.389	21.76	27.854	37.89	54.754
61-75	4.92	10.103	2.60	3.298	5.53	5.180	22.01	17.608	35.06	36.189
76-90	3.77	7.755	1.85	2.526	4.48	4.703	8.29	12.585	18.39	27.569
91-105	3.04	6.816	1.13	1.788	3.73	3.785	5.85	8.558	13.75	20.947
106-120	1.82	3.854	0.41	0.959	2.24	2.743	2.92	5.125	7.39	12.681
121-135	1.33	2.406	0.26	0.594	1.28	1.805	1.55	2.970	4.42	7.775
135 & above	0.86	3.099	0.15	0.542	1.11	2.812	0.88	3.723	3.00	10.176
Total	39.15	102.201	21.09	31.388	43.22	52.298	121.48	181.95	224.94	367.841

The analysis of the tree enumeration data shows that teak occupies about 10.64%, Non-teak timber species (Ain, Bija, Haldu, Shisham) occupy about 11.70% and other non-timber species occupy about 77.66% of the crop, taking all girth classes together. On the basis of tree enumeration results it is suggested that the percentage of teak and other timber species should be increased in order to meet the growing demand of timber for the local market. The results of tree enumeration are given in **Appendix No. LXXXIV** in volume II. A comparison of current enumeration data with the previous enumeration shows an increase in total estimated number of trees per hectare in the current enumeration from 229.25 to 367.84 trees per hectare and more than 57% of trees are in lower girth classes (i.e. under 45 cm girth) in the current enumeration. Also the availability of teak has increased from 18.51 to 39.14 trees per hectare.

SECTION 10.5 : SILVICULTURAL SYSTEM.

10.5.1 The silvicultural system is aimed at harvesting matured trees and carrying out improvement felling for removal of malformed trees to improve the crop. The potential of the site is a corollary to the silvicultural imperatives. The site has the potential to grow big sized timber. The SCI being the most conservative system, it has been applied to preserve and improve the ecological status of the forest in general. Natural regeneration will be encouraged by way of subsidiary silvicultural operations and rigid fire protection and grazing control measures. In suitable areas, gap plantation of teak and superior species will be taken up to improve the quality of the crop. Bamboo plantation shall be taken up in suitable sites in the 4th year after teak plantation.

10.5.2 The compartments allotted to this working circle are having crop density of 0.5 to 0.7. The site quality is generally III to IV and due to occurrence of mature and over-matured trees, the conservative harvesting has to be resorted to. Tree growth is very good with adequate natural regeneration. Trees in mature girth classes i.e. above 120 cms are around 17 per ha. and fairly distributed. The middle age crop (pre-harvestable girth class) is also fairly good, around 152 trees per ha. (girth 45 cms -120 cms). All areas having crop composition as described above are included in this working circle. Only some isolated patches are excluded for management reasons and few adjoining compartments are included even though the numbers of trees is less than the prescribed. Hence, selection cum improvement silvicultural system has been prescribed.

10.5.3 The harvestable girth has been determined after taking the inventory of the stocking. It envisages to selectively and silviculturally remove the trees of harvestable girth so that it is conducive for enriching the ecological status and at the same time it shall bring normalcy to the forests. Any species which is less than 1%, will not be removed or felled. The Natural regeneration shall be accorded top priority supplemented with artificial regeneration, rigid fire protection measure, soil and moisture conservation works.

SECTION 10.6 : CHOICE OF THE SPECIES.

Teak is the most valuable species from the commercial point of view therefore it will be given top priority while taking up of plantations depending on the suitability of the site and soil type. The miscellaneous species to be favoured are bija, haldu, ain, shisham, kalam, tiwas, dhawada, khair, rohan and Lendia. Edible fruits and flower yielding plants, semal and khair will be reserved from felling. In the plantations some shade bearing trees like ficus, gular, etc. will also be planted for the benefit of wildlife.

SECTION 10.7 : FELLING CYCLE.

The felling cycle is fixed at 20 years.

SECTION 10.8 : HARVESTABLE GIRTH.

The site has potential for growth and based on the results of stem analysis carried out for Chandrapur Forest Division in the previous working plan period, it shows that in case of Teak CAI and MAI curves intersect at the age of 100 years. The harvestable girth fixed for different trees species is given in the table as below.

Sr.No.	Species	Harvestable girth (cm)
1.	Teak, bija, ain, shisham, haldu	120
2.	Any other timber species	105
3.	Garari and Lendia	45

SECTION 10.9 : AGENCY FOR HARVESTING.

The felling operations may be carried out departmentally, or through JFM Committees as per the instruction of the Government.

SECTION 10.10 : REGULATION OF YIELD.

10.10.1 The annual yield will be regulated by area by making coupes as far as possible equi-productive in each working series. The coupes of 60 to 70 ha. will be laid down. The details of annual coupes and their sequence of working and planting is given in the **Appendix Nos. XXXIV, XXXV** in volume II of Non-Buffer Division.

10.10.2 K.P.Sagreiya's modification of Brandis method has been applied for yield calculation. The method of yield calculation is prescribed as below:

10.10.3 NUMBER OF STEMPs PER HECTARE: From the enumeration data obtained after calculations for SCI working circle of all five ranges, the average number of trees per ha. has been calculated which is given in table below.

Table

Girth classes	Ain, Bija, Shisham, Teak, Haldu	Garari, Lendia	Others	Total
15-30	23.54	20.08	72.83	116.45
31-45	17.29	14.70	49.33	81.32
46-60	13.09	8.30	33.37	54.76
61-75	8.22	4.86	23.12	36.20
76-90	6.15	3.30	18.10	27.55
91-105	5.74	1.76	13.44	20.94
106-120	3.20	0.84	8.64	12.68
121-135	2.11	0.40	5.25	7.76
136-150	1.45	0.24	3.42	5.11
151 & above	1.39	0.12	3.56	5.07
Total	82.18	54.60	231.06	367.84

10.10.4 In view of variations in density condition, no. of harvestable trees in forest area in SCI WC, it is not possible to prescribe clear cut rules for yield regulation. Yield is regulated by prescribing harvestable girth for the tree species. The Government of India instructed to harvest 50% of the normal yield. In addition to the yield obtained by harvesting matured trees, malformed trees, dead trees would also be removed and this would slightly add to the yield. For

yield calculation in SCI WC, the method of Sagreiya's modification of Brandis formula is used. Mathematical analysis for K.P. Sagreiya's modification of Brandis' method of determining the maximum sustained yield out of trees of exploitable girth from all age class forests is given as below;

- (i) The number of trees in Class I (Exploitable girth class) is S_1 ;
- (ii) The number of trees in classes II, III ... are S_2, S_3, \dots ;
- (iii) The fraction of the trees of classes II, III, ... that survive and are eventually available for harvesting as class trees are x_2, x_3, \dots so that $x_2 S_2 = S_2$; $x_3 S_3 = S_3$;
- (iv) The trees take Y_2, Y_3, \dots years in classes II, III, ..., so that the average annual recruitments in the class periods are- $S_2/Y_2 = R_2$,
 $S_3/Y_3 = R_3, \dots$
- (v) The overall average annual recruitment for the entire enumeration period, i.e.,
 $(S_2 + S_3 + \dots) / (Y_2 + Y_3 + \dots) = S/Y$ is say R .
- (vi) The felling cycle adopted is f years and
- (vii) The accruing average annual recruitment during the 1st, 2nd, Cycles is R', R'', \dots , so that the recruitments, accruing in successive cycles, i.e. $f R', f R'', \dots$ are given by as follows:

$$f R' = a R_x + (f - a) R_{x+1}$$

$$f R'' = b R_y + (f - b) R_{y+1}, \dots$$

Then the realizable recruitments R_{r1}, R_{r2}, \dots in cycles I, II, will be -

$$R_{r1} = \frac{1}{2} [f R' - a (R' - R_x)],$$

$$R_{r1} = \frac{1}{2} [f R'' - a (f R'' - R_y)], \dots$$

Therefore, the prescribed yield should be -

$$1/f [S_1 + f R'/2 - a (R' - R_x)/2],$$

$$1/2f [S_2 + f (R' + R''/2) - b (R'' - R_y)/2], \dots$$

As the stock in hand has to be liquidated in 1, 2, ... cycles, to obtain the maximum sustained yield, while the actual recruitment is still less than R.

From this it follows that if the overall annual recruitment R is to be realized on a sustained basis even while the realizable recruitment in a cycle is less than fR, there must be a stock in hand of –

$$S_I = f [R - R'/2] + a (R' - R_x) / 2 ,$$

$$S_{II} = f [2 R - (R' + R'' / 2)] + b (R'' - R_y) / 2 , \dots$$

as the deficiency continues for 1, 2, 3, ... felling cycles.

10.10.5 HARVESTABLE GIRTH 120 cms :- Yield regulation for Teak, Ain, Bija, Shisham and Haldu group is calculated by modified Brandis formula.

Details of period required by trees to shift to next higher girth class for Ain, Bija, Teak, Shisham, Haldu are as given below.

TABLE

Class	Girth class in Cms	No. of trees per ha. as per enumeration data	Period required by trees to switch over to next higher girth class (years)	Corresponding symbol representing period to switch over to next higher girth class
A	B	C	D	E
	Above 150	1.39	--	--
I	136-150	1.45	16	--
II	121-135	2.11	17	Y ₂
III	106-120	3.20	17	Y ₃
IV	91-105	5.75	15	Y ₄
V	76-90	6.15	13	Y ₅
VI	61-75	8.22	12	Y ₆
VII	46-60	13.09	11	Y ₇
VIII	31-45	17.29	10	Y ₈
IX	16-30	23.54	9	Y ₉

	TOTAL	82.18	120	
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The period required by trees to switchover to next higher girth class is worked out based on stem analysis data which was prepared and reproduced in the previous working plan. In the above table in column A, class I symbol is given for the trees in girth class of harvestable girth and above, based on enumeration data. Next lower girth is named as class – II and next girth class – III and so on.

Percentage of trees of different girth classes that will attain harvestable girth and silviculturally available for removal will be as stated in table below.

Class	Girth class in cm	Stems per ha.	% of trees available as class I in future	Corresponding symbol of column D	No. of trees available as class I in future	Corresponding symbol of column F
A	B	C	D	E	F	G
I	Above 150	1.39	--	--	--	--
I	136 -150	1.45	--	--	--	--
II	121-135	2.11	69	X ₂	1.45	S ₂
III	106-120	3.20	45	X ₃	1.44	S ₃
IV	91-105	5.74	25	X ₄	1.43	S ₄
V	76-90	6.15	23	X ₅	1.41	S ₅
VI	61-75	8.22	18	X ₆	1.48	S ₆
VII	46-60	13.09	11	X ₇	1.44	S ₇
VIII	31-45	17.29	8	X ₈	1.38	S ₈
IX	16-30	23.54	6	X ₉	1.41	S ₉
	TOTAL	82.18			11.44	

In the table above, in column C the number of trees present in a girth class is given based on enumeration data. The trees in class I of 136-150 and above girth class are not considered here because the trees in this girth class are above harvestable girth and it is the stock in hand for harvesting. In column D percentage of trees available as a class-I in future are given based on the number of trees to be available in Column

C. As the total number of class-II trees above harvestable girth are 1.45 (136-150 girth class) which means that out of 2.11 trees in class II, 1.45 trees will switch over to above harvestable girth and the percentage is 69%. In column E the symbol x_2, x_3 etc. is given for the percentage of trees available as class I in future corresponding to the column D. In column G, symbol S_2, S_3 etc is given for number of trees available as class-I in future from each girth class (class-III, class-IV, class-V) as given in column F. In column G at the bottom S indicates the total number of trees available as class I in future from all girth classes.

For the period Y (104 years) the total recruitment is S, the mean yearly recruitment R is S/Y,

$$R = 11.44/104 \\ = 0.11 \text{ Tree/ha.}$$

The average annual recruitment per ha. during each girth class period namely, $S_2/ Y_2 = R_2$, $S_3/ Y_3 = R_3$ will be as given in table below.

Class	Girth class in cm	Stems per ha.	Years in girth class	Corresponding symbol of column D	Annual recruitment to next girth class	Corresponding symbol of column F
A	B	C	D	E	F	G
I	Above 150	1.39	--	--	--	--
I	136 -150	1.45	16	--	--	--
II	121-135	2.11	17	Y_2	0.085	R_2
III	106-120	3.20	17	Y_3	0.085	R_3
IV	91-105	5.75	15	Y_4	0.095	R_4
V	76-90	6.15	13	Y_5	0.11	R_5
VI	61-75	8.22	12	Y_6	0.12	R_6
VII	46-60	13.09	11	Y_7	0.12	R_7
VIII	31-45	17.29	10	Y_8	0.14	R_8
IX	16-30	23.54	9	v_n	0.15	R_n

	TOTAL	82.18	104			
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In the table above the column F is obtained by the formula S_2/Y_2 , S_3/Y_3 , S_4/Y_4 , S/Y . In column G, R_2 R_3 etc indicate annual recruitment to next girth class corresponding to figures in column F and R indicates average recruitment to next girth class.

There is stock in hand of 2.84 trees/ha. (class- I) and there will be recruitment of 11.44 trees/ha. in 104 years and thus theoretically annual yield is : $(2.84+ 11.44) \div 104 = 0.14$ trees/ha. assuming that the existing stock is to be distributed uniformly, the total class I trees available at the end of the first year will be only $(S_1 + R_2)$ per ha.

Of these, all the S_1 (existing class I trees) will be available for removal, but when felling proceed from one end of the annual area to the other, only half of the recruitment of $R_2 / 2$ trees that will come into class I in one year over the whole coupe will be realizable. Remaining trees will be passing into class I thereafter. In other words the total realizable yield from the coupe (no. of trees per ha) will be $\{S_1 + R_2 / 2\}$. Similarly for 2nd coupe, before felling commences it will have S_1 trees and also one year`s recruitment namely R_2 trees, all of which will be available for removal. Besides this, in coupe I half of the year`s recruitment $R_2 / 2$ will also be available. Thus in 2nd coupe trees available per ha would be $\{S_1 + R_2 + R_2 / 2\}$, and so on.

Thus for one ha area of each coupe, realizable and accumulating class I trees for entire felling cycle would be as given in table below.

Number of trees available for harvesting per ha. for 20 year felling cycle

Sr. No.	Coupe No.	Year of operation	Class I at hand= S_1	Realizable Recruitment = $(n-1/2) R_2$	Accruing Recruitment=
1	I	1	2.84	$1/2 R_2 = 0.042$	$17R_2 + 2R_3 + 1/2 R_3 = 1.657$
2	II	2	2.84	$R_2 + 1/2 R_2 = 0.127$	$17R_2 + R_3 + 1/2 R_3 = 1.572$

3	III	3	2.84	$2R_2 + \frac{1}{2} R_2 = 0.212$	$17R_2 + \frac{1}{2} R_2 = 1.487$
4	IV	4	2.84	$3R_2 + \frac{1}{2} R_2 = 0.297$	$16R_2 + \frac{1}{2} R_2 = 1.402$
5	V	5	2.84	$4R_2 + \frac{1}{2} R_2 = 0.382$	$15R_2 + \frac{1}{2} R_2 = 1.317$
6	VI	6	2.84	$5R_2 + \frac{1}{2} R_2 = 0.467$	$14R_2 + \frac{1}{2} R_2 = 1.232$
7	VII	7	2.84	$6R_2 + \frac{1}{2} R_2 = 0.552$	$13R_2 + \frac{1}{2} R_2 = 1.147$
8	VIII	8	2.84	$7R_2 + \frac{1}{2} R_2 = 0.637$	$12R_2 + \frac{1}{2} R_2 = 1.062$
9	IX	9	2.84	$8R_2 + \frac{1}{2} R_2 = 0.722$	$11R_2 + \frac{1}{2} R_2 = 0.977$
10	X	10	2.84	$9R_2 + \frac{1}{2} R_2 = 0.807$	$10R_2 + \frac{1}{2} R_2 = 0.892$
11	XI	11	2.84	$10R_2 + \frac{1}{2} R_2 = 0.892$	$9R_2 + \frac{1}{2} R_2 = 0.807$
12	XII	12	2.84	$11R_2 + \frac{1}{2} R_2 = 0.977$	$8R_2 + \frac{1}{2} R_2 = 0.722$
13	XIII	13	2.84	$12R_2 + \frac{1}{2} R_2 = 1.062$	$7R_2 + \frac{1}{2} R_2 = 0.637$
14	XIV	14	2.84	$13R_2 + \frac{1}{2} R_2 = 1.147$	$6R_2 + \frac{1}{2} R_2 = 0.552$
15	XV	15	2.84	$14R_2 + \frac{1}{2} R_2 = 1.232$	$5R_2 + \frac{1}{2} R_2 = 0.467$
16	XVI	16	2.84	$15R_2 + \frac{1}{2} R_2 = 1.317$	$4R_2 + \frac{1}{2} R_2 = 0.382$
17	XVII	17	2.84	$16R_2 + \frac{1}{2} R_2 = 1.402$	$3R_2 + \frac{1}{2} R_2 = 0.297$
18	XVIII	18	2.84	$17R_2 + \frac{1}{2} R_2 = 1.487$	$2R_2 + \frac{1}{2} R_2 = 0.212$
19	XIX	19	2.84	$17R_2 + R_3 + \frac{1}{2} R_3 = 1.572$	$R_2 + \frac{1}{2} R_2 = 0.127$
20	XX	20	2.84	$17R_2 + 2R_3 + \frac{1}{2} R_3 = 1.657$	$\frac{1}{2} R_2 = 0.042$
	Total		56.80	16.990	16.990
		Average	2.84	0.849	0.849

Thus overall average number of trees per ha. above selection girth per year = $2.84 + 0.85 + 0.85 = 4.54$

Out of which available for selection felling per year = $2.84 + 0.85 = 3.69$

Percentage removal = $3.69 \div 4.54 = 81\%$

Following the Guidelines of Government of India, 50% of normal available yield can be harvested.

Accordingly average number of trees to be harvested for felling on average per ha annually (40.5% of 3.69) = 1.48, say 2 trees per ha.

Volume conversion factor (average) of trees in girth class 136-150 for timber = 2.100 m³

Average annual yield per hectare (2.100 x 1.48) = 3.108 m³

Total average annual yield-

For Non-Buffer Division- (2424.10 x 3.108) ÷ 20 = 376.71 m³ Say 377 m³

10.10.6 HARVESTABLE GIRTH 105 cms :- Yield regulation for other timber species (excluding Teak, Ain, Bija, Shisham, Haldu, Garari & Lendia) is calculated by modified Brandis formula.

Details of period required by trees to shift to next higher girth class for other timber species (excluding Teak, Ain, Bija, Shisham, Haldu, Garari & Lendia) is as given below.

Classes	Girth class in Cms	No. of trees per ha. as per enumeration data	Period required by trees to switch over to next higher girth class (years)	Corresponding symbol representing period to switch over to next higher girth class
A	B	C	D	E
I	Above 150	3.56	--	--
I	136-150	3.42	--	--
I	121-135	5.25	16	--
II	106-120	8.64	13	Y ₂
III	91-105	13.44	12	Y ₃
IV	76-90	18.10	13	Y ₄
V	61-75	23.12	13	Y ₅
VI	46-60	33.37	14	Y ₆
VII	31-45	49.33	13	Y ₇
VIII	16-30	72.83	14	Y ₈
	TOTAL	231.06	92	

The period required by trees to switchover to next higher girth class is worked out based on stem analysis data which was prepared and reproduced in the previous working plan. In the above table in column A, class I symbol is given for the trees in girth class of harvestable girth and above, based on enumeration data. Next lower girth is named as class – II and next girth class – III and so on.

Percentage of trees of different girth classes that will attain harvestable girth and silviculturally available for removal will be as stated in table below.

Class	Girth class in cm	Stems per ha.	% of trees available as class I in future	Corresponding symbol of column D	No. of trees available as class I in future	Corresponding symbol of column F
A	B	C	D	E	F	G
I	Above 150	3.56	--	--	--	--
I	136-150	3.42	--	--	--	--
I	121-135	5.25	--	--	--	--
II	106-120	8.64	60	X ₂	5.18	S ₂
III	91-105	13.44	39	X ₃	5.24	S ₃
IV	76-90	18.10	29	X ₄	5.25	S ₄
V	61-75	23.12	23	X ₅	5.32	S ₅
VI	46-60	33.37	16	X ₆	5.34	S ₆
VII	31-45	49.33	11	X ₇	5.42	S ₇
VIII	16-30	72.83	7	X ₈	5.10	S ₈
	TOTAL	231.06			36.85	

In the table above, in column C the number of trees present in a girth class is given based on enumeration data. The trees in class I of 136-150 and above girth class are not considered here because the trees in this girth class are above harvestable girth and it is the stock in hand for harvesting. In column D percentage of trees available as a class-I in

future are given based on the number of trees to be available in Column C. As the total number of class-I trees above harvestable girth are 5.25 (121-135 girth class) which means that out of 8.64 trees in class II, 5.25 trees will switch over to above harvestable girth and the percentage is 60%. In column E the symbol x_2, x_3 etc. is given for the percentage of trees available as class I in future corresponding to the column D. In column G, symbol S_2, S_3 etc is given for number of trees available as class-I in future from each girth class (class-III, class-IV, class-V) as given in column F. In column G at the bottom S indicates the total number of trees available as class I in future from all girth classes.

For the period Y (92 years) the total recruitment is S, the mean yearly recruitment R is S/Y ,

$$R = \frac{36.86}{92} \\ = 0.40 \text{ per ha.}$$

The average annual recruitment per ha. during each girth class period namely, $S_2/Y_2 = R_2$, $S_3/Y_3 = R_3$ will be as given in table below.

Class	Girth class in cm	Stems per ha.	Years in girth class	Corresponding symbol of column D	Annual recruitment to next girth class	Corresponding symbol of column F
A	B	C	D	E	F	G
I	Above 150	3.56	--			
I	136-150	3.42	--			
I	121-135	5.25	16			
II	106-120	8.64	13	Y_2	0.40	R_2
III	91-105	13.44	12	Y_3	0.44	R_3
IV	76-90	18.10	13	Y_4	0.40	R_4
V	61-75	23.12	13	Y_5	0.41	R_5
VI	46-60	33.37	14	Y_6	0.38	R_6

VII	31-45	49.33	13	Y_7	0.42	R_7
VIII	16-30	72.83	14	Y_8	0.36	R_8
	TOTAL	231.06				

In the table above the column F is obtained by the formula S_2/Y_2 , S_3/Y_3 , S_4/Y_4 , S/Y . In column G, R_2 R_3 etc indicate annual recruitment to next girth class corresponding to figures in column F and R indicates average recruitment to next girth class.

There is stock in hand of 12.23 trees/ha. (class- I) and there will be recruitment of 36.85 trees/ha. in 92 years and thus theoretically annual yield is : $(12.23 + 36.85) \div 92 = 0.53$ trees/ha. assuming that the existing stock is to be distributed uniformly, the total class I trees available at the end of the first year will be only $(S_1 + R_2)$ per ha.

Of these, all the S_1 (existing class I trees) will be available for removal, but when felling proceed from one end of the annual area to the other, only half of the recruitment of $R_2 / 2$ trees that will come into class I in one year over the whole coupe will be realizable. Remaining trees will be passing into class I thereafter. In other words the total realizable yield from the coupe (no. of trees per ha) will be $\{S_1 + R_2 / 2\}$. Similarly for 2nd coupe, before felling commences it will have S_1 trees and also one year's recruitment namely R_2 trees, all of which will be available for removal. Besides this, in coupe I half of the year's recruitment $R_2 / 2$ will also be available. Thus in 2nd coupe trees available per ha would be $\{S_1 + R_2 + R_2 / 2\}$, and so on.

Thus for one ha. area of each coupe, realizable and accumulating class I trees for entire felling cycle would be as given in table below.

Number of trees available for harvesting per ha. for 20 year felling cycle

Sr. No.	Coupe No.	Year of operation	Class I at hand= S_1	Realizable Recruitment = $(n - \frac{1}{2}) R_2$	Accruing Recruitment=
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1	I	1	12.23	$\frac{1}{2}R_2 = 0.20$	$16R_2 + 3R_3 + \frac{1}{2}R_3 = 7.94$
2	II	2	12.23	$R_2 + \frac{1}{2}R_2 = 0.60$	$16R_2 + 2R_3 + \frac{1}{2}R_3 = 7.50$
3	III	3	12.23	$2R_2 + \frac{1}{2}R_2 = 1.00$	$16R_2 + R_3 + \frac{1}{2}R_3 = 7.06$
4	IV	4	12.23	$3R_2 + \frac{1}{2}R_2 = 1.40$	$16R_2 + \frac{1}{2}R_2 = 6.60$
5	V	5	12.23	$4R_2 + \frac{1}{2}R_2 = 1.80$	$15R_2 + \frac{1}{2}R_2 = 6.20$
6	VI	6	12.23	$5R_2 + \frac{1}{2}R_2 = 2.20$	$14R_2 + \frac{1}{2}R_2 = 5.80$
7	VII	7	12.23	$6R_2 + \frac{1}{2}R_2 = 2.60$	$13R_2 + \frac{1}{2}R_2 = 5.40$
8	VIII	8	12.23	$7R_2 + \frac{1}{2}R_2 = 3.00$	$12R_2 + \frac{1}{2}R_2 = 5.00$
9	IX	9	12.23	$8R_2 + \frac{1}{2}R_2 = 3.40$	$11R_2 + \frac{1}{2}R_2 = 4.60$
10	X	10	12.23	$9R_2 + \frac{1}{2}R_2 = 3.80$	$10R_2 + \frac{1}{2}R_2 = 4.20$
11	XI	11	12.23	$10R_2 + \frac{1}{2}R_2 = 4.20$	$9R_2 + \frac{1}{2}R_2 = 3.80$
12	XII	12	12.23	$11R_2 + \frac{1}{2}R_2 = 4.60$	$8R_2 + \frac{1}{2}R_2 = 3.40$
13	XIII	13	12.23	$12R_2 + \frac{1}{2}R_2 = 5.00$	$7R_2 + \frac{1}{2}R_2 = 3.00$
14	XIV	14	12.23	$13R_2 + \frac{1}{2}R_2 = 5.40$	$6R_2 + \frac{1}{2}R_2 = 2.60$
15	XV	15	12.23	$14R_2 + \frac{1}{2}R_2 = 5.80$	$5R_2 + \frac{1}{2}R_2 = 2.20$
16	XVI	16	12.23	$15R_2 + \frac{1}{2}R_2 = 6.20$	$4R_2 + \frac{1}{2}R_2 = 1.80$
17	XVII	17	12.23	$16R_2 + \frac{1}{2}R_2 = 6.60$	$3R_2 + \frac{1}{2}R_2 = 1.40$
18	XVIII	18	12.23	$16R_2 + R_3 + \frac{1}{2}R_3 = 7.06$	$2R_2 + \frac{1}{2}R_2 = 1.00$
19	XIX	19	12.23	$16R_2 + 2R_3 + \frac{1}{2}R_3 = 7.50$	$R_2 + \frac{1}{2}R_2 = 0.60$
20	XX	20	12.23	$16R_2 + 3R_3 + \frac{1}{2}R_3 = 7.94$	$\frac{1}{2}R_2 = 0.20$
	Total		244.60	80.30	80.30
		Average	12.23	4.01	4.01

Thus overall average number of coppice trees per ha above selection girth per year = $12.23 + 4.01 + 4.01 = 20.25$

Out of which available for selection felling per year = $12.23 + 4.01 = 16.24$

Percentage removal = $16.24 \div 20.25 = 80\%$

Following the Guidelines of Government of India, 50% of normal available yield can be harvested.

Accordingly average number of trees to be harvested for felling on average per ha. annually (40% of 16.24) = 6.50, say 7 trees per ha.

Volume conversion factor of trees in girth class 120-135 for timber = 1.236 m³

Average annual yield per hectare (7 x 1.236) = 8.652 m³

Total average annual yield-

For Non-Buffer Division- (2424.10 x 8.652) ÷ 20 = 1048.665 m³
or say 1048 m³

10.10.7 HARVESTABLE GIRTH 45 cms :- Yield regulation for Garari & Lendia species is calculated by modified Brandis formula.

Details of period required by trees to shift to next higher girth class for Garari & Lendia species are as given below.

	Class Girth class in Cms	No. of trees per ha. as per enumeration data	Period required by trees to switch over to next higher girth class (years)	Corresponding symbol representing period to switch over to next higher girth class
A	B	C	D	E
I	Above 150	0.12	--	--
I	136 -150	0.24	--	--
I	121- 135	0.40	--	--
II	106- 120	0.84	--	--
III	91-105	1.76	--	--
IV	76-90	3.30	--	--
V	61-75	4.86	--	--
VI	46-60	8.30	--	--
VII	31-45	14.70	20	Y ₂
VIII	16-30	20.08	16	Y ₃
	TOTAL	54.60	36	

The period required by trees to switchover to next higher girth class is worked out based on stem analysis data which was prepared and reproduced in the previous working plan. In the above table in column A, class I symbol is given for the trees in girth class of harvestable girth and above, based on enumeration data. Next lower girth is named as class – II and next girth class – III and so on.

Percentage of trees of different girth classes that will attain harvestable girth and silviculturally available for removal will be as stated in table below.

Class	Girth class in cm	Stems per ha.	% of trees available as class I in future	Corresponding symbol of column D	No. of trees available as class I in future	Corresponding symbol of column F
A	B	C	D	E	F	G
I	Above 150	0.12	100	--	--	--
I	136-150	0.24	100	--	--	--
I	121-135	0.40	100	--	--	--
I	106-120	0.84	100	--	--	--
I	91-105	1.76	100	--	--	--
I	76-90	3.30	100	--	--	--
I	61-75	4.86	100	--	--	--
I	46-60	8.30	100	--	--	--
II	31-45	14.70	56	X ₂	8.23	S ₂
III	16-30	20.08	41	X ₃	8.23	S ₃
	TOTAL	54.60			16.46	

In the table above, in column C the number of trees present in a girth class is given based on enumeration data. The trees in class I of 136-150 and above girth class are not considered here because the trees in this girth class are above harvestable girth and it is the stock in hand for harvesting. In column D percentage of trees available as a class-I in future are given based on the number of trees to be available in Column C. As the total number of class-II trees above harvestable girth are 8.30

(46-60 girth class) which means that out of 14.70 trees in class II, 8.30 trees will switch over to above harvestable girth and the percentage is 56%. In column E the symbol x_2 , x_3 etc. is given for the percentage of trees available as class I in future corresponding to the column D. In column G, symbol S_2 , S_3 etc is given for number of trees available as class-I in future from each girth class (class-III, class-IV, class-V) as given in column F. In column G at the bottom S indicates the total number of trees available as class I in future from all girth classes.

For the period Y (36 years) the total recruitment is S, the mean yearly recruitment R is S/Y ,

$$R = \frac{16.46}{36}$$

$$= 0.46 \text{ trees per ha.}$$

The average annual recruitment per ha. during each girth class period namely, $S_2/Y_2 = R_2$, $S_3/Y_3 = R_3$ will be as given in table below.

Class	Girth class in cm	Stems per ha.	Years in girth class	Corresponding symbol of column D	Annual recruitment to next girth class	Corresponding symbol of column F
A	B	C	D	E	F	G
I	Above 46	19.82	--	--	--	--
II	31-45	14.70	20	Y_2	0.41	R_2
III	16-30	20.08	16	Y_3	0.51	R_3
	TOTAL	54.60	36			

In the table above the column F is obtained by the formula S_2/Y_2 , S_3/Y_3 , S_4/Y_4 , S/Y . In column G, R_2 R_3 etc indicate annual recruitment to next girth class corresponding to figures in column F and R indicates average recruitment to next girth class.

There is stock in hand of 19.82 trees/ha. (class- I) and there will be recruitment of 0.46 trees/ha. in 36 years and thus theoretically annual yield is : $(19.82 + 16.46) \div 36 = 1.00$ trees/ha. assuming that the existing

stock is to be distributed uniformly, the total class I trees available at the end of the first year will be only $(S_1 + R_2)$ per ha.

Of these, all the S_1 (existing class I trees) will be available for removal, but when felling proceed from one end of the annual area to the other, only half of the recruitment of $R_2 / 2$ trees that will come into class I in one year over the whole coupe will be realizable. Remaining trees will be passing into class I thereafter. In other words the total realizable yield from the coupe (no. of trees per ha) will be $\{S_1 + R_2 / 2\}$. Similarly for 2nd coupe, before felling commences it will have S_1 trees and also one year's recruitment namely R_2 trees, all of which will be available for removal. Besides this, in coupe I half of the year's recruitment $R_2 / 2$ will also be available. Thus in 2nd coupe trees available per ha would be $\{S_1 + R_2 + R_2 / 2\}$, and so on.

Thus for one ha area of each coupe, realizable and accumulating class I trees for entire felling cycle would be as given in table below.

Number of trees available for harvesting per ha. for 20 year felling cycle

Sr. No.	Coupe No.	Year of operation	Class I at hand= S_1	Realizable Recruitment = $(n - \frac{1}{2}) R_2$	Accruing Recruitment=
1	I	1	19.82	$\frac{1}{2}R_2 = 0.20$	$19R_2 + \frac{1}{2}R_2 = 7.99$
2	II	2	19.82	$R_2 + \frac{1}{2}R_2 = 0.61$	$18R_2 + \frac{1}{2}R_2 = 7.58$
3	III	3	19.82	$2R_2 + \frac{1}{2}R_2 = 1.02$	$17R_2 + \frac{1}{2}R_2 = 7.17$
4	IV	4	19.82	$3R_2 + \frac{1}{2}R_2 = 1.43$	$16R_2 + \frac{1}{2}R_2 = 6.76$
5	V	5	19.82	$4R_2 + \frac{1}{2}R_2 = 1.84$	$15R_2 + \frac{1}{2}R_2 = 6.35$
6	VI	6	19.82	$5R_2 + \frac{1}{2}R_2 = 2.25$	$14R_2 + \frac{1}{2}R_2 = 5.94$
7	VII	7	19.82	$6R_2 + \frac{1}{2}R_2 = 2.66$	$13R_2 + \frac{1}{2}R_2 = 5.53$
8	VIII	8	19.82	$7R_2 + \frac{1}{2}R_2 = 3.07$	$12R_2 + \frac{1}{2}R_2 = 5.12$
9	IX	9	19.82	$8R_2 + \frac{1}{2}R_2 = 3.48$	$11R_2 + \frac{1}{2}R_2 = 4.71$
10	X	10	19.82	$9R_2 + \frac{1}{2}R_2 = 3.89$	$10R_2 + \frac{1}{2}R_2 = 4.30$

11	XI	11	19.82	$10R_2 + \frac{1}{2} R_2 = 4.30$	$9R_2 + \frac{1}{2} R_2 = 3.89$
12	XII	12	19.82	$11R_2 + \frac{1}{2} R_2 = 4.71$	$8R_2 + \frac{1}{2} R_2 = 3.48$
13	XIII	13	19.82	$12R_2 + \frac{1}{2} R_2 = 5.12$	$7R_2 + \frac{1}{2} R_2 = 3.07$
14	XIV	14	19.82	$13R_2 + \frac{1}{2} R_2 = 5.53$	$6R_2 + \frac{1}{2} R_2 = 2.66$
15	XV	15	19.82	$14R_2 + \frac{1}{2} R_2 = 5.94$	$5R_2 + \frac{1}{2} R_2 = 2.25$
16	XVI	16	19.82	$15R_2 + \frac{1}{2} R_2 = 6.35$	$4R_2 + \frac{1}{2} R_2 = 1.84$
17	XVII	17	19.82	$16R_2 + \frac{1}{2} R_2 = 6.76$	$3R_2 + \frac{1}{2} R_2 = 1.43$
18	XVIII	18	19.82	$17R_2 + \frac{1}{2} R_2 = 7.17$	$2R_2 + \frac{1}{2} R_2 = 1.02$
19	XIX	19	19.82	$18R_2 + \frac{1}{2} R_2 = 7.58$	$R_2 + \frac{1}{2} R_2 = 0.61$
20	XX	20	19.82	$19R_2 + \frac{1}{2} R_2 = 7.99$	$\frac{1}{2} R_2 = 0.20$
	Total		396.40	81.90	81.90
		Average	19.82	4.09	4.09

Thus overall average number of trees per ha. above selection girth per year = $19.82 + 4.09 + 4.09 = 28.00$

Out of which available for selection felling per year = $19.82 + 4.09 = 23.91$

Percentage removal = $23.91 \div 28.00 = 85.40\%$

Following the Guidelines of Government of India, 50% of normal available yield can be harvested.

Accordingly average number of trees to be harvested for felling on average per ha. annually (42.70% of 23.91) = 10.22, say 10 trees per ha.

Volume conversion factor of trees in girth class 61-75 for timber = 0.223 m^3

Average annual yield per hectare (10 x 0.223) = 2.230 m^3

Total average annual yield-

For Non-Buffer Division- $(2424.10 \times 2.230) \div 20 = 270.287 \text{ m}^3$ or say 270 m^3

Annual yield :

Non-Buffer Division -

A : Selection felling :

Total annual yield for harvestable girth 120 cm - 376.71 m³

Total annual yield for harvestable girth 105 cm - 1048.66 m³

Total annual yield for harvestable girth 45 cm - 270.28 m³

Total annual yield for area under SCI WC - 1695.65 m³

B : Improvement felling : (expected yield 0.5 m³/ year)

Total annual yield from improvement felling - 60.60 m³

(2424.10 ha. x 0.5 m³ ÷ 20 years)

Total annual yield per year from SCI WC - 1756.25 m³

The enumeration data related existing stock of trees per hectare was provided by SOFR Unit, Gadchiroli. The average figure for annual yield for Non-Buffer division is 1756.25 m³, considering the entire area of SCI WC assuming the average number of trees to be felled in all categories. Based on stock map and past experience generally at the most 30% of the area in SCI WC is of D type of area, therefore, total annual yield for Non-Buffer division it would be 30% of 1756.25 m³ = 526.88 m³.

The yield would vary depending upon availability of trees and also the timber volume of trees vary in different localities. Actual yield shall be estimated by DCF, Chandrapur Forest Division, after carrying out enumeration of D type area.

Local volume conversion table for each range shall prepare at division level to estimate the yield obtain from coupe.

SECTION 10.11: COUPE DEMARCATION.

10.11.1 The coupes shall be demarcated one year in advance of the prescribed year of working. Demarcation shall be carried out as per the prescriptions given in this chapter as well as in Miscellaneous Regulations. The coupes shall be divided into 4 sections for effective control over different operations such as marking, felling, extraction etc. The coupe area shall be divided into grids as prescribed below. The site should be thoroughly inspected by the RFO concerned and he should issue the demarcation certificate.

10.11.2 Laying out grids: Laying of grids in A, B, C and D types areas shall be done after classifying area into various treatment types. In A,B,C and D type areas grids of 1 ha. size shall be laid down. For the plantations, grids of 0.5 ha. size shall be laid down.

10.11.3 Grid wise record of enumeration, marking and felling shall be maintained. In remarks column of marking register, reasons for marking such as mature, teak trees of coppice or seed origin, dead, malformed, live high stump, singling of coppice shoot, etc. will be recorded. Grid wise record of operations under natural regeneration e.g. tending rootstock, singling of coppice, weeding etc. shall be maintained.

10.11.4 An expenditure of 1 MD per hectare may be sanctioned for laying of 100 m x 100 m grids, wherever no specific provision is made for this purpose.

10.11.5 Enumeration: Enumeration of all the trees above girth 15 cm gbh ob (all species) shall be carried out in whole area of coupe. A, B, C and D category wise enumeration data shall be compiled, so that the population of existing stock can be ascertained and suitable treatment in future can be given to the area. Regarding teak trees details of seed origin or coppice origin and malformed teak trees shall be recorded during enumeration of 'D' area of coupe. Serial number with oil paint shall be written on trees, grid wise. Grid wise and section wise abstract of enumeration details shall be maintained. DCF shall submit coupe wise

details of enumeration (abstract) to CCF, Chandrapur Circle as well as CF, Working Plan Division, Chandrapur.

SECTION 10.12 : PREPARATION OF TREATMENT MAP.

Treatment map shall be prepared by RFO and it shall be verified by ACF. It shall be in the scale of 1:5000, showing grids. The treatment map shall be prepared with care and after intensive field inspection. The treatment map shall show all features related to categories A,B,C and D.

Type A : Protection Area : The following areas are included in this category.

- (i) Area with steep slopes (more than 25°).
- (ii) Eroded area and area prone to erosion.
- (iii) 20 m wide strip on both sides of water courses.
- (iv) Sacred grooves.

Type B : Under Stocked Area : This category includes blank areas or area with less than 0.4 crown density.

Type C : Pole crop and old plantation Area : It includes old plantations or patches of young pole crop of natural regeneration suitable for retention as future crop. The old plantations with minimum 30% survival and minimum one ha. at one place are included in this category.

Type D : Well stocked Area : This includes forest areas having more than 0.4 density.

SECTION 10.13 : TREATMENT OF COUPES.

10.13.1 Harvesting, plantation and other operations shall be carried out with minimum breaking of soil to avoid soil erosion. The climbers that interfere with growth of desirable species shall be cut in the entire coupe, but the plant species included in Red Data Book of BSI and other endangered and threatened species shall not be cut. In areas with heavy infestation of climber kukadranji, DCF shall prepare special

scheme for its eradication and get it approved from the CCF (Territorial) prior to its implementation. Soil and water conservation works shall be carried out in the entire coupe considering the requirement of site condition and severity of erosion, etc. Habitat improvement works for wildlife conservation is necessary.

10.13.2 Type A : Protection Area : Appropriate soil and moisture conservation measures shall be carried out. On either side of nala and river bank, planting of bamboo can be carried out.

10.13.3 Type B : Under stocked Area : Multiple coppice shoot shall be cut retaining one or two per stool and malformed trees shall be cut. Unwanted undergrowth which is hindering or likely to hinder the growth of seedlings of desirable species shall be removed. Certain blank areas can be utilised as meadows for wildlife conservation. Plantation shall be carried out with teak and other suitable indigenous species as per site conditions. The area selected for planting shall not be less than 5 ha. in a patch.

10.13.4 Type C : Pole crop and old plantation Area : No planting is necessary. Thinning will be carried out in old plantations as per Stand Table and General Regulations. Congestions in the established young pole crop shall be removed and spacing between poles may be kept approximately $1/3^{\text{rd}}$ of the height of the crop.

10.13.5 Type D : Well stocked Area : No plantation shall be taken up in this area. Felling will be carried out as per the marking rules. No felling is envisaged for the species with stocking of less than 1%.

SECTION 10.14 (A) : MARKING TECHNIQUE :

- (i) All the trees to be marked for felling shall be given a geru band at breast height and impression of marking hammer shall be put at the breast height as well as at the bottom by making a clear blaze of 10 cm x 10 cm size.

- (ii) All trees of teak, bija, sisam, ain, tiwas, haldu, dhawada and shivan of 45 cms and above girth (ob) at breast height and trees of all other species of 60 cm and above girth at breast height, shall bear a digital serial number both at breast height and on the base.
- (iii) Trees marked below 45 cm gbh (ob) of species viz.,teak, bija, sisam, ain, tiwas, haldu and shivan and other remaining miscellaneous species below 60 cm gbh (ob) will bear serial number given in coal tar. The digital and coal tar numbers will form a separate series. Only malformed trees will be recorded as fuel trees except that of teak and a tree shall be categorised as fuel tree, which it is not capable of yielding any sawn timber or poles.
- (iv) Trees showing the coupe boundary demarcation shall not be marked for felling.
- (v) All the trees bearing serial number shall be duly recorded in marking register with the following details.

Sr.No.		Species	Girth at breast height (ob) in cms	Remarks
Digital	Coal Tar			
1	2	3	4	5

- (vi) The abstract of trees marked for felling shall be given in 15 cm girth classes. Timber, poles and fuel wood trees will be shown separately. The marking number on the trees will be put in vertical direction as shown below.

For example tree no. 123 → $\begin{matrix} 1 \\ 2 \\ 3 \end{matrix}$
- (vii) Trees marked for selection felling and improvement felling shall be recorded separately in the marking register and also yield obtained shall be recorded separately.

SECTION 10.14 (B) : MARKING RULES.

Marking shall be carried out by the RFO under the close supervision of ACF in the same year in which demarcation will be done. DCF shall personally inspect atleast 30% of the coupes. Detailed prescriptions regarding marking rules are given in Miscellaneous Regulations. The following marking rules shall be followed.

10.14.1 Type A : Protection Area:

No felling is permitted in this area.

10.14.2 Type B : Under stocked Area:

- (i) All dead trees retaining 2 dead trees per ha. shall be marked for felling.
- (ii) All live high stumps shall be marked for felling and they should be cut close to the ground and it shall be properly dressed.
- (iii) All coppice shoots of valuable species shall be reduced to one or two vigorously growing shoots per stool.

10.14.3 Type C : Pole crop and old plantation Area:

- (i) In pole crop of not less than 0.5 ha. shall be spaced out in such a way that an average spacing of $1/3^{\text{rd}}$ of height of the poles shall be maintained between two rows.
- (ii) The dead, diseased and malformed trees of timber species shall be marked for felling. Fruit trees shall not be marked for felling.
- (iii) The multiple coppice shoots will be cut retaining one or two vigorous shoot.
- (iv) Thinning in old plantation shall be carried out as per the instructions given in the Miscellaneous Regulations.

10.14.4 Type D : Well stocked Area:

- (i) All edible fruit yielding trees will be reserved from felling.
- (ii) Multiple coppice shoots shall be marked for felling retaining the most promising one.
- (iii) All dead, malformed trees shall be marked for felling, leaving 2 dead trees per ha. To avoid reckless felling malformed trees

having straight clear pole exceeding 2.5 meter height from the ground level should not be marked for felling.

- (iv) Only that number of trees preferably of coppice origin and of harvestable girth and above will be marked for felling as prescribed under yield regulation. Those harvestable teak trees which are preventing the development of the seedling regeneration of desirable species, will be removed in preference to others. Otherwise felling of trees from these girth classes will be first from the highest girth class and then next below and so on. Due care should be taken to remove teak trees of coppice origin while retaining the teak trees of seedling origin as far as possible. The trees which are not likely to survive till the next felling cycle will be preferred for removal.
- (v) The silviculturally available trees with prescribed harvestable girth have to be marked for felling. A tree is considered as silviculturally available when (a) its removal will not lead to soil erosion, (b) its removal shall create appropriate gap for growth of young seedlings of desired species, (c) alternate trees for seed source shall be available, (d) does not create a permanent gap in the canopy. A gap of more than 6 meter diameter is considered as permanent gap, (e) tends to improve the remaining crop terms of volume production.
- (vi) During marking for felling, details shall be maintained for coppice and seed origin teak trees separately.
- (vii) All live high stumps shall be marked for felling.

10.14.5 Verification of Marking :

- (i) RFO shall carry out marking and should also certify the marking abstract.
- (ii) ACF concerned shall verify 20% of the marking work. He shall inspect all the coupes to verify marking and shall record his findings and give corrective written instructions.

- (iii) DCF shall inspect 10% of the coupes to verify marking and take corrective measures.
- (iv) CCF (T) shall check 1% coupe marking work randomly.

SECTION 10.15 : SOIL AND WATER CONSERVATION WORK:

The soil and water conservation works shall be carried out along CBO in the next year of main felling in coupes. Nala bunding, gully plugging, earthen check dams, cement bandharas, water absorption trenches, forest tanks, etc. shall be taken up in coupe area considering the site conditions. These works shall be taken up on the basis of micro-watershed treatment. CCT and WAT shall not be taken up in the area with 25% slope or more. There shall be a break leaving 2 m after every 10 m of CCT or WAT to safeguard against soil erosion and formation of gully.

SECTION 10.16 : REGENERATION:

(A) NATURAL REGENERATION : It is the best source for getting growing stock provided the available natural regeneration is well protected from fire, grazing, and weeds. Whatever natural regeneration is available, it should be demarcated, protected and tended so that it will become future growing stock.

The area around seedlings of natural regeneration shall be cleared of weed and grass within one meter diameter. Leaf litter and branches shall be arranged in 15 cm thick layer around the seedlings within the cleared area to provide organic mulch. There after 2 to 3 spade full of earth shall be put on it, which will keep seedling free from weeds and help loosening of soil. In addition, stone mulching shall be done around the current year recruits in the area where sufficient stones are available. Small stones shall be arranged around young seedlings for retention of moisture and preventing trampling by cattle or others. Weeding and soil working shall be carried out atleast for 3 years till the seedlings are established.

- (i) **Areas with adequate regeneration** :- Regeneration will be treated as adequate if the area contains more than 625 seedlings per ha. These areas will be rigidly protected from fires. The order of preference for favouring miscellaneous species is bija, shisham, haldu, ain, kalam, tiwas, dhawada, bhirra, rohan and Lendia. For all purposes natural regeneration seedlings should be treated at par with the planted seedlings.
- (ii) **Area with inadequate regeneration** :- In these areas planting will be done apart from tending of natural regeneratrion in the next year of main felling. In plantations, teak shall be planted on suitable sites along with suitable indigenous superior miscellaneous species.

(B) ARTIFICIAL REGENERATION:

(1) The areas which are deficient in natural regeneration shall be supplemented by planting. Species shall be selected considering the soil conditions, slope, economic importance etc. 50% teak and 50% non-teak species shall be planted in artificial regeneration activity. The species preferred for planting should be indigenous like bel, behada, chinch, amba, sitaphal, moha, dhawada, ain, arjun, tiwas, jamun, shivan, anjan, ber, etc. Importance shall be given to economically important NWFP. Minimum 5 ha. area in a patch shall be selected for the plantation activity.

(2) Pre-planting operations shall be carried out in the year of main felling and planting will be done along with CBO in next year of felling.

(3) Existing root stock and natural regeneration shall be considered to decide number of seedlings to be planted per hectare.

(4) It shall be ensured that no seedling is planted within 3 meters distance from an established seedling or existing trees.

The standing trees have influence zone of spreading shadow and pits should not be dugged either in the shadow or in the influence zone of the standing trees. Influence zone for various sizes of trees are as given below.

Zone of influence of trees

Sr. No.	Girth class (cm)	Influence zone (metre)
1.	< 30	2
2.	30 - 60	3
3.	60-90	4
4.	90-120	5
5.	> 120	6

SECTION 10.17 : SUBSIDIARY SILVICULTURAL OPERATIONS :

10.17.1 C.B.O. : This is very important silvicultural operation for improving quality & productivity of forests. CBO shall be carried out in the next year of main felling as prescribed below.

- (i) All standing trees marked for felling but not felled shall be felled.
- (ii) Climbers that interfere with growth of desirable species shall be cut. However, endangered and threatened species shall not be cut.
- (iii) All damaged trees which are not likely to recover shall be cut.
- (iv) The undesirable undergrowth interfering or likely to interfere with the growth of teak and other valuable species shall be cut.
- (v) Newly coming up multiple coppice shoots of teak will be reduced 1 or 2 per stool retaining the most promising ones.
- (vi) All malformed advance growth with no future shall be cut.

10.17.2 CLEANING :

These operations shall be carried out in the sixth year of main felling as prescribed below.

- (i) Climbers that hinder growth of desirable seedlings shall be cut (except endangered & threatened species).
- (ii) The established natural regeneration of teak and other desirable species shall be thinned to keep appropriate spacing. Teak coppice shoots interfering with the growth of seedling regeneration of teak and other desirable species shall be cut.
- (iii) Damaged and malformed seedlings shall be cut back.
- (iv) Inferior and undesirable undergrowth interfering or likely to interfere with the growth of desirable species shall be cut.
- (v) Only the most promising coppice shoot out of the two coppice shoots left during CBO shall be retained and all other new teak coppice shoots shall be removed.
- (vi) Soil working shall be carried out around the seedlings of natural regeneration.

10.17.3 THINNING : In natural regeneration area, thinning shall be carried out to create appropriate spacing for stimulation of growth of young poles. In such young pole crop, thinning shall be carried out in such a way that 1/3rd spacing of the crop height shall be retained between two adjoining poles. In teak plantations first thinning shall be carried out in the 10th and thereafter every five years. The silvicultural thinning shall be carried out on the basis of Stand Table.

SECTION 10.18 : OTHER REGULATIONS:

10.18.1 Grazing : The entire coupe shall remain closed to grazing for six years from the year of demarcation. The closed area should specially be mentioned in the grazing licence and villagers shall be informed of such closure by suitable means. JFMC's shall also be involved in grazing control activity.

10.18.2 Fire Protection : After demarcation entire coupes shall be rigidly protected from fire. JFMC's shall be involved in fire protection activity. The prescriptions contained in the chapter Miscellaneous

Regulations shall be followed regarding fire protection and maintenance of fire lines.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

**CHAPTER -11
IMPROVEMENT WORKING CIRCLE**

SECTION 11.1 : GENERAL CONSTITUTION AND VEGETATION

11.1.1 This working circle includes the area which requires improvement in the crop through improvement fellings and artificial regeneration. The total forest area included in this working circle in Chandrapur (Non-Buffer) Forest Division is 30749.80 ha. The range wise allotment of area is given in the table mentioned below.

Table

**Range wise area allotted to Improvement Working Circle in
Chandrapur (Non-Buffer) Forest Division**

Sr. No.	Range	Area allotted in ha.						Total No. of comptt.	Total Forest Area of Range in ha.	% of the area of the Range	% of the area of the Division
		No. of comptt.	RF	No. of comptt.	PF	No. of comptt.	U F				
1	2	3	4	5	6	7	8	9	10	11	12
1.	Chandrapur	09	2378.16	14	1492.91	--	--	23	3871.07	77.46	6.24
2.	Chichpalli	20	4349.49	37	3415.61	--	--	57	7765.10	66.96	12.52
3.	Bhadrawati	22	5956.97	14	2311.50	--	--	36	8268.47	74.60	13.33
4.	Sawali	29	9824.31	46	646.10	--	--	75	10470.41	40.24	16.88
5.	Warora	01	374.75	--	--	--	--	01	374.75	4.50	0.60
	Total	81	22883.68	111	7866.12	--	--	192	30749.80	--	49.57

The forest area included in this working circle is young to middle aged. The crop consists mainly of ain, dhaora, bija, shisham, khair, Lendia, aola, behada, char, hirda, moha, tendu and garari. Teak occurs in patches.

Bamboo occurs in the lower canopy and is thick over most of the area. The forest are in general of site quality IVb and there are IVa and few patches of site quality III. The density of crop varies from 0.3 to 0.5. The status of natural regeneration is poor, due to heavy biotic pressure, hostile soil regime and fires. The growing stock is badly hacked at places. There are multiple coppice shoots. Majority of the areas of this working circle were previously worked under Coppice with Reserve Working Circle, kuran, Teak plantation and Improvement Working Circle.

SECTION 11.2 : SPECIAL OBJECTIVES OF MANAGEMENT :

The prime objective of management will be to give silvicultural rest and to prepare the crop for management under SCI Working Circle in future. The special objects of management of these forests are as given below.

- (i) To improve the crop quality, density and bring normalcy through appropriate silvicultural operations.
- (ii) To maintain and improve soil cover through intensive soil and moisture conservation measures and encourage regeneration.
- (iii) To get maximum sustained outturn of small size timber and fire wood to meet the local demand through nistars.
- (iv) To protect forests from cattle grazing and fire.
- (v) Habitat improvement for wildlife conservation.

SECTION 11.3 : COMPARTMENTS AND WORKING SERIES :

11.3.1 In Non-Buffer Division 192 compartments have been allotted to this working circle and these are allotted to 22 working series each having 20 coupes, average area of coupes is 60 ha.to 70 ha. The working cycle is fixed at 20 years. The details of working series, compartments and coupes are given in **Appendix No.XXXVII, XXXVIII, XXXIX & XL** in volume II of this plan. The abstract of allotment of compartments to this working circle is given in the following table.

Sr. No.	Working Series	Name of Range	No. of Compt.	Total Comt.	Total Area ha.	Total area of WS. ha.
1	2	3	4	5	6	7
1.	Pirli	Bhadrawati	896, 899, 14B, 214, 907, 549, 910	7	1256.47	1256.47
2.	Pavana	Bhadrawati	9, 908	2	1200.34	1200.34
3.	Karli-Sonegaon	Bhadrawati	900, 901, 909, 219, 206	5	1258.43	1258.43
4.	Chiprala	Bhadrawati	210, 203, 208, 211	4	1211.24	1211.24
5.	Chora	Bhadrawati	546, 905B, 903,904,207, 200A, 545B, 937A	8	1292.10	1292.10
6.	Chicholi	Bhadrawati	871, 544, 547,548,543A, 543B, 545A1, 933A	8	1286.97	1286.97
7.	Pailibhatali	Bhadrawati	201A, 202A, 205, 877A	4	1289.78	1289.78
8.	Vadholi	Chandrapur	880, 878, 879, 881, 883, 886	6	1246.39	1246.39
9.	Sinala	Chandrapur	1009,399,400,401,402	5	1292.61	1292.61
10.	N.Lohara	Chandrapur	574A,574B,486,398,409, 541,571,575,576,577, 397,432	12	1252.80	1252.80
11.	Satara Tukum	Chichpalli	431, 437, 456, 436, 469	5	1246.40	1246.40
12.	Gilbili	Chichpalli	426, 430, 433, 463, 464, 527,537,536	8	1288.85	1288.85
13.	Dahegaon	Chichpalli	517, 534, 535, 540, 632	5	1284.54	1284.54
14.	Sushi	Chichpalli	538, 637, 676,701,1005, 647,667,679,645	9	1285.05	1285.05
15.	Sushi-II	Chichpalli	615, 629, 635, 639, 643, 644, 750, 653, 664, 672, 674, 749, 1016, 1017, 677A, 746A, 746B	17	1291.88	1291.88
16.	Chichala	Chichpalli	708, 715, 716, 717, 719, 720, 732, 736, 740, 752, 753, 754	12	1295.54	1295.54
17.	Murmadi	Sawli	302, 303, 304, 307, 308	5	2172.33	2172.33
18.	Rajoli	Sawli	310, 312, 313, 314, 315	5	2051.77	2051.77
19.	Mundhala	Sawli	289, 291, 298, 300, 309, 311, 316, 1428 to 1434, 1451 to 1458, 1591 to 1602, 1623 to 1627, 1643 to 1650, 1674 to 1679	53	2076.53	2076.53
20.	Sadagad	Sawli	305, 306, 317, 318	4	2149.30	2149.30
21.	Geora	Sawli	148, 149, 154	3	1035.58	1035.58
22.	Gaidongari	Sawli	152, 156, 160, 165, old 297	5	984.90	984.90
		Grand Total		192	30749.80	30749.80

SECTION 11.4 : ANALYSIS AND VALUATION OF CROP :

The stock mapping of the area was carried out through field inspections by the staff of the Chandrapur Forest Division and was verified with enumeration data. The result of the stock mapping for each compartment has been given **Appendix No.LXXVIII A to LXXXIV** in volume II of Non-Buffer division. The various signs and symbols used in stock maps have been given in **Appendix No. LXIII** in volume II .

The enumeration data received from SOFR Unit, Gadchiroli was analysed and details are given below.

Growing stock of Improvement Working Circle (Species and girth distribution) based on enumeration data 2008-2010.

Species	Stems per hectare in girth- classes in cm										Total
	15/30	31/45	46/60	61/75	76/90	91/105	106/120	121/135	136/150	>151	
1	2	3	4	5	6	7	8	9	10	11	12
Teak	8.36	4.88	2.05	1.21	0.73	0.49	0.37	0.29	0.17	0.14	18.70
Ain	11.06	8.29	4.00	2.44	1.77	1.34	0.88	0.52	0.38	0.29	30.97
Bija	0.40	0.45	0.45	0.44	0.52	0.58	0.46	0.34	0.22	0.26	4.10
Haldu	--	--	--	--	--	--	--	--	--	--	--
Shisham	0.41	0.77	0.79	0.59	0.33	0.14	0.04	0.04	0.02	0.02	3.15
Total	20.23	14.39	7.29	4.68	3.35	2.55	1.75	1.19	0.79	0.71	56.92
Tiwas	0.0	0.0	0.0	0.0	0.0	0.002	0.002	0.0	0.0	0.0	0.004
Dhawada	5.67	2.60	1.68	1.56	1.30	0.99	0.52	0.28	0.14	0.14	14.88
Hed	0.09	0.11	0.07	0.05	0.01	0.01	0.01	0.01	0.002	0.01	0.38
Khair	3.13	2.85	1.37	0.56	0.25	0.12	0.02	0.01	0.01	0.00	8.31
Shivan	0.05	0.02	0.02	0.01	0.01	0.004	0.002	0.01	0.00	0.01	0.12
Total	8.94	5.58	3.14	2.18	1.57	1.126	0.554	0.31	0.152	0.16	23.694
Lendia	4.66	2.83	1.44	0.86	0.62	0.39	0.28	0.15	0.06	0.04	11.32
Aola	0.65	0.47	0.32	0.17	0.13	0.06	0.05	0.02	0.01	0.006	1.89
Behada	0.58	0.61	0.42	0.34	0.33	0.26	0.18	0.13	0.10	0.16	3.11
Char	1.83	1.43	0.77	0.38	0.20	0.09	0.04	0.02	0.02	0.02	4.78

1	2	3	4	5	6	7	8	9	10	11	12
Hirda	0.15	0.07	0.09	0.06	0.04	0.04	0.02	0.03	0.004	0.02	0.52
Moha	1.97	1.61	1.39	1.43	1.35	1.44	1.14	0.84	0.68	0.92	12.77
Tendu	10.52	2.99	1.42	1.06	0.86	0.72	0.55	0.36	0.25	0.27	19.01
Total	20.36	10.01	5.85	4.33	3.53	3.00	2.26	1.55	1.124	1.436	53.40
Dikamali	0.57	0.09	0.02	0.02	0.00	0.00	0.00	0.002	0.00	0.00	0.70
Garari	10.61	6.60	3.23	1.60	0.90	0.34	0.13	0.04	0.013	0.004	23.48
Ghoti	3.96	2.34	0.72	0.24	0.11	0.06	0.01	0.002	0.004	0.00	7.43
Total	15.14	9.03	3.97	1.86	1.01	0.40	0.14	0.044	0.017	0.004	31.61
Others	32.79	25.17	15.78	10.96	8.18	5.61	3.75	2.21	1.42	1.34	107.20
Total	32.79	25.17	15.78	10.96	8.18	5.61	3.75	2.21	1.42	1.34	107.20
Grand Total	97.46	64.18	36.03	24.01	17.64	12.686	8.454	5.304	3.50	3.65	272.824

The comparative statement of enumeration data of the year 1998-1999 and 2008-2010 is given below.

Girth class	No. of trees/ha. General Utility Species		No. of trees/ha. Special Utility Species		No. of trees/ha. MFP Species		No. of trees/ha. Other Species		Total No. of trees/ha.	
	1998-99	2008-10	1998-99	2008-10	1998-99	2008-10	1998-99	2008-10	1998-99	2008-10
15-30	14.76	20.224	6.00	8.993	14.12	20.373	26.53	47.94	61.41	97.47
31-45	7.78	14.393	3.63	5.582	5.88	10.019	17.21	34.196	34.5	64.19
46-60	4.09	7.293	2.13	3.137	3.36	5.841	9.50	19.75	19.08	36.021
61-75	2.85	4.683	1.50	2.173	2.75	4.300	6.55	12.815	13.65	23.971
76-90	1.94	3.359	0.88	1.573	2.21	3.522	3.91	9.179	8.22	17.633
91-105	1.58	2.555	0.60	1.125	2.08	2.999	2.79	6.004	7.05	12.683
106-120	0.94	1.747	0.35	0.535	1.43	2.256	1.67	3.89	4.39	8.448
121-135	0.59	1.181	0.30	0.310	1.10	1.535	1.02	2.261	1.02	5.287
136 /150	0.68	0.784	0.19	0.151	1.46	1.125	1.10	1.436	3.43	3.496
>151	--	0.714	--	0.151	--	1.435	--	1.329	--	3.639
Total	35.21	56.953	15.58	23.69	34.39	53.405	70.27	138.81	152.75	272.842

The analysis of the tree enumeration data shows that there are only seven trees above 120 cm girth class, 104 trees between girth class 45 to 120 cm and 162 trees in under 45 cm girth class per hectare which shows that most of the trees are in the younger age group and fairly distributed over the whole working circle and therefore these compartments have

been included in the improvement working circle in order to prepare this young crop to reach harvestable size and to improve the edaphic and ecological conditions of the forests. The percentage of teak in the forest is 6.86%, whereas, the non teak (Ain, Bija, Haldu and Shisham) is 14.01% and the remaining 79.13% are miscellaneous species and therefore efforts are needed to increase the percentage of valuable timber species to atleast 50% of the crop by adopting hygienic silvicultural and tending operations.

SECTION 11.5 : SILVICULTURAL SYSTEM :

11.5.1 Considering the density, regeneration status, quantity of harvestable trees and other features of the forest crop, it is necessary to carry out improvement fellings besides tending of natural regeneration, cut back operations, removing congestion in young pole crop, singling of coppice shoots, etc. These operations would be supplemented with artificial regeneration, soil and moisture conservation works, grazing and fire control, etc. This working approach would improve the overall composition, quality, hygiene and productivity of the forests.

11.5.2 Felling cycle :

The felling cycle has been fixed at 20 years, based on quantum of work available, infrastructure and budget provision.

11.5.3 Harvestable girth and regulation of yield :

As the method of treatment is improvement felling there is no need of fixing harvestable girth. Improvement felling, thinning, singling, etc. would not yield much of timber and fire wood. As the yield is negligible, regulation of yield is not prescribed.

SECTION 11.6 : AGENCY FOR WORKING :

The demarcation and marking of the coupes will be done departmentally. Felling and disposal of the forest produce shall be done through Joint Forest Management Committees (JFMC's) as per the directions of the Government. The small timber, poles and fire wood will be made available to the local people on priority and balance shall be sold

in open auction departmentally. Protection and regeneration works may be carried out through JFMC's as per the guidelines issued by the State Government from time to time.

SECTION 11.7 : METHOD OF EXECUTION OF WORKS :

11.7.1 Demarcation : The annual coupes due for work should be demarcated one year in advance. The site should be thoroughly inspected by the RFO concerned and he should issue the demarcation certificate. Demarcation of coupe, preparation of treatment map and marking for improvement felling should be carried out as per the prescriptions in the chapter Miscellaneous Regulations and marking rules. The coupe shall be divided into 4 sections for effective control of various silvicultural operations.

11.7.2 Preparation of Treatment Map :

- (i) The treatment map should be prepared by the RFO. It will be thoroughly verified by the concerned ACF after field inspections. The treatment map shall be approved by the DCF after field inspections of majority of coupes.
- (ii) The treatment map shall indicate the categories of area under A,B,C and D.
- (iii) The treatment map will be prepared on graph paper in 1:5000 scale.
- (iv) Laying of grids in A,B,C and D type areas shall be done after classifying areas into various treatment types. In plantation area grid of 0.5 ha. size shall be laid down. In A,B,C and D type areas grid of 1 ha. size shall be laid down.
- (v) Grid wise record of enumeration and marking shall be maintained. In remarks column of marking register, reasons for marking such as mature, dead, malformed, live high stump, singling of coppice shoot, etc. will be recorded. Grid wise record of operations mentioned under Natural Regeneration e.g. tending, root stock management, singling of coppice, weeding, etc. shall be maintained.

- (vi) An expenditure of 1 MD per hectare may be sanctioned for laying 100m x 100m grids, wherever no specific provision is made for this purpose.
- (vii) The following categories shall be shown in the treatment map and all operations shall be carried out as per prescriptions.

1.Type A : Protection Area : It includes the following areas.

- (i) Area with steep slopes (more than 25°).
- (ii) Eroded area and area liable for erosion.
- (iii) 20 meter wide strip on both sides of water courses.

2.Type B : Under Stocked Area : It includes

- B-1 : Blank areas,
- B-2 : Under stocked area (density < 0.4).

3.Type C : Pole crop and old plantation Area : This category includes old plantations or patches of young pole crop of natural regeneration suitable for retention as future crop. The old plantations with minimum 30% survival and minimum one hectare area at one place are included in this category.

Type D : Well stocked Area : This includes forest areas having more than 0.4 density.

SECTION 11.8 : MARKING RULES :

11.8.1 Marking will be done in the same year in which demarcation will be done. Soon after the receipt of approved treatment map marking shall be carried out by the RFO under the close supervision of ACF. DCF shall personally inspect atleast 30% of the coupes to ensure proper marking. Detailed prescriptions regarding marking rules are given in Miscellaneous Regulations. The marking rules for each type of area will be as follows.

- (i) **Type A : Protected area** : No marking will be done.
- (ii) **Type B : Under stocked area** : All dead, malformed trees after retaining two dead trees per ha.; all but one or two vigorously growing coppice shoot per stool and all live high stumps will be

marked for felling. All edible fruit and flower yielding trees will be reserved from felling.

- (iii) **Type C : Pole crop and old plantation area** : The patches of not less than 1 hectare shall be identified having advance growth of any species and it shall be spaced out to one third of the crop height while retaining the vigorous and straight poles. Thinning shall be carried out in old plantation as per Stand Table.
- (iv) **Type D : Well stocked area** : All edible fruit and flower yielding trees shall be reserved from felling. All dead, malformed trees after retaining two dead trees/ha.; all live and dead high stumps, all but one or two vigorously growing coppice shoot per stool and silviculturally available matured trees above harvestable girth will be marked for felling. Only that number of trees above harvestable girth shall be marked for felling as prescribed in the yield regulation of SCI.

SECTION 11.9 : TREATMENT :

Following treatments are prescribed under this working circle for **Chandrapur (Non-Buffer)** Forest Division .

All operations shall be carried out with minimum breaking of soil to avoid soil erosion. The climbers that interfere with growth of desirable species shall be cut in the entire coupe, but plant species included in Red Data Book of BSI and other endangered & threatened species, important NTFP and medicinal plant species shall not be cut. Climber cutting should be limited to the most common woody climber species viz., kukadvel, palasvel, chilhar, papri-lalvel and piwarvel. In areas having heavy climber infestation of Kukadvel DCF shall prepare special scheme for eradication of climbers and get it approved from the CCF (Territorial) prior to its implementation. Soil and water conservation works shall be carried out in the entire coupe considering the requirements of site condition. Habitat improvement works for wildlife conservation are necessary.

11.9.1 Type A : Protection Area : Appropriate soil and water conservation measures shall be carried out. Planting of bamboo can be taken up on either side of nala, river water stream, etc.

11.9.2 Type B : Under stocked Area : All dead trees shall be marked for fellings except two trees per hectare, which will act as dens and snags to wildlife. All live high stumps shall be cut close to the ground and should be properly dressed. The multiple coppice shoots on old stools shall be reduced to one or two per stool retaining the vigorous one. The unwanted undergrowth hindering or likely to hinder the seedlings regeneration shall be removed. Certain blank areas can be utilised as meadows for wildlife conservation. Teak and indigenous miscellaneous species shall be planted as per the suitability of the site in blank and low density area. The area selected for planting shall not be less than 5 ha. in a patch. Soil and water conservation measures should be under taken as per the site condition.

11.9.3 Type C : Old Plantations or pole crop : No plantation shall be carried out in this area. Thinning shall be carried out in old plantations as per Stand Table and general regulations. The established natural regeneration shall be thinned to remove congestion and spacing between poles may be approximately $1/3^{\text{rd}}$ of the height of the crop. Soil and water conservation works have to be carried out as per site requirement.

11.9.4 Type D : Well stocked Area : All dead, badly damaged, malformed trees, all live high stumps and all coppice shoots except one or two vigorously growing coppice shoot per stool shall be marked for felling. No plantation shall be taken up in this area. The mature trees of gbh shall be removed, provided it does not create a permanent gap in the canopy. Trees not likely to survive next felling cycle, will be removed. Over matured trees of gbh shall be reserved against felling.

11.9.5 Soil and moisture conservation works :

Soil became compact due to heavy grazing and trampling by cattle, frequent fires resulting in poor drainage in forest area.

To improve soil fertility and drainage for good growth of forest crop, grazing control, soil and water conservation measures are necessary. Nala bunding, gully plugging, earthen check dams, cement bandharas, water absorption trenches, forest tanks etc. shall be taken up on the basis of micro-watershed treatment, from upper ridge to valley. CCT and water absorption trenches shall not be taken up in the area with 25% slope or more. There shall be a break leaving 2 m after every 10 m of CCT or WAT, to safeguard against soil erosion and formation of gully.

SECTION 11.10 : REGENERATION :

11.10.1 Natural Regeneration : Natural regeneration is the best way of obtaining growing stock. Whatever natural regeneration is available, it should be demarcated, protected and tended so that it will become future growing stock. The status of natural regeneration is very poor due to biotic pressure, grazing, weeds, frequent fires, etc. The identification and demarcation of the patches of natural regeneration shall be taken up. These area should be protected through a rigid fire protection scheme. Natural regeneration of desirable species should be cleared-off weeds within a diameter of one meter and mulching should be done by spreading twigs, debris leaves, etc. and put sufficient soil over it (about 2 or 3 ghamelas) around the seedling. This will facilitate protection from fire also apart from providing organic mulch. Weeding and soil working shall be carried out at least for 3 years till the seedlings are established.

11.10.2 Artificial Regeneration : Natural regeneration shall be supplemented with artificial regeneration as per the soil condition and rainfall. Species shall be selected for planting considering site conditions and those species shall be naturally occurring in these area. Fruit species, fodder species and species of NWFP should be included in plantations. The species indigenous to the area like teak, shisham, bamboo, ain, arjun, shiwan, chinch, jamun, ber, biba, anjan, amba, apta, etc. will be preferred. In general 50% teak and 50% non-teak species shall be planted. While

taking up plantation existing rootstock and natural regeneration shall be considered to decide number of seedlings to be planted per hectare. It shall be ensured that no seedling is planted within 3 meters distance from an established seedling or existing trees. The standing trees have influence zone or spreading shadow and pits should not be dug either in the shadow or in the influence zone of the standing trees. Influence zone for various sizes of tree are as given below.

Zone of influence of trees

Sr.No.	Girth class (cm)	Influence zone (meters)
1.	< 30	2
2.	30-60	3
3.	60-90	4
4.	90-120	5
5.	>120	6

SECTION 11.11 : SUBSIDIARY SILVICULTURAL OPERATIONS :

11.11.1 C.B.O. : It shall be carried out in the next year of main felling as prescribed below.

- (i) Climber cutting shall be carried out in the entire coupe, but care should be taken to avoid cutting of threatened and endangered species.
- (ii) All damaged trees which are not likely to recover shall be felled.
- (iii) All standing trees marked for improvement felling, but not felled shall be felled.
- (iv) Multiple coppice shoots shall be reduced to one or two per stool retaining the most promising one.
- (v) The unwanted growth interfering with the growth of teak and other valuable species shall be cut.
- (vi) All malformed advance growth with no future shall be cut.

11.11.2 Cleaning : Cleaning shall be carried out in 6th year after main felling as prescribed below.

- (i) Climbers that hinder growth of desirable seedling shall be cut (except endangered and threatened species) in the entire coupe area.

- (ii) Multiple coppice will be reduced to one or two per stool.
- (iii) All damaged and malformed poles will be cut back.
- (iv) All undesirable undergrowth interfering with the growth of seedling regeneration of teak and valuable miscellaneous species will be cut back.

11.11.3 Thinning : In natural regeneration thinning shall be carried out to create space for the growth of young poles. Thinning shall be carried out in such a way that 1/3rd spacement of the crop height shall be retained between two adjoining poles. While carrying out thinning, dead, diseased and malformed poles shall be marked first for felling. The multiple coppice shoots shall be thinned retaining the most promising one. Care shall be taken to remove the poles of coppice origin first. In old teak plantations the 1st and 2nd thinnings shall be carried out in 10th and 15th year of planting, respectively, on the basis of Stand Table. There after silvicultural thinning shall be carried out in the 25th and 35th year of planting .

SECTION 11.12 : OTHER REGULATIONS :

11.12.1 Fire Protection : The coupes including plantations shall be fire traced and rigidly protected from fire. These areas will remain close for grazing for a period of five years from the main felling. Fire protection shall be achieved successfully by involving the members of JFM committee.

11.12.2 Grazing : The area of main felling coupes shall remain closed for grazing for five years from the year of planting. While taking up plantations in the under stocked area, palatable fodder grasses will be sown or planted by tussocks so that palatable grass is available after five years. The rotational grazing will facilitate the opening up of area on rotational basis. The closed area should specifically be mentioned in the grazing licence and the villagers shall be communicated of such closure.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

CHAPTER –12
AFFORESTATION WORKING CIRCLE

**SECTION 12.1 : GENERAL CONSTITUTION AND
VEGETATION :**

12.1.1 The forest area included in this working circle is mostly open, degraded and under stocked. Most of the areas included in this working circle were kept under Improvement Working Circle of earlier plan. Some areas under the categories of zudpi jungle and in possession of Forest Department is also included in this working circle. All the areas with less than 0.4 density and areas under encroachments have been included in this working circle. The regeneration and improvement of degraded forest area have been difficult and challenging task due to bad edaphic conditions, inadequate rainfall, inhospitable climatic condition and uncontrolled biotic interference.

12.1.2 18606.93 ha. forest area of Chandrapur (Non-Buffer) division is included in this working circle, which is mostly eroded, scrub, blank and density less than 0.4 area. Most of these areas were previously managed under Improvement Working Circle and some under Selection-Cum-Improvement Working Circle in Srivastava's plan.

**RANGE WISE DISTRIBUTION OF FOREST AREA IN AFFORESTATION
WORKING CIRCLE**

A. NON-BUFFER FOREST DIVISION :

Sr. No.	Range	Area allotted in ha.						Total No. of compit.	Total Forest Area of Range in ha.	% of the area of the Range	% of the area of the Division
		RF		PF		UF					
		No. of compit.	Area in ha.	No. of compit.	Area in ha.	No. of compit.	Area in ha.				
1	2	3	4	5	6	7	8	9	10	11	12
1.	Chandrapur	03	575.67	08	97.79	--	245.91	11	919.37	18.40	1.48
2.	Chichpalli	01	29.02	34	827.91	--	239.62	35	1096.55	9.46	1.77
3.	Warora	08	2107.72	05	462.67	--	861.47	13	3431.86	41.17	5.53
4.	Bhadrawati	03	912.99	24	657.74	--	198.45	27	1769.68	15.96	2.85
5.	Sawali	21	5713.05	158	5581.32	--	95.10	179	11389.47	43.77	18.36
	Total	36	9338.45	229	7627.43	--	1641.05	265	18606.93	--	29.99

12.1.3 Vegetation :

The areas included in this working circle in general are under stocked and open with crop density less than 0.4, having some better stocked areas in a few compartments to a limited extent with site quality IV. The main species in these area are teak, dhawada, ain, tendu, etc. Excessive grazing pressure has resulted in compaction of soil with little or no sub-soil moisture. Natural regeneration of valuable species could not get established due to regular die-back and hence is poor.

12.1.4 Reasons for assigning the area to Afforestation Working Circle are :

- (i) The areas in general are under stocked and open with crop density mostly less than 0.4.
- (ii) The site quality of these areas is poor which represents mostly site quality IV.
- (iii) The soil is compact with little or no soil moisture and highly impervious due to heavy grazing.
- (iv) The status of natural regeneration is poor.
- (v) The under stocked and open areas will be restocked through afforestation schemes to increase the area under forest cover.

SECTION 12.2 : SPECIAL OBJECTIVES OF MANAGEMENT :

The special objectives of management are as follows.

- (i) To check further degradation of area and to increase vegetation cover in the area, to improve quality and composition of the crop.
- (ii) To check the loss of top soil by taking up suitable soil and moisture conservation measures.
- (iii) To increase the water absorption capacity of the soil.
- (iv) To meet the local demand for fuel wood, fodder, small timber increasing the availability of NWFP and employment opportunities.
- (v) To increase the productivity of land.

SECTION 12.3 : COMPARTMENTS ALLOTTED TO AWC :

The compartments allotted to this working circle are given in the following table. Details of compartments, working series and coupes are given in **Appendix No.XLI, XLII, XLIII & XLIV** of volume II of Non-Buffer division.

Allotment of compartments to Working Series in Afforestation W.C.

A. NON-BUFFER FOREST DIVISION :

Sr. No.	Working Series	Name of Range	Compartment Nos.	Total Comptt	Total Area (ha.)	Total Area of WS (ha.)
1	2	3	4	5	6	7
1.	Tembhurda	Warora	10, 12, 13A2, 550W, 923 to 925 zudpi	07	1399.76	1399.76
2.	Mesa	Warora	11, 13A1, 13B, 14A zudpi	04	1455.31	1455.31
		Chandrapur	572	01		
		Bhadrawati	Zudpi			
				05		
3.	Durgapur	Chandrapur	403, 485, 518, 882, 884, 887, 1007, 885A, 885B, zudpi	09	836.22	1381.83
		Bhadrawati	213, 888, 893	03	188.06	
		Warora	926, 927	02	357.55	
				14	1381.83	

1	2	3	4	5	6	7
4.	Pirli	Chandrapur	573	01	29.38	1506.60
		Bhadrawati	204, 215, 891, 892, 894, 895, 897, 906, 911, 913, 914, 916, 917	14	1005.27	
		Warora	Zudpi	--	471.95	
				15	1506.60	1506.60
5.	Chichpalli	Bhadrawati	872A, 872B, 873A, 873B, 835A, 912, 915, 918, 934, 941A	10	377.40	1473.95
		Chichpalli	539, 550ch, 616, 617, 631, 649, 673, 675, 680, 684, 695 to 697, 677B, 713, 718, 721, 727, 733, 734, 737, 743 to 745, 747, 748, 751, 755 735A,B,C,D,E & F, Zudpi	34	1096.55	
				44	1473.95	
6.	Umari	Saoli	294, 1507 to 1515, 1528 to 1537, 1550 to 1558, 1704, 1705	31	1555.14	1555.14
7.	Sonapur	Saoli	293, 1485 to 1501, 1516 to 1525, 1527	29	1478.09	1478.09
8.	Antargaon	Saoli	1502 to 1506, 1441, 1442, 1444 to 1450, 1461, 1559 to 1562	19	1432.02	1432.02
9.	Khandala	Saoli	290, 295 to 297, SN.136, 1435 to 1440, 1476, 1479 to 1484, 1563 to 1567, 1569 to 1590, 1603 to 1622	65	1512.96	1512.96
10.	Mehakhu	Saoli	292, 150, 151, 153, 155, 1851 Hirapur, 1443, 1459, 1460, 1462 to 1475, 1477, 1478	25	1549.69	1549.69
11.	Sirshi	Saoli	157 to 159, 199P, 1526, 1568, 1851 Bothali	07	1427.67	1427.67
12.	Pathari-I	Saoli	196, 197, 164P	03	1225.66	1225.66
13.	Pathari-II	Saoli	198, 201, 161P	03	1208.24	1208.24
TOTAL:-				265	18606.93	18606.93

SECTION 12.4 : STOCK MAPS :

The stock maps were prepared by the field staff of the Chandrapur Forest Division. These stock maps were analysed and the details are given in the **Appendix No.LXXVIII A to LXXXIV** in volume II of Non-Buffer division.

SECTION 12.5 : METHOD OF TREATMENT :

12.5.1 As per the observations the earlier efforts of afforestation have not been proved successful to a large extent, therefore it is expected that proper care shall be taken to afforest these areas. The area should be treated with intensive soil and moisture conservation measures with site specific treatment plan on the basis of site conditions, therefore for the purpose of afforestation, treatment in these areas should be given in two phases.

Restorative and Productive phase is proposed in 30% of the total area of the Afforestation Working Circle. In remaining area of this Working Circle plantations of suitable species shall be carried out as per the site requirement and condition. CCF (Territorial) shall review the applicability and effect of Restorative and Productive phase after 4th years of implementation of this prescriptions and give suggestions with respect of the applicability of this prescription.

12.5.2 Phase - I Restorative Phase:

The period of this phase will be of two year. The area of the coupe shall be protected completely from biotic interference by digging TCM or live hedge fencing or barbed wire fencing. Appropriate soil and moisture conservation measures like nala bunding, gully plugging, CCT and WAT wherever necessary shall be taken up. These water conservation measures shall be taken up on watershed basis i.e. ridge to valley approach. Singling of root stock and cut back operations shall be carried out to improve root stock. Sowing seeds of maharukh, khair, bamboo, sagargoti and other local species may be useful for live hedge fencing. The P.P.O./P.Y.O operation shall be undertaken in second year of restorative phase along with felling. Motivation of local people for JFM as an important work shall be taken up. The villagers shall be allowed to cut and carry grass at nominal rates in the area which was allotted to JFM Committee.

12.5.3 Phase - II Productive Phase:

The period of the phase II shall be of 5 years immediately after completion of restorative phase. The RFO shall thoroughly inspect the area and prepare treatment map for that area. If any minor repairs are required for soil and moisture conservation works which were already taken up in restorative phase shall be undertaken. After thorough inspection by the RFO if he finds favourable improvement in the area as well as in the social climate, he shall select suitable species for plantation in the coupe. The treatment map shall be prepared as per the site conditions indicating which species to be planted in a particular area, existing crop density, soil type, topography and natural regeneration areas of at least one ha. at one place. The treatment maps shall indicate the treatment to be given grid wise and species to be planted grid wise on the basis of suitability of soil.

Species selection should be invariably in consultation with JFM Committee and preference shall be given for local species rather than introducing exotic or non- local species. The members of JFM Committee shall be motivated and involved for raising successful plantation with their active participation and cooperation. Before taking up plantation the natural regeneration areas shall be properly identified and preference shall be given to naturally regenerated seedlings and tending operations shall be carried out to obtain healthy natural regeneration. Wherever natural regeneration is not sufficient, in blank and less density areas, the areas shall be supplemented with artificial regeneration. The number of plants to be planted per ha shall be decided on the basis of available natural regeneration, root stock, blank area and also considering soil factors, rainfall, temperature etc. It is prescribed that proper managerial inputs (better nursery stock, soil working, mulching, fertilizer application etc.) shall be applied to the naturally regenerated seedlings rather than planting more number of seedlings. Artificial regeneration shall not be taken up in those areas in which the established regeneration is adequately available and results of seed sowing are excellent.

SECTION 12.6 : FORMATION OF COUPES AND PLANTATION SERIES:

The entire WC is divided into 13 working series and each working series consists of 20 coupes. The details about working series and coupes are given in **Appendix No.XLI** of volume II of Non-Buffer division.

SECTION 12.7 : REGULATION OF YIELD:

Since majority of the area is degraded, open and under stocked, no appreciable yield will be realized except improvement felling.

SECTION 12.8 : IMPLEMENTING AGENCY:

All the prescribed operations will be implemented departmentally including plantation works by active co-operation and involvement of JFM Committee.

SECTION 12.9 : METHOD OF EXECUTING WORKS:

12.9.1 Demarcation : All annual coupes shall be demarcated and marked one year in advance.

12.9.2 Laying of grids : Laying of grids in A, B, C and D type areas shall be done after classifying areas into various treatment types. In A,B,C and D type areas grids of 1 ha. size shall be laid down. For the plantations grid of 0.5 ha. size shall be laid down. An expenditure of 1 MD per ha shall be sanctioned for laying of 100 m x 100 m grids, wherever no specific provision is made for this purpose.

12.9.3 Preparation of treatment map : After the demarcation of coupe, treatment map will be prepared by the RFO and it will be verified by the ACF with an emphasis of the suitability of sites for plantation, as well as the promising natural regeneration area. The treatment map will show contours along with important features like nala, streams, other protected areas, open and less density area, natural regeneration area, old plantation

area and the area more than 0.4 density in A,B,C,D types. Treatment map will be prepared on graph paper in 1:5000 scales.

(1) **Type A - Protection area** : This type includes the following area:

1. The area with the steep slope i.e. more than 25°.
2. Area already eroded or prone to soil erosion.
3. 20 metre wide strip on both sides of rivers, water courses and around water tank.

(2) **Type B - under stocked area** : It includes areas with density less than 0.4 and exceeding 5 ha at one place.

(3) **Type C - Group of young poles and old plantation area** : It includes pole crop of established regeneration of teak and other species suitable for retention as future crop and old plantations. The survival in old plantation areas will be more than 30 % and extent of area should not be less than 1 ha. at one place.

(4) **Type D - Well stocked area** : This type includes the area with crop density more than 0.4.

SECTION 12.10 : TREATMENT PRESCRIBED:

Different kinds of treatment are prescribed for various categories as under.

12.10.1 The climber cutting shall be carried out in entire coupe area. Care should be taken to avoid cutting of species included in Red Data Book of BSI and other endangered, threatened, vulnerable species.

12.10.2 The entire coupe shall be treated with soil and moisture conservation works such as nala bunding, gully plugging, CCT wherever necessary.

12.10.3 **Type A - Protection area** : No felling is prescribed, intensive soil and moisture conservation measures shall be undertaken. Bamboo plantation will be taken up on the both sides of nala if the soil conditions are

suitable. In eroded areas cuttings of Nirgudi and other soil binders will be planted to control soil erosion. The area to be planted shall not be less than 5 ha. at one place. While taking up plantations care should be taken that the plantation work will not lead to any soil erosion.

12.10.4 Type B - Under stocked area : Intensive soil and moisture conservation measures shall be carried out to increase the productivity and check soil erosion. In blanks plantation with Teak and other indigenous species will be under taken and seed dibbling will be under taken wherever it is needed as per the soil conditions.

12.10.5 Type C - Group of young poles and old plantation area: Thinning shall be carried out in young pole crop of natural regeneration in order to create appropriate spacement to stimulate growth of the crop. In old plantations thinnings are prescribed as per the stand table. In this type of area, no plantation shall be taken up.

12.10.6 Type D - Well stocked area: No planting will be done in this area. Natural regeneration will be facilitated to enrich the area. Improvement felling wherever possible is prescribed.

SECTION 12.11 : MARKING TECHNIQUE AND MARKING RULES :

12.11.1 Marking technique for the trees to be marked for felling is prescribed in chapter on Miscellaneous Regulations. Marking of tree will be done by the RFO under the guidance of ACF concerned. The DCF will inspect himself as many coupes as possible to give guidance and instructions to staff and also to check against excess marking if any. Grid wise record of enumeration and marking will be maintained. In remarks column of marking register, reasons for marking such as mature, dead, malformed, live high stump, singling of coppice shoot etc. will be recorded. Grid wise record of operations mentioned under Natural Regeneration e.g. tending, root stock management, singling of coppice,

weeding etc shall be maintained. The marking rules of various categories of areas are given below.

12.11.2 Type A - Protection area : No tree will be marked for felling.

12.11.3 Type B - Under stocked area:

- (a) No live tree will be marked for felling.
- (b) All live high stumps shall be cut-back.
- (c) All dead trees will be marked for removal retaining 2 trees per ha. which will act as snag and dens for wildlife. Multiple coppice shoots will be reduced to one or two per stool retaining the most vigorous one.
- (d) The undesirable under growth which is preventing or likely to prevent the development of the natural seedling will be removed and all possible efforts shall be made to protect and develop rooted stock.

12.11.4 Type C- Group of young poles and old plantation area:

- (a) The congested pole crop will be marked for thinning in order to create proper spacement in the crop preferably $1/3^{\text{rd}}$ spacement of crop height will be retained between two adjoining poles.
- (b) All dead, diseased and malformed poles will be marked first before thinning.
- (c) In old plantations thinning will be carried out to maintain appropriate spacement as per the stand table. Care shall be taken to retain the poles of seedling origin. Coppice origin poles will be removed first.
- (d) No plantation shall be taken up in this type of area.

12.11.5 Type D - Well stocked area:

- (a) Multiple coppice shoots will be marked for felling to reduce the number of stems or poles to 1 or 2 per stool retaining the most promising ones.
- (b) All live high stumps shall be cutback.

(c) All dead trees shall be removed retaining 2 per ha.

SECTION 12.12 : SOIL AND MOISTURE CONSERVATION

WORKS:

Soil and moisture conservation measures shall be under taken in the restorative phase. These works shall be taken up along with marking and completed before the onset of monsoon of the next year. Detailed descriptions regarding soil and moisture conservation works given in Miscellaneous Regulations shall be followed.

SECTION 12.13 : REGENERATION:

12.13.1 Natural Regeneration: Natural regeneration is the best source of getting better quality stock provided the sufficient natural regeneration is available. The available natural regeneration area shall be demarcated and properly protected from weed growth, fire, grazing and other biotic interference. The seedlings of natural regeneration can be secured only by means of systematic weeding commencing in the first rainy season and continued there after till the plants of natural regeneration are free from the suppression. Due to deciduous nature of the forests the natural regeneration in these forests has greatly suffered because of frequent fires coupled with inhospitable soil conditions. As a result of frequent fires the seedling suffer a lot from desiccation which needs proper mulching for each plant to reduce the effect of desiccation. The natural regeneration areas shall be categorised into 2 types.

Area with adequate regeneration: In this type, regeneration is considered adequate if the area contains more than 625 seedlings per ha. In order to stimulate growth and development of young recruits of Teak and other valuable desired miscellaneous species the following prescriptions shall be adopted for tending of natural regeneration. Minimum 1 ha. area in a patch shall select for the management.

(1) Identification of the area containing promising natural regeneration shall be done inside the coupe.

(2) The unwanted under growth, which is preventing or likely to prevent the growth of natural regeneration of desired species shall be removed.

(3) Identified patches of natural regeneration shall rigidly be protected from fire, grazing and other interferences. Suitable thinning and tending operations will be carried out to create congenial atmosphere for the growth of crop. Coppice shoots which interfere with the development of young natural seedlings shall be removed. A little opening up of canopy by felling marked trees and ground cover at some places shall boost establishment of natural regeneration of Teak and other species by providing better light and aeration.

The natural regeneration shall be cleared off weeds and grasses within the diameter of one metre and these weeds and grasses, leaf-litter and branches shall be arranged in 15 cm high layer around the seedlings within the cleared area and there after two to three spadeful of earth shall be put at the base of seedling to provide organic mulch. This will keep the soil around the plants free from weeds as well as help securing the loosening of soil. In addition, stone mulching shall be done around the current year recruits in the areas where surface stones are available. Small stones shall be arranged in a circle closed around every young seedling, which will help in retention of surface moisture as well as avoid accidental trampling by cattle or others. Wherever natural regeneration is not sufficient, it shall be supplemented with artificial regeneration.

Area with inadequate regeneration: In these areas seed sowing of suitable species shall be done by the field staff apart from tending of available natural regeneration in the next year of the main felling. In this area seedlings should be planted keeping upto 625 seedlings per ha.

12.13.2 Artificial Regeneration: In these areas wherever natural regeneration is not sufficient or in open and blank areas, plantation with suitable indigenous species shall be taken up under artificial regeneration. The number of seedlings to be planted is decided on the basis of soil conditions, rain fall, temperature variation and rate of evapo-transpiration.

The choice of species to be planted will depend upon suitability of site, its local demand and will be decided in consultation with JFM Committee or local village community. Various details about pre-planting, planting and post-planting operations given in artificial regeneration of Miscellaneous Regulations are to be referred. Minimum 5 ha. area in a patch shall be selected for the plantation activity.

12.13.3 PRE-PLANTING OPERATIONS:

(1) The PPO/PYO will be carried out one year before actual planting works are to be taken up. The planting stock in the nurseries should be tended with great care so that seedlings of various species grow into healthy and hardy planting stock and attain sufficient height when planted out. The seeds for raising nursery stock shall be from known source especially from the plus trees of high forests and preferably certified seeds. The seedlings shall be raised with improved technique preferably the seedlings raised under root- trainer technology may be used as planting stock.

(2) **Fencing:** The area to be planted will be fenced by TCM or live hedge or barbed wire fencing to protect plantation from cattle and wild animals. While digging of TCM care shall be taken when the boundary pass across the contour in such areas no TCM shall be dug and live hedge fencing will be provided. The size of TCM shall be of 1.9 m X 0.6 m X 1 m.

(3) **Digging pits:** Digging of pits shall be carried out as per the type of plantation to be raised.

12.13.4 Choice of Species: The choice of species will depend upon climatic and edaphic conditions and also preference of local people. The species for planting which occur locally and of the proven fodder grass species, fruits, NWFP and some of the timber species shall be preferred. 50% Teak species and 50% Bamboo and miscellaneous species to be planted depending upon the suitability of sites. 25% tall poly pot seedling of medicinal, fruit and fodder species shall be planted in area. Plantation model shall be selected as per site's requirement. The palatable grass

species of sheda, paunya and marvel shall be preferred. Bamboo can be planted in suitable areas especially along nala bank.

12.13.5 FIRST YEAR OPERATION :

(1) Planting: Planting operation will be completed within a fortnight of onset of monsoons. The Teak seedlings or stumps should be planted after first monsoon showers. Whereas in case of miscellaneous species poly-pot or root-trainer plants are to be planted. Tall poly pot seedlings of medicinal, fruit and shadowed species are to be planted.

(2) Weeding and Casualty Replacement: The weeding shall be carried out as per the schedule given below.

1st weeding shall be completed before end of July. The 2nd weeding shall be completed in the beginning of September, whereas 3rd weeding shall be completed by mid of October. Along with 3rd weeding mulching shall be carried out. Casualty replacement shall be carried out along with 1st weeding, if required. The natural regeneration is properly tended. However the coppice shoots preventing or likely to prevent the development of seedling regeneration will be removed.

12.13.6 Planting on TCM and live-hedge fencing: On the TCM Agave bulbils in 2 rows in 1 metre spacing and bamboo seedling at 2 metre spacing and tussocks of fodder grass in 2 rows in 0.6 metre and seed sown of suitable fuel wood species like Acacia species. For live hedge fencing the species should be planted as follows. The outer 2 rows of Agave at 0.5 metre spacing and inner 3 rows by fast growing thorny trees and shrubs, such as Acacia species by sowing or planting at 0.5 metre spacing. If necessary on TCM Sagargoti will be planted or seeds of Sagargoti will be sown.

12.13.7 Second year operation: In the 2nd year of plantation casualty replacement should be carried out immediately after the onset of monsoon and having sufficient rainfall before mid-July. During 2nd year two weedings, one by end of August and the other is by end of October shall be carried out. Mulching and hoeing shall be done along with second

weeding. During the time of 2nd weeding mulching with leaves is preferable, especially leaves of leguminous species, which will facilitate recycling of the nutrients in the soil and effective mulching will be associated in reduction of sub-soil moisture loss.

12.13.8 Third year operation: In 3rd year weeding shall be carried out in the month of September along with soil working. One more soil working shall be carried out in the month of October for proper retention of soil moisture. Natural regeneration shall be properly tended. In the 3rd year of the plantation cleaning shall be carried out. Coppice shoots of Teak will be removed if NR and AR are successful, otherwise coppice shoots will be cutback and reduced retaining one vigorous coppice shoot per stool. The established advance growth of Teak and other valuable species will be spaced out suitably, through tending operations.

12.13.9 Fourth & fifth year operation: Fire line, watch & ward shall be carried out during fourth & tenth year of the plantation.

SECTION 12.14 : SUBSIDIARY SILVICULTURAL OPERATIONS:

12.14.1 CBO: Cut Back Operation shall be carried out next year after main working of the coupe and the following prescriptions shall be followed.

(1) All climbers shall be cut. However care shall be taken to avoid cutting of climber species included in Red Data Book of BSI and other threatened & vulnerable species.

(2) All established multiple coppice shoots and poles shall be reduced to one or two per stool retaining the most promising one.

(3) The established advance growth of teak and valuable species will be spaced out suitably.

12.14.2 Cleaning and Tending : Cleaning and Tending operation shall be carried out in the coupe area in the 3rd year and cleaning operation in the 6th year after main felling as prescribed below.

- (1) All climbers shall be cut and the unwanted undergrowth interfering or likely to interfere with the growth of Teak and other valuable species will be cut. Threatened, endangered species shall not be cut.
- (2) Most promising shoots out of previously retained shoots will be retained and all other new coppice shoots of teak will be removed.
- (3) Established and natural regeneration of teak and other species shall be spaced out with appropriate tending operations.
- (4) All coppice shoots interfering with the growth and development of seedlings regeneration of Teak and other species will be cut back.
- (5) Soil working shall be carried out around the seedling of natural regeneration.

12.14.3 Thinning: In old plantations thinning shall be carried out as per Stand Table based on age and site quality of the plantation. 1st and 2nd thinnings shall be carried out in 10th and 15th year of planting, respectively. Silvicultural thinning shall be carried out after every five years of planting respectively. The detailed procedure for carrying out thinning given in Miscellaneous Regulations shall be followed. The other operations are :

- (1) All dead, badly damaged and uprooted trees shall be felled.
- (2) All climbers shall be cut. However, species included in Red Data Book of BSI and other vulnerable, threatened species shall be cut.
- (3) Unwanted undergrowth which is interfering or likely to interfere with the seedlings of natural regeneration and artificial regeneration shall be removed, coppice shoots will be cut back.
- (4) In groups of young poles of Teak which are naturally regenerated, thinning shall be carried out keeping average spacement between two poles at 1/3rd of the height of the adjoining poles.
- (5) In case of Teak plantations thinning will be carried out as per the principles of Stand Table based on the age and site quality.

SECTION 12.15 : OTHER REGULATIONS:

12.15.1 Fire Protection: The coupes shall be fire traced and rigidly protected from fire. The area will remain closed for grazing for a period of

five years from the main working. In the month of October/November after the fire tracing is over, all the undesirable undergrowth will be cut. The area shall be cleared off all the dry and cut bushes, leaves etc. by end of February to avoid fire hazard. Effective protection shall be ensured against fire during the fire season so that survival and establishment of the seedlings for development as future growing stock can be achieved. Fire protection shall be achieved successfully by involving JFM Committee. To ensure effective fire protection a workable fire protection scheme should be chalked out in which huge share of people (JFM Committee members) those who have effectively protected forests from fire shall be given. A meaningful participation and modalities shall be worked out to protect forest from fire and impart training to members of JFM Committee.

The techniques of fire protection will be adopted as given in Protection WC. Plan shall be chalked out so that effective fire fighting force is in place for protection of forests for the period of 15th February to 15th June and 24 hours duty on the suitable area from where areas can be tackled easily the prescriptions given in Miscellaneous Regulation shall be followed.

12.15.2 GRAZING CONTROL:

Closure to grazing and raising fodder:

The areas of the coupes shall remain closed to grazing for five years from the year of main planting. Palatable fodder grass, suitable for that area will be sown or planted by tussocks, so that palatable grass will be available at the end of five years when the coupes are opened for grazing and the villagers would have enough fodder for their cattle on rotational harvest basis from such coupes. The rotational harvest or grazing will facilitate the opening up of area on rotational basis. The rotation is fixed for three years. The closed areas should be specially mentioned in the grazing licence and the villagers be communicated of such closure by suitable means.

The local people shall be made aware of the importance of forest protection from illegal grazing and fire. Participation and active involvement of local people especially members of JFM Committees shall be encouraged in protection of forests. Regular awareness camps or campaign shall be arranged to explain the people about its importance, benefit of regeneration and protection. The prescription for regulation of grazing is given in Miscellaneous Regulation.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

CHAPTER - 13

FODDER IMPROVEMENT WORKING CIRCLE

**SECTION 13.1 : GENERAL CONSTITUTION AND
VEGETATION :**

13.1.1 This working circle includes the area situated amidst agricultural cultivation and are capable of producing qualitative fodder and grass. These areas was previously managed under Fodder Management W.C., Pasture W.C., Kuran W.C. and Improvement W.C. The compartments of new reserve forests and protected forests devoid of vegetation and eroded areas of improvement working circle have been included in this W.C. The site quality of the area included in this working circle is IV b and are mostly devoid of any appreciable tree growth or sparsely wooded with ain, lendia, tendu, rohan, char, dhaora, bija, etc. The vegetation is of low quality and contains mostly miscellaneous species of varying composition. The principal species are ain, lendia, moyan, tendu, rohan, char, dhaora, bija and occasional patches of teak. Hingan, bharati, lokhandi, dikamali, kharata and jilbili appear as shrubs. Bhurbhusi (*Andropogon pumilus*), ghonal (*Anthistiria ciliata*), kusal (*Andropogon contertus*), mushan (*Lesilema laxum*), paonia (*Ischasmum suleatum*), phukis (*Andropogon serratus*), polki (*Acluda varia*), etc. are the grasses coming up in the open patches. Good fodder grasses like paonia, marvel, sheda, and mushan are rare.

13.1.2 The areas which are in the immediate vicinity of human habitations, are under tremendous biotic pressure. Some areas have

been encroached upon for cultivation. Due to heavy biotic interference like grazing and illicit cutting for firewood, the crop has been reduced to scrubby growth. The status of natural regeneration is very poor. The heavy pressure of grazing has resulted in compaction of soil and erosion. Due to this many patches have become almost blank.

13.1.3 The reasons for assigning the areas to Fodder Improvement Working Circle (FIWC) are :

- (i) These areas have been traditionally managed for fodder improvement.
- (ii) These areas are located close to the towns and big villages so that these can cater to the needs of fodder and grass.
- (iii) The areas are open and sparsely wooded and it is necessary to manage this areas to protect and conserve the ecology and vegetation of these grasslands.

13.1.4 The total area of Chandrapur (Non-Buffer) Division included in this working circle is scattered, which is 6233.32 ha. The distribution of areas in various ranges are as given in the table below.

Sr. No.	Name of Range	Area allotted in ha.						Total comptt. No.	Total Forest Area of Range in ha.	% of the area of the Range	% of the area of the Division.
		Reserve Forest		Protected Forest		Zudpi Jungle					
		Total comptt. No.	Area in ha.	Total comptt. No.	Area in ha.	Sy. No.	Area in ha.				
1	2	3	4	5	6	7	8	9	10	11	12
1.	Chandrapur	0	0	0	0	0	0	0	0	0	0
2.	Chichpalli	0	0	0	0	0	0	0	0	0	0
3.	Warora	4	2071.19	0	0	0	0	4	2071.19	30.0	3.33
4.	Bhadrawati	0	0	0	0	0	0	0	0	0	0
5.	Sawali	2	161.64	171	4000.49	0	0	173	4162.13	16.0	6.71
	Total	6	2232.83	171	4000.49	--	--	177	6233.32	46.0	10.04

SECTION 13.2 : COMPARTMENTS ALLOTTED TO FIWC:

The compartments allotted to this W.C. includes Reserved Forests and Protected Forests. The details of blocks and compartments allotted

to this working circle are given in **Appendix No.XLV** in volume II of Non-Buffer division. The abstract of it is given in the table as below.

Sr. No.	Name of Range	Name of working Series	Compartment Nos.	Total Comptt.	Total area (ha.)	Total area of WC (ha.)
1.	Warora	Kem	2, 3, 4, 5	4	2071.19	2071.19
Total (Warora Range) :				4	2071.19	2071.19
2.	Sawali	Bharpayali	299, 301, 1538-1549, 1628-1642, 1651-73, 1680-1703, 1706-1713, 1721-1736	100	2104.97	2104.97
		Gola Bujurg	1714-1720, 1737-1800, 1846, 1847	73	2057.16	2057.16
Total (Sawali Range) :				173	4162.13	4162.13
Total :				177	6233.32	6233.32

SECTION 13.3 : SPECIAL OBJECTIVES OF MANAGEMENT:

- (i) To improve the quality and quantity of fodder in the forest area by introducing palatable species of grass.
- (ii) To meet the demand of local cattle population for palatable grass and fodder to reduce grazing pressure on adjoining forests.
- (iii) To improve site conditions through intensive soil and moisture conservation works.
- (iv) To augment the production of fodder grasses.

SECTION 13.4 : WORKING SERIES AND FORMATION OF COUPES:

The entire area allotted to this working circle has been constituted into 4 working series of 20 annual coupes each. Every coupe will be taken up for a special improvement operation every year. The statement showing working series and coupes in each series is given in **Appendix No.XLV, XLVI, XLVII & XLVIII** in Volume II of Non-Buffer division.

SECTION 13.5 : PREPARATION OF TREATMENT MAP :

Treatment map should be prepared by RFO showing A, B, C and D types of area. It should be verified by ACF and approved by the DCF.

SECTION 13.6 : METHOD OF TREATMENT :

Since these areas are prone to illegal grazing, fire and other biotic pressures, it is important to protect the area either by live hedge fencing or wire fencing. All these areas have to be effectively fire traced every year and closed for grazing for three consecutive years. Rotational & controlled grazing shall be allowed from 4th year onwards depending upon the carrying capacity of the area. The rotational grazing will be allowed from 4th year during the month of October to May. The rotation is fixed for 3 years.

As these areas are open and exposed, intensive soil and moisture conservation works like nala bunding, gully plugging, cement plugs, etc. are prescribed. Treatment shall be on the basis of watershed, depending upon the site conditions. The following works shall be carried out in the coupes while carrying out treatment to develop meadow and grassland.

- (i) As it is degraded area extensive soil and moisture conservation measures are prescribed like gully plugging, nala bunding at suitable places and contour trenches as per the agro-climatic models of the Soil Conservation Department (1000 to 1200 rmt/ha.) depending upon the site conditions.
- (ii) All obnoxious weeds and thorny shrubs and bushes shall be uprooted and the unpalatable grasses shall be removed by ploughing in the area in pre-flowering stage.
- (iii) Broadcasting seeds of superior grass species shall be taken up after ploughing along with contour trenches at the onset of monsoon. The tussocks of palatable grass species planted on freshly excavated and heaped soil bund on the lower side of trenches is prescribed.

- (iv) The fodder grasses shall be allowed to be cut only from 4th year onwards after seeding.
- (v) Plantation of tree species like anjan, babul, kusum, sirus, tiwas, etc. of fodder value shall be taken up by poly pot planting keeping 200 plant population per ha. along with sowing of grass seed on grass beds.
- (vi) The area shall be completely protected from uncontrolled grazing, fire, etc. The area shall be closed with barbed wire fencing or cattle proof trenches in order to have a complete protection.
- (vii) The area shall be effectively fire traced and protected from fire every year.
- (viii) The cutting of grasses for stall feeding of cattle shall not be allowed in these areas for first three years after planting to allow them to seed and multiply. The grazing shall be regulated as per Government Policy on rotation basis. Rotation is fixed for 3 years.
- (ix) All existing trees shall be retained.

SECTION 13.7 : CHOICE OF SPECIES:

Seed broadcasting and tussock planting of superior fodder grasses like sheda (*Schima nervosum*), paunya (*Schima sulcatum*), marvel (*Dicanthium annulatum*), etc. shall be taken up. The final selection of species shall be as per the site requirement.

SECTION 13.8 : IMPLEMENTING AGENCY:

All prescriptions under this working circle shall be carried out departmentally. Also in places where JFM committees are in existence, it should be implemented through them under the supervision of DCF.

To make rotational grazing successful and to implement the prescriptions effectively, the participation and cooperation of local villagers are extremely necessary. It is therefore, suggested that the areas where rotational grazing has been proposed, the JFM committees shall be involved in effective implementation of the prescriptions and protection of such areas.

SECTION 13.9 : GRAZING REGULATION:

13.9.1 Rotational Grazing: Grazing regulation will be adopted on the basis of rotational grazing principle. It will not be feasible to close the whole area of this working circle during the monsoon when grazing is most needed. On the basis of past experience the most practical and beneficial method of grazing would be to divide all the compartments of each coupe into three sections (A,B & C) and close one section for grazing for three years. The remaining two sections will remain open for grazing. The sections laid out so as to cause the least inconvenience in respect of access to open areas. The grazing will be according to the grazing settlement report. The field staff will have the sole responsibility to implement the prescriptions in most effective manner.

SECTION 13.10 : OTHER REGULATIONS:

- (i) During the monsoon i.e.1st July to 31st October, extraction of grass from the closed area will be prohibited.
- (ii) In order to enforce the monsoon closures, staff may be deployed in such areas.
- (iii) Frequent inspection will be carried out with a view to ascertain the results of closure.
- (iv) Main working coupes shall be fire traced every year and will remain closed to grazing.

SECTION 13.11 : SOIL AND MOISTURE CONSERVATION WORKS:

The areas allotted to this WC are open, blank and suffered from excessive biotic pressure resulted in compaction of soil, gully formation, nala formation, etc. To control soil erosion and to retain moisture, soil and moisture conservation works such as gully plugging, nala bunding, cement plugs, etc. are prescribed. For details of this work Miscellaneous Regulations may be referred.

SECTION 13.12 : REGENERATION:

As these areas are basically ear-marked for raising grass and fodder, superior palatable grass seed of paunya, sheda, mushan, marvel, etc. shall be sown to raise palatable grass in order to meet the demand for grass. Non fodder tree species shall not be planted as to maintain grassland ecosystem. 200 tall poly pot seedlings of fodder, shadow, fruit bearing species shall be planted preferably in each ha. area of plantation. Natural regeneration and artificial regeneration activity shall be followed as prescribed in the Miscellaneous Regulations.

SECTION 13.13 : GRAZING POLICY:

13.13.1 The Government of Maharashtra vide R & F. D. Resolution No. MFR-1368/132-ii Y, dated 6.12.1968 formulated the grazing policy for the entire state, with an objective to have an uniform grazing policy throughout the state. The policy aims at providing ideal pasturage within the available resources in the state forests without letting the resources impair or deteriorate. In view of the above, the Government of Maharashtra vide Revenue and Forest Department Resolution No. MFP-137/237035-z dated November, 3, 1973 promulgated the grazing rules to illustrate the regulatory character of the forests grazing. The important features of the grazing rules are as below.

- (i) All grazing in the forest (whether free or other wise) would be on permit only.

- (ii) Each forest division will be divided into grazing units and the issue of license is subject to such definite allotment of villages to a particular grazing unit, to such limitation on the number of cattle grazed in any such units, as may have been ordered by the Government after special enquiry and also to such closure to grazing as may be enforced in accordance with the prescriptions of sanctioned working plan.
- (iii) For excess cattle, license at prescribed rates may be taken out for any grazing unit, provided there is a room in that grazing unit.
- (iv) For free grazing of cattle of cultivator family and others, issue of licenses are limited to the period of June 15 to July 31 only.
- (v) A grazing license can be refused over a period of one year to any individual, who has been guilty of persistent illicit grazing by the order of the Chief Conservator of Forests. Government otherwise may refuse grazing license for a community whose members have been guilty of persistent illicit grazing.
- (vi) Computation of cattle units are made as per the following table.

TABLE

Sr. No.	Cattle	Equivalent cattle unit	Grazing fees
1.	Adult buffalo	2	2.00
2.	Adult cows, bull or bullock	1	1.00
3.	Buffalo calf (less than a year, but more than 6 months old)	1	1.00
4.	Cow calf (less than 3 years, but more than 6 months old)	½	0.50

- (vii) Essential cattle, subject to a maximum of two plough units per cultivator family, should be allowed free grazing in forests. 2 plough unit shall mean 4 cattle unit.
- (viii) The patwari/Talathi/Gramsewak shall issue a certificate on demand to all cultivator families entitled to graze cattle free.

13.13.2 The following is the maximum permissible grazing incidence permitted in each category of forests as stated in the functional classification.

- (a) **Protection forests:** Because of steep and precipitous nature of forests, grazing should altogether be prohibited here, except in exceptional cases, where too the incidence should not exceed one cattle unit for 4 hectare (10 Acre).
- (b) **Tree Forests:** The grazing incidence of these forests should be one cattle unit for 1.2 ha.
- (c) **Minor Forests:** The grazing incidence for these forests should be one cattle unit for 0.6 to 0.8 ha.
- (d) **Pasture Land :** The grazing incidence for these lands should be one cattle unit per 0.4 ha.
- (e) **Grass Reserve:** The grazing is completely eliminated from these areas, but cutting of grasses should be permitted

CHAPTER - 14
GREAT INDIAN BUSTARD RECOVERY PLAN
WORKING CIRCLE

14.1.1 India is a home of 4 species of Bustards viz., Great Indian Bustard (*Ardeotis nigriceps*), Lesser Florican (*Sypheotides indica*), Bengal Florican (*Houbaropsis bengalensis*) and Houbara Bustard. The GIB and Bengal Florican have been listed as critically endangered in IUCN Red list 2011. Habitat loss and degradation coupled with poaching and overgrazing of grasslands are considered some of the major reasons for the drastic decline in Bustard population. The GIB is a large ground bird with a height of about a metre, a somewhat long neck and quite long legs. The females are considerably smaller compared to males which display a well developed inflated gular pouch during calling, producing deep resonant calls.

14.1.2 In Chandrapur Forest Division 7 to 11 GIB's have been reported from the non-forest areas of Warora and Bhadrawati range. It has been found that the agriculturist around Warora and Bhadrawati had been observing these birds since last 50 to 60 years in their fields. The birds are also found to tolerate the presence of farmers and grazing around them. The main reason for the survival of these birds in these pockets is the cropping pattern followed by the farmers. Most of the agriculturist are keeping aside a patch of around 1 ha. in their farm for growing grass for their cattle. This system helps the presence of these birds who feed on such patches. Apart from GIB, Lesser Florican has been recorded in the Chandrapur district. The Lesser Florican is found to be a migrant and the

exact status is not yet studied in details. The presence of GIB has been reported in C.No.1, 6, 7a, 7b, 8 of Warora range of Chandrapur Forest Division. The details of working series with compartments and their coupes given in **Appendix No.XLIX**. The distribution of GIB and the results of its census carried out in Chandrapur Forest Division is given in the table below.

Table A

Area of presence

Sr. No.	Name of Range	Working Circle	Working Series	Comptt. Nos.	Total No.of Comptt.	Total area (ha.)
1.	Warora	GIB W.C.	Pimpalgaon Singara	1, 6, 7a, 7b, 8	5	2237.11

Table B

Distribution of Great Indian Bustard in Chandrapur Forest Division

Sr. No.	Range	No.of Birds found in census	Place of occurrence	Place of Breeding	Place of Nesting	Place of Roosting	Place of Non Breeding site
1.	Warora	7	Marda	Marda	Marda	Marda	Warora
			Ashti	Wanoja	Wanoja		Arvi
			Tulja	Madhav-bhatti	Ashti		Kharwad
			Wanoja	Ashti	Madhav-bhatti		Ashti
			Tumgaon	Tumgaon	Tumgaon		Niljai
			Dahegaon				Virjaval
			Kondhala				Karanj
2.	Bhadrawati	4	Madhav-bhatti Ajangaon				Shembal, Borda, Jamgaon
			Bhatadi	Bhatadi	Bhatadi	Bhatadi	Takadi
			Nandori	Panvadhala	Panvadhala		Jena
			Panvadhala				Kewana

Table C

Census of Great Indian Bustard in Chandrapur Forest Division

Range		2005	2006	2007	2008	2009	2010	2011	2012	2013
Warora	Male	2	--	3	--	--	2	3	1	--
	Female	4	--	4	--	--	2	4	4	--
	Young ones	--	--	--	--	--	--	1	--	--
	Total	6	6	7	5	4	4	8	5	--
Bhadrawati	Male	3	2	--	3	2	--	3	--	2
	Female	1	1	--	1	1	--	1	--	1
	Young ones	--	--	--	--	--	--	1	--	--
	Total	4	3	3	4	3	4	5	4	3

The Chief Conservator of Forests, Chandrapur has already prepared a Action Plan for protection and conservation of GIB in Warora and Bhadrawati ranges of Chandrapur Forest Division. The general objectives of the plan are as given below.

14.2 Objectives of Recovery Plan:

- (i) To augment the populations of GIB, Lesser Florican to a minimum viable population.
- (ii) To improve the habitat range of the GIB, Lesser Florican especially the breeding sites and nesting sites of these species.
- (iii) To facilitate a participatory approach towards conservation of GIB and Lesser Florican.
- (iv) To facilitate the captive breeding of GIB.

14.3 Activities for Bustard Recovery Programme:

- (i) Establishment of a Nodal and Research Centre at Tembhurda of Warora range for undertaking the breeding programme.
- (ii) Training of officers and field staff in In-situ and Ex-situ conservation of Bustard species.

- (iii) Identification of vital Bustard habitats such as breeding sites, Nesting sites, Lake sites, feeding sites. These sites may be declared as Critical Bustard Sites (CBS). Meadow development in zudpi forest, Reserve Forest and Private waste land will be carried out.
- (iv) The Critical Bustard Sites shall be declared as inviolate and no anthropogenic activities shall be allowed, especially during the breeding season.
- (v) Protection of the areas intensively used by GIB by erecting Chain Link fencing around important breeding sites.
- (vi) Involving local villagers, volunteers, NGO's in monitoring of GIB and Lesser Florican.
- (vii) Coordination and help of District Administration, Local Panchayats and local villager should be sought since the CBS lies outside forest areas.
- (viii) Creation of minimal infrastructure zone around the breeding enclosures to prevent mortality and disturbance of the birds.
- (ix) Providing incentives to local farmers for adapting beneficial crop pattern for GIB and Lesser Florican.
- (x) Public consultations/ dialogues with the local communities and custodians of private grasslands in these areas. Conducting Awareness Campaigns, creation of Citizen Groups at village level should be done to ensure active participation of the villagers.
- (xi) Providing alternative sources of livelihood to the local communities so as to prevent them from hunting these birds and removal/destruction of eggs and its nest.
- (xii) Treatments prescribed in Fodder Improvement W.C. shall be given in forest area where the presence of GIB has been reported.
- (xiii) Strict fire management practices and preventing illegal grazing shall be followed stringently.

- (xiv) Regular population monitoring of Bustards shall be done. The period between 15th July to 17th July every year has been fixed in this division for past 7 years. BNHS, WII and NGO's shall be involved in population monitoring activity. Use of modern techniques such as satellite telemetry programme, micro-chips, etc. to understand the seasonal movement pattern and life history of the species.
- (xv) Intensive patrolling during June to January of the year.
- (xvi) Capacity building of Forest Department staff and local communities through specialized training in Bustard conservation, grassland management and participatory planning.

14.4 Regulations: Stone Mining and Coal Mining is a major problem in Bustard Critical Zone area. No new mining leases may be granted in these areas. Also conversion of agricultural land into non-agriculture purpose needs to be controlled with proper co-ordination with District Administration.

14.5 Work in progress : Principle Chief Conservator of Forests (Wildlife), M.S. Nagpur submitted action plan for Bustards to State Govt. vide their letter No. Desk/WL/22(6)/5370 Dt. 07.03.2014 & State Govt. had given formal approval & submitted the same to Central Govt. As per this action plan Rs. 32.97 lakh allotted to his area through CAMPA.

14.5.1 Deepening of Van Talav in GIB area :- Result of radio collaring to GIB show existence of GIB in Comptt. No. 7A. Therefore in this area existing Vantalao taken for desilting so that water will retain in crunch period.

14.5.2 Grass plantation over 25 Ha.:- As a part of Bustard recovery programme Meadow development in Critical Bustard sites is taken over 25 Ha. In Comptt. No. 7A.

14.5.3 Chain Link fencing :- To protect above meadows from wildlife and captive animals chain link fencing taken up and is part of Meadow Development.

14.5.4 Construction of Laboratory :- For research purpose building at Tembhurda is under construction.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

**CHAPTER -15
BAMBOO (OVERLAPPING) WORKING CIRCLE**

**SECTION 15.1: GENERAL CONSTITUTION OF WORKING
CIRCLE:**

15.1.1 This working circle extend over the entire Chandrapur forest Division, overlapping all the working circle. The total area of the Bamboo overlapping working circle in Chandrapur (Non-Buffer) Forest Division is 19470.20 ha.

The distribution of Bamboo overlapping working circle is shown in the table below.

CHANDRAPUR (NON-BUFFER) FOREST DIVISION :

Range	Reserved Forest in ha.	Protected Forest in ha.	Unclass Forest in ha.	Total Forest in ha.
Chandrapur	2275.11	1131.37	--	3406.48
Bhadrawati	4842.92	8.45	--	4851.37
Warora	1117.33	--	--	1117.33
Chichpalli	5013.18	3230.89	--	8244.07
Sawali Sawali FDCM	1850.95	--	--	1850.95
Total	15099.49	4370.71	--	19470.20

**SECTION 15.2 : GENERAL CHARACTER OF THE
VEGETATION:**

15.2.1 The common variety of bamboo occurring in this division is *Dendrocalamus strictus*. It generally forms an under storey all over the Division. The bamboo has gregariously flowered in 1982. Strict

protection measures led to profuse regeneration which has resulted in congestion. The clump formation has now been affected. It is however observed that clump formation was better in areas where plantations were done during 1980 and in early 1990 in which every year clear felling of bamboo was carried out at the time of weeding and in areas where illicit cutting of bamboo was regularly taking place. Therefore, regular thinning as well as repeated cleaning operation to limit the no. of bamboo clumps / ha. was necessary. It is also found that in gregariously flowered bamboo areas regular thinning and cleaning operation leads to early clump formation. As the matured clumps formation is lesser in extent, only thinning and cleaning program are recommended for the areas under immature clumps. The extent of bamboo bearing area given in **Appendix No. LV** in volume II of Non-Buffer division.

SECTION 15.3 : COMPARTMENTS AND CUTTING SERIES :

15.3.1 The details of the compartments and cutting series of Commercial and Nistar bamboo felling series in Non-Buffer Forest Division are given in **Appendix No. LVI, LVII** .

SECTION 15.4 : SPECIAL OBJECTIVES OF MANAGEMENT:

15.4.1 The special objectives of management are :

- (i) To attain optimum increment in the growth of bamboo.
- (ii) To meet Nistar & Commercial demand on sustained basis.
- (iii) To meet the growing demand of bamboo based industries.

SECTION 15.5 : ANALYSIS AND VALUATION OF THE CROP :

15.5.1 The bamboo crop was not undertaken during the tree enumeration exercise.

SECTION 15.6 : SILVICULTURAL SYSTEM :

15.6.1 The silvicultural system to be followed here will be selection system.

SECTION 15.7 : CUTTING CYCLE :

15.7.1 A cutting cycle of 3 years shall be followed.

SECTION 15.8 : METHOD OF TREATMENT :

15.8.1 Bamboo will be harvested on a three years cycle basis so as to remove congestion in the bamboo clumps and enhance the productivity on a sustained basis. The crop will be treated on clump basis i.e. each clump will be treated independently as per the requirement. A cutting cycle of 3 years has been fixed as 1st and 2nd year bamboo culms provide food and nourishment to the rhizomes under soil the same will not be cut. They are also deficient in lignifications and are brittle and highly vulnerable to fungal attack. Only 3rd year culms are fit for harvesting.

SECTION 15.9 : FORMATION OF CUTTING SERIES :

Two cutting series are formed viz., Commercial cutting series and Nistar cutting series. Statement showing the constitution of Commercial bamboo cutting series is given in **Appendix No. LVII** and the statement showing the constitution of Nistar bamboo cutting series is given in **Appendix No. LVI**.

SECTION 15.10 : REGULATION OF YIELD :

It is regulated by area.

SECTION 15.11 : IDENTIFICATION OF AGE OF BAMBOO:

15.11.1 The marking of bamboo is highly selective therefore, it is necessary to distinguish, current year, previous year and mature culms from one another.

a) **CURRENT YEAR BAMBOO** : Culm sheath is present on lower half of the culm, branches are present throughout the length of the culm and bloom (White powdery dust) is present abundantly and comes off easily when touched.

b) **SECOND YEAR BAMBOO** : Culm sheath absent, branches are present practically at all nodes. Bloom is patchy and does not come off easily.

c) **THIRD YEAR BAMBOO** : Culm sheath absent, branches are present practically at all nodes, white bloom is absent and it becomes blackish grey.

SECTION 15.12 : AGENCY FOR HARVESTING:

The Commercial felling series will be sold as per guidelines issued by Government of Maharashtra through open auction. The Nistar felling series will be worked departmentally or through JFM committees as per the guidelines issued by the Government.

SECTION 15.13 : METHODS OF EXECUTING THE TREATMENT :

15.13.1 The coupe shall be demarcated in the same year in which they become due for harvesting. Due coupes will be demarcated in April/May (before onset of monsoon) by erecting poles at suitable intervals. On the poles, compartment number, coupe No. and name of cutting series will be written. Soon after the demarcation, the entire coupe due for working will be thoroughly inspected by the R.F.O and 10% checking will be done by an A.C.F. The inspection will be carried out compartment wise and the area containing Bamboo will be shown on the map. In this area sample enumeration will be done and as per the enumeration the estimate of various works and yield of bamboos will be prepared.

SECTION 15.14 : METHODS OF WORKING :

15.14.1 The following felling rules will be followed rigidly.

- (i) No harvesting works should be permitted between 15th June to 30th September i.e. no bamboo exploitation will be permitted during the monsoon season as this is a period of formation of new culms. As far as possible the cutting of bamboo should end by March when the culms are almost devoid of starch and therefore attracts less insect borers.
- (ii) No clumps should be considered fit for harvesting unless it contains more than 12 mature culms (one year as well as two year included).
- (iii) No culms below the age of 2 years will be felled.
- (iv) Following culms shall be removed from all clumps.
 - (a) All dead, decayed and dry bamboos.
 - (b) Culms whose half or more top part is broken or damaged.
 - (c) Twisted or malformed culms.
- (v) In a mature clump the following types of culms (green and living) will be retained.
 - (a) All current season's i.e. less than one year old culms.
 - (b) From the rest culms equal in number to the current season's (i.e. less than one year old) culms or 8 whichever is more.

The remaining culms will be considered available for harvesting.

- (vi) The cutting height of culms will be between 15 cm to 45 cm. above ground level i.e. above the first internode above the ground. The cut shall be slanted with the sharp instrument.
- (vii) In case of any flowering, no culm from flowered clumps shall be felled in the year of flowering.
- (viii) Harvesting of bamboo shall be done in a manner so as to ensure that the retained culms are evenly spaced and that

some mature culms i.e. more than 2 year old are retained on periphery for the purpose of support to the new culms.

- (ix) Following acts will be strictly prohibited.
 - (a) Digging of rhizomes.
 - (b) Lopping of bamboo culms for fodder.
 - (c) Use of tender bamboo culms for bundling.
- (x) Climber infesting with growth of bamboo clumps will be cut.
- (xi) After cutting, the debris will be removed away from the clumps and will be stacked at a distance not less than 2 meter away from the outer periphery of each clump.
- (xii) In order to facilitate working of congested clumps, wedge shaped opening will be created in the clump from outside to the centre of the clump. The width of the wedge will not be more than 75 cms.
- (xiii) Felling will start from the centre of the clump towards the periphery.
- (xiv) Clumps which have been dealt badly by the local villagers should be cleaned by the method mentioned in the item (iv) above. Such areas should strictly be closed to grazing for a period of two years. Besides this, to improve the condition of such clumps, digging half circular trench to the uphill side of size 60cm x 60cm and 1 to 1.5 meter away from the centre of the clumps is proposed to be taken.

SECTION 15.15 : BAMBOO FLOWERING :

15.15.1 Flowering is either periodic or annual. It is either gregarious, sporadic or both. Gregarious flowering is usually followed by the death of clumps, but in some cases of sporadic flowering the clumps do not die after flowering. The gregarious flowering proceeds from one end of the forest to another in waves. In two to three years the entire forest flowers. Because of this phenomenon, bamboo flowering is

an important event to reckon with in estimates of sustained supplies. The common bamboo (*Dendrocalamus strictus*) found in this area shows an irregular flowering in which one or few culms in one clump or a few clumps in one locality flower at any one time, while at other times all culms of one clump and all clumps in one district are simultaneously covered with flowers. The physiology of bamboo flowering is still not fully understood. Rhizome planted away from the parent rhizome also maintains the physiological cycle of the parent. There is also a belief that bamboo flowering synchronises with famine year. This is accountable to the fact that drought period hastens up flowering it is also noticed that in the year previous to flowering no new shoots are put up. In case of *Dendrocalamus strictus*, it has been observed that intensity of flowering varies from locality to locality and from year to year in the same locality.

15.15.2 After the gregarious flowering and subsequent death of old bamboos, the profuse regeneration of bamboo comes up. Many a times fallen seeds are attacked by fungus which destroys the seeds and in order to avoid fungus attack, a mild solution of fungicide may be sprayed over the seeds. The viability of the bamboo seeds is for one year and the seeds should be collected and spread manually in the deficient areas. It takes nearly eight years for new regeneration to reach the exploitable size, but often it takes considerably more time.

15.15.3 It is essential to keep a proper record of bamboo flowering. As soon as gregarious flowering occurs in any locality its extent should be found out and recorded in the compartment histories and also in the Divisional Note Book. A report should also be made to the Chief Conservator of Forests, Silviculturist, Conservator of Forests, Working Plans and Editor of Indian Forester, Dehradun. As soon as bamboos start flowering gregariously, the whole area will be effectively closed to grazing and strictly fire protected for a period of 10 years so that the seeds falling on the ground can germinate and the seedling so obtained are able to establish and clump formation starts. The dry culms only after flowering and seedling should be cut and disposed off.

15.15.4 TREATMENT OF BAMBOO FLOWERING AREA :

(i) Collection of seeds and their disposal :

The fresh seeds of bamboo will be collected from the clumps. The seeds will either be sent to the silviculturist for storage and further distribution among various divisions or will be sown, if needed locally, in raised beds of standard size in the last week of May or first week of June. After the rains set in the bamboo seeds will germinate and in the months of October - November, these seedlings will be transplanted in the polythene bags. The seedlings so raised will be utilised for afforestation works and also for raising bamboo plantations.

(ii) Method of harvesting :

Immediately after completion of seeding it will be necessary to remove all culms as they get dried. The removal may be done either departmentally or through the agency of Forest Labourers Cooperative Societies, JFMC's/EDC's, or else the standing coupes may be auctioned. The Chief Conservator of Forests (Territorial), will take a decision in this regard.

(iii) Tending Operations :

After completion of seeding it is essential to properly look after the young regenerated crop till a time the clump formation starts. The following operations will be carried out depending upon the age of the crop.

A) Crop age between 1 to 3 years :

During this period the area will normally contain thick seedling crop and the clump formation does not start. During this period following tending operations will be carried out.

- i) The area will be thoroughly gone over and 0.6 meter diameter foci at the rate of 300 per hectare will be formed, distributed evenly over the whole area.
- ii) All the rank growth of grasses, weeds and even bamboo seedlings upto a distance of 1.5 meter all around the foci

formed as above, will be cleared so that the growth of the bamboo seedlings in the selected foci are not hampered.

- iii) All climbers within and around the foci upto 1.5 meter distance will be completely removed.
- iv) The whole area will be strictly protected from fire and grazing.

B) Crop age between 3 to 8 years :

During this period the clump formations starts but the crop is yet immature for harvesting. During this period following operations will be carried out.

- i) All badly grown, twisted and damaged culms from the selected foci will be removed.
- ii) All weeds, grasses and climbers, within and around the foci upto a distance of 1.5 meter, will be completely removed.
- iii) Tree growth of species, others than teak, ain, shisham, bija, tinsa, tiwas, dhaora, haldu, karam, semal, mowai and bhirra over topping the clumps, will be removed.
- iv) The whole area will be strictly protected from fire.

(iv) Cycle of tending operations :

The operations, as prescribed under (A) and (B) above, will be carried out annually. Where this is not possible due to administrative reasons, these operations, except fire protection, will be carried out on 2 years or at the most 3 years cycle. The territorial Chief Conservator of Forests will decide the tending cycle to be followed in each area. The fire protection operations will be carried out every year and the area will be closed to grazing till completion of clump formation.

15.15.5 Bamboo Plantation :

This will be carried out in the 4th year as under planting in planted patches of main coupe.

(i) Pre-monsoon Works :

1. Demarcation of the patches suitable for bamboo plantations will be done in the year of demarcation of the bamboo coupe. Plantable patches not less than 5 ha. in extent of plantable area will bear separate demarcation. Pits will be dug at 6m x 6m and of size 45 cm x 45 cm x 45 cm negotiating the overwood and bamboo clumps etc. to bring up the bamboo population to sufficient extent. Preplanting operations will be carried out in the year of harvesting the bamboo in the coupe. Planting operations will be carried out in the rains subsequent to bamboo harvesting. In case of underplanting the bamboo, it will be done in the 4th year of main planting.

2. The coupe will be demarcated soon after the rains in the year in which the pre-monsoon works are to be undertaken by erecting posts at suitable intervals. This demarcation will exclude the working coupes of the main working circle to which this working circle overlaps to avoid confusion. On the posts, compartments number, coupe number and name of the planting series should be written with black paint.

15.15.6 METHOD OF EXECUTING THE WORKS.

(a) Collection of seeds :

The seeds as far as possible should be collected directly from the forest or obtained from Silviculturist. Divisional Manager, Seed Unit, FDCM Ltd. Seeds can be obtained from the sporadically flowering bamboo clumps or from the gregariously flowered dry deciduous forests. The collected seeds after cleaning can be stored in dry sealed tins or in gunny bags. Normally viability of bamboo seed is one year. There are about 55,000 seeds in a kg. Before seed sowing, the viability of the seeds should be tested by carrying out tetrazolium test which includes the putting of cotyledons in solutions for 24 hours. The viable seeds become red coloured. .

(b) Nursery technique :

The nursery operations will start two years in advance of the planting operations. The following operations are involved.

i) Preparation of mother beds : After thorough cross ploughing the area upto a depth of 30 cm. raised beds of size 12.20 m x 1.20m will be prepared in the month of March - April after allowing the ploughed soil to weather for about a month. All clods on beds should be broken properly before sowing. The height of the beds may vary from 20 cm to 30 cm. The space to be left in between two beds should facilitate sowing, watering, weeding and later-on pricking of the seedlings.

ii) Sowing : As soon as the seed is available in May - June, it should be sown in lines in the bed, lines being 10 cm apart. About 1 kg. seed will be required for a bed.

iii) Germination : After the rains set in, the germination starts within 6 to 7 days and is completed within 3 weeks. Germination is about 60 to 80 %.

iv) Transplantation : As soon as the seedlings are 3 to 5 cm tall, they should be pricked out from the mother beds and transplanted in polythene bags filled with mixture of soil, sand and cow dung manure in the ratio of 1:2:1.

At least two to three seedlings should be transplanted together in a bag as it helps the early formation of clumps. A minimum of 10,000 polythene bags can be prepared in this way from one bed.

(C) Premonsoon works :

Immediately after demarcation of the areas at the close of rains a treatment map will be prepared indicating the areas suitable for bamboo underplanting. The premonsoon works will then be taken up in such areas. The include the following works :

1) Clearing of lines : One meter wide straight lines should be cleared by cutting all brush wood and under growth at intervals of 6

meters over the area. The established regeneration of important tree species such as teak, ain, bija, shisham, haldu, dhaora, bhirra, tinsa and tiwas falling on these lines should not be removed.

2) **Digging pits** : The pits of size 45 cm x 45 cm x 45cm should be dug on these cleared lines at a spacing of 6 m x 6 m.

3) **Soil conservation works** : All gullies should be plug using the brush wood.

4) **Refilling of pits** : After the soil gets sufficient weathered the pits should be refilled with the excavated soil in the month of April. To avoid possible attack of seedlings by white ants a small quantity of 10% B.H.C. powder (about 5 gm.) should be mixed thoroughly in the soil before refilling the pits.

D) Planting operations : After the first good monsoon showers are received and the soil gets properly soaked upto a depth of 30 cm the nursery raised bamboo seedlings in polythene bags should be planted in these pits after removing the polythene bags. Care must be taken to see that the buds or rhizomes do not get hurt while transporting and planting the seedlings. The rhizome portion should only go completely below the ground level. The soil should be packed thoroughly round the plants and sloped so as to avoid water logging.

E) Weeding operations :

1. Weedings are necessary to save the plants from suppression for first 3 years. In the first year 3 weedings are prescribed. The first weeding should be carried out by the mid of July. Along with this weeding replacement of casualties should also be done. The second weeding should be carried out by the mid of August and the third weeding should be completed by the end of October. Along with the third weeding it is necessary to do mulching. It is generally seen that mulching work is neglected with the result that moisture conservation in the soil is adversely affected. The soil should be heaped around the plant at the centre. Saucer helps in accumulating the late rain water which is very

useful for the growth of shallow rooted bamboo. These saucers should be broken in the beginning of rain next year and remade at the last weeding.

2. In the second year two weedings should be carried out. The first weedings should be carried in the month of July and along with this weeding casualty replacement should also be done. The second weeding should be carried out in the month of October.

3. In the third year only one weeding should be carried out in the month of August.

(F) Tending Operations:

All climbers within or around the plants up to a distance of 1.5 meter will be completely removed in the sixth year.

SECTION 15.16 : GROWTH OF SEEDLINGS AND DEVELOPMENT OF CULMS AND CLUMPS:

15.16.1 In the first year the seedlings develop into thin, wiry stem, bearing single foliage leaves arising alternately at the nodes. The stem is sheathed by the bases of the leaves. Meanwhile fibrous adventitious, roots develop from the base of young shoot. Successive pointed buds are produced in the rhizomes. From these are, developed branch rhizomes which curve first downwards and then upwards and thus successive shoots arise deeper down. Successive shoots as also buds and rhizomes from which they arise become larger and larger. The earlier shoots are thin, wiry and grass like but subsequently a stage is reached when woody culms are produce. The transition is gradual.

15.16.2 The time taken to form normal culms depends on conditions of growth. Under artificially raised conditions and with regular weeding the stages are -

Third season	:	Whippy culms
Fourth Season	:	Fair sized culms

8th season : Large enough bamboos to permit cutting of 1 or 2 culms per clump.

The normal season at which new culm are produced appears to be July to September.

15.16.3 Maturity : A clump is said to have attained maturity when it commences formation of new branches to the rhizomes and more new culms are produced every year. Investigation of F.R.I. on all India basis have shown that the life of a culm is about 9 years (varying from 4 to 14 years).

SECTION 15.17 : OTHER REGULATIONS :

15.17.1 FIRE PROTECTION : Fires cause extensive damage to the new shoots of bamboos and, therefore, these areas will be completely protected from fire.

15.17.2 GRAZING CONTROL: These areas should be protected from grazing especially after flowering and in the rainy seasons in which the recruitment of new culms take place.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

**CHAPTER - 16
WILDLIFE MANAGEMENT (OVERLAPPING)
WORKING CIRCLE**

The Wildlife Management will be done as per prescription given in Vol.III of Tiger Conservation Plan (Adjoining area) of Tadoba-Andhari Tiger Reserve.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

CHAPTER-17

**NON-WOOD FOREST PRODUCE (OVERLAPPING)
WORKING CIRCLE**

SECTION 17.1 : GENERAL CONSTITUTION :

17.1.1 This is an overlapping working circle covering the entire forest area of the tract dealt with in Chandrapur (Non-Buffer) Forest Division. The non-wood forest produce includes both minor forest produce (MFP) and also the medicinal plants found in this tract.

**SECTION 17.2 : NON WOOD FOREST PRODUCE OF THE
TRACT:**

(A) MINOR FOREST PRODUCE:

17.2.1 There are numerous minor forest produce available in this tract and are found in almost all ranges with varying extent. These contribute sizeable revenue to the State exchequers as well as to generate mandays to engage local tribals during which they remain virtually without work. These play an important role in rural economy. The important minor forest produce, found in this tract are Moha flower and fruits, Bamboo, Tendu, Myrabolons, Gum, Broom grass etc.

(B) MEDICINAL PLANTS :

17.2.2 The tract is rich in variety of medicinal plants which are used for curing various ailments by the local people and therefore medicinal plants occupy an important position in the socio-cultural, spiritual and medicinal arena of local villagers/tribes. Their sustainable management and harvesting can conserve bio-diversity, sustain human

and environmental health, generate employment and earn foreign exchange by promoting exports.

17.2.3 The special task force set up by the Planning Commission for Conservation and sustainable use of medicinal plants stressed the need for conservation and preservation of medicinal plants. The per capita annual consumption of drugs of Rs. 125/- in India is the lowest in the world mainly because medicinal plants constitute the principal health care resources for the majority of the population in India. The World Health Organisation (WHO) estimated that 80% of the population of developing countries rely on traditional medicines mostly plant drugs for their primary health care needs. The modern pharmacopoeia still contains at least 25% drugs derived from plants and many others which are synthetic analogues built on prototype compounds isolated from plants. Transition from synthetic analogues built on microbially produced antibiotics to plant based drugs is rapidly gaining acceptance. Global resurgence in the use of plant based drugs is an opportunity for India to attain self reliance and boost the export of herbal drugs. The demand on plant based therapeutics is increasing in both developing and developed countries due to the growing recognition that they are natural products, being non-narcotic, having no side-effects, easily available at affordable prices and some times the only source of health care available to the poor. The conservation and sustainable use of medicinal plants are issues on which immediate focus is required in the context of conserving bio-diversity and promoting and maintaining the health of local communities, besides generating productive employment for the poor with the objective of poverty alleviation in tribal and rural areas.

17.2.4 At present 90% collection of medicinal plants is from the wild, generating about 40 million mandays employment and since 70% of plants collections involve destructive harvesting, many plants are endangered or vulnerable or threatened. Currently medicinal plants are collected without having a complete knowledge about their maturity and

use. They are also not stored properly which results in deterioration of their medical value.

17.2.5 For sustainable and equitable development of medicinal plants it has been realised that medicinal plants conservation areas need to be identified and field surveys and studies are required to be conducted in order to take necessary steps for their *in situ* conservation. The task force had also recommended the establishment of “Vanaspati Van” covering an area of about 3500 to 5000 hectares each for the intensive production of medicinal plants and their propagation which will produce quality herbal products and generate productive employment to the local people specially women who are skilled in herbal production, collection and utilisation. These “Vanaspati Vans” can be managed under Joint Forest Management Programme for benefit sharing to alleviate poverty of local people/tribals.

17.2.6 The important medicinal plants which have been identified in this tract have been given in **Appendix No. LIX** in volume II of Non-Buffer division.

SECTION 17.3 : SPECIAL OBJECTS OF MANAGEMENT:

17.3.1 As per the National Forest Policy, 1988 the development of minor forest produce (MFP) has been one of the objectives in forest management. Therefore consistent with the above policy, the special objects of management decided are as follows:

- i) To manage MFP and medicinal plants scientifically and to utilise the existing potential optimally and thereby to enhance the productivity and production of the same.
- ii) To take measures for conservation and sustainable use of N.W.F.P.
- iii) To generate mandays for providing work to the local people and thereby improving their socio-economic condition.
- iv) To provide better and improved quality of life and culture supporting items to the local tribals.

- v) To identify and conserve the forest areas rich in M.F.P. and medicinal plants and improve the stocking of NWFP yielding species in forests.
- vi) Sustainable harvest and use of NWFP, scientific and non-destructive extraction of medicinal plants.

SECTION 17.4 : METHOD OF TREATMENT :

(A) MINOR FOREST PRODUCE :

17.4.1 The treatment to be given will be different for different types of minor forest produce. Therefore, each M.F.P. will have separate treatment as follows:

1) MOHA:

i) MOHA FLOWER: USE AND NUTRITIVE VALUE :

17.4.2 Moha flower is a rich source of sugar, vitamins and calcium. The flower, in its ripe form, has almost 73% of all sugar and is, therefore, even a better medium for fermentation than grapes.

17.4.3 Moha flower is eaten raw and cooked. This is eaten also after frying or baking into cakes. More usually, the corolla tubes, after removing the stamens, are boiled for about 6 hours and left to simmer until water evaporates completely. The odour disappears as a result of cooking and the material becomes soft and jelly like. It is eaten with rice, tamarind, salai seeds, grains or other food or as sweet meat. Dried Moha flower is also boiled with rice and mixed with wheat flour and this provides a wholesome food. After drying it becomes valuable food additive to the tribal diet. Moha flower is largely used in the preparation of distilled liquor also. This liquor is actually the beer of India having strong smoky foetid odour which disappears on aging. It is reported to increase gastric irritation and produce other adverse effects. Redistilled and carefully prepared liquor is of good quality without having adverse effects and closely resembles to Irish Whisky. The corollas were, in the past, exported to France for distillation of cheap brandy. However, the French Government in order to protect their home industry prohibited

the import of the same. Subsequently, it was imported by Europe for feeding pigs.

17.4.4 Moha spirit prepared by distillation of liquid containing fermented moha flowers is the most important alcoholic drink in many of the tribal areas. It makes a potent drink and efforts are required to be made to refine it in modern distilleries. The flowers are also used for the preparation of certain kinds of non-alcoholic food drinks by some tribes. The flowers are also used for the preparation of vinegar. Moha having appreciable proteins and vitamins has valuable nutrition content. A syrup of good quality is prepared from the corollas by extraction with hot water and clarification with activated charcoal and evaporation under vacuum. The syrup with very high sugar content (61%) has a golden yellow colour with the odour of fresh flower. It is a substitute for honey. Apart from human consumption, moha flower offers an excellent food to the livestock and wild animals as well. Nutritive value of flower showed digestible crude protein 3.08, total digestible nutrients 73.7 and starch equivalent to 55.1 kg/100 kg. The flesh of animals particularly of pigs, fed on moha flowers, acquires a delicate flavour.

17.4.5 Besides, moha trees have an important place in tribal folklore and religious beliefs. For example, moha flowers are used to forecast rain and moha tree is worshiped in the form of deity called "Mahugoria" in parts of Bastar district of Madhya Pradesh. The Madias prefer to bury or cremate their dead bodies under a moha tree.

ii) MOHA FRUIT: USE AND NUTRITIVE VALUE :

17.4.6 A ripe fruit has cream coloured epicarp, which is edible. Moha berries are eaten raw or cooked. They are also eaten by cattle, sheep, goats, monkey and parrots. They have medicinal value as well. Fruits fell on the ground are easily attacked by insects and ants and thus become unfit for human consumption.

17.4.7 The moha seed yields oil. A thick oil light yellow in colour and extracted from the seeds, is used by forest tribes for cooking purposes, as an illuminance and hair oil. It is also used in the

manufacture of soaps, particularly, laundry chips. In many areas, it is also used as an adulterant for 'Ghee' for which it is clarified to buttermilk to mask disagreeable odour. The oil finds use in medicines also.

17.4.8 Crude oil has a deep colour, high acidity, unpleasant odour and bitter taste. Refining and hydrogenation yield product similar to mutton fallow or cocoa butters. Oil having acid value below 13 may be refined by treatment with caustic soda and that with higher acid value is extracted with alcohol and further treatment with alkali. Refined oil finds use in the manufacture of lubricating greases and fatty alcohol. The oil is also used for candles, as batching oil in Jute Industry and as a raw material for the production of stearic acid.

17.4.9 The yield of oil from the seeds depends on the efficiency of the equipments employed for crushing them. It is 20-30% by weight of the kernels when crushed in 'Ghanis', 34-37% in expellers and 40-48% when extracted by solvents.

17.4.10 Moha oil should have a set of characteristics. For this purpose ISI standards have been prescribed which are given in the following table.

Sr. No.	Characteristics	Grade		
		I	II	III
1	Moisture and insoluble impurities % by mass maximum	0.10	0.25	0.50
2	Colour in a ¼ in cell on the Loviband scale expressed are Y + 5R not deeper than	20	30	50
3	Refractive index at 40 C	1.459	to	1.460
4	Specific gravity at 90/30 C	0.862	to	0.875
5	Saponification	187	to	196
6	Iodine value	58	to	70
7	Unsaponification matter % by mass	2.00	3	3.00
8	Acid value maximum	0.5	20.0	>20

(iii) YIELD :

17.4.11 Moha trees start bearing flowers and fruits between 10th to 15th years of their planting. A study with reference to the yield of moha flowers and fruits has been conducted by the MVSS, Chandrapur in comptt. No. 195 Tadgaon Range of Bhamragarh Forest Division in the year 1992. The trees of different shapes and girth classes were selected for the purpose of this study. The results obtained are given in the following table :

Sr. No.	G.B.H. in cm.	Weight in Kg.	
		Flower	Seed
1	076-090	08.00	1.20
2	091-105	10.00	1.00
3	106-120	11.25	20.00
4	136-150	13.30	2.75
5	151-175	13.00	3.80
6	176-190	15.00	4.00
7	206-220	20.00	4.30
	Average	12.34	2.72

As the year 1992 was not a good seed year, the average obtained above is on lower side.

(iv) FORMATION OF UNITS AND COUPES:

17.4.12 The range will be the unit of working for the purpose of this working circle. Since operation is to be carried out annually throughout the area and so the unit will be the coupe in this case. Enumeration of all mohua trees shall be conducted compartment wise and record of the same shall be kept at beat, round and range level.

(v) AGENCIES FOR COLLECTION :

17.4.13 The collection of moha flowers and seeds is presently being done by individuals. Normally they confine themselves around their villages only to collect moha flowers and seeds. For large scale operation of collection may be done by JMFC as per terms and conditions as decided by the Government.

(vi) MARKET :

17.4.14 The collection of moha flower and seed is done by the tribals and purchase of the same is done by the TDC which comes under Monopoly Act. Presently local people consume majority of the collection locally and excess quantity is sold in the market to private purchasers.

17.4.15 Taking moha liquor is part and parcel of the tribal life. They cannot simply live without it. It can be said that it is one of the life supporting items for the tribals. But the crude spirit, prepared by the tribals in local "Bhatti" is having a number of health hazardous ingredients, which are bound to lead the poor and unhealthy state of health as well as lower their life expectancy. The comparison of crude liquor with distilled and redistilled liquor forces us to think over an act of welfare for the poor tribals by way of improving the quality of life supporting items. Therefore, it is essential for the Govt. to amend the Monopoly Act and allow to set up modern distillery. The setting up of distillery plants should be at the range level and run by the agency, decided by the Government, under the supervision of the forest department. Similarly, moha oil is the only source of edible oil and illuminance to the poor tribals. But the crude oil is bitter in taste, bad in odour and is having many hazardous ingredients. The comparison of the crude oil with that of ISI mark compels us to do something for the poor people of the forest. This is one of the duties of the department to improve the quality of life supporting items of the local tribals and thereby ensuring to the maximum possible extent the energetic and healthy state of the tribals. Therefore, setting up efficient expeller or solvent plants attached with refining tools is required to be decided on priority. The installation of the same should be at range level. The regulation of production and distribution etc. should be as per the guidelines decided by the Government. The financial bottleneck should be removed by using 5 % forest grant for the welfare of the tribals.

(vii) OTHER REGULATIONS :

17.4.16 (i) Compartment wise list of moha trees should be prepared and maintained at beat, round, range and division levels.

(ii) As it is a bare fact that one of the important reasons of forest fire is the burning of leaf litter on ground under moha trees by tribals to collect moha flowers and fruits. Therefore, before the start of flowers falling, the ground under the moha tree crown should be cleaned with the cooperation of villagers and choukidars. This may be treated as one of the most important duties of not only the Beat Guard but also the concerned JFM committee, failure in it and occurrence of fire should be viewed very seriously.

(iii) The measures for enhancing the production and productivity by local means should be explored and taken. Local people may be of great help in this regard.

(2) GUM :

(i) USE AND VALUE :

17.4.17 Kulu (*Sterculia urens*), dhaora (*Anogeissus latifolia*) and Salai (*Boswellia serrata*) gum are the main sources of gum production in this tract. These are used in medicines, chemicals, cosmetics and food industries. Salai gum is mostly used as incense and is said to be used in the Indian medicines for rheumatism and nervous diseases. It has the possibility of becoming an important substitute for imported Canada balsam, used as mounting media in the preparation of microscopic slides. This gum is very similar to turpentine oil. It has also been found suitable in the manufacture of elastic adhesive, lacquers, oil cloth compositions, ink varnish, paints and perfumery. Kulu gum is the costliest gum and is having export potential. Dhaora gum is very good for the preparation of many food articles.

(ii) YIELD :

17.4.18 The study of yield of gums has not been done in this tract. The production is low. No scientific method for tapping has been used so far in this area. This field has got potential for employment generation

and revenue earning. Besides, the regulations of the collection are very important from protection of forest from fire point of view.

(iii) TAPPING RULES :

17.4.19 The rules for tapping, derived by the FRI, Dehradun, are as follows:

- a) The tapping season will commence from November to end of May in each year. No tree below 90 cm in girth will be tapped.
- b) Tapping will be confined to the main bole of trees between 15 cm from ground level to the point from which first branch is given off.
- c) Only trees above 90 cm in girth at breast height will be tapped.
- d) Each tree will be tapped continuously for 3 years and will be given a rest for 3 years thereafter. The second tapping cycle will begin in the 7th year after the commencement of tapping season and will continue for another period of 3 years.
- e) The initial blaze of 20 cm wide and 30 cm in length or height may be made in the month of November on trees at 15 cm above ground level with a sharp adze having 7.5 cm wide blaze. The blaze is made 0.6 cm deep in the bark.
- f) Blaze may be made horizontally leaving approximately equal space between the two blazes. The blazes should not have any loose fibre. The lower surface of the blaze should be slightly sloping outwards to avoid lodging of guggul in the blazed pocket in case initial blazing is done by adze.
- g) The guggul starts oozing out soon after blaze are made and may be collected initially after a month, i.e. about December when the blazes may also be freshened. Subsequent collections and freshening may be done fortnightly upto May. Thus 12 freshening may be required to be made during the year.
- h) In each freshening the lower surface is not to be freshened. The edges may be scraped so that only 3.8 cm increase is on either side

in width at the end of 12 freshening. This means that about 0.3 cm should be scraped off either side in width in each freshening.

- i) The lowest row of blazes will be at one meter above the ground level. The next row of blazes will be made at the height of 60 cm from the lower i.e. at a total height of 1.6 meter from the ground level. The vertical portion of the blaze of upper row will alternate with similar portion of the row and no two blazes of the two rows will be directly one above the other.
- j) The number of blazes to be made on each tree will depend on its girth at breast height as given in the following table:

TABLE

Sr. No.	Girth at breast height	Max. no. of blazes to be made on each trees.
1	09. m to 1.3 m	2
2	1.3 m to 2.0 m	3
3	2.0 m to 3 m	4
4	Over 3 m	1 Blaze for every 45 cm girth in addition to category 3 above.

- k) No fresh blaze will be made on the partially healed up surface or old wounds.
- l) Each blaze will be in a shape of parabola with a 2.5 cm side base. The curved side of the parabola will be upwards and of height not more than 7.50 cm and the depth of the blaze will not exceed 0.6 cm in the wood.
- m) At the end of the season, the height of the blaze shall not be greater than 12.50 cm. Maximum permissible dimension of each blaze shall be 10 cm x 12.5 cm x 0.6 cm in width, height and depth respectively.
- n) Since the tapping is to be done continuously for three years the total height of the blaze at the end of three years of tapping will be 37.5 cm. the width and depth remaining the same.
- o) In the second cycle i.e. in the 7th year (after three years rest) new blazes will be made in the same way in the unblazed portion, in

between the blazed portions of the first cycle. This blazing will continue for another three years in the manner described above and the operations will be repeated till unblazed is fully covered.

(iv) FORMATION OF UNITS AND COUPES :

17.4.20 Range is the unit. Each unit will be divided into three annual coupes. The working cycle will be of three years.

(v) AGENCY :

17.4.21 All operations will be carried out through JFM committee or the agency decided by the Government.

(vi) OTHER REGULATIONS :

17.4.22 (i) The compartment wise list of such trees should be prepared and maintained at beat, round, range and division levels.

(ii) Cleaning around the trees to facilitate gum collection and to avoid fire, should be done.

(iii) To increase the population of salai trees soil should be dug up in the form of a ring with a radius of 1.5 times that of crown. By doing so root suckers are injured and from which profuse shoots come out. Singling and tending will increase the population of this species. The same may be tried for Kulu as well.

(iv) Gum producing trees should be reserved from felling.

(v) Strict watch is necessary to enforce tapping rules and check unauthorised collection of gum and tapping during the period of rest.

(3) TENDU :

(i) USE :

17.4.23 This is one of the most important minor forest produce of the tract providing gainful employment to the local people. This is used for manufacture of bidi. During Tendu season local people pluck tendu leaves and almost all members of family go to forests for plucking tendu leaves. The plucked leaves are sold at authorised tendu phadies at the

rate fixed by the Government. Further the royalty amount is paid to the tendu leaves collectors in the form of incentive wages after deducting administrative expenses. Year wise distribution of Incentive wages to the tendu leaves collector in Chandrapur Forest Division and the year wise production and revenue obtained in the last 10 years is given in the table below.

(ii) YIELD :

17.4.24 The production of tendu leaves, royalty obtained and Bonus amount distributed in the last ten years are furnished in the following table :

Table

Non-Buffer Forest Division, Chandrapur

Sr. No.	Year	Yield in std. bags	Royalty (Rs. in Lakhs)	Bonus Amount distributed	
				No.of Beneficiaries	Amount (Rs. In Lakhs)
1	2003-04	40600	357.17	---	---
2	2004-05	34700	194.41	---	---
3	2005-06	35000	177.10	---	---
4	2006-07	33400	192.06	16845	118.52
5	2007-08	34600	436.11	17853	385.67
6	2008-09	34600	282.58	18904	227.71
7	2009-10	34600	322.85	21048	267.99
8	2010-11	34800	423.93	15936	360.21
9	2011-12	34800	358.62	15878	304.07
10	2012-13	33600	468.75	17718	416.11
11	2013-14	20000	126.74	13386	89.06

17.4.25 No scientific efforts are seen to have been made to augment the tendu leaves production in this tract so far. On the contrary, every year pruning is carried out officially to get good flush of leaves. During pruning all small size plants, whether seed origin seedlings or coppice origin seedlings, are cut every year resulting into threat to future seed bearers. If such type of operations continued, the seed

bearers will go on diminishing season after season. The scientific impact of pruning of Tendu stands needs to be studied. Sometimes local people put fire to forests to get good flush of tendu leaves in connivance with tendu contractors which causes adverse impact on regeneration.

(iii) FORMATION OF UNITS:

17.4.26 The tract is already divided into tendu units for the purpose of regulation or trade of tendu leaves. The tendu units formed in this division are given below.

Tendu Units in Chandrapur Forest Division

Range	Name of Tendu Units
Warora	1-Warora, 2-Shegaon
Bhadrawati	3-Masal, 4-Chora, 5-Bhadrawati
Chandrapur	6-Durgapur, 7-Chandrapur
Chichpalli	8-Chichpalli,9-Dongarhaldi, 10-Mahadwadi, 11-Sushi, 12-Janala, 13-Mul
Sawli	14-Rajoli, 15-Chargaon, 16-Sawli, 17-Wyahad, 18-Sirsi, 19-Kapsi, 20-Gewardha

(iv) OTHER REGULATIONS :

17.4.27 (a) To augment the tendu tree population, soil should be dug up 15 to 20 cm deep around the tree, in a circular ring of diameter equal to that of the crown so as to cause injuries to the root suckers. The trees of gbh more than 45 cm should be selected for such operation. This will cause injuries to the root suckers to stimulate growth of seedlings through them. The tending and singling of shoots from root suckers will increase the population of the tendu tree.

(b) Pruning should not be done yearly. It should be done at an interval of 3 years during which some seedlings could establish and become the future seed bearer. Pruning should strictly and exclusively be of branches and not seedlings irrespective of their origin.

(4) BAMBOO :

(i) USE :

17.4.28 This is one of the important minor forest produce of this tract. This is popularly known as poor man's timber. The local people make use of it in a variety of ways. Tribal people eat tender rhizomes as vegetable during the monsoon. Besides, it is used by Burads to prepare bamboos articles and local people in construction of huts, house, cattle sheds and fencing. The bamboo is also used in a number of industries such as Paper and Pulp, Ice cream etc.

(ii) FORMATION OF COUPES :

17.4.29 The details of felling series and coupes are given in **Appendix No. LV, LVI, LVII** in volume II of Non-Buffer division.

(iii) AGENCY :

17.4.30 This has been discussed in detail in the chapter on Bamboo (overlapping) Working Circle.

(iv) VILLAGE INDUSTRIES :

17.4.31 Making bamboo tatta is one of the important and potential propositions. This should be encouraged, along with the other activities by the local people, particularly tribals. There is huge demand of the same in this area by many agencies, one of them is WCL. This will increase sharply the economic status of the tribals. The raw material will be supplied by the department in the manner described in the Chapter on Bamboo (Overlapping) Working Circle.

(5) MYRABOLONS, DIKAMALI AND NIRMALI FRUITS :

(i) USE :

17.4.32 These minor forest produce are used in many ways. Hirda, Beheda and Aonla are most common amongst myrabolons. These are of high medicinal value and are used in many Ayurvedic medicines. Hirda and Beheda are given to child in villages invariably for cold, cough and stomach disorder, dikamali and nirmali fruits are used in chemicals and in many other industries.

(ii) YIELD :

17.4.33 So far no study has been conducted to assess the yield of fruits from these tree species. The distribution of such species in different girth classes is given in **Appendix No.LXXIX to LXXXII** of Non-Buffer division.

(iii) FORMATION OF UNITS AND COUPES :

17.4.34 The range will be the unit. Since working is annual and covers the entire area and so unit will also be the coupe.

(iv) AGENCY FOR HARVESTING :

17.4.35 The units should be given on lease. The lessee will collect the same as per the direction of the Dy.C.F. concerned. The lease period should be from 1st July to 30th June. Lease should be given for one year by calling tender at divisional or circle level. On failure of tender, departmental harvesting or through JFMC's can be thought, if it is profitable and market is surveyed and assured.

(v) OTHER REGULATIONS :

17.4.36 (a) The detailed list of such species should be prepared and maintained at beat, round, range and division levels.

(b) These species should be excluded from felling.

(6) BROOM GRASS :

(i) USE :

17.4.37 This grass is used in preparation of broom which is usually used in houses. It is a seasonal crop and localised one.

(ii) YIELD :

17.4.38 So far no study has been conducted to assess the yield of this grass.

(iii) FORMATION OF UNIT :

17.4.39 The Range will be the unit.

(iv) AGENCY :

17.4.40 The unit will be sold by calling tender or through JFM committees.

(v) OTHER REGULATIONS :

17.4.41 (a) The areas suitable for this grass should be sown.

(b) The compartment wise details should be prepared and maintained at beat, round, range and division levels.

(c) The area should be fire protected.

(B) MEDICINAL PLANTS:

(I) ANALYSIS AND VALUATION OF THE MEDICINAL PLANTS :

17.4.42 Methodology for studying the medical plants : In order to assess the potential of areas rich in medicinal plants the field surveys are required to be conducted at the range level and the promising areas need to be identified for the establishment of "Vanaspati Vans" and also for the *in situ* conservation and sustainable use of medicinal plants available in the division. The objectives of vegetation studies are to assess the species diversity and distribution, density of trees; to estimate the basal area of the trees, diameter at breast height (d.b.h.) and size distribution of trees; to assess the extent of regeneration, seedlings and coppice root stocks and the regeneration potential of different species; to understand the existing and potential end uses of species; to understand the stages of forest succession and estimate the standing growing stock and productivity.

17.4.43 The methodology adopted for conducting this type of study is known as tree quadrat method in which a sample plot of 50 m x 20 m is laid and the number of plots is decided on the basis of crop/species composition and the area of the study. In each quadrat, data on stems measuring >30 cm gbh is enumerated and identified and recorded and this data is used for calculating species richness, size class distribution, height class distribution etc. and is essential to understand the

sustainability of natural resource extraction and the spatial and temporal changes due to the impact of extraction. The plot size for shrubs is 5 m x 5 m and all stems measuring a girth of >3 cm but with girth >30 cm or a height >140 cm are enumerated. To make qualitative and quantitative assessment of herbs plots are required to be randomly located inside the shrub quadrat and the plot size for herbs is normally 1m x 1m. The control plots are also required to be laid in order to study the comparison and the identical sampling methods need to be adopted. In each sample plot the medicinal plant species shall be identified with the help of taxonomist and desired data will be recorded.

(II) MANAGEMENT OF THE AREA:

17.4.44 The medicinal plants conservation areas (MPCA) and medicinal plants development areas (MPDA) shall be managed within the N.W.F.P. overlapping working circle and its boundaries shall be co-terminus with N.W.F.P. areas.

17.4.45 The management plan of MPCA and MPDA areas shall be worked out by the Deputy Conservator of Forests after conducting the desired vegetation studies and surveys. These activities can be taken up as part of the Joint Forest Management Programme. The necessary financial requirements shall be made available as part of the annual budget.

(III) METHOD OF TREATMENT :

17.4.46 The territorial division shall endeavour to establish MPCA, MPDA and NWFP areas and each one of them shall be managed as a unit. Each JFM area shall be a unit of its own and JFM areas shall not be excluded from NWFP areas. Non JFM forest areas will be conveniently divided into appropriate lease units preferably in tune with NWFP units which cover some medicinal species also.

(a) Treatment for MPCA areas:-

- (i) Selection of sites, that cover the range of forest types, altitudes, areas of known species richness and medicinal plants presence.

Sites having RL (Red listed plants such as *Michelia champaca*, *Drosera indica* etc.) species populations should also be considered.

- (ii) Conducting ethno botanical studies in partnership with Bare Foot Botanists (BFBs) from local communities. Documentation of all plant taxa occurring in MPCAs with herbarium records, systematic estimation of plant populations and regeneration distribution patterns, association, micro habitat and cultural information related to the plants collected, needs to be carried out.
- (iii) Records about the MPCAs such as the year of formation, extent, forest type, works carried out etc. shall be maintained at the divisional level.
- (iv) A map demarcating the boundaries of the MPCAs should be prepared and maintained and the boundaries of the MPCAs shall be clearly demarcated by fixing boundary pillars at each survey station and numbering it. The boundaries can as far as possible be natural features and the area a mini water shed.
- (v) Taking efficient measures to protect sites from fire and other biotic pressures. Grazing shall not be allowed within the MPCAs. Rigid protection from biotic interference shall be given and this can be achieved through forest protection committees/local management committee.
- (vi) Locating breeding populations of RL and economically valuable species and at a subsequent stage develop a suitable species recovery program for critically endangered species and enrichment planning programme for economically valuable species.
- (vii) Except for the collection of seeds / propagules for multiplication either for research or development elsewhere, no other removal shall be permitted.
- (viii) The endangered and valuable vulnerable species spotted in the MPCAs can be multiplied in the nursery and planted in the vicinity where such species are found

- (ix) Establishing a network of nurseries around selected MPCA to supply planting material of those plants available in the MPCA network and demanded by both non-commercial and commercial user groups.
- (x) Establishing signage and demonstration plots in selected MPCAs for education of local people and visitors. Important species can be labelled around the demonstration plot.
- (xi) Building and strengthening community institutions for long term management of the sites.
- (xii) Fencing of the MPCA area shall be done on priority basis and necessary funds should be made available for the same.

(b) Treatment for MPDA areas :

In these areas the eco-restoration and biological upgradation of degraded forest is to be resorted using the JFM concept and the following prescriptions need to be followed :

- (i) Selection of suitable degraded forest areas for MPDA programme.
- (ii) Involve a competent local NGO for organising the community.
- (iii) Selection of species to be raised in the MPDA from those indigenous to the region, a mix of trees, shrubs and herbs that are native, relatively easily grown and are marketable.
- (iv) Establishing a system of sustainable harvest based on collection guidelines for specific species that are informed by “conservation science”.
- (v) Joint management of MPDA by the local Forest Department and local communities. Proceeds of the harvest of medicinal plants from the MPDA (in the form of raw material) to be shared under the JFM framework.
- (vi) Creation of market links & by back guarantees for sale of produce at the outset of the programme.
- (vii) Building and strengthening community institutions for sustainable management.

(c) Treatment for NTFP areas:-

- (i) Selection of suitable non-degraded areas where medicinal plant collections are already underway.
- (ii) Involvement of a competent local NGO for organising the community.
- (iii) Establishing a system of sustainable harvest based on collection guidelines for specific species that are informed by “conservation science”.
- (iv) Joint management of forest sites by the local Forest Department and organised local communities. Assign specific forest areas to specific local village communities with clear delegation of responsibilities, privileges and full accountability. Proceeds of the harvest of medicinal plants to be shared under the JFM framework.
- (v) Creation of market links for sale of produce at the outset of the programme.
- (vi) Building and strengthening community institutions for sustainable management.
- (vii) Only such plants/parts of the plant specified for each species whose medicinal values are recognised should be collected e.g. fruits and seeds of neem tree.
- (viii) Removal of plants or plant parts of species other than the specified ones shall be totally prohibited.
- (ix) Lopping of branches to gather buds, fruits or leaves shall be totally prohibited.
- (x) Fruits and seeds that have fallen to the ground alone are to be collected. May be the branches can be gently shaken to facilitate the shading of fruits and seeds.
- (xi) For each medicinal plant/tree species about 1-2 % of the population shall be left as seed bearers for encouraging natural regeneration and also seed collection. These trees shall be

numbered and ring marked and no collection shall be done from these seed bearers.

- (xii) Species to be raised for use in Primary Health Care, trade will be listed out category wise, well in advance to facilitate nursery operation. Information already generated on nursery and plantation techniques for the chosen species, will be used for artificial regeneration.
- (xiii) Based on the outcome of the survey of the vegetation, the proportion of medicinally important tree species shall be increased while taking up reforestation works under eco-restoration and water augmentation programmes.
- (xiv) Tending of coppice shoots/root stocks of existing trees shall be taken up and the natural regeneration shall be encouraged.
- (xv) Seeds/seedlings shall be sown/planted in the barren patches and in the weeded and soil worked areas around the tree saplings. Medicinal plant species of the nature of the climbers can be planted close to the naturally existing trees and shrubs or their natural hosts
- (xvi) If contour trenching is carried out, the species mentioned in the previous para can be raised on the mounds in the first year and in the trenches during the next year when some silt gets deposited in them.
- (xvii) At convenient contour intervals, say 30 m. shrubs like Kumari (*Aloe barbensis*), Adhatoda (*Justicia adhatoda*), Nochi (*Vitex negundo*) and Vettiver (*Vetiveria zizanioides*) can be raised as vegetative barriers along the contour. These species can also be planted along the RF boundary. This will incidentally facilitate demarcation of the forest area.
- (xviii) In the swamps, along the stream banks and on the waterspread areas and aprons of check dams and percolation ponds, hydrophytes like Neerbrahmi (*Bacopa monnieri*), Vallarari

(*Centella asiatica*), Vasambu (*Acorus calamus*), Arathai (*Alphinia calcarata*) etc. can be planted.

17.4.47 Sustainable harvest: Information suggesting norms for sustainable levels of harvest shall be worked out by the Deputy Conservator of Forests after taking into consideration the results of vegetation survey and availability of medicinal plants species and the parts of the plant or tree used for medicinal uses. Untimely harvesting should not be permitted otherwise natural regeneration will be affected. In case where the roots/ tubers/ rhizomes or the specific plant parts used in medicine, the natural regeneration of these species shall be ensured by leaving well distributed and adequate numbers of seed bearers. An alternative would be to replant the area after harvest. Destructive collection should be prohibited. In some plants whose leaves are used for medicinal purposes, it is common practice to uproot the whole plant and therefore in such cases only the leaves should be allowed to be collected. In case of vetiver, the roots alone are used in medicine. Since it is raised as a soil binder and vegetative barrier, harvesting can be taken up only when the slips establish, produce tillers and the clumps form a thick barrier. At this stage, leaving a strip of grass barrier on the uphill side tillers can be uprooted on down hill side. Similarly in case of *Cymbopogon* species leaves are to be harvested every quarter. On no account should the clumps be allowed to set fire to, to encourage growth and development of new and young shoots. In this case if the clumps lie scattered, the harvesting will be done only once a year and that too well after the plants flower and seed dispersal has taken place.

SECTION 17.5 : RESEARCH WORKS :

17.5.1 There are so many minor forest produce in the forest which are unidentified and untapped. The efforts of the department should be to explore them and manage them scientifically. The identification of medicinal plants in the field is to be taken for study immediately. This

has wide scope in future. Innovation and research works should always be carried out and the same be recorded and reported properly.

17.5.2 The following are the important rules :

- i) The annual estimates of collection of N.W.F.P. shall be based upon the experience.
- ii) The annual estimates of collection of N.W.F.P. shall be approved by the Chief Conservator of Forests.
- iii) The Range Forest Officer of the respective range shall issue the passes for collection of N.W.F.P to the lessees and keep record of the collection etc.
- iv) The minor forest produce lease units shall have distinct boundaries.
- v) N.W.F.P. collection estimates shall be based upon the inventories of forests resources.
- vi) Scheme shall be formulated for improving yield of N.W.F.P. e.g. plantations, protection against disease etc.
- vii) Measures shall be taken to maintain and improve the present output of the N.W.F.P.
- viii) The MPCAs shall be accorded the status of a “preservation plot” and documentation shall be done by opening plot files.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

**CHAPTER –18
JOINT FOREST MANAGEMENT (OVERLAPPING)
WORKING CIRCLE**

SECTION 18.1: BACKGROUND:

18.1.1 The National Forest Policy 1988 envisages massive people's movement for conservation of forest resources. The Govt. of India issued directions to all the State Governments vide letter No. 621/89-PP dated 1st June, 1990 regarding framework for creating massive people's movement through involvement of village communities in protection and management of degraded forest lands. Participation management strategy envisaged in forestry sector is known Joint Forest Management (JFM).

18.1.2 The Ministry of Environment & Forests of Govt. of India issued circular No. 22-8/98-FPD dated February 11, 2000 and No. 22-8/2000-JFM (FPD) dated February 21, 2000 in which detailed guidelines are incorporated for the Joint Forest Management Programme. The Govt. of Maharashtra also issued guidelines vide Government Resolution No. SLF-1091/ PK119/F-11 dated March 16, 1992 to constitute "JFM Committees realising the fact that forest protection can not be achieved without active participation and cooperation of local people. As per the guidelines of G.R. of 16th March 1992 instructions were issued for preparation of management plans for implementation of Joint Forest Management. GoM issued revised guidelines and framework for implementation of JFM programme vide G.R. dated 25-4-2003. Later Government of Maharashtra also issued Guidelines

for implementation of JFM programme vide Government Resolution No. FDM-2011/no 100/F-2 dated 22-12-2011. The Govt. of Maharashtra under MREGS issued guidelines regarding implementing agency under which Joint Forest Management committee's were recognised as implementing agency vide Govt. Resolution No.MREGS/2012/PK63/EGS-1/Planning/Bombay, dated 8-1-2013. The GR is enclosed in Vol.II as **Appendix No. LXXI** of Non-Buffer division.

18.1.3 In Chandrapur (Non-Buffer) Forest Division there are 532 villages out of this 284 villages are adjoining forests. At present 216 JFM committees have been constituted. 32 villages have been brought under Forest Development Agency. The quality of forests is degraded near human habitations and protection of these areas cannot be achieved unless there is people participation and cooperation. The villagers with homogenous population and forest areas having sizable population of SC and ST and other economically dependent people shall be given preference to be included in JFM.

SECTION 18.2 : NEED FOR IMPLEMENTATION OF JFM:

In consonance with National Forest Policy 1988, special emphasis is given to JFM due to increasing biotic pressure, depletion of soil due to soil erosion and degradation of forests. Demand is increasing for timber and fuel wood. Heavy grazing pressure, repeated forest fires, diversion of forest land for agriculture, industries, housing and irrigation projects etc are putting strain on forests. To check further loss of forest cover and forest area and to regenerate the degraded forests, the below mentioned aspects are given thrust while implementing JFM Programme.

(1) Protection and management of forests by developing a sense of ownership and belongingness of forests among the local people, to regenerate degraded forest areas with the active participation of local people.

(2) Increasing the vegetation cover and to carry out soil and moisture conservation works with the active co-operation of local people.

(3) Involving local people in forest protection and to provide tangible and intangible benefits in lieu of their cooperation in forest protection.

SECTION 18.3 : SOCIO-ECONOMIC CONDITIONS:

The total human population of the Chandrapur district is 21,94,262 as per 2011 census. Population density is 181 per sq. km. ST population constitutes 18.10% and SC population 14.30% of total population. People residing in villages constitute 64.9% whereas, those residing in cities constitute 35.05%. As per 2007 data livestock population is 10,30,423, of which cows and bullocks constitute 55%, Buffalos- 8.74%, sheeps and goats- 33.46% and others 4.51%. The population density of livestock in the district is 83.94/sq.km.

SECTION 18.4: STATUS OF JFM:

18.4.1 The JFM in Chandrapur Forest Division was started in the year 1997-98 under Maharashtra Forestry Project. The details of JFM implementation are given in the table below.

Details of villages under JFM in Chandrapur (Non-Buffer) Forest Division

Sr. No.	Range	No. of JFMC	No. of Registered JFMC's	Area allotted for protection (ha.)	Plantation area (ha.)
1.	Warora	52	50	5285.02	160 AR
2.	Bhadrawati	27	25	7091.54	155 AR
3.	Sawali	44	40	8171.63	125 AR
4.	Chichpalli	25	24	5522.57	470 NR 250 AR
5.	Chandrapur	01	01	264.27	30 AR
	Total	149	140	26,335.03	720 AR 470 NR

The population depends on agriculture and allied activities for the livelihood and most of the SC, ST population are land less and work as agricultural labourers. The population adjoining forests mostly depend upon forests for day to day needs, naturally causing pressure on forests. The cattle populations also cause lot of pressure on forests for grazing. The local people hardly utilise forest area for stall feeding of their cattle. In some pockets grazing by sheep and goats is noticed and they cause extensive damage to the regeneration. Apart from local cattle, migratory cattle also exert pressure on forests in this Division. The most important factor for the implementation JFM is willingness of the local people to participate in these activities. In this regard the guidelines of Govt. of Maharashtra GR No. MSC/ 2000/ C.N. 143/ F-2 dated 25th April 2003 shall be followed. At present there are 149 committees constituted in Chandrapur (Non-Buffer) Forest Division. The total forest area allotted to these committees for protection is 26,335.03 ha., out of which in 720 ha. artificial regeneration works and in 470 ha. Natural regeneration works has been undertaken.

18.4.2 The details of grading of JFM Committees are given below.

No. of villages Good: 40; Better: 52; Average: 57; Total: 149

18.4.3 The following villages of this division received Sant Tukaram Award at District level.

Sr. No.	Year	Range	JFMC	Rank at District level
1.	2006-07	Mul	Satara Tukum	II
2.	2007-08	Chichpalli	Jambharla	II
3.	2008-09	Chichpalli	Jambharla	I
		Mul	Dahegaon	III
4.	2011-12	Warora	Rampur	II
		Bhadrawati	Pewara	III
5.	2012-13	Warora	Rampur	I
		Bhadrawati	Pewara	II

18.4.4 The participation of woman in JFM is good. The details of plantation taken up by the JFMC's are given in table below.

Sr. No.	Year	Range	Place of Plantation	Comptt. No.	Area in ha.	AR/NR
1	2	3	4	5	6	7
1.	1997	Chichpalli	Satara (T)	437	30	AR
2.	2004	Chichpalli	Mahadwadi	638	25	NR
3.	2005	Chichpalli	Satara (T)	438	25	NR
4.	2006	Chichpalli	Walani	530	25	NR
5.	2006	Chichpalli	Walani	614	25	NR
6.	2006	Chichpalli	Aagadi	715	25	NR
7.	2006	Chichpalli	Mankapur	436	25	NR
8.	2006	Chichpalli	Janada	716	25	NR
9.	2006	Chichpalli	Jamkhurd	673	25	NR
10.	2006	Chichpalli	Nagada	538	25	NR
11.	2006	Chichpalli	Nagada	708,711	25	AR
12.	2006	Chichpalli	Jambharla	426	25	NR
13.	2006	Chichpalli	Bhagvanpur	524	25	NR
14.	2006	Chichpalli	Bhagvanpur	524	25	AR
15.	2006	Chichpalli	Kantapeth	717	25	NR
16.	2009	Chichpalli	Ghanoti No.2	68	30	AR
17.	2010	Warora	Kem	5	25	AR
18.	2010	Sawali	Tadbhuj	307	25	AR
19.	2010	Sawali	Saimara	311	25	AR
20.	2010	Chichpalli	Gondsawali	537	30	AR
21.	2010	Chichpalli	Gilbili	527	30	NR
22.	2010	Chichpalli	Dahegaon	733,734	25	AR
23.	2010	Chichpalli	Rampur Dixit	672	30	AR
29.	2012	Warora	Wagholi	12	35	AR
30.	2012	Warora	Susa	2	25	AR
31.	2012	Warora	Lonar	6	25	AR
32.	2012	Warora	Mahalgaon	10	25	AR
33.	2012	Bhadrawati	Masad	283	50	AR
34.	2012	Bhadrawati	Chicholi	--	25	AR
35.	2012	Bhadrawati	Pewara	9	25	AR
36.	2012	Sawali	Bhatejam	1706	25	AR
37.	2012	Chichpalli	Jamkhurd	673	30	AR
38.	2012	Chandrapur	Kitadi	184	30	AR
39.	2013	Warora	Borgaon	5	25	AR
40.	2013	Bhadrawati	Tirwanja	203	30	AR
41.	2013	Sawali	Ghodewahi	1712	25	AR
42.	2013	Sawali	Kapasi	199	25	AR

SECTION 18.5: SPECIAL OBJECTIVES OF MANAGEMENT:

- (1) To protect forests and to utilise degraded forest areas for productive purposes in order to meet the demand for fuel, fodder and timber requirements, of the people.
- (2) To rehabilitate and regenerate degraded forests and to check soil erosion.
- (3) To seek the cooperation and active participation of local people in forest protection, management and development activities.

SECTION 18.6 : COMPARTMENTS AND FELLING SERIES:

Implementation of the prescriptions under this WC is completely voluntary and it is based on willingness of the villagers, therefore neither compartments are allotted nor felling series are formed. It is an overlapping WC which encompasses the entire forest area of the division. The microplans prepared for the area allotted to a particular village of JFM committee shall be in consonance with the prescriptions given for that area under this working plan. Any deviation from the plan requires permission of the competent authority.

SECTION 18.7 : PRINCIPLES AND ETHICS:

Certain principles and ethics should be as followed as per guidelines for the implementation of JFM in any village.

- (1) Eco-system conservation and sustainable use of resources is the goal of resource management.
- (2) To enable development of strong institutional system in the long run for JFM implementation it is necessary to have participatory and democratic structure.

- (3) Open communication system and gender equity is of the prime importance.
- (4) Management responsibility and benefit sharing in relation to traditional usage should be ensured.
- (5) The community shall take the responsibility to maintain the system.
- (6) Effective conflict resolution should be ensured.
- (7) Traditional rights and uses shall be respected and rational approach should be adopted in accepting or rejecting same.
- (8) Discrete jurisdiction and proper terms of agreements should be ensured.
- (9) Effective monitoring and appraisal systems should be adopted.

SECTION 18.8 : TREATMENT PRESCRIBED FOR JFM:

In the system of JFM the forest staff must know the principles and approach of JFM. The first and foremost thing is to convince the local people about the importance of forestry and their role in meeting daily needs of them. The villagers who are willing to take part in JFM programme a memorandum of understanding shall be signed. DCF shall prepare Microplans for the area to be assigned to concerned JFM Committee as provided in the GR dated 25th April 2003 and guidelines issued by Govt. of India and the State Government from time to time.

- The microplan prepared for the particular village shall be in consonance with the prescriptions contained in Working Plan. The microplans shall be sanctioned by competent authority.
- The assigning of forest area to JFM committee and execution of works shall be strictly in accordance with the guidelines issued by Government of India as well as Government of Maharashtra.

- MOU shall be signed regarding forest area assigned to JFM Committee and there should not be any ambiguity in terms and conditions.
- The area allotted to JFM committee should be shown on the map and incorporated in the memorandum of understanding.
- The Micro Plan should be prepared with active involvement of members of JFM Committee on scientific lines and the site specific estimates shall be prepared for the works which would be taken up and sanctioned by competent authority before implementation.

SECTION 18.9 : ACTIVITIES TO BE TAKEN UP:

JFM Committees should be involved to take up following activities in the area assigned to them.

- (1) Stringent protection of forests allotted to JFM committee.
- (2) Active participation of members of JFM committee in protecting, improving and developing forests.
- (3) Protection of forests from fire, grazing and encroachment, collection of NWFP on scientific lines or non- destructive collection methods.
- (4) Helping forest officials in patrolling and enforcement of law for forest protection.

For protection of forests from grazing integrated efforts should be taken to improve the breed of cattle so that, the income may be increased with less number of improved breed of cattle. In this regard the Rural Development and other departments should be requested to help the JFM committees. The forest officials will have to play the role of facilitator for implementation of various development works. The fire protection should be achieved through JFM Committee by assigning certain fire lines and forest area to the JFM Committee. The grant for protection of forest from fires i.e. burning of fire lines, wages for fireworks shall be directly remitted

to JFM Committee after successful protection of forests from the fire. Necessary legal and moral help should be provided to members of JFM Committee for the protecting forests from illicit felling, encroachment, grazing, fire protection etc.

SECTION 18.10 : ACTIVE COOPERATION AND PARTICIPATION OF PEOPLE:

It is the duty and responsibility of forest officials to create awareness among the members of Forest Protection Committee as well as villagers about the importance of forests, its intangible benefits and protection of the forest from fire, illicit felling, encroachment, grazing, etc. The active participation of local people must be encouraged in management, protection and developmental activities of the forest assigned to them. For achieving effective results in this regard it is required to take up regular efforts like conducting meetings, workshops and visits to successful areas shall be arranged to explain about the protection of forests and achievements in other villages. A comprehensive fire protection scheme shall be prepared and explained to JFM members for prevention and protection of forest from fire. The Forest Protection Committee's members shall be made aware of their duties and responsibilities to have their active participation in the protection and management of the forests. The produce obtained from the assigned areas will play an important role for the improvement of economy of JFM village as well as restoration and improvement of the forest area.

SECTION 18.11 : ROLE OF FOREST OFFICIALS:

The role of forest officials in implementing of JFM is as the facilitator as given below.

- (1) Providing technical inputs and support for the activities under JFM and ensure implementation of scientific forest management.

(2) Creation of awareness amongst the members of JFM Committee about the role and various benefits available.

(3) The forest officials shall act as a facilitators for implementation of various developmental activities by other departments.

(4) The responsibility and benefit of local people should be thoroughly briefed by forest officials.

Joint Forest Management requires strong institutional capacity to make collaborative efforts for forest protection activities and make it successful in getting the economic returns and regeneration of the forests. Therefore the forest officials have to take adequate measures and precautions in formalizing participatory management. Various Government Resolutions, Orders and guidelines in relation to JFM are given in **Appendix No LXXI** in volume II of Non-Buffer division.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

CHAPTER –19

**FOREST PROTECTION (OVERLAPPING) WORKING
CIRCLE**

SECTION 19.1 : INTRODUCTION:

The forest protection is one of the most important and difficult aspects of forest management. Lot of degradation of forest has already taken place due to increase in human and cattle population. The developmental works required diversion of forest land for cultivation, irrigation projects, industries etc. which resulted in shrinkage of forest area. This situation has created huge gap in demand and supply of forest produce. The forest of Chandrapur (Non-Buffer) division has tremendous pressure of illicit felling, encroachment, grazing and fire because of excessive biotic pressure of the adjoining villagers and nature of vegetation, climate and social factors. In Non-Buffer division out of 65 beats, 14 beats are considered hyper sensitive, 41 are sensitive beats and 10 beats are normal. There are 46 saw mills in the division, most of them are at Chandrapur and few located Ghuggus, Mul, Warora & Bhadrawati area.

The forest offenders are agricultural labourers and the intensity of forest offences increases during lean season of agriculture, particularly during July to September when there is no work for agriculture labourers. Offenders indulge in forest offences prior to festival occasions such as Aakhadi, Pola, Dasehra, Diwali etc. they resort to illicit felling for easy money for festival celebration. In Non-Buffer division the DFO is assisted by 3 ACFs, 6 Territorial RFOs, 34 Round Officers, 102 Forest Guards for protection of forests. They have been provided with 9 vehicles. Check

Nakas are established in Non-Buffer division at strategic points with 24 hours working. In some of the places the forest offenders indulge in offences in groups and it is very much difficult to control them by a Forest Guard.

SECTION 19.2 : SPECIAL OBJECTIVES OF MANAGEMENT:

- (1) To protect the forests from illicit felling, encroachment, fire and grazing.
- (2) To sensitize local people about forest protection and involve them in preventing forest offences.
- (3) To raise the moral of staff and strengthen their capabilities to deal with illicit felling, encroachment, poaching etc.
- (4) To develop database to monitor various offence cases.

SECTION 19.3 : STRATEGY FOR FOREST PROTECTION:

The strategy to be adopted to protect forest is of integrated approach and it shall be applied at various fronts by undertaking collective measures based on situation and time. The strategy shall be direct / field oriented in a participatory manner with active involvement and co-operation of local people specially members of JFM Committees. Total villages in Non-Buffer Forest Division are 284, whereas, 102 Forest Guards are placed at various places to protect forests. For effective protection there is a need to seek the co-operation and involve local people in forest protection. Some of the effective measures are given below.

- (1) Existing forest needs to be well protected and developmental works like soil and moisture conservation measures; natural and artificial regeneration works and other cultural operations shall be carried out in order to increase productivity of forests.
- (2) Regulation of grazing and controlling fire.

- (3) Seeking co-operation and active participation of local people in all operations of forest management and
- (4) Employment generation to local people during lean period.
- (5) Fulfilling the demands of local people for forest produce.
- (6) Effective utilization of existing infrastructure, strengthen and updating infra-structural facilities.
- (7) Improvement in communication facility and mobility of the forest staff.
- (8) Installation of new Check Nakas at hyper sensitive and sensitive points.
- (9) Patrolling sensitive forest areas along with the local people/ JFM Committee members.
- (10) Introducing Rewards, Awards and informer system and making forest offences high risk low gain process.

SECTION 19.4 : PROTECTION MEASURES:

19.4.1 A protection plan is to be prepared at division level at the start of new year in January for taking strict protection measures in pursuance of GR dated 8.5.2003. Protection plan will cover following issues.

1. Joint patrolling with JFM committee members and staff of adjoining range, round and beat.
2. Forest allowance to Police Patils in villages adjoining forests organizing Police Patil's meetings at range level.
3. Checking weekly markets for prevention of illegal trade of NTFP and wildlife parts and products.
4. Covering of furniture marts, private depots, small carpenter units etc. and monitoring through monthly returns, surprise checks and also prescribing registration and maintenance of records for such units.
5. Monitoring the activities of habitual offenders.

6. Armory and custody at every range headquarters. The personnel who have undergone arms training be provided with regular firing practice facilities with co-ordination of police department.
7. Empowering officers above the rank of RFO with magisterial powers such as grant of custody, remand and for prevention of offences on lines of revenue department.
8. Inspection and regular checking of water holes.
9. Creation of secret fund for reward to informers, creation of intelligence network etc.
10. Keeping round the clock vigilance in sensitive area through deployment of special protection force comprising of staff, ex-army personnel and laborers at the protection huts constructed at strategic points. Also outsourcing protection work to an independent agency such as security guards may be considered.
11. Joint patrolling and meetings for exchange of information about offenders and more effective co-ordination through Tiger Cell.
12. Supply of Mobile phone sets for easy access of information to Beat Guards, Round Officers, and RFO in sensitive area.
13. In dealing with organized gangs if any engaged in illicit cutting and also in encroachment removal operations a special Task Force comprising of one Police Inspector, two Head Constables, two Constables, two Lady Constables be placed at the disposal of DCF for specific period during the year.
14. A legal cell constituted under the control of DCF with the engagement of prosecutor on contract basis on lines of Police Department.
15. Owing to the spurt of encroachments with the enforcement of the Scheduled Tribes and Forest Dwellers (Recognition of Forest Rights) Act 2006, the area under encroachment and those susceptible to encroachment need to be dealt with on priority.

19.4.2 Inspection in transit : Illegal transportation of forest produce should be checked by concerned staff as well as Mobile Squad staff.

19.4.3 Special surprise checking and Nakabandi shall be organised on major district roads and known routes from Jungle to town through Mobile Squad and local staff once in month.

19.4.4 Collection of intelligence and information:

The RFO/ Round Officers should frequently interact with villagers to collect information regarding illicit felling, encroachment, poaching, illegal grazing etc. through its intelligence network and keep that information, suggestions in a register in his personal custody. Through the intelligence network, village wise record of habitual offenders must be prepared by RFO in consultation with Beat Guard and Round Officer in the proforma given below and this register must be updated regularly.

Register of habitual offenders

Name & address of the offender	Previous record POR No./Qty/Action taken	Modus – operandi	Photograph if available
1	2	3	4

19.4.5 Disposal of petty offence cases: Many forest offences are petty in nature and these can be tried summarily for easy disposal as per the provisions of Indian Forest Act 1927. The petty offence cases had been pending for long time on large scale. These cases should be disposed off by taking special drive.

19.4.6 Provision of lock-ups: Some forest and wildlife offences are of non-bailable nature and for prosecution of offenders it is necessary to provide lock-up cells at every range head quarter. It is prescribed that lock-up cells shall be established at every range head quarter and will be manned with the adequate number of staff.

19.4.7 Creation of legal cell: In order to have speedy disposal of forest offences to file and pursue court cases, a legal cell headed by one Forest Prosecutor may be constituted with supporting staff.

19.4.8 Rewards: The existing provisions of rewards to subordinate staff for exemplary work in detection and prevention of offence cases need to be reviewed. The reward amount may be enhanced and maximum amount may be granted. It is proposed that the scheme may be extended to gazetted officers also. A secret fund should be used to gather intelligence and information.

19.4.9 Training: Training to field staff shall be organised by DCF from time to time on the issues of various Acts, preparation of offence cases, tackling assault on staff, framing charge sheets, filing court cases, recording evidence etc. For this purpose help of police officers, ex-army men, advocates, forest officers, NCC officers should be sought to train field staff especially Forest Guards and Round Officers.

19.4.10 Check Nakas: Check Nakas are established at various strategic points to control the transportation of illicit forest produce and other illegal activity. The Check Naka must be duly notified by competent authority and published for the benefit of public as well as law enforcing authorities. The check nakas should be manned round the clock and provided with effective modern communication facilities.

19.4.11 Patrolling : To control illicit felling regular patrolling is essential in sensitive and hyper sensitive beats. Separate day and night patrolling around the sensitive, highly sensitive areas and on roads leading from jungle to towns shall be carried out. Record or register should be kept in range office regarding patrolling. ACF should supervise this type of patrolling and also he should participate in such patrolling at least once in the month.

19.4.12 Mobile Squad : In Non-Buffer area at division level one Mobile Squad headed by ACF (Protection) with the staff of 2 Foresters and 3 Forest Guards along with a Jeep is available. Mobile Squad with head quarter at Chandrapur looks after forest protection under the control of the DFO, Chandrapur Forest Division. The DFO should closely monitor the

work of mobile squad and should obtain weekly reports to monitor the protection activities.

19.4.13 Inspection of area of illicit felling: The following time schedule has been prescribed for inspection of illicit felling area by the concerned officers vide Government Circular dated 8/5/2003.

In situ value of illicit cutting at a place	Designation of inspecting officer	Period within which inspection should be completed
Up to Rs.50,000	RFO	3 days from detection/ receipt of intimation of detection
Above Rs. 50,000 but not exceeding Rs. 2,00,000	ACF	3 days from the receipt of information
Above Rs. 2,00,000 but not exceeding Rs. 5,00,000	DCF	3 days from the receipt of information
Above Rs. 5,00,000	CF	7 days from the receipt of information

19.4.14 The Government vide its letter No. TRS-1082/36/F-6, Dt. 8th September 1982 directed the department to launch the offence cases above Rs. 2,000/- in court of law for prosecution unless the prosecution is difficult to succeed.

19.4.15 Wireless network: Presently there is a well established wireless network in this division with 1 Repeater and 10 Base stations at different places. In the present day communication has become easy and faster and the offenders making use of modern communication systems like mobile phones in committing forest offences. 35 walkie-talkie sets, 36 mobile phone sets and 65 PDA's have been provided to the staff of Chandrapur Forest Division. Proper and timely maintenance should be provided for the wireless network and modern communication gadgets.

19.4.16 Mobility of staff: In Chandrapur (Non-Buffer) Forest Division 9 Government vehicles are provided to DCF, ACF and RFO's. With the

existing road network by using modern speedy vehicles, the forest offenders easily transport the illicit material. Some of the territorial RFOs have been provided with government vehicles. It is necessary to provide jeeps upto RFO level for effective forest protection.

19.4.17 Provision of Arms: Some times offenders use modern weapons like fire arms in committing forest offences. For forest staff without modern weapons, it is difficult to prevent those offenders from committing forest offences. With a view to providing weapons to the forest staff the Government sanctioned 10, 9 mm pistols and 4 rifles to the staff for forest protection in the division. The fire arms provided to the staff members are not sufficient to deal with the offenders and the fire arms may be provided even to the lower rank staff those who involve in forest protection. Regular training camps to field staff should be conducted regarding use and maintenance of the weapons.

19.4.18 Rapid Response Unit: A Rapid Response Unit has been established at Chandrapur in the Non-Buffer Division to quickly respond and attend to the conflict situation created as a result of man-wild animal interface. The unit consists of 4 Foresters, 9 Forest Guards and 3 Vanmajurs and are provided with a field van/mini truck with built in rails for accommodating a trap cage with space for equipment, attendants and staff, a tranquilizing kit for chemical immobilization, mobile phones, wireless handsets, GPS sets, radio collars and other necessary equipments. Such units should be created at each range headquarter taking in consideration the ever increasing man-animal conflict situations.

19.4.19 Territorial Inspections :

1. Beat checking : In order to have stringent protection of forest it is necessary that the field staff required to carry out patrolling in their respective jurisdictions and the officers concern will exercise effective supervision and control at all levels. It is utmost necessary to report every forest offence promptly as per directions given in the standing order 37.

The instructions issued for the guidance and strict compliance with a view to take effective measures in relation to efficient forest protection as given below.

- (i) Beat Guard :** Every Beat Guard must carry out patrolling in his beat regularly. After thorough, inspection of entire forest area of his jurisdiction of every fortnight and issue POR for all the damages detected in his beat within the 1st instant.
- (ii) Round Officer :** The Round Officer of a round is required to inspect each beat at least once in 3 months and he should verify and enumerate the damage not reported by the concern Beat Guard. His report must reach to the Dy. Conservator of Forests through Range Forest Officer after thorough inspection.
- (iii) Range Officer :** The primary responsibility of the Range Forest Officer is to verify whether the Round officer and Forest Guard are carrying proper patrolling of the forests of their jurisdiction or not. He should inspect a specific portion covering at least 1/4th of the area of the Beat once in 6 months and the findings are required to submitted to Dy. Conservator of Forests and Chief Conservator of Forests punctually. In case of the quantum of illicit felling is more the Range Forest Officer will take appropriate measures to inspect Beat thoroughly.
- (iv) Supervisory Officer :** The supervisory officer while on tours will inspect the specific areas of illicit felling. It is prescribed that the supervisory officer must spend one day for inspection of such vulnerable area within 15 days.

The forest offences shall be reviewed regularly at various levels regarding the nature of offence, quantum of offence, whether the case is compoundable or required to launch in court of law, etc.

While dealing forest offences the offences not only booked under the provisions of Indian Forest Act 1927, Wild Life (Protection) Act 1972, Forest Conservation Act 1980 but also these cases shall be dealt in content in IPC, CRPC, etc for effectiveness of the case.

2. Transit rules for Forest Produce : The regulation of transportation of forest produce is under Bombay Transit of Forest Rules 1960 published by the Agriculture and Forest Department under No. IFA-1057/22947-(VI), Dt. 23rd April 1960. The Government of Maharashtra vide its notification no. 1083/91822/(II)/CR 87/F-6, Dt. May 30th 1995 has amended Section 61 of Indian Forest Act 1927 making the law more stringent. Under this amendment some of the Assistant Conservator of Forests and above have been designated as Authorised officers for the purpose of this act who are competent to confiscate the vehicles, instruments, forest produces, etc. involve in forest offences related to the illicit removal of notified forest produce.

The provisions of Government vide letter no. TRS-1089/PK-27/89/F-6, Dt. May 14th 1990 stated that the transit pass shall be issued within 45 days from submission of application.

19.4.20 PRESCRIPTION FOR PROTECTION IN NON-BUFFER AREA : For effective protection of forest the following prescriptions are made.

- (1) Review the offence cases beat wise, every month. Review the *varas*, *bevaras* offence cases monthly, efforts shall be made to find out the offenders in each *bevaras* case.
- (2) Every *varas* case having more than Rs.10,000 worth forest produce/loss to the forest is invariably submitted to the court within the prescribed time. Delay in the submission of charge sheets in the courts should be viewed seriously.
- (3) Use IPC provisions for the effective control of the illicit felling.

- (4) The data related to offence cases shall be analyzed with the help of computers using available software.
- (5) Monitor the occurrence of all the offence cases daily through wireless.
- (6) Identify and list all the paths used for the transportation of illicit material.
- (7) Place effective patrolling squad at all important routes to prevent the transportation of illicit material.
- (8) Emphasis shall be made to arrest and prosecute the offenders rather than seizing the material.
- (9) Plan in such a way to have young guards in the hyper sensitive areas.
- (10) History sheets of all the offenders along with their photo and bio-data are maintained at Round, Range and Division level.
- (11) Prepare list of offenders, showing the offence cases involved by him, against each offender.
- (12) Use Cr. P.C. 110 provisions with respect to habitual offenders.
- (13) Provisions of IPC 395 shall be used by registering the complaint in the police station for the offences wherein five or more than five offenders are involved. The DCF shall co-ordinate with the Superintendent of Police to see that stringent sections of IPC will be used in the F.I.R.
- (14) Every beat guard shall maintain a register of stumps in the requisite proforma. Every stump is registered by a serial number followed by year, for example, if tree number is 129/08. Here 129 is tree number and 08 - is year. Every year from January 1st, onwards start the new series. After one year all the high stumps be dressed to ground level to obtain good coppice. The supervisory officers, during the beat inspection, verify the registered stumps and unregistered stumps.

The beat guard shall be held responsible for non-registering the illicit stumps.

- (15) Every range and division office shall maintain the xerox copies of the judgement of all forest cases for the guidance and improvement purposes.
- (16) Court Guard duties be assigned to a special duty FG for each Range Office and as well as Division office to monitor the dates and for timely communication to the witnesses.
- (17) The RFO shall collect the beat *khairiyat* report from each Forest Guard and Round Officer monthly and shall submit Range *khairiyat* report to the DCF every month and DCF should monitor the report for constant vigilance.

SECTION 19.5 : FIRE PROTECTION:

19.5.1 The area of Chandrapur Forest Division is prone to repeated fires due to heavy biotic pressure and due to deciduous nature and the dry climate. Fire caused extensive damage to the forest specially regeneration, forest growth, ground flora, soil organisms and the soil productivity. Prevention of fires and effective control of fires as prescribed in the plan is essential for forest development. The leaf litter on the ground and highly combustible under growth of grasses etc. catch fire and spread instantly. In summer high speed of winds spread fire easily before it could be brought under control. The areas needed to be protected from fire are classified into the following categories based on purpose of fire protection.

19.5.2 Class I : Forest completely protected. This area includes.

- i. All main felling coupes, thinning coupes, all the forest area under Protection WC, Afforestation WC and Improvement WC and Fodder Improvement WC.
- ii. All regenerated coupes of all WC till the young crop has attained the age of 10 years.

- iii. All plantations.
- iv. All forest nurseries.
- v. All government timber depots.
- vi. Special habitat areas or any other special important areas as specified by the concerned circle in charge.
- vii. These areas are cleared with appropriate width of fire line as per the guide lines and patrolled by fire watchers. If any fire incidence takes place in this area is treated as calamity and should be reported to the concerned DCF in detail.

19.5.3 Class II (General fire protection):

- i. The remaining areas of SCI WC.
- ii. All the other areas as specially directed by the CCF(T) of Chandrapur Circle on special grounds.
- iii. These areas are separated from surrounding areas by means of external fire lines and will be divided into suitable blocks with interior fire lines and no trees shall be cut. Fire watchers may be engaged as sanctioned by the concerned circle in charge.

19.5.4 Class III (forests Protected by law only): Those categories which are not included in class I and II are included in this class. Generally deliberate burning is prohibited and no special measures of fire protection will be undertaken. The following categories of fire lines will be maintained, kept clean of all growth and combustible material.

- i. All external boundaries of reserved forests to the extent of width of 12 meters.
- ii. 6 meter width around all the plantations up to 10th year from planting.
- iii. 3 meter wide coupe lines up to 10 years of main felling.
- iv. 6 meter wide lines on both sides all along the roads and car tracts that are passing through forests.

v. 40 meter wide fire lines around timber and fuel wood depots.

To control and reduce fire the following operations shall be undertaken.

- (1) The cutting and cleaning of fire lines shall be completed by end of December and controlled burning shall be completed by the end of February.
- (2) Leaf litter on the fire lines shall be collected from time to time and burn before the fire season starts.
- (3) No fire line shall be burnt after February unless there is a special order from the concerned DCF.

19.5.5 Fire control measures :

- (1) A consolidated fire protection scheme shall be prepared as per the prescriptions of WP with the provisions of watch point, strategic location, fire watchers, deployment of vehicles and the supervisory staff.
- (2) The fire watchers and the forest staff are required to be given training in fire protection and handling of fire fighting tools.
- (3) The fire watchers shall constantly patrol the areas of class -I and class- II.
- (4) The fire watching towers shall be erected at strategic points where the fire watchers sit on towers and observe location of fire.
- (5) After receiving information the fire watchers move in group to particular location and extinguish fire with the help of fire fighting tools.
- (6) The Division office shall maintain a register of fire lines showing length and width of fire lines, the period of cutting & burning and a consolidated map shall be prepared based on the actual position of fire lines. Any negligence in fire protection duty shall be viewed as dereliction of duty. The supervisory officer must extensively tour in the area and verify the fire control measures.

(7) The members of JFM committees and Eco-development committee shall be involved in the fire protection. The work of fire protection can be entrusted to these committees.

(8) Awareness creation in the villages through regular meetings, posters, etc.

(9) To prevent forest fire due to Tendu leaves collection, the tendu collection centres of the village where forest fire had occurred should be closed for a year or two as per Government directives.

(10) The vehicles that are available will be deployed at strategic locations where the fire protection gangs can reach easily.

19.5.6 Responsibility of officers in fire protection:

The Range Forest Officer is personally responsible for efficient fire protection in his range. If there is a common boundary between 2 ranges, the responsibility of clearing fire line will be decided by the DCF. In case of common boundary between 2 divisions, the fire line cutting and maintenance will be decided by the CCF (T), Chandrapur Circle. The DCF is personally responsible for carrying out efficiently all protective measures. The DCF must satisfy himself that external fire lines and other fire lines are prepared before February by carrying out extensive tours in the area. He is required to move in his jurisdiction extensively. During fire season and during his tour, he must keep a strict watch on fire protection by means of interaction with local people and inspections. A constant watch should be kept on Tendu contractors and their agents who engage local labourers to put fire to forests to get good flush of Tendu leaves.

19.5.7 Fire reports:

If any fire incidence takes place the concerned RFO must inform DFO/DD at once. After fire is extinguished, RFO shall submit a detailed report to Division office on extent of area damaged, value of damage with detailed map within 15 days. The Division office shall submit monthly return in prescribed proforma to the Circle office showing serial number of

fire, date of occurrence, cause, area burnt, extent of damage and the steps taken to extinguish fire. A register of fire record shall be maintained at Division office giving details of length of fire line of Class I, II and III. The fire incidents that take place in class I, II, III areas shall be indicated with different marks on map. Deliberate burning of debris on silvicultural principles to encourage regeneration need not be included in fire protection scheme and fire should not spread out side the targeted area.

SECTION 19.6 : GRAZING CONTROL:

Grazing causes lot of damage to regeneration due to trampling. To control grazing, grazing units are formed in the division. The number of cattle heads per unit is fixed as per the carrying capacity of the area. The incidence of grazing is high in and around the forest areas where the villages are situated and the impact of grazing, illicit felling, fire encroachment is also tremendous around the villages. Therefore the forest area around villages are deprived of regeneration. In many places especially areas around villages, the ground story is completely missing. Number of various offence cases is given in the following table.

Statement showing number of offence cases registered

Sr. No.	No. of offences registered					
	Year	Illicit felling	Grazing	Fire	Others	Total
1	2008-2009	661	1	119	40	821
2	2009-2010	647	2	120	59	828
3	2010-2011	610	1	125	43	779
4	2011-2012	576	0	182	45	803
5	2012-2013	421	2	53	51	527

SECTION 19.7 : ENCROACHMENT:

The problem of encroachment is common in almost all the areas specially the forest areas located adjoining human habitations. The problem of encroachment is mainly because of lack of survey and demarcation on the ground, the greed of people and apathy of local people

towards government lands. Small isolated patches of forestland are often neglected and become vulnerable to encroachment. In order to mitigate the problem, it is essential to take up survey and demarcation works on top priority. Precast pillars of 1st and 2nd class type shall be erected after the survey is over which can be completed in a phased manner. The existing cairns shall be repaired and maintained under 1/5th boundary demarcation scheme. The powers vested with ACF and above rank officers under Section 53 and 54 of Land Revenue Code shall be effectively utilized. The encroachment if any can be tried summarily and evicted as early as possible. The following instructions shall be followed regarding encroachments.

(1) Special care shall be taken to ensure protection of such patches from encroachment. The civil powers of eviction are entrusted to ACF and DCF. The procedure laid out in the Land Revenue Code shall be followed before the execution of eviction. Habitual encroachers shall be prosecuted as per Indian Forest Act.

(2) All external boundaries shall be demarcated with concrete pillars. All sensitive and important boundaries and wherever disputes are there, be surveyed and concrete pillars be laid immediately.

(3) All encroachments shall be listed with their names, age, residence, profession whether belongs to SC, ST, OBC/NT, extent of encroachment, s.no. and location of encroachment, village/block.

(4) A detailed report of the case be prepared for each encroacher and submitted to ACF to obtain summary eviction orders in a time bound programme.

(5) After the completion of due procedure of Land Revenue Code and after giving a reasonable opportunity of being heard to the encroacher, ACF shall pass a summary eviction order if he satisfies so quoting the findings.

- (6) The concerned RFO shall execute the eviction order.
- (7) If the encroachments in a village are more in number, police protection be obtained for the operation. Use of Cr. P.C. provisions like section 106 and 110 be used to smoothen the eviction operations as well as to prevent the tendency of future encroachments.
- (8) For the encroachments on the un-classed forests (though 7/12 shows clear possession of the department) FIR shall be lodged in the concerned police station for the prosecution.
- (9) Regularisation of the encroachments made earlier to 1980 be settled as early as possible and necessary proposals be submitted to Government.
- (10) After the listing of all encroachments, sample verification shall be carried out by all supervisory officers to detect unregistered encroachments.
- (11) In the month of May, a drive for encroachment prevention be taken up in all the sensitive areas by taking meetings in the villages by *Dawandi* and distribution of leaflets and posters.
- (12) Keep a watch on all the sites meant for debris cleaning, ploughing etc., in the month of May, so that encroachments are removed even before the sowings.

In the recent past the tendency for encroaching forest land for cultivation has increased. The actual encroached area is higher than that of recorded one. The eligible encroacher's encroachment is under enquiry by the District Magistrate Committee in relation to regulation of the Schedule Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006 and Act 2008. The causes of forest encroachments shall be examined thoroughly and corrective measures be taken. All necessary support should be extended to evict the encroachments as early as possible. The boundary management and standard administrative guidelines will help to control the encroachment. RFO must inspect at least

50% of the boundary demarcation, ACF at least 10% of the boundary demarcation, DCF at least 2% of the boundary demarcation. RFO Mobile Squad shall check 2 % of the boundary demarcation.

19.7.1 Boundary Maintenance:

Precast reinforced cement concrete pillars have been fixed to demarcate the boundaries of forest. However, it has come to notice that in most of the places the RCC pillars were destroyed for the purpose of stealing mild steel bars by unknown persons, as every pillar constructed cannot be rendered protection in the forest for all the time. Also due to difficulties in execution of this works in remote places and keeping control on the quality & quantity the purpose of the scheme has been defeated in most of the places.

It is therefore recommended that demarcation of such areas by digging TCM around the area in a phased manner be included in this WP under revision and old system of cairns be enforced strictly. It is necessary to take up the work of updating maps, updating entries in 7/12 record of rights, tallying the area by checking village maps, forests notifications, form 1 A of village Patwari/Talathi etc. shall be taken up. DCF shall take up monthly review of progress of these works. All the maps must be updated and supplied for better management. The update maps shall be provided to WPO. The damaged old loose stone cairns should be repaired and wherever necessary new cairns be made. Maintenance programme of 1/5th boundary maintenance should continue as per the old practice of cutting of demarcation line 12 m wide and erection of loose boulder cairns

SECTION 19.8 : ROLE OF JOINT FOREST MANAGEMENT :

JFM committee's will contribute to a large extent in protection of the forest from illicit felling, encroachment fire, grazing, etc provided if the forest staff has a constant dialogue with the JFM committees and involve them for joint patrolling, management and development of the forests. The

JFM committees shall be entrusted with specific area earmarked for the protection, management and development of the area. The committee members need to be given training in technical matters of protection at the same time they should be provided with gainful employment by taking up management and developmental activities in the areas entrusted to them.

SECTION 19.9 : POACHING:

A programme for of checking of weekly bazar be chalked out to control the sale of wild animals and during festival season like Pola, Holi, particularly tribal community resort to hunting of wild animals and appropriate measures should be taken under Wildlife Protection Act 1972.

**SECTION 19.10 : CONTROL OF UNAUTHORISED
COLLECTION OF NWFP:**

In this division a number of NWFP is available, out of these Tendu, Moha, Gums and Behada etc. are available in large quantity. To control unauthorised collection of NWFP apart from the patrolling in forests checking should be organized by RFO in some marketing places like weekly bazar and other places regularly.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

**CHAPTER –20
MISCELLANEOUS WORKING CIRCLE**

The area to the extent of 1784.46 ha. in Chandrapur (Non-Buffer) division have been included in this working circle. Based on the stock map details most of the area included are under encroachment and others are under water as they are adjacent to some water bodies like nalas, river, etc. and some already been handed over to other department. These forest lands cannot be managed under any silvicultural system. Hence, no treatment is prescribed for these areas. However, it is recommended to survey and demarcate these areas and undertake eviction of encroachment wherever required. The range wise allotment of area and the compartments details is given in **Appendix No.XLIX** in volume II of Non-Buffer division. The area statement is given in the table as below.

Chandrapur (Non-Buffer) Forest Division:

Sr. No.	Range	No. of Comptt.	Area (ha.)	% of area of Range	% of area of the Division
1.	Chandrapur	02	91.10	1.82	0.15
2.	Bhadrawati	18	470.04	4.24	0.76
3.	Chichpalli	90	1003.53	8.65	1.62
4.	Warora	10	219.79	2.63	0.35
5.	Saoli	--	--	--	--
	Total	120	1784.46		2.87

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

CHAPTER –21

BIODIVERSITY

SECTION 21.1 : BIODIVERSITY OF CHANDRAPUR (NON-BUFFER) FOREST DIVISION:

21.1.1 STATUS OF BIODIVERSITY: The area of the forest divisions is situated in biodiversity rich part of central India. Extreme seasonal variations, diverse topographical characters, thick forest with good canopies and various small and large sized dams of annual and perennial type creates diverse habitat for floral and faunal communities. Therefore different kinds of plants, animals including varieties of zooplanktonic and phytoplanktonic species harbor in this forest division. The highest numbers of big cat species of Vidarbha are also found in these forest divisions. This area is very rich in wildlife and various species of wild animals are found in abundance. Primitive tribes like Kolam and Gond are sharing common habitat with wildlife of this area as these tribal communities resides adjacent to the forest, it creates tremendous biotic pressure from both the sides resulting in man animal conflict situations frequently. Increasing encroachment is another problem to be addressed.

This forest division is very rich in floral diversity pertaining to this area. The forest type is 'Southern Tropical Dry Deciduous Forests' and it is grouped as 5A/C3 under revised classification of the forests by Champion and Seth. It serves as a living reparatory of various economical, medicinal, aromatic and ornamental plant species. Due to the terrain, water bodies, grasslands, open lands different plant species from phytoplanktons to

mosses to timbers and medicinal plants are found with some endemic species.

This area is very good habitat of various chordate species. Tiger, Leopard, Sloth Bear, Wild Dogs, Jackal and Hyaena are commonly found carnivores in the forests of this division. The herbivores commonly found are Sambar, Chital, Nilgai, Gaur or Indian Bison, Wild Boar, Barking Deer, Four Horned Antelopes, Langoor and Chinkara. The rodents found are Three Stripped Squirrel, Tree Shrew, Porcupine, Hares, etc. The area is rich in avifauna with migratory birds visiting in winter to big water bodies like Chargaon, Chandai Nala, Erai, etc. The migratory birds visiting these places are Bar headed Geese, Black stork, Sarus Crane, etc.

Varieties of amphibian, reptilian and Piscean species are found in this area. Fish is an important tropic level of the aquatic ecosystem and there is threat on local fish fauna because of uncontrolled, un-scientific ways of fishing, taking place in some important water bodies resulting in to threatful conditions in the distribution of large no of invertebrates, amphibian, reptilian species in general and avian species in special that it affecting distribution of local and migratory species of birds as lot amongst them are in endangered categories.

Kinds of invertebrates from zooplanktons varieties of butterflies, moths, beetles, odonates, crabs, prawns, spiders, shells are found in this forest division. It is very essential to make inventory of the floral and faunal diversity of this rich and diverse habitat as no scientific study has been undertaken. To highlight the loss of habitat and to conserve genetic diversity, scientific interventions are the need of the time.

21.1.2 LEGAL ENACTMENT :

In view of above consideration, the Biological Diversity Act, 2002 has been enacted to provide for conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits. In pursuance of Biological Diversity Act, 2002, Biological Diversity

Rule 2004 framed and came into force into 15th April 2004. The Act provides for statutory bodies like National Biodiversity Authority at the National level and State Biodiversity Boards at State levels, to regulate access to biological diversity. Maharashtra Biological Diversity Rules 2008 was notified under section 63(1) of Biological Diversity Act 2002 on 10th December 2008. Government of Maharashtra vide their notification dated 2.1.2012 has created Maharashtra State Biological Diversity Board. Under the provision of Rule no. 23 of Maharashtra Biological Diversity Rules 2008, District level, Taluka level & village level Biodiversity committees should be formed. The District level committee has been formed in Chandrapur district under the Chairmanship of the Collector.

At every local level, every local body shall constitute a Biodiversity Management Committee within its area of jurisdiction.

Function of the Committee:-

- The main function of Biodiversity Management Committee (BMC) is to prepare people biodiversity register in consultation with local people. The register shall contain comprehensive information on availability and knowledge of local biological resources, their medicinal or other use or any other traditional knowledge associated with them.
- The other functions of the BMC are to advice on any matter referred to it by the State Biodiversity Board or Authority for granting approval, to maintain data about the local **Vaidus** and practitioners using the biological resources.
- The Authority shall take steps to specify the form of the People's Biodiversity Registers, and the particulars it shall contain and the format for electronic database.
- The Authority and the State Biodiversity Boards shall provide guidance and technical support to the Biodiversity Management Committees for preparing Peoples Biodiversity Registers.

- The People's Biodiversity Registers shall be maintained and validated by the Biodiversity Management Committees.
- The committee shall also maintain a Register giving information about the details of the access to biological resources and traditional knowledge granted, details of the collection fee imposed and details of the benefits derived and the mode of their sharing.

In Chandrapur district 8 talukas level committees have been formed and 89 village level biodiversity Management Committees have been constituted. In Non-Buffer area of Chandrapur division 36 village level committees have been constituted so far. The list of committees is given in **Appendix No. LXXVII** in volume II of Non-Buffer division. Taking into consideration the ecological value and biological diversity of the landscape there is an urgent need for documentation of the available local biological resources by preparing People's biodiversity registers.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

**CHAPTER -22
FOREST RIGHT ACT**

**SECTION 22.1 : THE SCHEDULE TRIBES AND OTHER
TRADITIONAL FOREST DWELLERS
(RECOGNITION OF FOREST RIGHTS)
ACT,2006 :**

22.1.1 The Scheduled Tribes and other Traditional forest dwellers (recognition of forest rights) Act, 2006 is enacted on 29.12.2006 & pursuance of this The Govt. of India Ministry of Tribal welfare Notification dated 1.1.2008 to recognize and vest the forest rights and occupation in forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded. This act provides for a framework for recording the forest rights so vested and the nature of evidence required for such recognition and vesting in respect of forest land.

22.1.2 For the purpose of this act, the following rights which secure individual or community tenure or both shall be the forest rights of forest dwelling Scheduled Tribes and other traditional forest dwellers on all forest lands. This includes....

- a) Right to hold and live in the forest land under the individual or common occupation for habitation or for self cultivation for their livelihood.
- b) Community rights.

- c) Right to ownership, access to collect, use and dispose of minor forest produce.
- d) Any other traditional right customarily enjoyed by the forest dwelling Scheduled Tribes or other traditional forest dwellers.
- e) Not with standing anything contained in the Forest (Conservation) Act-1980, the Central Government shall provide for diversion of forest land for school, hospital, anganwadi, fair price shop, electric and telecommunication lines, tanks, drinking water supply, minor irrigation projects, canals, roads and community centres etc. provided that the land should be less than one hectare in each case and which do not involve felling of trees exceeding seventy five trees per hectare.

22.1.3 The recognition and vesting of rights under this Act shall be subject to the condition that such Scheduled Tribes or Tribal Communities or other traditional forest dwellers had occupied forest land before the 13th of December 2005.

22.1.4 The right conferred shall be heritable but not alienable or transferable.

22.1.5 The forest rights recognized and vested in respect of land which shall be under the occupation of an individual or family or community on the date of commencement of this act i.e. 31/12/2007 and shall be restricted to the area under actual occupation and shall in no case exceed than an area of four hectares.

22.1.6 The holders of forest rights, Gram Sabha and village level institution in area are bound to protect wildlife, forest and biodiversity, adjoining catchment area, water resources and other ecological sensitive areas as well.

22.1.7 Status of individual rights (as on 1/6/2014) :

(A) NON-BUFFER FOREST DIVISION

	Chandrapur	Warora	Bhadrawati	Chichpalli	Saoli	Total
(i) Nos. of claims received at village level committee	--	152	21	1021	626	10820
(ii) Nos. of claims sent (with area involved) to Sub-divisional Committee	--	<u>132</u> 168.05 ha.	<u>15</u> 19.04 ha.	<u>147</u> 200.125 ha.	<u>63</u> 48.74 ha.	<u>357</u> 435.955 ha.
(iii) Nos. of claims sent (with area involved) to District level Committee	--	<u>132</u> 168.05 ha.	<u>15</u> 19.04 ha.	<u>147</u> 200.125 ha.	<u>63</u> 48.74 ha.	<u>357</u> 435.955 ha.
(iv) Nos. of claims finally accepted by District level Committee	--	<u>132</u> 168.05 ha.	<u>15</u> 19.04 ha.	<u>147</u> 200.125 ha.	<u>63</u> 48.74 ha.	<u>357</u> 435.955 ha.

22.1.8 Status of Community rights: There were 12 claims received and accepted by District level Committee, pertaining to area of 49.81 ha. of forest land.

22.1.9 Status of claims for forest land for common facilities : No such claims were received in Non-Buffer Forest Division.

22.1.10 Under Section 3(2) of this Act, 3 claims related to Electricity line & School play ground were accepted by the DFO, Chandrapur. The total area involved is 1.1495 hectares.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

**CHAPTER –23
MISCELLANEOUS REGULATIONS**

Following regulations are prescribed for Non-Buffer Forest Division.

**SECTION 23.1 : DEMARCATION AND MARKETING
TECHNIQUES:**

23.1.1 Coupe demarcation & treatment map:

The coupes due for felling shall be demarcated one year in advance of its due year. But for coupe no. I demarcation, marking and main operation of felling will be carried out in the first year of operation of WP. In Buffer (TATR) division irrespective of whether any felling is carried out or not demarcation of coupes should be taken up followed by soil and moisture conservation measures and hygienic operations such as climber cutting. Demarcation of coupes is an essential activity since it not only helps in demarcating the forest area but also acts as a fireline in preventing forest fires to a great extent. Therefore, DCF shall ensure that the demarcation of due coupe is carried out every year irrespective of subsequent felling in the coupe is being carried out or not.

The coupes due for felling will be demarcated by cutting and clearing the bushy under growth with a 3 meter width of line. Pillars of 2 meter height will be erected in the middle of the line at suitable intervals (one pillar should be visible from the other) except where the coupe boundary coincides with a permanent feature like a big nala, fire line or road. The pillars will bear coupe details like coupe number, name of felling series, compartment number, year and working circle on the side away from the coupe area. The boundary trees of coupes will be given 2 coal tar bands and Geru band in between after scraping dead bark. The lower coal tar band shall be at breast height while upper coal tar band will be 15 cm above it. These trees so selected shall be above 45 cm. girth and selected

at suitable intervals. These trees will be numbered serially and numbered to be at just below lower coal tar band and the numbers will be entered in the marking register in the following form.

Table

Sr. No.	Species	GBH	Remarks
1	2	3	4

After demarcation having been certified by the RFO, stock map and treatment map shall be prepared by the RFO concerned as per the prescriptions and it should be verified by ACF.

After the coupe is demarcated coupe demarcation certificate shall be furnished by concerned RFO in the following format.

F O R M A T

I, -----, RFO, -----range-----
 certify that I have personally inspected the demarcation of coupe no. -----
 in compartment no -----of ----- FS ----- WC on -----
 ----- (date)----- and have prepared the treatment map as
 per the prescriptions of the working plan.

The area of the coupe is ----- ha.

Place -----

Date-----

Signature

(-----)

(Range Forest Officer-----

-----Range)

Place

Verified

Date-----

(-----)

Assistant Conservator of Forests,-----)

23.1.2 Demarcation of Sections:

(1) For the effective management of coupes each coupe shall be divided into 4 sections having an equal area approximately. The section line shall have 1.5 m width line and the lines are prepared by cutting and clearing brush wood except when the section line coincides with permanent features. In each section A,B,C & D type area should be mentioned grid wise in treatment map.

(2) The trees above 45 cm gbh selected at suitable intervals and the inner edge of 1.5 m wide cleared section line will be given 2 coal tar bands 15 cm apart, the lower one being at the breast height just below lower coal tar band, section number will be given on the side away from the area of coupe.

23.1.3 Demarcation of protection area: On the periphery of protection area trees shall be selected and given 2 geru bands, 15 cm apart and lower band at breast height. Apart from this a cross (X) in geru colour between 2 bands will be given on the opposite side of protection area. All these trees shall be serially numbered and the number will be given below the lower geru band on the side bearing the cross. All protection area will be numbered in Roman numerals and standing trees on the periphery of each protection area shall be numbered. Identification with separated series in each area so that the periphery trees of each protection area will be a separate series of Roman numerals. The periphery trees marked with number should not be felled.

Table

Sr. No.	Species	Girth at bh(ob) in cms	Remarks
1	2	3	4
1/1	Ain		Not to be felled
11/1	Dhawada		Not to be felled
111/1	Teak		Not to be felled

23.1.4 Treatment map and dividing coupe into grids:

(1) Treatment map of coupe will be prepared on graph paper in 1:5000 scale. Laying of grids in A,B, C and D type areas shall be done after classifying coupe area into various treatment types. In B1 area grids of 1 ha size shall be laid. In B2 area, where plantations are prescribed, grids of size 0.5 ha shall be laid. In C and D type areas grids of 1 ha size shall be laid down.

(2) Grid wise record of enumeration, marking and felling shall be maintained. In remarks column of marking register, reasons for marking such as mature, dead, malformed, live high stump, singling of coppice shoots etc will be recorded. Grid wise record of operations mentioned under natural regeneration e.g. tending, root stock management, singling of coppice, weeding etc shall be maintained.

(3) An expenditure of 1 MD per hectare shall be sanctioned for laying of 100 m x 100 m grids, wherever no specific provision is made for this purpose.

(4) The coupe area shall be classified into A- protection area; B- understocked area; C- old plantations & pole crops and D- well stocked type area. These details shall be shown in treatment map.

23.1.5.1 Marking Technique:

(1) All the trees to be marked for felling shall be given a geru band at breast height and on base, the impression of marking hammer shall be put at the breast height as well as at the bottom by making a clear blaze of size 10 cm X 10 cm.

(2) The following trees shall bear a digit serial number both at breast height and base. A) All trees of teak, bija, sisam, ain, tiwas, haldu, dhawada and shivan of 45 cms and above in girth at breast height over bark. B) Trees of all other species of 60 cm and above girth at breast height.

(3) Trees marked below 45 cm gbh (ob) of species Teak, Bija, Sisam, Ain, Tiwas, Haldu and shivan, and other remaining miscellaneous species below

60 cm gbh(ob) will bear serial number which will be given in coal tar. The digital and coal tar numbers will form a separate series. Only malformed trees will be recorded as fuel trees except that of teak and a tree shall be categorised as fuel tree, when it is not capable of yielding any sawn timber or poles.

(4) Trees showing the coupe boundary demarcation shall not be marked for felling.

(5) All the trees bearing serial number shall be duly recorded in marking register with the following details.

Sr.No.		Species	Girth at breast height (ob) in cms	Remarks
Digital	Coal Tar			

(6) The abstract of trees marked for selection felling and improvement felling shall be given in 15 cm girth classes. Timber, poles and fuel wood trees will be shown separately. The marking number on the trees will be put in vertical direction as shown below.

2
4
5

For example tree no. 245 --->

23.1.5.2 Marking Rules:

Marking shall be carried out by the RFO under the close supervision of ACF. DCF shall personally inspect at least 30% area of the coupe and give guidance to ensure correct marking and avoid deviation of prescriptions. Climbers shall be cut in entire coupe. In Buffer area climber cutting shall be restricted to five woody climber species viz., Kukadvel, Palasvel, Chilhar, Papri lalvel and Piwarvel. Species included in Red Data Book of BSI and other endangered, threatened and vulnerable species shall not be cut. The following marking rules shall be followed.

1. Type A : Protection area:

No felling is permitted in this area.

2. Type B : Under stocked area:

- (1) All dead trees retaining 2 dead trees per ha shall be marked for felling.
- (2) All live high stumps shall be marked for felling and they should be cut close to the ground and it shall be properly dressed. Fruit trees, NTFP species shall not be cut.
- (3) Multiple coppice shoots and poles shall be reduced to one or two per stool retaining the most vigorous one.

3. Type C : Pole crop and old plantation area:

- (1) In pole crop young poles shall be marked for felling to remove congestion. The spacing between two adjacent poles shall be approximately $1/3^{\text{rd}}$ of the height of the pole crop.
- (2) The dead, diseased and malformed trees of timber species shall be marked for felling fruit trees shall not be marked for felling.
- (3) The multiple coppice shoots will be cut retaining one or two vigorous shoot.
- (4) Thinning in old plantation shall be carried out as per the instructions given in section 23.6.3 of this chapter.

4. Type D : Well stocked area:

- (1) Trees of fruit species and NWFP shall not be marked for felling.
- (2) Multiple coppice shoots of teak shall be marked for felling retaining the most promising one.
- (3) All dead, malformed trees shall be marked for felling, leaving 2 dead trees per ha. for conservation of wildlife. A tree considered to be malformed if it does not have a straight clear bole exceeding 2.5 m height from ground level with defective stem occupying more space than its future value warrant. To avoid reckless felling malformed tree having straight clear bole exceeding 2.5 meter height from the ground level should not be marked for felling.
- (4) Teak trees of coppice origin preventing growth of the seedling regeneration of desired species shall be marked first for felling.

- (5) The silviculturally available teak trees with prescribed harvestable girth have to be marked for felling. A tree is considered as silviculturally available when (a) Removal will not lead to soil erosion; (b) Removal shall create appropriate gap for growth of young seedlings of desired species; (c) Alternate trees for seed source shall be available. d) Does not create a permanent gap in the canopy. A gap of more than 6 meter diameter is considered as permanent gap. (e) Tends to improve the remaining crop in terms of Volume production.
- (6) Healthy teak trees which are good seed bearers shall be retained.
- (7) Trees shall not be marked for felling within 20 m on both side of large nala.
- (8) During marking for felling, details shall be recorded for coppice and seed origin teak trees separately.
- (9) Plus trees of teak and other species shall be identified during enumeration and they should not be marked for felling.
- (10) All live high stumps of teak shall be marked for felling.
- (11) There shall not be felling within the radius of 300 m of sites of historical importance and ecotourism sites situated in forests.
- (12) Only estimated harvestable girth teak and other species trees preferably of coppice origin and that of harvestable girth and above will be marked for felling.
- (13) Felling of teak tree shall be from the highest girth class to the next lower girth class.

SECTION 23.2 : HARVESTING AND DISPOSAL OF FOREST PRODUCE:

23.2.1 Removal of Garadi, Lendia and Kukudranji :

The proportion of Garadi and Lendia in the forests of both the Buffer and Non-Buffer division is comparatively very high. This has affected adversely the regeneration of important desirable timber and other species. Therefore, it is prescribed to remove all the available stems of

these species above prescribed harvestable girth. Similarly, in some of the forests area of Buffer and Non-Buffer division the old plantations of teak and other valuable species are heavily infested by kukudranji which has severely affected the growth in girth and height of the crop. Hence the removal of kukudranji is prescribed to improve the hygiene of the crop.

23.2.2 Timber and fire wood: All the marked coupes of main felling will be worked departmentally or allotted to JFM committees as per the policy of Government. However, tending operations like thinning shall be carried out only through department as it is highly technical. All the timber and firewood shall be transported to government depot or duly sanctioned depots for sale or auction. Timber, poles and firewood to be given to people on Nistar at concessional rate shall be kept separately in these depots, and dispose off as per the Government guidelines.

The demand of timber wood and firewood of the villager shall be met on priority at local level. It may contribute reducing illicit felling to some extent.

23.2.3 Tendu leaves: Prescriptions for pruning coppicing, regeneration given in NWFP WC shall be followed.

23.2.4 Grasses: The instructions contained in G.R.No.MFP-1169/118931- (6) - F-2, Dt. 29/10/1976 will facilitate the disposal of grass available in coupes. The grass from closed coupes will annually be offered on cutting terms to Gram Panchayats, public bodies or FLCs of adjoining area at a reasonable price fixed by the department. If the Gram Panchayat or the public bodies are not interested in purchasing grass, it may be auctioned or be sold or may be sold on rated passes. To encourage stall feeding the villagers may be allowed to cut and take grass at nominal rates to be decided time to time without damaging forests.

23.2.5 Other NWFP, medicinal plants: The collection and disposal shall be in accordance with the instructions issued by the government from time to time and as per the legal provisions.

SECTION 23.3 : IRREGULAR HARVESTING:

Irregular harvesting of any forest produce such as timber, fire wood, NWFP etc. is prohibited except in the following cases. Removal of dead, fallen and fire wood and wind fallen trees except in coupes due for working shall be carried out as per the procedure mentioned below.

(1) The Beat Guard shall prepare coupewise availability of dead, fallen, fire wood and wind fallen timber and report to concerned RFO. The RFO shall then prepare coupewise estimates for such material by marking these trees for extraction. While marking 2 dead trees per ha. shall be left for the benefit of wildlife. The material shall be extracted by RFO after obtaining sanction of DCF. The material so extracted from forests may be given to Gram Panchayat or Forest Protection Committee at concessional rates as sanctioned by the CCF (T) Chandrapur Circle or disposed off as per the instructions of Government. The details of material extracted and the manner in which it is disposed off shall be entered in compartment history form.

(2) The felling of trees on fire lines if necessary may be carried out with the permission of DCF after referring it to CCF, Chandrapur Circle.

(3) Approval of felling of trees under electric line and telephone line existing prior to enforcement of Forest (Conservation) Act 1980 or after that may be given by the DCF as per the sanction accorded by the competent authority.

(4) Removal of trees on forest land by other agency or departments like Irrigation, PWD etc shall be undertaken after their proposals for the use of forest land for non-forestry purposes are sanctioned by GoI under Forest (Conservation) Act 1980. The cost of removal shall be borne by concerned department.

(5) Disposal of forest produce obtained from submergence area of dams and tanks and from construction of roads etc shall be carried out as per the instructions of competent authority.

(6) Felling of trees for the purpose of study, research, for preparation of volume tables, yield tables shall be carried out by the WPO after obtaining permission from CCF, Chandrapur Circle.

(7) Irregular harvesting shall not be carried out for the purpose of undertaking plantations/ afforestation works under various schemes and which is outside the scope of the WP.

(8) Sometimes due to insects and fungus attacks there is a large scale mortality of pole or tree crop and removal of such trees shall be permitted as a part of irregular harvesting, after following the procedure prescribed by the Government. In such cases, the matter shall be investigated with the assistance of Research wing, Tropical Forest Research Institute, Jabalpur or other Government agency.

(9) The live high stumps left over by the illicit cutters shall be cut flushed to the ground after preparation of inventory of such stumps, after verification by ACF.

(10) Sometimes the leaning trees may become dangerous to public as well as private property, these shall be removed as under irregular harvesting.

SECTION 23.4: MAINTENANCE OF BOUNDARIES:

23.4.1 The present state of boundary maintenance is not up to the mark and the Reserved Forest boundaries though they are clearly demarcated on the ground, the boundary marks are not seen at many places. The boundary demarcation between the reserved forests and adjoining private agriculture fields or revenue land is not clearly distinguishable therefore it is necessary that the division should take up the work on top priority and get the area demarcated and prepare accurate maps. The maps shall be updated incorporating corrections and kept in Division office and Range Office. The maps of the division showing boundary pillars should be given to working plan division. The external and internal boundaries shall be maintained in accordance with the 1/5th

boundary demarcation scheme, the boundaries of the forests shall be maintained as per details given below.

23.4.2 The outer boundary of government forests shall be maintained with a clear cut width of 12 m. The under growth that inhibits the view and prevents one forest boundary marks being seen from the neighbouring one shall be cleared. The boundary trees shall not be removed so long as they do not obstruct the view of boundary marks one from the other except where natural features form the boundaries. After clear cut demarcation on the ground cairns shall be erected. Instructions issued by Principal Chief Conservator of Forests regarding specifications such as shape, description, foundation, dimensions, colour wash, etc of boundary marks (cairns) shall be followed. The boundary marks shall be erected at such a convenient place so that both can be seen from one place to another place. Generally the distance between 2 cairns is of 500 m if the line is straight. Each boundary pillar shall bear serial number and a fresh series shall be given to each adjoining village.

23.4.3 Boundary mark specifications:

(1) The boundary mark specifications shall be as approved by PCCF, Maharashtra State.

(2) Apart from boundary marks tin plates will be fixed on the boundary trees at a height of 3 m preferably at the boundary of the compartments. These plates will indicate the compartment number with an arrow and below them will be pillar numbers on either side of plate. The metal plate will be of 45 cm x 45 cm size. This will be painted with white, compartment number and pillar number will be written in red colour. Special attention shall be taken in annual maintenance of boundary marks and the following shall be ensured.

Whether

(a) the boundary pillars are correctly located as per the map and demarcation register.

(b) The boundary width is to the extent of required measurement or not.

- (c) Regular maintenance of cairns and wooden post is replaced wherever necessary.
- (d) That the boundary post bears the correct number and same is engraved and written in coal tar or paint.
- (e) If any encroachments are there, the matter should be pursued and removed.

23.4.4 Rules for inspection and maintenance of forest boundaries

(1) The Forest Guard of the concerned beat is mainly responsible to protect and maintain the boundary pillars every year. He himself shall colour wash them annually after rains and make a special report after completing this job. All boundary marks shall be specially inspected by the Beat Guard at least once in year. The boundary marks inspection shall be mentioned in his diary and send it to RFO.

(2) Round Officer is also responsible for protection and maintenance of all boundary marks in the forest in his round. He is required to ensure proper maintenance and colour wash by the Beat Guard as directed. Round Officer is responsible to inspect all boundary marks in a year which are due for maintenance and repairs as per 1/5th boundary demarcation scheme. This matter shall be mentioned in diary and send it to RFO. Round officer shall submit report annually in the following format.

I, ----- R.O. -----
 certify that the annual length of the boundary lines have been verified by me personally and that boundary lines and marks are found to be correct as per the maps. I further certify that each cairn bears a correct serial number and next cairn is visible from either side of each cairn. There are no encroachments /encroachments as detailed below.

Signature of the R.O. with date

(3) RFO is required to check 25% of annual boundary line as per the 5 year programme and 5% verification shall be done by ACF.

(4) DCF shall monitor and carry out 2 % inspection of the boundary demarcation works, shall check up the periodic returns.

23.4.5 Maintenance of compartment boundaries: The compartment boundary shall be maintained regularly by clearing under growth to the extent of 3 m width except where the boundary coincides with the natural features. Tin plates of compartment boundaries with a size of 30 cm x 30 cm indicating compartment numbers should be affixed on the trees at a height of 3 m. These plates are painted with white and number shall be put in red colour paint.

23.4.6 Demarcation of Forest areas finalized under Forest Rights Act, 2006 : Under Forest Right Act, 2006, 357 cases in Non-Buffer division and 274 cases in Buffer division has been finalized till June,2014. These forest areas should be demarcated on priority and transferred on village/forest maps. Those cases which has not been regularized under this Act should be removed on priority.

23.4.7 Legal provisions available for maintenance of boundary marks :

(1) Section 63 (C) of Indian Forest Act 1927

(2) Section 68 of Indian Forest Act 1927

SECTION 23.5 : REGENERATION :

23.5.1 Natural Regeneration: Natural regeneration is the best source of getting better quality stock provided the sufficient natural regeneration is available. The available natural regeneration area shall be demarcated and properly protected from weed growth, fire, grazing and other biotic interference. The seedlings of natural regeneration can be secured only by means of systematic weeding commencing in the first rainy season and continued there after till the plants of natural regeneration are free from the suppression. Due to deciduous nature of the forests the natural regeneration in these forests has greatly suffered because of frequent fires coupled with inhospitable soil conditions. As a result of

frequent fires the seedling suffer a lot from desiccation which needs proper mulching for each plant to reduce the effect of desiccation. The natural regeneration areas shall be categorised into 2 types.

Area with adequate regeneration: In this Type, regeneration is considered adequate if the area contains more than 625 seedlings per ha. In order to stimulate growth and development of young recruits of Teak and miscellaneous species the following prescriptions shall be adopted for tending of natural regeneration.

- (1) Identification of the area containing promising natural regeneration shall be done inside the coupe.
- (2) The unwanted under growth, which is preventing or likely to prevent the growth of natural regeneration of desired species shall be removed.
- (3) Identified patches of natural regeneration shall rigidly be protected from fire, grazing and other interferences. Suitable thinning and tending operations will be carried out to create congenial atmosphere for the growth of crop. Coppice shoots which interfere with the development of young natural seedlings shall be removed. A little opening up of canopy by felling marked trees and ground cover at some places shall boost establishment of natural regeneration of Teak and other species by providing better light and aeration.

The natural regeneration shall be cleared out within the diameter of one meter and these weeds and grasses, leaf-litter and branches shall be arranged in 15 cm high layer around the seedlings within the cleared area to provide organic mulch. There after two to three spadeful of earth shall be thrown to the mulch in place. Therefore it will keep the soil around the plants free from weeds as well as help securing the loosening of soil. In addition, stone mulching shall be done around the current year recruits in the areas where surface stones are available. Small stones shall be arranged in a circle closed around every young seedling, which will help in retention of surface moisture as well as avoid accidental trampling by cattle or others. Weeding and soil working mulching shall be carried out at

least for 3 years in natural regeneration patches till the seedlings are established.

Wherever natural regeneration is not sufficient, it shall be supplemented by artificial regeneration to restock the area.

Area with inadequate regeneration: In these areas seed sowing of suitable species shall be done by field staff apart from tending of available natural regeneration in the next year of the main felling wherever natural regeneration is not sufficient, it shall be supplemented by artificial regeneration to restock the area keeping 625 tree population per ha.

23.5.2 Artificial regeneration: Plantation of local suitable species will be taken up in the following year of main felling as per the suitability of site. In plantations 50% teak and 50% poly pot seedlings of miscellaneous species will be planted. Out of which 25% tall poly pot seedlings of medicinal, shadow, fruit and seed bearing species shall be planted invariably.

Grids shall be laid down in the plantation area and treatment map shall be prepared as specified in this chapter. The N.R. and A.R. work shall be carried out as per the guidelines given by P.C.C.F. M.S. vide letter No.D-1/c/Plan/C.N.23/13th PC/550/12-3 dated 25.6.2012.

Considering the density of the crop in the area the plantation shall be raised. On the basis of density the number of plants shall be assigned with respect to site. Overall the number of plants which are to be planted density wise are given below.

Sr. No.	Density of crop in area	No. of seedlings to be planted	Spacement
1	< 0.1	2500	2m x 2m
2	0.1 to 0.2	1111	3m x 3m
3	0.2 to 0.3	625	4m x 4m
4	0.3 to 0.4	278	6m x 6m

The planting work will be carried out as given below.

Pre-monsoon works: These operations will be done in the year of main felling. Fencing or TCM will be prepared for protection of plantations. The

TCM with standard cross section 1.90 X 0.60 X 1.0 m will be dug along the boundary. No TCM will be aligned which runs across the contour and in that case live hedge fencing shall be undertaken with thorny shrubs like *Acacia senegal*, babul and cuttings of shrubs like *vitex* and *Dodonea*.

Pits digging: The pits digging will be completed before March and it should be allowed to weathering during summer. The refilling of pits will be completed before end of May. The number of plants may be decided on the basis of site and model of scheme as cited in the para. The formula of ecological index shall be taken into consideration while deciding number of plants to be planted in a particular locality. It shall be ensured that seedlings are not planted under shade of existing trees. It shall be ensured that no seedling is planted within 3m distance from an established tree.

23.5.3 Nursery operations :

(1) Teak Stumps: These will be prepared from one year old seedlings raised on beds as per standard nursery technique. The seed source must be from a known place and duly certified by the competent authority. The stumps will be prepared by following standard technique and 'A' class root shoots shall be used for raising plantations.

(2) Teak seedlings: For raising teak plantation poly pot teak seedlings shall be raised in nursery. The seed source must be from a known place and dully certified by the competent authority.

(2) Miscellaneous plants: Misc. and medicinal plants of tall seedling will be raised in polythene bags by following standard miscellaneous nursery techniques. Standard size of poly bags shall be used for raising miscellaneous plants to obtain optimum size of plants. Tall poly pot seedling may raised in nursery as per the nursery model sanctioned under MREGS by state government vide GR.No.MGR-2011/C.N.-28/EGS-1/Planning (EGS)/dt.10th may 2011.

The nursery will be started by October of the previous year of the planting. The height of plants will vary from species to species. Shifting of poly bags will be taken up within nursery every 15 days once the plant

attains 10 cm height, however while shifting care should be taken that the plants are not damaged. The potting mixture shall be managed properly and application of suitable mixture and fertilizer will be carried out at appropriate intervals. Before planting good quality, healthy and appropriate size plants will be selected and these will be inspected by the officer not below the rank of ACF.

23.5.4 1st Year operations: The seed sowing of live hedge species shall be taken up in three rows. Planting of Agave on the outer two rows of two edges of fencing at a spacing of 50 cm and planting of shrub cutting in inner three rows will be done. The teak stump planting will be done in crowbar holes whereas the polythene bag planting will be done in pits after the onset of monsoon. The polythene bags will be planted in such a manner that their collars are at the ground level and it will be covered with soil up to a height of 5 cm above collar.

23.5.5 Subsequent operations: First weeding along with causality replacement shall be completed within 20 to 25 days after planting. 2nd and 3rd weeding will be carried out in the month of September and October respectively. The 3rd weeding shall be coupled with soil working and mulching to reduce evaporation loss. One more soil working will be done in the month of January if there are winter rains, based on availability of funds. Weeding and soil working to seedlings in live hedge shall be ensured to improve the growth and survival of plants on live hedge. In the second year plantation the causality replacement will be carried out after the onset of monsoon and weeding will be done in the month of August and October respectively. Soil mulching will be carried out along with 2nd weeding. In case of teak, dibbling will be done in the month of May. In 3rd year plantation only one weeding along with soil mulching will be done in the month of September. Debudding in Teak plantation will be done in 2nd year plantation.

23.5.6 Bamboo Plantations:

(1) Take up Bamboo plantation at suitable area at a spacing of 5 m to 6 m in the 4th year from the year of main plantation as per prescriptions.

(2) **Pre-monsoon works:** In 3rd year of main plantation pits of the size of 45 cm X 45 cm X 45 cm will be dug before March and allow the soil for weathering. Pits refilling will be done at the end of May.

(3) **Nursery:** To raise the stock for bamboo planting the nursery will be started two years in advance of planting and maintain in the nursery till the rhizomes are formed and these rhizomes will be used for planting. The bamboo rhizome bank will be established at suitable sites in each range and bamboo seeds shall be obtained from known sources and sown on beds. After one month small seedlings shall be transplanted to polythene bags after cutting their branches above 3 to 4 nodes. Suitable fertilizers will be applied to achieve proper growth and rhizome formation.

(4) **1st year operation:** With the onset of monsoon bamboo polybags will be transported to the site and planted in pits. The casualty replacement will be done at the end of July or August 1st week, weeding and soil working will also be carried out. At the time of planting, suitable fertilizers, insecticides will be given to each plant in the pits. In the first year three weedings and one soil working will be done.

(5) **Subsequent operations:** In the 2nd year two weedings and soil working, in 3rd year one weeding and soil working are prescribed and if necessary, insecticide may be applied to protect bamboo from termites.

SECTION 23.6 : SUBSIDIARY SILVICULTURAL OPERATIONS:

All these operations shall be carried out departmentally. These operations shall include –

23.6.1 Cut back operations: CBO shall be carried out in the following year of the main felling.

(1) Climber cutting of entire area.

- (2) Care shall be taken to avoid cutting of species included in Red Data Book of BSI and endangered and threatened species.
- (3) Removal of badly damaged or broken trees during main felling.
- (4) Cutting back of malformed advance growth.
- (5) The unwanted under growth interfering with the Teak and other valuable miscellaneous species shall be removed.
- (6) The multiple coppice shoots or poles shall be reduced to one per stool.

23.6.2 Cleaning and Tending: Cleaning and Tending operation shall be carried out in the coupe area in the 3rd year and cleaning operation in the 6th year after main felling as prescribed below.

- (1) Climber cutting of entire area of the coupe. It shall be ensured that no species listed in Red Data Book of BSI and no endangered or threatened species are cut.
- (2) Removal of damaged and malformed saplings in teak plantation area.
- (3) All coppice shoots shall be completely cut except in area where planting stock has not come up successfully and in such area multiple coppice shoots shall be reduced to 1 per stool which is vigorous one.
- (4) The undesirable growth interfering with teak and other valuable species will be cut.
- (5) In the patches of advance growth of teak and other valuable species proper spacing will be created by removing inferior under growth.
- (6) Cleaning of weeds at the base of teak plants and intensive soil mulching shall be carried out immediately after rainy season is over.
- (7) In eroded area or area liable for erosion, soil conservation measures shall be taken up by way of gully plugging, nala bunding, check dams etc.

23.6.3 Thinning: (1) First thinning will be carried out at the end of 10th year of planting as per standard silvicultural practice for teak plantation and as per the instructions of DCF in this regard. Second thinning will be carried out in 15th year of planting. Third and subsequent thinning

will be carried out at an interval of 5 years. However, final thinning will be carried out as per FDCM vogue vide Managing Director's letter No.PLN/2874 Nagpur, dt.02/09/1999. These instructions of thinning operations are given in the **Appendix No.XC** of Volume-II.

(2) Preparation of Treatment Map: Treatment map of the area to be worked will be prepared by RFO and will be verified by ACF & DCF. As per the thinning of teak plantation approved vide Managing Director's letter No.PLN/2874 Nagpur, dt.02/09/1999. The treatment map will be approved by the DCF. He will issue instructions in writing to concerned RFO, who will issue written instructions to the marking officer, not below the rank of Forester, stating how different areas will be treated.

(3) Marking technique: All trees marked for felling will be given geru band at bh after removing the bark and will bear marking hammer at bh and the base. All trees above 45 cm at bh will be given digit no. Marked trees will be recorded in prescribed marking book. Selected trees at suitable intervals standing on the periphery of the coupe i.e.on the edge of the 3 m outer line will be given two coal tar bands and geru or red band in between. The lower coal tar band will be at breast height and the upper coal tar band will 15 cm above it. Just below the coal tar band, serial number in Arabic will be given on the side away from the area of the coupe. The record of such trees will be maintained in the marking register in the following form.

(4) Method of executing felling/working: After it is decided, as to how many number of trees per hectare are to be retained and those to be removed in different girth classes as per yield table & stand table of that site quality, the marking for removal in that girth class shall be effected in the following order.

- (i) First, non-teak coppice shall be marked irrespective of species till all are marked.
- (ii) Then teak coppice shall be marked till all are marked.

(iii) Thereafter non-teak trees of seed origin shall be marked for felling. However, trees of Shisam, Bija, Semal (of seed origin) shall not be marked for felling besides fruit bearing trees like Aonla, Mahua and Charoli etc. for any reason whatsoever. They shall be retained in excess of the desired population of the growing stock.

(iv) Then teak trees of seed origin would be taken up for marking.

(5) Thinning procedure for old plantations: 1st thinning shall be carried out at the age of 10th year and 2nd thinning at the age of 15th year. Thinning shall be carried out based on the principles of Stand Table. In order to carry out thinning based on Stand Table, first of all age of plantation shall be ascertained with available data of plantation or carrying out stem analysis of few stumps. In plantations grid wise enumeration of trees shall be carried out and these will be listed in the following table.

Enumeration of old plantations

Sr. No.	gbh ob	Species		Origin	Status	Remarks
		Teak	Non – Teak	Seed/ Coppice	D/CD/ S/M/I	
1	45	Teak	-	Seed	D	To be retained
2	51	-	Ain	Seed	D	To be felled
3	36	Teak	-	Coppice	S	To be felled

gbh ob: girth at breast height over bark, D: Dominant, C: Co-dominant, S: Suppressed, M: Malformed, I: Intermediate.

The grid wise average girth of the crop will be computed. The basal area will be ascertained with the help of wedge prism. The basal area is the average of basal area obtained from at least 3 places and after obtaining average girth and basal area, the data will be compared with the stand table. If the basal area of the crop is more than that in stand table for corresponding age then the thinning will be carried out in the following procedure. If the basal area of the crop is equal to or less than that of Stand Table then no thinning shall be carried out except removal of trees.

The non- teak species will be marked for felling except fruit bearing species. The teak trees of coppice origin will be marked first for felling. After that the malformed, suppressed, intermediate, co-dominant and dominant species will be marked for felling in respective order to the extent of number of marked trees for felling are available, leaving behind retained trees confirming to stand table data of crop girth and basal area. The retained stumps shall be uniformly distributed over the area. After confirming marking with the stand table these marked trees shall be felled. After that the basal area will be obtained with the help of wedge prism by means of Stand Table leaving the marked trees from total count. If it is comparable to Stand Table then marking is perfect.

In case of old teak plantations in which thinning had not been carried out and the crop is congested, the above principle shall not be applicable. Instead of that, the average girth of the stand will be worked out on the basis of average girth of the corresponding age nearest to the multiple of 5 m higher side will be read from stand table then the thinning will be carried out as if the crop is of that age. Care shall be taken that excess thinning will not be carried out. Thinning shall be carried out through department and thinning area shall be protected from fire and grazing. If any prescriptions regarding the activity of N.R./A.R./SSO required to modify it must be dully approved by the P.C.C.F M.S.

SECTION 23.7 : FIRE PROTECTION:

Repeated fire causes intensive damage to forests damaging flora and fauna, young crop, regeneration and fertility of soil. The forests shall be protected from fire by taking up effective protection measures. For the purpose of fire protection the forest area is classified into three categories Class-I, Class-II and Class-III and regular maintenance of fire lines and specific prescriptions given in Protection WC should be strictly followed.

SECTION 23.8 : GRAZING CONTROL:

23.8.1 Grazing in forests is a menace which hampers regeneration to a great extent. In this division heavy cattle population pressure causes lot of damage to the forests. The total number of villages in Non-Buffer division is 284 and in Buffer division is 79 villages situated adjoining forest. The Govt. of Maharashtra formulated grazing policy vide its resolution no. MFP-1365/1322-Y, dt. 6/12/1968 and the grazing rules were framed vide G.R. No. MFP/137/237035-Z, dt. 3/11/1973, according to which grazing be allowed as per the carrying capacity. The grazing incidence in SCI WC area comes to 1.2 ha and for Improvement and Afforestation WC it comes about 0.6 and 0.8 cattle per ha. The Government Resolution No. MFP-1371/237035-Z is given in **Appendix No LXXII, LXXIII** in volume II of Non-Buffer division. In the area where grazing settlement has been effected will be governed by the new grazing policy where as in un-settled areas the old grazing rules of Central Provinces and Berar Forest Manual volume II shall apply.

23.8.2 The State Government vide Govt. Resolution No.MFP/2103/C.No.135/F-1, dated 21st March 2005 directed the Department to submit a proposal for sheep grazing policy from all the forest divisions. The Government in the above said Govt. Resolution also directed to appoint Grazing Settlement Officer. Accordingly ACF was appointed as Grazing Settlement Officer.

(1) Grazing is not allowed in Kuran and Ramna areas. The coupes which were worked are closed for grazing for 5 years.

(2) In Chandrapur Forest Division the available area for grazing is not sufficient to meet the grazing demand of cattle in the division. Therefore, forest area could not be made available for sheep grazing in the division.

(3) Details regarding maximum admissible cattle units to various categories of agriculturist, non-agriculturist, cow/cattle etc. are given in Govt. Resolution dt. 2nd August 1971. As per Govt. Resolution dt. 6th December 1968 cattle units are decided for different kinds of cattle are

given below. For grazing in the forests the following classification has been evolved.

1 – buffalo : 2 unit 1 calf : 0.5 unit

1 - cow/bull : 1 unit 1 sheep : 1 unit

23.8.3 Regulation of grazing: The main felling coupes of all WC will remain closed for a period of 5 years from the main felling as the felling cycle is fixed at 20 years, 1/4th area of the felling series will remain closed for grazing at any time. All the forests are not possible to open for grazing at a time and as the cattle population is not uniformly distributed therefore it is prescribed that the cattle exceeding carrying capacity of an area open for grazing should not be allowed to enter into forests. The excess cattle units can be managed through fodder development activity on common community lands and wastelands. The villagers shall be persuaded to go for stall feeding of some of their cattle which are more than carrying capacity of the forest adjoining them and the local people shall be educated and made aware of ill-effects of excessive grazing on forest growth. Apart from this the forest staff should open dialogue with the local villagers to discuss Grazing Policy, carrying capacity of forests and the area available to graze their cattle in the adjoining forests. The DCF should prepare a consolidated grazing plan based on area, cattle units, carrying capacity, rotational grazing and avenue for excess cattle units.

The grazing policy formulated by the Government of Maharashtra vide its resolution No.MFP-1365/13221-Y, dt. 6-12-1968 and the grazing rules formulated by Govt. of Maharashtra vide resolution No. MFP-/1371/237035-Z, dt. 3.11.1973. The grazing in the forests will be controlled as per the prescribed grazing incidence for each class of forests. In view of provisions the grazing will be regulated in different WC of this plan as given below.

(1) Selection- Cum-Improvement WC: This WC comprises the tree forests and grazing incidence is 1.2 ha. per cattle unit. Natural regeneration which is poor due to large scale damage due to uncontrolled grazing in all

the compartments allotted to this WC. The area shall be permanently closed to grazing for a period of 5 years and worked coupes will be closed for another five years from the year of main felling.

(2) Improvement WC: The grazing incidence is 0.6 ha. per cattle unit. The closure is as prescribed in SCI WC in the above paragraph.

(3) Afforestation WC: The grazing incidence in area under this WC should not be more than 1 cattle unit per 0.8 ha. The main coupes will remain closed for a period of 7 years from the year of restorative phase implementation.

(4) Fodder Reserve WC: The forests included in this WC can be classified as Grass Reserves under miscellaneous forests. In the compartments of Ramnas grazing shall be completely eliminated, however cutting of grass is permitted. In other compartments of this WC rotational grazing is permitted. The rotation is fixed for three years.

The following guidelines shall be followed for utilization of grass.

- (1) The demand for grass should be assessed yearly and the production of grass should be recorded in separate registers and these records shall be maintained at beat, round, range level.
- (2) For collection of grass each range is considered as one unit.
- (3) The collection and disposal shall be as per the procedure laid down by the Government.
- (4) Villagers are allowed to cut the palatable grasses from the closed plantation sites as per the procedure laid by the Government.
- (5) Good and palatable grasses like paunya, sheda, marvel shall be introduced in fodder improvement area as well as grazing units earmarked for grazing.

SECTION 23.9 : MAINTENANCE OF MAPS:

As per the provisions contained in National Working Plan Code 2004, the following maps shall be prepared, maintained and supplied to implementing officers and other officers as given below.

(1) Stock Maps: All the compartments of forests dealt with under this plan have been stock mapped on 1: 50000 scale toposheets, 3 sets of uncut and un-mounted maps have been prepared showing stocking details as per the standard conventional signs. Stock map shows details of blank area, crop composition, density etc. Out of these sets one set will be retained in the office of the WP and one set of each stock map submitted to APCCF, Working Plan, (East), Nagpur and one set each will be sent to DFO, Chandrapur .

(2) Management Maps: These are prepared on 1:50000 scale 2 sets of uncut and un-mounted and 2 sets of cut and mounted maps on 1:50000 scale showing divisional, range, block, compartment boundaries etc. Working Circles, Felling Series and coupe number other important features are shown on these maps. These maps prepared in the Working Plan office.

(a) One uncut and un-mounted set of maps will be kept in the office of the Working Plan Officer, Chandrapur for record. During the plan period any alteration in the map due to afforestation and disforestation will be shown in this copy from time to time.

(b) Second uncut and un-mounted set each will be supplied to DFO, Chandrapur Forest Division. Any alteration will be shown on the maps and furnish it to WPO.

(c) One uncut and un-mounted set of copy will be submitted to APCCF Working Plan, (East) Nagpur. The master copy will be kept in the Working Plan Office, Chandrapur. Additional copies have to be prepared by the Territorial Divisional surveyor for the use of field staff. One copy should be kept in division office for field use and used by divisional surveyor for laying out of the coupes annually in the field. Trace of plantation area after field survey should be sent to divisional office by the RFO so as to update the uncut and mounted master set of maps in the divisional office. Similarly

one copy of traced map should be sent to Working Plan Office, Chandrapur.

(3) Working Plan Maps: These maps are prepared on 1:15000 scale cut and mounted. These maps show WC, felling series and management, administrative and physiographic features. One set of these working plan maps will be submitted to APCCF Working Plan, (East), Nagpur and one set each will be sent to DFO, Chandrapur .

(4) Reference Map: The reference map shows the details of WC, range boundaries, canal, railway lines, rest- houses, neighbouring town/villages, etc. This is attached to the printed volume in such a way that when it is unfolded it will be completely outside the volume of the working plan. The reference map is a miniature mix of working plan and management maps.

SECTION 23.10 : SOIL AND MOISTURE CONSERVATION MEASURES:

To rejuvenate the soil conditions the soil and moisture conservation works are of utmost importance. The Division office will prepare a consolidated plan for soil and moisture conservation measures for the entire division including contour trenching, nala bunding, check dams etc. after thorough survey of the entire division.

23.10.1 Nala bunding and check dams:

The main purpose of nala bund or check dams is to reduce the run off of water and to arrest siltation. Nala bunding will be from ridge to valley. Nala bunds and check dams will be constructed by using loose boulders available. No blasting or digging will be done if boulders are not available, but brush wood may be used for this purpose. Simple nala bunds will be effective to the extent of 8 m lengths, beyond that these structures are not useful and permanent engineering structures will be required to design nala bunds. The nalas have been divided into 3 categories- 1) upto 4 m width, 2) 4 to 6 m width, 3) and 6 to 8 m width. The nala bunds shall be approved by competent authority and the design must be from one side of

bed to the other side of bed. The boulder pitching in a semi circular fashion on the top of the bunds so that the stones are compact and are not washed away by water. The distance between two successful bunds will be such that standing on the site of lower bund the base of upper bund should be in the line of eye sight of the person standing on nala. In general the distance between successive bunds for different slopes will be the same as that for contour trenches. These nala bunding and check dams shall be on the basis of watershed management.

Some of the designs of nala bunding are given in **Appendix No. LXI, LXII** in volume II of Non-Buffer division. The check dams may be cement bandhara. At suitable site construction of cement bandhara shall be taken up. In small gullies construction of brush-wood bandharas will be sufficient. In nalas in which nala beds are complete with sands, inverted bandhara shall be taken up. Apart from the above mentioned models there are many models available with soil conservation department and they may be consulted to have appropriate models suitable for forest area for taking up intensive soil and conservation measures.

23.10.2 Contour trenching: Effective long contour trenches (CCT) with a length of 30 meter with baffle walls at 5 meter interval will be dug in coupe in the area of crop density less than 0.4. The baffle wall shall be of 1.5 m length as a precaution to prevent formation of nalas or soil erosion. The interval between two contour trenches may be kept approximately 6 meters, which may vary depending upon the line to line distance between contours as per the prevailing topography. CCT shall not be dug in area with slope of 25°. The total length of the trenches shall not be more than 1200 m per ha. The trenches will be of 30 cm deep and 60 cm wide and length may vary from 1000 to 1200 m per ha. depending on the site. The soil and boulders dug out from trenches will be heaped on their lower side, on these heaps planting of grass tussocks, sowing of seeds of grass, seeds of trees and shrubs species Sesbania, Hamata, Sitafal and planting of cuttings Ipomea and Agave bulbils etc. for the stabilization of soil of heaps. The trenches near the nalas will be discontinued and will be curved

upwards on both sides of the nala at an angle of 45° in order to prevent run off of stored water in the trenches into nala. The curved portion will be of 5 meter length on either side of nala.

SECTION 23.11 : FORESTRY EXTENSION:

The ever growing human and cattle population mount lot of biotic pressure on the forests resulting in degradation of forests especially in the forest pockets adjoining human habitations. Illicit felling, heavy lopping of trees for fuel and unregulated grazing cause lot of harm to forests and these bad trends can be curbed if the people are made aware of the harm, they perhaps unknowingly inflicting on forests and in turn to themselves.

In order to mitigate such problems forestry extension work should be chalked-out by the division office with detailed programme for holding the awareness camps at regular intervals in different villages with active participation of JFMC's, EDC's, voluntary agencies and gram panchayats. The DCF along with his team of officers will try to participate in as many awareness camps as possible. In such camps the forest officers will interact with the villagers highlighting importance of forests, alternative fuel source, self reliance of villagers to meet their fuel requirements without much dependence upon forests. The people should be made aware of the points given below.

- (1) Various uses of forests to the people, consequences of vanishing forests to them and their future generations.
- (2) To make villagers aware about the alternatives available for fuel wood like biogas, LPG, fuel efficient chullah like Vanjyoti, solar cookers etc.
- (3) Stall-feeding to the cattle should be propagated and the benefits derived there from.
- (4) All land owners in the village should be convinced to grow fuel wood and fodder trees species on the field bunds or unutilized or under-utilized area of their own land so as to reduce the pressure on forests.

(5) Villagers should be actively involved in the forest protection and various afforestation schemes. Village school teachers and educated children will be involved in all these activities as the resource personnel and motivators.

SECTION 23.12 : DEVIATION OF WP PRESCRIPTIONS:

23.12.1 The following works will not constitute deviation from the WP.

- (1) Removal of dead fallen wood.
- (2) Petty felling carried out as mentioned in irregular harvesting.
- (3) Any research activity or work study required to conduct.

23.12.2 The following works will constitute a deviation from the working plan.

(1) The felling and disposal of forest produce in submergence area of dams, canal sites, road sides and other areas falling under the purview of Forest (Conservation) Act 1980. The necessary sanction shall be obtained before undertaking felling.

(2) All other deviations can be classified into following categories as per the draft amendment to article 191 and article 192 of Working Plan Code vide G.R.no. FWP-10625625 (ii) – J, dt. 25th May 1962 of Agriculture and Forest Department.

(a) Deviation which would alter the schedule of working given in WP, the examples of which are both non-working of coupe in the prescribed year or working the coupe in the year not prescribed by WP. Changes in the areas of coupe on account of disforestation or undertaking areas for execution of any special scheme under plan programme.

(b) Deviations which would involve alteration in the silvicultural treatment, for example stopping or curtailing felling for planting because of shortages of labourers, funds, material for plantation works or unsuitability of terrain and soil for undertaking up plantations to the extent prescribed in WP; Extensive felling of dry trees killed by fire, fungus, insect attack or other

natural calamities; Felling of unusual size and extent for special departmental works, special felling to meet a sudden new demand of a particular industry; Felling involving modifications in the prescribed marking rules.

(c) The sanction to all these deviations shall be obtained. Application for sanction to such deviation shall be submitted sufficiently in advance by CCF (T), Chandrapur so that such proposals are received as far as possible before the deviation occurs and is submitted along with the control forms.

23.12.3 Procedure for obtaining sanction for deviation as per the National Working Plan Code 2004:

The DCF will submit deviation proposals to CCF (T), Chandrapur in prescribed form in triplicate, alongwith copy of control forms. CCF (T), Chandrapur shall verify the proposals and send the deviation proposals to Working Plan Officer for submitting it to APCCF Working Plan, (East), Nagpur. Following is the format of deviation statement:

Statement showing deviations Working Plan prescriptions

Year..... Division

Serial No. of deviation	Control book name, form no. page	Reference to working plan		Nature of deviation requiring PCCF's sanction.
		Paragraph	Nature of prescription	
1	2	3	4	5

Deviation Proposal for the year

Sr. No.	Working Circle	Felling series	Coupe No.	Area (ha.)	Comptt. No.	Nature of operation in w.p.	Year of operation prescribed in w.p.	Actual year of operation	Designation of inspecting Officer	Reason for deviation
1	2	3	4	5	6	7	8	9	10	11

SECTION 23.13 : NSPECTION OF WP IMPLEMENTATION:

The CCF (T), Chandrapur circle shall ensure all the prescriptions of working plan are scrupulously implemented by the Division office. The work shall be inspected in the following manner :-

Chief Conservator of Forests (T), Chandrapur : 2%

Divisional Forest Officer, Chandrapur division : 5%

Asstt. Conservator of Forests : 20%

RFO/Forester : 100%

The norms for inspection of works are as per the standing orders and circulars issued by Government of Maharashtra and the department in this behalf. Any lapses in discharging responsibilities shall be treated as dereliction of duties and the erring staff is liable for disciplinary action. The CCF (T) shall be the competent authority to decide any technical matter prescribed in WP and he will guide the subordinate staff in all such matters. WFO may be consulted for any clarification of prescriptions.

SECTION 23.14 : SAW MILLS:

23.14.1 The rules for regulating saw mills in the state are incorporated in Bombay Forest Rules 1942 and these rules have been updated from time to time.

(1) No person shall establish a saw pit for cutting or converting of timber or manufacturing charcoal without prior sanction in writing of the RFO under Sec. 4 of Indian Forest Act 1927. If the Government declares that it has been decided to constitute any land as Reserved Forest and for this also above rule is applicable.

(2) Within the limits of 10 km of any Reserved or Protected Forest any land required in clause (I), no person shall erect or operate any machinery or saw mill for cutting or converting timber without obtaining license in this behalf. In this regard direction have been issued vide R&FD, G.R. dated 16/7/1981.

(3) Any person intends to establish a saw pit or manufacturing charcoal under class (I) of sub rule (1) shall make an application in that behalf to RFO and DCF.

(4) If the applicant fails to receive sanction within one month under clause (I) of sub rule (1) the applicant may proceed to establish the saw pit or to

manufacture char coal without violating the provisions of the act or any rule made there under.

(5) On receipt of an application under sub rule (2) RFO, DCF shall make such enquiry as he deems fit after satisfying himself regarding the safeguard of forest protection and sanction license in scheduled E, subject to the conditions set out there in or refuse to grant the sanction of license.

(6) Every license granted is renewed under this rule subject to the provisions contained in this rule regarding cancellation, be effective for a period not beyond the day of 31st December from next month following date, the date of issue or renewal. DCF may on application made to him renew the license issued under sub rule (3) with effect from the date of its expiry.

(7) If the licensee does not make application before expiry or failed to renew the license is liable for punishment and cannot operate sawmill without renewal.

(8) DCF, not with standing the forgoing sub-rules may, where he has reason to believe that a licensee is operating a saw mill in contravention of the provisions of these rules and the conditions of rule or the license, is indulging in illegal activity which may be detrimental to forest protection, can revoke the license granted under the sub rules.

(9) If the DCF refuses to issue or renew or any matter related to license, the order shall be communicated to the concerned in writing.

(10) Any person aggrieved by an order made under sub rule (8), may within 30 days after receipt of order, appeal the CCF (T) who shall decide the appeal after giving opportunity for personal hearing. The decision of CCF (T) shall be final.

23.14.2 Subsequently, the State Government has issued amendment vide notification No SWM 1081/ 106836/ F-6, dated 16th July , 1981, the State Government put a ban on issue of new license However, if the applicant has already spent the money and completed the formalities, license can be issued vide SWM 1081/ 106836 (A) F-6, dated August 18, 1981. The license

of saw mill can be suspended for three months. Saw mill owners are required to maintain three registers by the Government Order dated February 22, 1984. No saw mill can operate after sunset to sunrise without the written prior permission of the Divisional Forest Officer. The Govt. vide letter no. TRS 1081/ 102380/ F-2 R & F D dated July 18, 1981 has laid down the inspection norms of saw mills by the officers of various ranks. RFO shall inspect twelve, ACF 6, DCF 3 and CCF (T) one saw mill in a month. Apart from above mentioned Govt. Resolutions there are number of G.R.s, circulars issued by the Government from time to time regarding issue of saw mill license, restoration of license, shifting of saw mills, issue of duplicate license, maintenance of timber account in saw mills etc. A list of different Government Resolutions and circulars is given as below.

Sr. No.	Govt. Resolution/circular	Subject
1	SWM-1091/ 106836/ F-6, dt. 29.8.1981	Grant of licenses for erecting or operating machinery or saw mills for cutting or converting of timber.
2	Circular No.SWM-1081/ 106836/ F-6, Dt.26.10.1981	Grant of license for erecting or operating machinery or saw mills for cutting or converting of timber.
3	Circular No.SWM-1081/ 106836/ F-6, Dt.31.10.1981	1. The Bombay Forest (Amendment) Rules, 1981. 2. The Bombay Transit of Forests Produce (Vidarbha Region and Saurashtra and Katch areas) (Amendment) Rules 1981.
4	Govt. letter No. SWM-1081/ 132654/F-6, Dt.19.11.1981	Scrutiny of application of Grant of sawmill license.
5	Notification SWM – 4582 / 200/ F-6, Dt. 8.7.1982	Restorations of License.
6	Gazette- SWM - 1082/ 96225- (i)/ F-6, dated 1/8/1982.	Amendment on notification dated 16/7/81.
7	Circular – SWM - 1080/ 112274/ F-6, dated 20/9/1982.	Precautions and measures to take while issuing license.
8	Notification - SWM- 183/ A- 61/ CR-4(iii) / F-6, dated 30/6/1983.	Change in decisions taken by Chief Conservator of Forests / Forest Officers.
9	Circular No. - SWM- 183/ A- 61/ CR-4(iii) F-6, dated 7/7/83.	Grant of saw mill license Procedure regarding.
10	Gazette – Dt. 18.8.1984	Grant of licenses within the forest limit.
11	Notification - SWM- 1084/ CR-12 / AF-6, dated 17/5/1985.	Provisions of Mumbai Forest Act, Rule No. 8 (3).
12	Gazette - SWM- 1084/ CR-12 / AF-6, dated 17/5/1985.	Provisions of Mumbai Forest Act, Rule No. 8 (3).
13	Notification - SWM- 1084/ CR-32 / A/F-6, dated 22/1/1986.	Issue of duplicate licenses.

Sr. No.	Govt. Resolution/circular	Subject
14	Gazette - SWM- 1084/ CR-32 / A/F-6, dated 22/1/1986.	Issue of duplicate licenses.
15	Govt. letter No.SWM/1085 / CR-134 /F-6, Dt. 3.2.1986	Saw mill Rules.
16	Circular SWM-1082/CR-20/ F-6, Dt.8.11.1989	Registers maintained by private Saw mill owner.
17	Govt. letter SWM-1090/CR-57 / F-6, Dt.1.10.1989	Mumbai Forest Rules 1942 – Sawmill license Rule No. 88.
18	Gazette SWM-1090/CR- 57/F-6, Dt. 28.8.1991	Transfer and shifting of Sawmill license – instructions.
19	Notification- SWM-1090/CR- 57 / F-6, Dt. 28.8.1991	Transfer and shifting of Sawmill license – instructions.
20	Notification- SWM-192/CR –94/ (i)/ F-6, Dt. 14.7.1992	Regarding fixation of Fees for Transfer/ shifting and issuing of Sawmill license.
21	Gazette -SWM/1093/CR-27I(L)/ F-6, Dt. 16.6.1993	Definition of small scale works does not include carpentry of sawmill operate.
22	Govt. letter No.SWM-1094/CR-40/ F-6, Dt. 15.9.1994	Permission for fixing additional horizontal band saw to Sawmill.
23	Gazette – SWM-1096/CR –123(1)/ F-6, Dt. 31.7.1997	Modification in License fee / Revised fees for the period of 10 years.
24	Gazette - SWM-1096/ CR-123 (1) / F-6, Dt. 6.11.1998	Modification in License fee / Revised fees for the period of 10 years.
25	Notification – TRS-1095/ CR –109/ F-6, Dt. 22/9/1999	Indian Forest Act – 1960, The Bombay Transit of Forests Produce (Vidarbha & Katch areas) Rule 1960, The Hyderabad Transit of Forests Produce (Mumbai) Rules 1958 (Amendment) Bombay Forest Rules 1942 (Amendment)
26	Govt. letter SWM/1090/CR-57/ F-6, Dt. 13.1.2000	Guidelines for Transfer/ shifting and issuing of Sawmill license.
27	Gazette – TRS- 11/ 2000/ CR – 534/ F-6, Dt. 7/6/2001	Fixation of fees for Transfer/ shifting and issuing of Sawmill license
28	Gazette- SWM/1090/CR-57/F-6, Dt. 6.11.2001	Guidelines for Transfer/ shifting and issuing of Sawmill license.
29	Notification dt. 15.3.2003	Para No. 16(ii) and (iv) and guidelines by the order passed on dt.7/2/2002 in Writ Petition 3652/2001.
30	Gazette- SWM-1097/CR-379/F-6, dt. 17.3.2003	Order passed in Writ Petition no. 3652/2001 dt. 7/2/2002.
31	Govt. letter No.S-30/122/2001/ CR – 505/ F-6, dt. 20.3.2003	Order passed in Writ Petition no. 3652/2001 dt. 7/2/2002.- 10 Km distance -
32	Gazette – SWM-1093/CR-331/ F-6, dt. 3.11.2003	Concessions for 12 inch or less than diameter round band
33	Govt. letter No. SWM-03/ 2001/ CR-154/ Part-2/F-6, dt.11.1.2005	Bombay High Court – Bench Nagpur - order passed on 7/2/2002, Para 16(iv) ----
34	Govt. letter No. SWM-03/ 2001/ CR-154/ Part-2/F-6, dt.12.1.2005	Bombay High Court – Bench Nagpur - order passed on 7/2/2002, Para 16(iv) ----
35	Govt. letter-SWM-09/2001/CR-350/ F-6, dt. 23.6.2006	Decision taken by Central High Power Committee regarding Plywood/ Veneer.

23.14.3 Section 129 Bombay Forest Rules 1942 states that who so ever contravenes the provisions of Rule 88, shall be punishable with imprisonment for a term which may extend to six months or with fine which may extend to five hundred rupees or both.

SECTION 23.15 : CHARCOAL KILNS:

Permission shall not be granted to manufacture charcoal to private persons in Reserved Forests or Protected Forests or in private areas up to ten kilometer boundary from forests.

SECTION 23.16 : USE OF HAMMER:

CCF (T) shall issue guidelines and orders regarding the shape and size of various types of hammers which will be used for the following works.

- (1) Marking of coupes.
- (2) POR cases material to be marked by Forest Guard.
- (3) POR cases material to be marked by Forester.
- (4) POR cases material to be marked by RFO.
- (5) POR cases material to be marked by ACF.
- (6) Marking of material from jungle depot to coupe depot.
- (7) Marking of material from coupe depot to sale depot.
- (8) Marking of sold material.
- (9) Marking of malki material / timber by ACF.

SECTION 23.17 : TRIBAL WELFARE:

The forests and tribals coexist and their bond is inseparable. In order to maintain ecological balance, it is necessary to take care of socio-economic well being and culture of the tribals. It is extremely difficult to protect forests without active participation and cooperation of local people. To improve economic standard of tribals it is necessary to take up various

programmes, industries, safe guarding their domestic needs for forest produce like bamboo, fire wood and small timber. For all the activities of NWFP a separate NWFP WC has been constituted. Care has been taken to retain fruit trees from felling and in the plantations 20% fruits trees are to be planted for the purpose of local tribals of the forests, while treating forests under various WC. In the 73rd amendment of Constitution of India facilitated extension of Panchayat Raj Act in Scheduled Area has opened new avenues for tribal development. In the said amendment the Gram Panchayats are given rights over NWFP in Scheduled Areas.

The Government of India has enacted “ The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006, which recognized and vested the forest rights and occupation in forest lands in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in forests for generations but whose rights could not be recorded, to provide for a framework for recording the forest rights so vested and the nature of evidence required for such recognition and vesting in respect of forest land. The recognized rights of the forest dwelling Scheduled tribes and other traditional forest dwellers include the responsibility and authority for sustainable use, conservation of bio-diversity and maintenance of ecological balance and thereby strengthening the conservation regime of forests while ensuring livelihood and food security of above mentioned groups. The forests rights on ancestral lands and their habitat were not adequately recognized in the consolidation of State Forests in pre-independence and post independence period resulted in historical injustice to these groups, who are integral part to the very survival and sustainability of the forest ecosystem. The act also recognized the necessity to address the long standing insecurity of tenurial and access rights of forest dwelling Schedule Tribes and other traditional forest dwellers including those who are forced to relocate their dwelling due to state development interventions. This act has enabled for recognition, protection and transfer of rights to these groups who have been deprived of the legal rights for centuries together.

SECTION 23.18 : PRIVILEGES AND CONCESSIONS FOR FOREST PRODUCE:

The National Forest Policy 1988 indicated that the local people shall have first charge on forest produce. The forest produce obtained from forests will first be supplied to local people at the rates fixed by Government. The arrangement should be made at such places near the villages where the villagers can approach easily.

SECTION 23.19 : SMALL TIMBER, POLES AND FIRE WOOD:

Small timber and poles are used by local people for agriculture as well as house construction. Firewood shall be supplied from the local depots at concessional rates. To meet the demand of local people for forest produce such as small timber, poles, fire wood etc. for construction, repairs to house, agriculture purposes and fire wood for domestic use will be supplied at concessional rates from local depots. The demand of local people shall be obtained through Gram Panchayat and their demand for above mentioned material shall be met.

SECTION 23.20 : METEOROLOGICAL OBSERVATIONS :

Since there is a well established Meteorological Department in the state with its offices in the rural areas, it is unnecessary to incur expenditure on instruments meant for meteorological observations. The necessary meteorological observations can be obtained from Meteorological Department. However it is necessary to know about number of rainy days and quantum of rain for plantation activities, therefore instruments regarding the same are required to be installed at suitable places. Automatic self recording rain gauge may be used in this connection.

SECTION 23.21 : BUILDINGS:

The details regarding available buildings in Non-Buffer division are given in **Appendix No.V** of volume II of this plan. Presently maintenance of

existing buildings, offices, rest houses and residential quarters is very poor due to paucity of funds and these buildings require regular maintenance. Wherever there are no forest nakas, guard and round officer's quarters, the same should be constructed on priority basis.

SECTION 23.22 : ROADS, CART TRACTS AND CULVERTS:

The details of roads, cart tracts and culverts have been given in **Appendix No.VI** of volume II of Non-Buffer Division. Construction of new roads on the forest land is not permitted under Forest (Conservation) Act 1980 without prior permission of Government of India. These roads, cart tracks and culverts require regular maintenance for effective management of forests.

SECTION 23.23 : ESTABLISHMENT AND LABOURERS:

The details of staff have been given in Chapter 7 of Part-I of this plan. The Range, Round & Beats of Non-Buffer Forest Division is given in **Appendix No.VII** of volume II, of this plan. The erstwhile Chandrapur Forest division has been recognized in to Buffer and Non-Buffer Forest. The whole Chandrapur landscape is highly sensitive with respect to man-wildlife conflict. The field staff especially the Forest Guards and Round Officers are burdened with work in these sensitive area. For proper and effective implementation of working plan prescriptions strengthening and judicious distribution of work load is recommended.

SECTION 23.24 : MAINTENANCE OF LAND RECORDS :

In the division and range offices following records shall be maintained.

- (1) 7/12 record of all survey numbers belonging to Forest Department.
- (2) Village maps on 1:5000 scale shall be procured.
- (3) A comparative chart of 3 surveys i.e.'Jamabandi', resurvey and consolidation and different area of forest survey numbers in each survey shall be prepared.

(4) 7/12 extract on which the record of right is not mutated in the name of Forest Department earlier, shall be persuaded to transfer it in the name of Forest Department. It shall be pursued to make necessary mutation in 7/12 extract regarding the area transferred to the Forest Department.

(5) It shall be ensured that in each 7/12 extract the following entries were recorded: The Government of Maharashtra, Forest Department, Reserved Forests and Protected Forests. The above entries shall be hand written and no stamps shall be used to show these prescriptions.

(6) The forest area handed over to other department should be updated and verified compartment wise.

(7) Reconciliation of all type of forest areas along with compartment and survey number wise with respect to Reserved forest, Protected forest, Un classed forests and other forest area should be verified and updated during plan period.

SECTION 23.25 : ENCROACHMENT:

Encroachment is a constant problem for forest protection. The Government of Maharashtra had taken decision in 1978 and 1979 to regularize encroachments pertaining to period 1/4/1972 to 31/3/1978 and certain conditions were laid down to confirm eligible encroachers. Accordingly most of the encroachments pertaining to that period were regularized. However some of the encroachments of that period remain without regularization due to various reasons of non-availability of record, encroachments not pertaining to that period etc.

SECTION 23.26 : WORKING PLAN NOTE:

A note on WP at the end of WP period shall be prepared and the note shall be sent to the Working Plan Officer and APCCF Working Plan, (East), Nagpur for revision and preparation of working plan of this Forest Division.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

**CHAPTER -24
CONTROL AND RECORDS**

SECTION 24.1 : CONTROL FORMS AND RECORDS :

The following records shall be maintained in the division office.

- (i) Control Forms
- (ii) Compartment History
- (iii) Plantation and Nursery Registers
- (iv) Divisional Note Book

24.1.1 CONTROL FORMS :

(i) Control Forms should be prepared regarding implementation of working plan prescriptions as well as definite suggestions regarding other operations. All forestry operations like harvesting, subsidiary silvicultural operations, cleaning, thinning, regeneration works, boundary demarcation and soil and moisture conservation works carried out as per the working plan prescriptions, shall be maintained in the Control Forms. The prescribed proforma of the Control Forms are given in **Appendix No. LXVI** in volume II of Non-Buffer division.

(ii) The DCF/DFO shall submit Coupe Control Forms to CCF (T) by December every year, after verifying them, would send them to Working Plan Officer by January every year. All the entries showing the deviation from the prescriptions of working plan will be underlined in red ink.

SECTION 24.2 : COMPARTMENT HISTORIES :

24.2.1 Compartment history is the record of various activities and observations made in the past year. They shall be maintained in Form

No.1 to 5 as given in **Appendix No. LXVII** in volume II of Non-Buffer division.

Form I : Compartment descriptions written by CF, Working Plan as per his inspections.

Form II : Records of plantation and changes in the growing stock.

Form III : Records of Trees Marked by Felling.

Form IV : Compartment Outturn.

Form V : Compartment History.

24.2.2 Each compartment should have a separate file since they are the record of past management practices and their effect on the growing stock. One copy of the compartment history should be kept in the Division Office and the other in the Range office. Every year in July the RFO should fill in the columns in the compartment history forms and submit the same to the DCF who will get them scrutinised by a Gazetted Officer not below rank of ACF, get them typed and sign them. One copy of the forms will be filled in the division office in the divisional compartment history file and another copy will be returned to the RFO. The copies of the annual compartment history files kept in the division office, after completion will be supplied yearly in the month of August to the CF Working Plan for filling in the compartment history files kept in his office. The CF Working Plan will return them back to the Territorial Division after completion of his records.

SECTION 24.3 : DIVISIONAL JOURNALS :

24.3.1 It is desirable for a Divisional Forests Officer to maintain certain Journal for records and for his ready reference. These journals are important for controlling and monitoring of various activities of expenditure. Few of the forms for these journals have been prescribed here but it is for Dy. Conservator of Forests to add or omit any column if he desires so.

24.3.2 These registers are prescribed below.

- i) Nursery Registers.
- ii) Plantation Registers.

- iii) Coupe Registers like Marking, Jungle Felling, Dragging Register etc.
- iv) Annual plan of operations.
- v) Records of seed years of various species.
- vi) Insect or fungus attack or other injuries to forests.
- vii) Fire in regeneration areas.
- viii) Building Registers.
- ix) Roads and well Register.
- x) Auction result.
- xi) Plantation raised under agri-silvicultural operation.

24.3.3 Plantation registers should be maintained for all areas regenerated artificially in the form No.1 to 9 as given in **Appendix No. LXVIII** in volume II of Non-Buffer division. Nursery registers should be maintained in Form No.1 to 10 samples of which are given in **Appendix No. LXIX** in volume II of Non-Buffer division.

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

CHAPTER -25

THE ESTIMATED VALUE OF FORESTS

The forest are tropical dry deciduous type dominated by teak distributed throughout the area alongwith its associates like Ain, Bija Haldu, Shisham, Tiwas, Bihada, Hirada, Khair, Dhawada, Shiwan, Tendu, Garari, Char, Choti, Surya, etc. There are various timber species and all of them may not be economically profitable. An attempt has been made here to calculate total Capital Value of forest by using standard deviation method. The Capital Value has been calculated for various W.C. as the stocking position is different in various W.C., for Chandrapur (Non-Buffer) Forest division.

A. NON-BUFFER DIVISION:

(i) Capital Value of Forest Under S.C.I. W.C.(Non-Buffer)

Sr. No.	Girth Class	No. of Trees Per ha.			Stumpage Value			Capital value of Forest per ha.		
		Teak	Non Teak		Teak	Non Teak		Teak	Non Teak	
			Superior	Inferior		Superior	Inferior		4x6	4x7
1	2	3	4	5	6	7	8	9	10	11
1.	15U30	12.50	21.48	82.45	196	68	16	2450.00	1460.64	1319.20
2.	31U45	9.73	16.16	55.44	447	156	37	4349.31	2520.96	2051.28
3.	46U60	6.68	11.07	37.00	1035	361	86	6913.80	3996.27	3182.00
4.	61U75	3.45	7.35	25.39	1706	595	141	5885.70	4373.25	3579.99
5.	76U90	2.13	5.97	19.47	2628	917	217	5597.64	5474.49	4224.99
6.	91U105	2.45	4.53	13.96	5900	2058	488	14455.00	9322.74	6812.48
7.	106U120	0.88	3.03	8.77	8221	2867	680	7234.48	8687.01	5963.60
8.	121U135	0.61	1.82	5.35	10766	3755	890	6567.26	6834.10	4761.50
9.	136U150	0.40	1.25	3.45	15156	5286	1253	6062.40	6607.50	4322.85
10.	151 & Above	0.31	1.18	3.58	21337	7441	1764	6614.47	8780.38	6315.12
	TOTAL	39.14	73.84	254.86	-	-	-	66130.06	58057.34	42533.01
Grand Total (value per ha.) :								166720.41		

The Value per hectare is = Rs.166720.41

Total Value (Area x Value per hectare) = 2424.10 x 166720.41

= 404146945.881

= 4041 Lakhs

(ii) Capital Value of Forest Under Improvement Working Circle

Sr. No.	Girth Class	No. of trees per ha.			Stumpage Value			Capital value of Forest per ha.		
		Teak	Non Teak		Teak	Non Teak		Teak	Non Teak	
			Sup	Inf.		Superior	Inferior		Superior 4x6	inferior 4x7
1.	15U30	8.36	19.78	69.33	196	68	16	1638.56	1345.04	1109.28
2.	31U45	4.88	15.32	43.99	447	156	37	2181.36	2389.92	1627.63
3.	46U60	2.05	8.14	25.83	1035	361	86	2121.75	2938.54	2221.38
4.	61U75	1.21	4.95	17.81	1706	595	141	2064.26	2945.25	2511.21
5.	76U90	0.73	3.51	13.39	2628	917	217	1918.44	3218.67	2905.63
6.	91U105	0.50	2.59	9.59	5900	2058	488	2950.00	5330.22	4679.92
7.	106U120	0.37	1.69	6.38	8221	2867	680	3041.77	4845.23	4338.40
8.	121U135	0.29	1.07	3.92	10766	3755	890	3122.14	4017.85	3488.80
9.	136U150	0.17	0.68	2.64	15156	5286	1253	2576.52	3594.48	3307.92
10.	151 & Above	0.14	0.62	2.88	21337	7441	1764	2987.18	4613.42	5080.32
	TOTAL	18.70	58.38	195.76	-	-	-	24601.98	35238.62	31270.49
Grand Total (value per ha.):								91111.09		

The Value per hectare is = Rs. 91111.09

Total Value (Area x Value per hectare) = 30749.80 x 91111.09

= 2801647795

= 28016 Lakhs

Total Capital Value of Forest in Chandrapur Non-Buffer Division

Sr. No.	Working Circle	Area in ha.	Value of Forest in Lakhs
1.	S.C.I.W.C.	2424.10	4041
2.	I.W.C. W.C.	30749.80	28016
GRAND-TOTAL		33173.90	32057

The total forest area of Chandrapur Forest Division in Non Buffer Division is 62035.72 ha. The capital value of the forest estimated is Rs. 32057 Lakhs of SCI & IWC by using the standard deviation method, without

considering other intangible benefits. The Government issued G.R. No.FLB-1002/C.No.199/F-10, dt.9/12/2003 in which the procedure to calculate Net Present Value (NPV) based on quality, density and species is given. In view of instructions in above mentioned G.R. an attempt has been made to calculate Net Present Value (NPV) of Chandrapur Forest Division. The extent of area density wise is given in the following table.

Density	Area in ha.
0.6 and above	1296.65
0.4 To 0.6	5085.40
0.1 To 0.4	19576.30
0.1 and below (Blank)	36077.37
TOTAL	62035.72

As per the G.R. different rates are given for different density classes and different WC. The NPV calculated is given in the below mentioned table.

N.P.V. of Forest

W.C.	Density	Area in ha.	NPV per ha. in Lakhs	NPV in Lakhs
SCI	0.6& above	1090.85	9.20	10036
	0.4 to 0.6	1017.08	9.00	9154
AWC & FIWC, IWC	0.6& above	205.08	7.70	1585
	0.4 to 0.6	4068.32	7.13	29007
SCI, AWC, FIWC & IWC	0.1 to 4	19576.30	6.56	128420
	0.1 & below	36077.37	5.80	209249
Total		62035.72		387451

The Net Present Value (NPV) of Forest of Chandrapur is Rs.387451 lakhs.

Estimated Value of out turn of Forests:

The Forest of this division are managed on a sustained annual yield basis. The net annual realization represents the return on the capital out turn calculated by formula.

Capital out-turn = $r / 0.0p$

Where 'r' is the net annual income and 'p' is the rate of interest.

The average annual income from this division for last 10 years is

Rs. @ 7% interest the capital out-turn of this net income is :

$$\text{Capital out-turn} = r/0.0p = \frac{33332188}{0.07} = 476174114$$

The total area covered under this plan is 62035.72 ha.

Hence capital value per ha. is : $\frac{476174114}{62035.72} = \text{Rs.}7675.80$

**CHANDRAPUR (NON-BUFFER) FOREST DIVISION,
CHANDRAPUR**

**CHAPTER –26
FINANCIAL FORECAST**

Working plan for the Chandrapur (Non-Buffer) has been prepared with specific objectives in respective working circles. Various prescriptions have been given to achieve these objectives. Execution of works needs proper planning and adequate financial provision for that. Execution of works will generate some services and revenue to exchequer. That is why we need financial forecast for the plan.

SECTION 26.1 : EXPENDITURE

26.1.1 Expenditure on establishment :

To run the proper administration, an efficient administrative set up is required. It is recurring expenditure on the set up of organization i.e. on salary and other benefits to officials and staff, maintenance of offices, vehicles, roads, buildings, machines, communications.

26.1.2 Expenditure on harvesting forest produces and other activities:

During the implementation of prescriptions of the draft report, some forest produce are going to be harvested. In SCI WC, IWC and NWFP WC, forest produce in the form of timber, firewood or other produce like tendu leaves, gums etc will be harvested, it will need expenditure to be incurred on various activities.

26.1.3 Expenditure Details :

Since the expenditure on various items are linked with minimum wage rate for wages and the prevailing salaries of staff and officers, it is not possible to work out expenditure on specific item at this point of time. We can have the glimpses of it based on certain assumptions. First of all we assume that wage rate and salaries and other commodities consumption are going to be static. The quantum of works to be carried out is also going to be constant and furthermore the areas to be tackled yearly are also not going to vary. Based on these assumptions, the calculations are made. These are symbolic and not final.

I. NON-BUFFER DIVISION :

(A) Timber: Cost of exploitation per cubic meter timber = Rs. 2100/-

Cost of exploitation per beat firewood = Rs. 350/-

Details of Yield and Expenditure

Working Circle	Area in ha.	Average Area per year in ha.	Yield per year			Expenditure in rupees lakhs per year	
			Timber	Poles	Fire wood	Timber, Firewood	Total
SCI	2424.10	121.205	526.88	100	66	11.29	11.30
IWC	30749.80	1537.49	--	--	--	--	--
AWC	18606.93	874.72	--	--	--	--	--
FIWC	8470.43	216.18	--	--	--	--	--
MISC	1784.46	--	--	--	--	--	--
Total	62035.72	--	526.88	100	66	11.29	11.30

(B) Regeneration

(i) Natural Regeneration:

Natural regeneration will be carried out in SCI WC, Afforestation WC, Improvement WC and Fodder Improvement WC. The expenditure will be incurred as per the rate sanctioned by PCCF, M.S.

Projection of Expenditure in Various WC

Sr. No.	Working Circles	Area in ha.	Workable Area per year in ha.	Expenditure (rupees in lakhs (Rate @ Rs.9680/ha., daily wage Rate Rs.285.46/MD)	No. of man-days to be generated
1	2	3	4	5	6
1	SCIWC	2424.10	100	9.68	3391
2	IWC	30749.80	350	33.88	11868
3	AWC	18606.93	200	19.36	6782
4	FIWC	8470.43	150	14.52	5086
5	MISC	1784.46	--	--	--
	Total	62035.72	800	77.44	27127

(ii) Artificial Regeneration:

Artificial regeneration works are required in under stocked and suitable blank areas. The expenditure will be incurred as per the rate sanctioned by PCCF, MS.

Plantation Under A.R. in SCI

(No.of seedlings 1600/ha.)

Plantation work	Total area in ha. during this Plan period	Area available per year in ha.	Operation	Expenditure in rupees lakhs (daily wage rate 285.46/MD)	No. of man-days to be generated
1	2	3	4	5	6
Mix species plantation and others	2424.10	50	PPO/PYO	41.68	14600
			FYO	24.21	8481
			SYO	12.69	4445
			TYO	8.92	3125
			4 th YO	5.49	1925
			5 th YO	5.49	1925
			Total	98.48	34501

(C) Soil and moisture conservation and other items:

Exhaustive plan will be prepared and expenditure will be incurred from Employment Guarantee Schemes and Rural Development Schemes and Water Conservation Schemes of Central and State Government. Hence no quantification has been attempted.

Year wise details of expenditure: Expenditure to be incurred during Plan period is summarized in following table.

Artificial Regeneration expenditure in SCI

Year	Artificial Regeneration expenditure in Rs. lakhs						Total expdr. in Rs. (lakhs)	No. of man-days to be generated
	P PO	F YO	S YO	T YO	4 th YO	5 th YO		
1	2	3	4	5	6	7	8	9
2014-15	42	--	--	--	--	--	42	14600
2015-16	42	24	--	--	--	--	66	23081
2016-17	42	24	13	--	--	--	79	27526
2017-18	42	24	13	9	--	--	88	30651
2018-19	42	24	13	9	6	--	94	32576
2019-20	42	24	13	9	6	5	99	34501
2020-21	42	24	13	9	6	5	99	34501
2021-22	42	24	13	9	6	5	99	34501
2022-23	42	24	13	9	6	5	99	34501
2023-24	42	24	13	9	6	5	99	34501

Plantation Under A.R. in IWC**(No. of seedlings 625/ha.)**

Plantation work	Total area in ha. during this Plan period	Area available per year in ha.	Operation	Expenditure in rupees lakhs (daily wage rate 285.46/MD)	No. of man-days to be generated
1	2	3	4	5	6
Mix species plantation and others	30749.80	250	PPO/PYO	148.60	52057
			FYO	78.00	27315
			SYO	23.03	8070
			TYO	39.78	13938
			4 th YO	27.47	9625
			5 th YO	27.47	9625
			Total	344.35	120630

Year wise details of expenditure: Expenditure to be incurred during Plan period is summarized in following table.

Artificial Regeneration expenditure in IWC

Year	Artificial Regeneration expenditure in Rs. Lakhs						Total expdr. in Rs. (lakhs)	No. of man-days to be generated
	PPO	FYO	SYO	TYO	4 th YO	5 th YO		
1	2	3	4	5	6	7	8	9
2014-15	149	--	--	--	--	--	149	52057
2015-16	149	78	--	--	--	--	227	79372
2016-17	149	78	23	--	--	--	250	87442
2017-18	149	78	23	40	--	--	290	101380
2018-19	149	78	23	40	28	--	318	111005
2019-20	149	78	23	40	28	27	345	120630
2020-21	149	78	23	40	28	27	345	120630
2021-22	149	78	23	40	28	27	345	120630
2022-23	149	78	23	40	28	27	345	120630
2023-24	149	78	23	40	28	27	345	120630

SMC Works with artificial regeneration expenditure (SCI & IWC)

Year	Artificial Regeneration expenditure in Rs. Lakhs						Total expdr. in Rs (lakhs)	No. of man-days to be generated
	PPO	FYO	SYO	TYO	4 th YO	5 th YO		
1	2	3	4	5	6	7	8	9
2014-15	191	--	--	--	--	--	191	66657
2015-16	191	102	--	--	--	--	293	102453
2016-17	191	102	36	--	--	--	329	114968
2017-18	191	102	36	49	--	--	378	132031
2018-19	191	102	36	49	34	--	412	143581
2019-20	191	102	36	49	34	32	444	155131
2020-21	191	102	36	49	34	32	444	155131
2021-22	191	102	36	49	34	32	444	155131
2022-23	191	102	36	49	34	32	444	155131
2023-24	191	102	36	49	34	32	444	155131

Plantation Under A.R. in AWC

(No. of seedlings 1111/ha.)

Plantation work	Total area in ha. during this Plan period	Area available per year in ha.	Operation	Expenditure in rupees lakhs (daily wage rate 285.46/MD)	No. of man-days to be generated
1	2	3	4	5	6
Mix species plantation and others	18606.93	100	PPO/PYO	121.90	42702
			FYO	43.75	15328
			SYO	20.83	7297
			TYO	15.75	5517
			4 th YO	11.00	3850
			5 th YO	11.00	3850
			Total	224.23	78544

Year wise details of expenditure: Expenditure to be incurred during Plan period is summarized in following table.

Artificial Regeneration expenditure in AWC

Year	Artificial Regeneration expenditure in Rs. Lakhs						Total expdr. in Rs (lakhs)	No. of man-days to be generated
	PPO	FYO	SYO	TYO	4 th YO	5 th YO		
1	2	3	4	5	6	7	8	9
2014-15	122	--	--	--	--	--	122	42702
2015-16	122	44	--	--	--	--	166	58030
2016-17	122	44	21	--	--	--	187	65327
2017-18	122	44	21	16	--	--	203	70844
2018-19	122	44	21	16	11	--	214	74694
2019-20	122	44	21	16	11	11	225	78544
2020-21	122	44	21	16	11	11	225	78544
2021-22	122	44	21	16	11	11	225	78544
2022-23	122	44	21	16	11	11	225	78544
2023-24	122	44	21	16	11	11	225	78544

SMC Works with A.R. Expenditure in Rs. Lakhs in FIWC

(वैरण साधन संपत्तीचा विकास करणे)

Plantation work	Total area in ha. during this Plan period	Area available per year in ha.	Operation	Expenditure in rupees lakhs. (daily wage rate 285.46)	No. of man-days to be generated.
1	2	3	4	5	6
Fodder & Misc. Plantation	8470.43	100	PPO/PYO	22.17	7765
			FYO	4.22	1479
			SYO	5.05	1769
			TYO	4.53	1589
			4 TH YO	4.32	1514
			5 TH YO	4.32	1514
			Total	44.61	15630

Year wise details of expenditure: Expenditure to be incurred during Plan period is summarized in following table.

Artificial Regeneration expenditure in FIWC

Year	Artificial Regeneration expenditure in Rs. Lakhs						Total expdr. in Rs lakhs	No. of man-days to be generated
	PPO	FYO	SYO	TYO	4 th YO	5 th YO		
1	2	3	4	5	6	7	8	9
2014-15	22	--	--	--	--	--	22	7765
2015-16	22	4	--	--	--	--	26	9244
2016-17	22	4	5	--	--	--	31	11013
2017-18	22	4	5	5	--	--	36	12602
2018-19	22	4	5	5	4	--	40	14116
2019-20	22	4	5	5	4	5	45	15630
2020-21	22	4	5	5	4	5	45	15630
2021-22	22	4	5	5	4	5	45	15630
2022-23	22	4	5	5	4	5	45	15630
2023-24	22	4	5	5	4	5	45	15630

SMC Works with artificial regeneration expenditure (AWC & FIWC)

Year	Artificial Regeneration expenditure in Rs. lakhs						Total expdr. in Rs. (lakhs)	No. of man-days to be generated
	P P O	F Y O	S Y O	T Y O	4 th Y O	5 th Y O		
1	2	3	4	5	6	7	8	9
2014-15	144	--	--	--	--	--	194	50467
2015-16	144	48	--	--	--	--	192	67274
2016-17	144	48	26	--	--	--	218	76340
2017-18	144	48	26	21	--	--	239	83446
2018-19	144	48	26	21	15	--	254	88810
2019-20	144	48	26	21	15	16	270	94174
2020-21	144	48	26	21	15	16	270	94174
2021-22	144	48	26	21	15	16	270	94174
2022-23	144	48	26	21	15	16	270	94174
2023-24	144	48	26	21	15	16	270	94174

Total Expenditure in Rs lakhs

Year	Establishment	Boundary, demarcation fire protection	Timber	S & m work	N.R.	Artificial regeneration expenditure In Rs. (lakhs)	Total expdr. in Rs. (lakhs)	No. of man-days to be generated
1	2	3	4	5	6	7	8	9
2014-15	13	8	11	13	78	335	458	155888
2015-16	13	8	11	13	78	485	608	208435
2016-17	13	8	11	13	78	547	670	230155
2017-18	13	8	11	13	78	617	740	254676
2018-19	13	8	11	13	78	666	789	271842
2019-20	13	8	11	13	78	714	837	288657
2020-21	13	8	11	13	78	714	837	288657
2021-22	13	8	11	13	78	714	837	288657
2022-23	13	8	11	13	78	714	837	288657
2023-24	13	8	11	13	78	714	837	288657

SECTION 26.2 : ANNUAL REVENUE EXPECTED FROM ALL SOURCES:

Exploitation of forest produce not only leads to incurring expenditure but also generates revenue in the form of services and goods. Revenue would be received from exploitation of timber, firewood, bamboo, services of grazing, eco-tourism, NWFP etc.

Revenue from all sources:

Sr. No.	Item	Quantity	Rate	Revenue in Rs. (lakhs)
1	2	3	4	5
1	Timber (Selection)	526.88	9752	51
2	Timber (Improvement)	--	--	--
3	Fuel Beats & poles	66 & 100	2312	2
4	Tendu	35070 Std. bags	Rs. 916	322
5	Miscellaneous	--	Lump-sum	54
	Total			427

SECTION 26.3 : STATEMENT OF REVENUE AND EXPENDITURE FOR THE ENTIRE PLAN PERIOD:

(in rupees lakhs; 8 % additional rate per year)

Sr. No.	Year	Timber	Fuel Beat & Pole	Tendu	Other	Total Revenue	Total Expenditure	No. of man-days to be generated
1	2	3	4	5	6	7	8	9
1	2014-15	51	2	322	54	429	458	155888
2	2015-16	55	2	348	58	463	656	208435
3	2016-17	60	2	376	63	501	723	230155
4	2017-18	65	2	406	68	541	799	254676
5	2018-19	70	2	439	73	584	852	271842
6	2019-20	75	2	474	79	630	904	288657
7	2020-21	80	2	512	85	679	976	288657
8	2021-22	85	2	553	92	732	1054	288657
9	2022-23	90	2	597	99	788	1138	288657
10	2023-24	95	2	645	107	849	1229	288657

SECTION 26.4 : EXPENDITURE ON PLAN PREPARATION:

Expenditure on Plan of Chandrapur Forest Division cannot be separately worked out. Working Plan Division has been given the responsibility of preparing plan of various forest divisions. Revision of working plan for Chandrapur Forest Division was taken up in 2008. Office of the APCCF, (Working Plan-East), Nagpur also incurs expenditure on GIS works and instruments. Hence actual expenditure on preparation of this Plan cannot be segregated. Proportionate expenditure has been worked out as given below.

NON-BUFFER DIVISION:

Proportionate Expenditure	-	Rs. 71,45,677/-
Working Plan Area.	-	62035.72 ha.
Per Unit Area Cost.	-	Rs. 115.20/ha.



GOVERNMENT OF MAHARASHTRA

**TADOBA-ANDHARI TIGER RESERVE,
CHANDRAPUR**



TIGER CONSERVATION PLAN
(Plan Period 2014-15 to 2023-24)

VOLUME-III
(ADJOINING AREA)

Basic Plan by
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PART A: THE EXISTING SITUATION

CHAPTER 1

INTRODUCTION OF THE AREA

1.1 Brief Description of the Area and significance for Tiger Conservation:

1.1.1 Name:

The area included as adjoining area comprised of Bramhapuri Forest Division, Central Chandra Forest Division, Chandrapur Forest Division, West Chanda FDCM Division, Central Chanda FDCM Division and Bramhapuri FDCM Division. Commonly this tract can be named Chandrapur district adjoining forest. The forest areas are both in compact block and scattered patches covering total geographical area of Chandrapur district (except Core and Buffer of TATR).

This area is unique and prime habitat for the flora and fauna including the Tiger, Panther, along with herbivores like Chitals, Sambars, Gaur, etc.

1.1.2 Location:

By Geographic Co-ordination:-

- i) Longitude 78° 48', and 80° 55' East.
- ii) Latitude 19° 30' and 20° 45' North

Location by Other Features:-

The area is situated in the South East of Maharashtra State. On the North of Chandrapur district Nagpur, Wardha and Bhandara district, on the East Gadchiroli district, on the South Gadchiroli district and Andhra Pradesh and on the West Yavatmal district is situated.

Location Bio-geographic Zonation:-

As per the Bio-geographic Classification of India by Wildlife Institute of India, Dehra Dun the Division is Classified as :

- i) Bio-geographic Kingdom : Paleotropical
- ii) Sub Kingdom : Indomalayan
- iii) Bio-geographic Zone : 6- Deccan peninsula
- iv) Biotic province : 6-B Central Plateau

1.1.3 Constitution:-

The forest area considered as the Adjoining area is as follows:-

(Area in ha.)					
Sr. No.	Division	Reserved Forests	Protected Forests	Un-classed Forests	Total Area
1	Bramhapuri (T)	64016.100	33463.360	1087.520	98566.980
2	Central Chandra (T)	86513.412	19575.040	5819.605	111908.100
3	Chandrapur (T)	27314.240	21354.280	1699.750	50368.270
4	West Chanda (FDCM)	23929.670	--	--	23929.670
5	Central Chanda (FDCM)	31214.632	--	--	31214.632
6	Bramhapuri (FDCM)	20252.011	--	--	20252.011
	Total	253240.065	74392.680	8606.875	336239.663

1.1.4 Extent (Area Statement and Legal Status):-

The total area included in this Plan is **3362.397** Sq. Km. The total area includes Reserve Forests, Protected Forests and Un-classed Forests.

Boundaries :-

(A) **External:-** The external boundary of this area is well defined as it coincides with district boundary.

(B) **Internal:-** The internal boundaries are compartment boundaries, division boundaries, range boundaries, well defined on ground and are regularly maintained.

Legal Status:-

(i) **Reserved Forests:-**

The forests dealt with are notified as Reserved Forests under Indian Forest Act (VII of 1878) under the Central Provinces' Gazette Notification No. 917(i), dated the 24th February, 1879, and No. 3918, dated 5th September, 1895, and Government of Maharashtra, Revenue and Forests Department Notification No. FLD / 3685 / 9316 / C-R-42 / F-3, dated 5/5/1992.

(ii) **Protected Forests:-**

Under the provisions of Madhya Pradesh Abolition of Proprietary Rights (Estates, Mahals, Alienated Lands) Act 1951, all the community and other waste land were taken over by the Revenue Department. These forests were transferred from

time to time to the Forests Department as per the instructions contained in Madhya Pradesh Govt. Revenue Department No. 2249/286-XII, dated 6th April, 1951 and No.7177/CR-617-12 of 4th December 1951 with an object of managing the forests on scientific lines. Subsequently these forests were declared as Protected Forests under sec. 29 of I.F.A., 1927, notified vide M. P. Gazette Notification No.3056-1216-XI, dated 4th June, 1955 and Bombay Gazette Notification No.FLD/1056-12623-F, dated 8th August, 1957 published on 3rd October 1957. Further the Government of Bombay declared their intention to constitute these forests as Reserved Forests under Section 4 of Indian Forest Act, 1927; vide Bombay Government Gazette Notification No.FLD/1258/II-3314-E,dt. 30th May, 1959, which was published on 20th August, 1959.

1.2 Approach and Access:-

The area can be approached from Nagpur, Wardha, Yavatmal, Gadchiroli, Bhandara in all season by road. The nearest airport is Nagpur. The nearest railway station are Chandrapur, Ballarshah, Warora, Mul, Rajoli, Sindewahi and Nagbhid. Good road network with proper bridges exist all over the area.

The State Road Transport buses ply within the district. Buses from Nagpur, Wardha, Yavatmal, Gadchiroli, Bhandara are also available frequently.

1.3 The Statement of Significance:-

The location of the Adjoining area falls in “6B Central Plateau province of the Deccan Peninsula Zone” as per Bio-geographic classification of Wildlife Institute of India, Dehra Dun. These forests according to Champion and Seth’s Classification belong to the sub group 5A-C1-1B Southern Tropical Dry Deciduous Forest having Teak as dominant species.

The Core zone of Tadoba Andhari Tiger Reserve is situated almost in center of Chandrapur district so the source population of Tiger breeding in the Core has spread over the whole forest of Chandrapur district and further spreading in neighbor district. For long term conservation of Tigers this adjoining area is significant.

Economic Value:-

The area consists of Tropical Dry Deciduous Teak Forests. Teak, a high value timber species is dominant in most part of the forest area. Other timber species are

Ain, Bija, Shisam, etc. Bamboo is dominant in most of the area. Moha, Tendu are other NTFP species. Charoli, Bibla, Kadhai (Sterculia), Dhawda, Myrabolans i.e. Beheda, Hirda and Amla are also present. The production of Bamboo and Tendu leaves add to the economy of rural population.

Biological Value:-

The area is rich in flora and fauna. The flora consists of that of typical Dry Mix Deciduous forests. The animals represent wide variety of vertebrates including mammals, reptiles, birds and Amphibians species.

The mammals belongs to order Insectivora (shrews), Scandentia, (Tree shrew), Chiroptera (Bats), Primates (Monkey), Pholidota (Ant eater), Carnivora (Cats), Artiodactyla (Deers), Rodentia (Squirrels, Rats), Lagomorpha (Hare).

The reptiles consist of Squamata (Snakes) and Chilonia (Turtles). The amphibian include Frogs and Toads.

Rare and endangered fauna –

Some of this fauna is rare and endangered. The status is as follows:-

Red Data Book Vulnerable:-

- (1) Tiger – *Panthera tigris tigris*
- (2) Leopard - *Panthera pardus fusca*
- (3) Indian Bison - *Bos gaurus*
- (4) Four Horned Antelope – *Tetracerus quandricornis*
- (5) Common Indian Monitor – *Varanus bengalensis*
- (6) Indian Chameleon – *Chamales zeylanicus*

Red Data Book Endangered Reptiles:-

- (1) Python – *Python molurus*

IUCN Lower Risk near Threatened Mammals Reptiles:-

- (1) Wild Dog - *Cuon alpinus*
- (2) Indian Cobra (Nag) - *Naja naja naja*
- (3) Russell's Viper (Ghonas) - *Vipera russelli*

IUCN Vulnerable Reptiles:-

- (1) Kasav-*Aspderetes leithii*

1.4 Habitat:-

1.4.1 Natural Habitat Corridors:-

The Forests of Bramhapuri Forest Division including FDCM division are distributed over Bramhapuri, Nagbhid, Sindewahi and Chimur tahsils of Chandrapur District. The area is connected to Tadoba Andhari Tiger Reserve towards West with a crop of good Mixed Deciduous Forest and availability of plenty of water. The area serves as a good natural habitat for the wild fauna and a corridor to local wild life of TATR.

The Forest of Central Chanda Forest Division including FDCM division is distributed over Ballarshah, Pombhurna and Gondpipari tahsils of Chandrapur District. The area is connected to Tadoba Andhari Tiger Reserve towards North and contiguous to Chaparala Sanctuary towards South. With a crop of good Mixed Deciduous Forest and availability of plenty of water, the area serves as a good natural habitat for the wild fauna and a corridor to local wild life of TATR and Chaparala Sanctuary.

The Forest of Chandrapur Forest Division including FDCM division are distributed over Warora, Bhadrawati, Chandrapur, Mul and Saoli tahsils of Chandrapur District. The area is in continuation with Buffer zone of Tadoba Andhari Tiger Reserve towards North and East. With a crop of good Mixed Deciduous Forest and availability of plenty of water, the area serves as a good natural habitat for the wild fauna and a corridor in between Buffer zone and Central Chanda division.

1.4.2 Regenerated & Planted Habitat Corridors:-

Area has been planted with Teak, miscellaneous tree species and Bamboo, Raising Teak, mixed, Bamboo and Fodder plantations as per provision of sanctioned Working Plan. Besides adequate number of fruit trees are retained which not only provide succor to the fauna, including avifauna, but also result in a multi level, multi species crop. Presence of wild animals such as Tiger, Leopard, Gaur, Sambar, Spotted Deer and other fauna proves that the plantations are not detrimental to bio-diversity conservation but providing a good habitat for the local wild life.

1.5 Disturbances in Habitat Corridors:-

Kanpa – Mul road, Nagbhid-Bramhapuri road and Sindewahi-Pathari road, Chimur – Warora road, Sindewahi- Chimur road, Gangalwadi-Eakra-Sindewahi road and railway line from Bramhapuri to Chandrapur are passing through the forest area of Bramhapuri division so cause of disturbances in this habitat.

Nagpur-Chandrapur road, Bhadrawati-Chandankheda road, Chandrapur-Gadchiroli road, Chandrapur-Allapalli/ Adilabad road, Mul-Gondpimpri road, Chichpalli-Ballarshah road, Mul-Petgaon-Palasmaon-Chimur road and railway line from Nagpur to Kazipeth, Chandrapur to Wadsa are passing through the forest area of Chandrapur and Central Chanda division so cause of disturbances in this habitat.

The canals of Gosikhurd irrigation project are also the cause of disturbance in this habitat.

1.6 Stepping Stones:-

Area is covered by a good crop of Mixed Deciduous Forests interspersed with grassy blanks and a network of perennial water holes to support wild life.

1.7 Map Showing Landscape Beyond Core and Buffer Areas:-

The Map of Chandrapur district showing the area of Bramhapuri, Chandrapur and Central Chanda divisions (The area of FDCM Division are within territorial division) along with Core and Buffer zones of Tadoba Andhari Tiger Reserve is attached (**Map No. 1**)

1.8 Major Land use Classification in the Area:-

The Adjoining area consists of mainly forest, agriculture land, industrial area, mining area and village/town/cities.

1.8.1 Forest:-

The forests are of type Southern Tropical Dry Deciduous Forests and under forestry working by territorial division and FDCM.

1.8.2 Agriculture Land:-

The agriculture land generally belongs to small marginal farmers. The main crop is Paddy, Soyabin and Cotton. Irrigation facility is available only to 25% agricultural land.

1.8.3 Village/ Towns/ Cities:-

There are large townships within the adjoining landscape namely Bramhapuri, Chimur, Nagbhid, Sindewahi, Chandrapur, Ballarshah, Mul, Rajura, Warora, Bhadrawati, Saoli, Gondpipri and Korpana. Following table shows taluka wise villages present in the Tadoba Andhari Landscape out side Core and Buffer zone :-

Sr.No.	Tahsil	Total villages	Sr.No.	Tahsil	Total villages
1	Ballarpur	35	9	Bhadravati	146
2	Gondpipri	98	10	Korpana	113
3	Sindewahi	100	11	Warora	174
4	Mul	103	12	Chimur	244
5	Chandrapur	84	13	Jiwati	83
6	Brahmapuri	140	14	Pombhurna	71
7	Nagbhir	138	15	Saoli	111
8	Rajura	111		Total	1751

1.8.4 Other Uses:-

The district is rich in minerals especially coal and limestone. There is heavy pressure of mining. Many coal mines (Open cast and under ground) are operating in the area. Other industries are Paper mill, Cement factories and Thermal power plants.

1.8.5. Quality of Habitat:-

The area is covered with pristine Dry Deciduous Forests having a good crop of mixed vegetation including varieties of fruit trees. Bamboo is found to occur all over in these forests except heavily eroded areas and exposed rock. Streams passing through the tract drains in to Wainganga River and its tributaries. Altitudes of various hills in the tract vary from 180 m. to 295 m. above M.S.L.

Diverse landscape and vegetation as well as round the year availability of water make the areas an ideal wild life habitat.

1.9 Geology, Rock, Soil, Climate and Water:-

Geology, Rock, soil:-

Northern part of the tract represents mainly one type of Geological formation viz. Archen, represented by gneisses, schistone and granites. The soil is clayey loam or sandy loam and is moderately deep. The soil along slopes is shallow having boulders.

The central part of the tract represents mainly by Deccan trap, alluvial laterite happen including Lamenta beds. This belongs to Gondwana and Vindhya system. Rocks of Granite, quartz, gneiss etc are present. The soil is of alluvial and laterite origin, which is sandy with stretches of Yellow Brown and Grayish loom. At places it is overtopped with Black Cotton Soil of varying thickness.

Areas north east of village Kanhargaon and north of village Aksapur of Zaran Range which is Southern part of tract is comprised of sedimentary rocks of puruna group. This is represented by quartzite and lime stones of englomerate formation. Soil derived from this type of rock formation is clayey loom and supports medium site quality (II to IV a) forest. Rest of the area of Zaran Range is comprised of the Kamthi series of rock belonging to the lower Gondwana systems, Kamthi series is represented by the ferrusious sand stones and clays, both white and yellow. Soil derived is fairly deep; fertile and sandy loam, and support high quality mixed forest. The soil however being sandy loam, soft and friable is easily susceptible to erosion. In some patches of this tract, top layer of soil has been eroded due to sheet and gully erosion rendering the site comparatively less fertile supporting only low quality (III b) forest.

Western part of Kanghargaon, Tohogaon and Dhaba Ranges which is again Southern part of the tract are covered by the Kamthi series rocks represented by sand stones and clay. The remaining forest area to the east of Dhaba is occupied by the igneous rocks such as garbo and pyroxenite and gneisses of the Pre cambrium age. The soil west to the Dhaba is deep and fertile sandy loam supporting high quality mixed forest and that to the north east of Dhaba is grayish clay supporting medium quality teak forest (II to IVa). Narrow band of lime stone formation belonging to Vindhyan series exists extending between Dongargaon in the south east to Karanji in the centre. Soil is clayey loam of moderate depth and fertility and supports forest of medium (III) quality.

Climate:-

Three distinct seasons can be recognized viz, summer, rains and winter. The summer is mostly hot and dry. During summer temperature shoots up fairly high. The fierce heat of April and May becomes unbearable. The highest temperature is 48.3⁰ C and the lowest minimum temperature recorded is 2.8⁰ C. The weather cools down considerably during monsoon. Average rainfall is 1365 mm. Most of the precipitation occurs during the month of June, July and August ranging from 200 to 400 mm per month. Rainfall during remaining months is sporadic and varies from 2.5 mm to 72.5 mm per month. Atmosphere is humid and sultry. Frost is unknown.

Water:-

The entire area of the district falls in the Godavari basin. The area is drained by major tributaries of the Godavari River. The major tributaries are Wardha, Wainganga and Painganga rivers. The Painganga, flowing along part of the Western boundary, meets the Wardha river at Wadha near Ghugus to form the Wardha river. It further flows in NW-SE direction finally merging into the Wainganga river at the South Eastern corner of the district. After this confluence the river at the South Eastern corner of the district. After this confluence the river along with their sub tributaries rising in the uplands within the district drain whole area of the district.

The Wainganga river which flows along the border of Chandrapur and Gadchiroli district is the main river of the district. The Wardha is the only perennial river in the district having the longest river course as compared to the other two major rivers. The main tributaries of the Wardha river are the Erai rises in the Northern part of Warora tahsil and flows along due South over a length of 80 km. until it meets the Wardha just South of Chandrapur. The Painganga flowing along Western border takes East West course and then joins the Wardha river at Wadha near Ghugus.

Though the forests have good perennial water sources, the overall availability of water in the inhabited areas is scanty particularly in the summer season. Drinking water is available through wells and tanks in most of the villages. Water table is 20 to 25 meter deep. However, at a depth of 100 meter ample quantity of water is available. Wells generally dry out during the hot summer months of May and June. Water table recedes in summer and water is scarce.

Major perennial sources of water are Asolamendha, Maregaon, Khairi, Pawanpar, Kachchepar, Ghodazari, Chargaon, Labhan Srad, Irai, Naleshwar, Lalnala and many other village tanks.

1.10 Vegetation Types:-

1.10.1 Composition and Condition of the Crop:-

According to Champion and Seth the forest tract of these Divisions fall under the sub group 5A i.e. Southern Tropical Dry Deciduous forest which are classified into the followings :-

- A) Southern Tropical Dry Deciduous Teak bearing forest Type 5A/C1
- B) Southern Tropical Dry Mixed Deciduous forest Type 5A/C3

The forests of this tract are Mixed Forests of site quality varying from II to IV with crop density varying from 0.2 to 0.6. The middle canopy is dense. Natural regeneration is scanty. Natural Bamboo is abundant along *nalas* and on hills. Major common trees and shrubs occurring in the area are as under:-

1.10.2 Floristic Composition:-

(A) Top canopy:- *Tectona grandis* (Teak), *Pterocarpus marsupium* (Bija), *Anogeissus latifolia* (Dhawada), *Terminalia tomentosa* (Ain), *Lannea grandis* (Movai), *Madhuca latifolia* (moha), *Bombax ceiba* (Semal), *Terminalia arjuna* (Arjun), *Diospyros melanoxylon* (Tendu), *Lagerstroemia parviflora* (Sehna), *Mitragyna parviflora* (Kalam), *Choloroxylon switenia* (Bhera), *Dalbergia paniculata* (Dhoban), *Boswellia serrata* (Salai), *Adina cordifolia* (Haladoo), *Xylia xylocarpa* (Surya), *Terminalia bellerica* (Behada), *Albizia odoratissima* (Chichawa)

(B) Middle Canopy:- *Cleistanthus collinus* (Garadi), *Zizypus xylocarpa* (ghot), *Embllica Officinalis* (Awala), *Accacia Catechu* (Khair), *Bauhinia purpurea* (Apta), *Grewia tiliifolia* (Dhaman), *Dolichndrone falcata* (Medsing), *Soyamida febrifuga* (Rohan), *Acacia leucophlolia* (Hiwar), *Holarrhena antidysentrica* (Kuda), *Buchnania lanzan* (char), *Semecarpus anacardium* (Biba), *Butea monosperma* (Palas), *Ixora parviflora* (Lokhandi), *Dalbergia latifolia* (Shisham), *Cassia fistula* (Amaltas), *Morinda tinctoria* (Ali)

(C) Lower canopy:- *Cassia tora* (Tarota), *Helecteris isora* (Muradseng), *Woodfordia floribunda* (Jilbili), *Gardenia lucida* (Dikanji), *Lantana camera* (Raimumia), *Dodania viscosa* (Gilbilli), *Tephrosia purpurea* (Diwali), *Cassia auriculata* (Tarwat), *Dichrostachys cineraria* (Yelati) etc.

(D) Climbers:- *Butea superba* (palaswel), *Acacia pinnata* (Chilati), *Calycopteris floribunda* (kukudranji), *Zyzyphus oenoplia* (Ironi), *Ichnocarpus frutesens* (Dudhivel), *Abrus precatorius* (Gunj), *Mucuna pruriens* (Kachhuri), *Celastrus paniculata* (Malkagani), *Hemidesmus indicus* (Khobarwel), *Cocculus villosus* (wasanwel)

(E) Bamboo and grasses:- *Dendrocalamus strictus* (Bans), *Eragrotis tenella* (bhurbhuri), *Themeda triandra* (Ghonad), *Dicanthium arnnulatum* (Marvell), *Aristida adecensionis* (Kusli), *Iseilema laxum* (Mupheim)

(F) Regeneration:- The regeneration of Bija, Ain, Kalam, Teak, Lendia, Dhwada, Tendu is noticed. Regeneration of Garadi and Anjan is abundant; however natural regeneration is adversely affected due to repeated fires and grazing.

1.11 Wild Fauna and Habitat:-

The habitat consists of undulating landscape with mostly plains and few hills. There are many perennial rivers and streams with mosaic of high forests, meadows and worked areas. This forms a perfect habitat for Tigers and its co predators like Panther and Wild dogs. The prey base consists of Sambar, Cheetal, Barking deers, Wild boars, Langoods etc. The habitat has been degraded at some places, which are interspersed with habitations causing man animal conflict.

The census figure of different divisions as available is attached as **Appendix-I**.

1.12 Major changes in the Landscapes (settlements/other infrastructure):-

The landscape is changing in the recent past with the upcoming of coal mines of Western Coal Fields Ltd., Chandrapur Super Thermal Power Station, other new private thermal power stations, cement factories, other mines etc.

1.13 Administration and Organizations:-

The adjoining areas included in this Plan consist of three Territorial Divisions and three divisions of Forest Development Corporation of Maharashtra. The territorial divisions are under the Chief Conservator of Forests (Territorial), Chandrapur Circle and the FDCM divisions' area under the General Manager, North Chandrapur Region FDCM. Administrative units of each division are as follows:-

Sr.No.	Division	ACF's	Ranges	Rounds	Beats
1	Bramhapuri Division	5	6	21	92
2	Central Chandra Forest Division	3	7	23	95
3	Chandrapur Forest Division	2	5	17	65
4	West Chanda FDCM Division	2	4	13	23
5	Central Chanda FDCM Division	2	4	16	33
6	Bramhapuri FDCM Division	2	5	9	18

CHAPTER – 2
STATUS OF TIGER AND CO – PREDATORS

2.1 Distribution and Abundance:-

The major predator “Tiger” is distributed almost all over the adjoining area. There may be seasonal variation depending upon the presence of water and prey species. Panthers and Wild Dogs are co-predators of Tigers found in this area. Distribution and abundance status of Tigers and its Co- predators is as under:

Distribution of Tiger and Co-predators as per 2012 estimation

Sr. No.	Division	No. of Tigers	No. of Panthers
1	Bramhapuri (T)	22	25
2	Central Chandra (T)	10	9
3	Chandrapur (T)	6	12
4	West Chanda (FDCM)	3	5
5	Central Chanda (FDCM)	7	1
6	Bramhapuri (FDCM)	10	5

Map showing presence of Tiger in Chandrapur district is enclosed as Map No. 2.

2.2 Prey-Predator Relationships

The prey base is satisfactory. The prey consist of Cheetal, Sambar, Barking deer, Blue bull, Four Horned Antelopes, Bison, Wild boars, Langur.

The food habit study indicates that large prey like Sambar and Gaur contributes about 70% of Tiger diet. Medium sized prey like Cheetal and wild Boar contributes 20% and remaining prey species contributes about 10% of the diet. Sambar, Cheetal and Wild Boar forms important prey for all the three top predators. Tiger prefers large prey like Sambar and Blue Bull while Cheetal is preferred by Panthers and Wild Dogs.

The systematic assessments of prey predator biomass have not been done in the adjoining areas, so actual ratio and relationship can not be quantified.

2.3 Assessment of Threats

2.3.1 Poaching:-

The hunting culture of tribals in the remote areas is responsible for depletion of prey base. The poaching of carnivores is rare but retaliation killing of big cats by poisoning the cattle kills is common. Traditional hunting by tribals during 'Pola' period (no work days during rainy season) is common in remote areas. The Naxalite threat in some areas also makes management difficult. Organized poaching by Baheliya community can not be ruled out.

The following table shows territorial division wise number of wildlife offences booked:-

Year	Chandrapur	Bramhapuri	Central Chanda	Total	Remarks
2004-05	7	4	16	27	3 Leopards died of poisoning in Chandrapur division
2005-06	4	7	25	36	3 Tiger (Natural) death in Each one in Chandrapur/ Bramhapuri/ Central Chanda dn. & 3 Leopard (Natural/ Snake Poison/ Poaching) death (1) Bramhapuri and (2) Central Chanda dn.
2006-07	2	2	21	25	2 Case of Tiger (Poison/Accident) death in Central chanda & Chandrapur division & 1 Leopard killed by Electrocutation in Central Chanda dn.
2007-08	9	9	19	37	1 case of Tiger killed by Forest staff because of dangerous to human being. & 8 cases of Leopard (Natural/ Accident) death (1) Chandrapur, (6) Bramhapuri, (1) Central Chanda division
2008-09	39	21	15	75	1 case of Tiger Natural death in Bramhapuri division & 9 Leopard (Natural/Accidental) deaths (2) Chandrapur, (6) Bramhapuri and (1) Central Chanda dn.
2009-10	42	39	9	90	3 Tiger (Accident/Fighting with other animals) death in Chandrapur/Bramhapuri dn. & 4 Leopard (Natural/Accidental) death (3) Bramhapuri and (1) Central Chanda dn.
2010-11	31	28	25	84	3 Tiger (Fighting) death in (2) Chandrapur/(1) Bramhapuri dn. & 6 Leopard (Natural/Accidental/ Electrocutation/fighting) death (4) Chandrapur, (1) Bramhapuri and (1) Central Chanda dn
2011-12	24	23	29	76	3 Tiger (Natural/Electrocutation/ Accidental) death in (1) Chandrapur/(2) Bramhapuri dn. & 14 Leopard (Natural/Accidental/ fighting/ Electrocutation) death (8) Chandrapur, (6) Bramhapuri.
2012-13	32	24	32	88	3 Tiger (Natural/Fighting) death in (2) Bramhapuri (1) Central Chanda dn. & 7 Leopard (Natural/Accidental/fighting) death (4) Chandrapur, (2) Bramhapuri (1) Central Chanda dn.
2013-14	34	7	22	63	1 case of Tiger Accidental death in Chandrapur division & 5 Leopard (Natural/Accidental/fighting) deaths (3) Chandrapur, (2) Bramhapuri dn.

2.3.2 Illicit cutting:-

The forest area in the landscape is surrounded on all sides by well populated villages. In spite of regular patrolling by the field staff some incidences of illicit cutting are reported wherein villagers residing in the bordering areas resort to such activities to meet their need of small timber for making agricultural implements, pole, fire wood, etc.

2.3.3 Grazing:-

As number of village and cattle population is high, the grazing incidences are more than capacity of the forest. So the over grazing adversely affect the quality of habitat.

2.3.4 Forest Fires:-

Forest fires are common between the periods starting from late February to May end till the arrivals of monsoon. Repeated fires have resulted in poor establishment of natural regeneration and destruction of organic matter. Severe fire causes scorching that leads to unsound and hollow stems which further render them vulnerable to fungus and insect attack. Fire causes soil erosion indirectly by destroying vegetal soil cover. Fires are set by peoples with an interest to collect flowers, fruits, good Tendu leaves flush and grass.

2.3.5 Railways: This landscape is having major railway lines.

- 1) New Delhi – Chennai Railway line
- 2) Mumbai – Howdah Railway line
- 3) Gondia – Chanda Fort Railway line

Railway lines 1 and 2 are very busy lines and are major threat to wild animal moving in corridor. Railway line 3 passes through forest area and no of incidences of accidents of wildlife has taken place on this railway line in the past.

2.3.6 Roads: Major roads like, Nagpur–Chandrapur–Rajura–Asifabad, Chandrapur–Mul–Umred–Nagpur, Chandrapur–Aheri–Sironcha and other roads are having heavy traffic in day and night. Nagpur Chandrapur Rajura road is now 4 laned Road. Which has increased the threat?

2.3.7 There are no existing and proposed hydro electric projects in the corridor area.

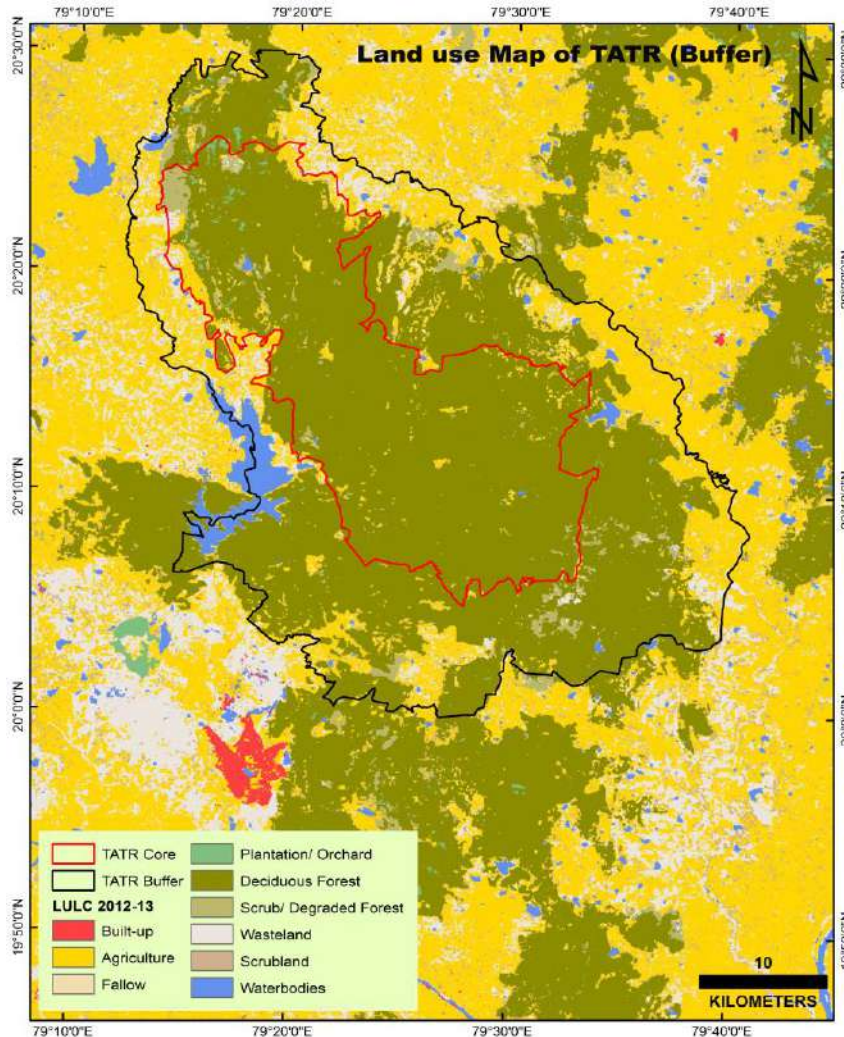
2.3.8 Major Dams: Major dams like Gosi khrud, Chargaon, Chandai and proposed dams like human dam break the corridors.

CHAPTER 3

LAND USE PATTERNS AND CONSERVATION- MANAGEMENT ISSUES

3.1 Land use classification:-

Majority of non forest land nearby forest area is agricultural land. This is mainly of Paddy, Cotton and Soyabin crop with Chilly grown at places. Land use map is attached.



3.2 Socio economic Profile of Villagers and Resource Dependency and Human-Wildlife Mutual Impacts :-

There are 768 villages in the territory of the Bramhapuri division, 445 in the territory of the Central Chanda division and 538 in the territory of the Chandrapur division. Out of 1751 villages in adjoining area landscape 995 villages are in the vicinity and adjoining to forest.

Dependency of rural communities on forest based resources is increasing day by day. All the villagers in the vicinity are dependent on forest for their domestic need of fuel, small timber and minor forest produce. Majority of villagers of villages in the vicinity of forest are also dependent on the forest for their livelihood earning.

Except few all the villagers are not happy with the presence of wild animals in their areas as the herbivores raid their crops and carnivores lift their cattle and even kill/ injure human beings.

3.3 Resource Dependence of Villages:-

The villages in nearby forest area are dependent on forest resource like firewood, grass for their day to day need. Livelihood of some households depends on forest resources like. Bamboo, firewood, Tendu leaves, Moha flowers etc.

3.4 Human wildlife conflicts:-

At present the human and wild life conflict is at its top in this area. The crop raiding by Wild boars, Nilgai are common in all villages. The cattle killing by Tigers and Leopard is increasing day by day due to increased number of cattle and unabated grazing in all part of forest area. The killing of human being by Tiger/ Leopard has multiplied the human wild life conflict.

Data showing incidences of Human injuries / death and cattle killed by Tiger and Panther and compensation paid

Sr. No.	Year	Human Death		Human Injury		Cattle kills	
		No. of Cases	Compensation paid in Rs	No. of Cases	Compensation paid in Rs	No. of Cases	Compensation paid Rs
Bramhapuri Division							
1	2010-11	5	1000000	16	297573	562	2586177
2	2011-12	5	1000000	7	117238	506	2778325
Central Chanda Division							
1	2010-11	2	400000	64	677000	282	1752000
2	2011-12	0	0	35	938000	212	1554000
Chandrapur Division							
1	2010-11	6	1200000	82		608	
2	2011-12	0	0	27		487	
Bramhapuri FDCM Division							
1	2010-11	0	0	0	0	41	247650
2	2011-12	0	0	2	9829	59	418400
Central Chanda FDCM Division							
1	2010-11	0	0	1	50000	98	530125
2	2011-12	0	0	1	12000	99	500900
West Chanda FDCM Division							
1	2010-11	0	0	0	0	19	175152
2	2011-12	0	0	0	0	37	229825

3.5 Assessment of Inputs of Line Agencies/ Other Departments

Though line agencies/other department are having many schemes for livelihood provisions, natural resource depending reduction schemes but they are not integrated and so effects of such schemes are not visible. Now Government of Maharashtra, vide Government Circular No. FDM-2011/C.N.100/F-2, dated 22.12.2011 has instructed all agencies/ department of State Government to integrate their rural development programmes in the villages situated in the forest.

PART B: - THE PROPOSED MANAGEMENT
CHAPTER – 4
VISION, GOALS, OBJECTIVES AND PROBLEMS

4.1 Vision:

To strengthen the linkages/corridor between the source population of Tigers of Tadoba Andhari Tiger Reserve and other Tiger bearing areas in the landscape.

4.2 Management Goals:

- Management of corridors and adjoining area to maintain connectivity to other Tiger bearing areas for ensuring gene flow as an ecological requirement for long term survival of the species.
- Habitat development of the corridor/ adjoining area for easy movement and dispersal of the wild animals.

4.3 Management Objectives:

- Suitable modification in the existing management practices so as to upgrade and maintain the ecological status of the connectivity.
- Implementation of co-existence agenda with a focus on the wildlife habitat parameters and the livelihoods/developmental needs of the local communities.
- Involvement of local communities, line agencies and other stakeholders for management of such areas.

4.4 Problems in Achieving Objectives:

- High level of biotic interference in the area is a big management challenge.
- Lack of an interdepartmental coordination agency may be a major problem in management of corridor.
- Some of the forest areas in the district are highly degraded.

4.5 Strengths-Weaknesses-Opportunities-Threats (SWOT) Analysis

Strengths :-

- There is good vegetation in around 80% area of adjoining landscape.
- Many existing water bodies is a strength.
- Presence of fairly good wild life population with breeding tigress in adjoining landscape.

Weaknesses:-

- Fragmentation due to lack of vegetation in some area of adjoining landscape is biggest weakness.
- Lack of good grassland is major weakness of the adjoining landscape.
- A corridor break of approximately 7 km is noticed between Central Chanda Division and Chaprala Wildlife Sanctuary. Effort needs to be made to build up this corridor to have continuity to the southernmost dense forests of Gadchiroli Circle.
- Activities of mining for coal and lime stone and existence of cement factories, paper mill etc. put lot of pressure on natural resources which are being obtained from forest land.
- New Delhi-Chennai and Chanda Fort-Gondia railway track passing through the Division makes available faster movement for poachers.
- Busy broad tar roads viz. Chandrapur to Asifabad, Chandrapur to Adilabad, Chandrapur to Aheri, Nagpur to Chandrapur, Chandrapur to Gadchiroli etc. passing through the forest areas are cause of fragmentation for forest resulting in cases of accident of wildlife crossing the road.
- Very little budgetary provision for wildlife management in territorial/ FDCM divisions in adjoining landscape.

Opportunities:-

- Large chunk of Reserve Forest area is a good opportunity to restore the traditional corridor and make suitable the adjoining landscape for dispersal of wild animal including Tiger.
- Good public sentiment to protect the Tiger can be a opportunity which will help in removing the existing weaknesses.

Threats:-

- Railway lines, roads and electric lines passing through the corridor is a big threat.
- Poaching of Wild animals in corridor is a challenging threat.
- Increased naxal activities are posing threat to forest and wildlife management.
- Upcoming mining industries are also posing threat to the wildlife.
- Electric lines are the threat to the wildlife.
- There are several bottle necks identified in TATR to Bor Tiger Reserve, TATR to Umred-Karandla Wildlife Sanctuary, TATR to Navegaon-Nagzira Tiger Reserve, TATR to Tipeshwar Wildlife Sanctuary and TATR to Kawal Wildlife Sanctuary. These are major threats to the dispersal of wildlife from source population.

CHAPTER 5

MANAGEMENT STRATEGIES

5.1 Delineations of Corridors and other habitat used by Tigers and co-predators

The Buffer area has contiguity with forests of Bramhapuri and Chandrapur Forests Divisions. Beyond this the corridor exists to forests of Nagpur, Bhandara and Gondia Divisions through Wadsa Forest Division. The Corridors also exists to Central Chanda, Allapalli, Sironcha and Bhamragad Forests Divisions. The corridor exists to Chaprala and Bhamragad Wildlife Sanctuaries. This corridor extends to Indrawati Tiger Project in Chhattisgad State and also to forests of Andhra Pradesh State in the South. The corridor is broken at some places.

Actual evaluation and delineations of above corridors has not been done as detailed systematic long term studies were not done. A project titled “**Long term monitoring of Tiger, Co-predators and prey species in Tadoba-Andhari Tiger Reserve and adjoining landscape**” will be implemented by Wildlife Institute of India [funded by NTCA (75%) and State Government (25%)] from 2013-14 and will be continued up to 5 years and can further extend up to 10 year. This scientific research project will give sufficient data for delineations of corridor.

Wildlife Conservation Trust, Mumbai and Wildlife Trust of India, Noida have studied the corridors connecting Tadoba Andhari Tiger Reserve the source population, which is very important therefore is incorporated as below:

Background:-

Tadoba-Andhari Tiger Reserve (TATR) and its immediate surroundings (buffer zone and Brahmapuri division) forms an important source population in the larger central Indian landscape and the area with 69 tigers (Jhala *et al*, 2011) forms the biggest population of tiger in the landscape (2nd All India Tiger Estimation) (Jhala *et al*, 2011).

As per the Wildlife (Protection) Act, 1972, corridors for dispersal of tigers are defined as “*ecologically compatible land uses in the tiger reserve and areas linking one protected area or tiger reserve with another for addressing the livelihood*”

concerns of local people, so as to provide dispersal habitats and corridors for spill over population of wild animals from the designated core areas of tiger reserves or from tiger breeding habitats within other protected areas”.

The following Notes and accompanying Maps and Excel Tables identify and list down the forest compartments that form corridors connecting TATR to other tiger reserves (Kawal, Bor, Melghat and Navegaon-Nagzira) and adjoining wildlife sanctuaries (Umred Karhandla and Tipeswar).

Methodology:-

As per the guidelines for preparation of the Tiger Conservation Plan (TCP) and its supplement (Part C “For the Corridor”) (Document number NTCA/01/07) WCT have delineated the corridors at forest compartment level from TATR to other tiger reserves and wildlife sanctuaries.

WCT have taken the following data to produce the corridor delineation maps:

- a) Compartment level Maps
- b) Macro level delineation of corridors (Least Cost Paths) as per 2010 country level tiger assessment (All India Tiger Estimation, 2010)
- c) Vectorised forest cover map from Forest Survey of India converted from geo-referenced raster images with pixel resolution of 24 meters
- d) Results from the Occupancy surveys conducted by the Wildlife Trust of India (WTI)
- e) Results from the Genetic connectivity study by the Wildlife Conservation Trust (WCT)

Genetic connectivity:-

A study was conducted by WCT to assess connectivity among tiger populations at a finer scale and evaluate the importance of forest patches (newly declared protected areas) in parts of central India, especially the Greater Tadoba Landscape (GTL).

Non-invasive sampling of tiger DNA was carried out by collecting scats from TATR and its satellite tiger populations in protected areas such as Pench National Park, Mansinghdeo, Bor, New Bor, Tipeswar, Umred-Karhandla and Chaprala Wildlife Sanctuaries and territorial forest divisions such as Bramhapuri and South Chanda.

The identification of different populations, genetic structure and assignment tests were based on 14 polymorphic microsatellite marker data of 104 individual tigers. The assignment tests shows evidence for frequent dispersal of individuals in this landscape and provides insight to the importance of presence of intervening forest patches / corridors and the network of newly declared satellite PAs surrounding tiger-source populations. The genetic assignment results show total of 19 dispersal events, of which eight were between Bramhapuri (BRM) and TATR. Although BRM and TATR are considered as single population, we assigned BRM as separate population to understand the local dynamics at a finer scale. Single sample from Nawegaon was assigned to BMR, indicating movement from BMR to Nawegaon. Similarly, there is tiger movement between Tipeshwar-Kanhargaon-TATR and between Bor-TATR.

Assignment tests between GTL and other PAs like Pench, Nagzira and Melghat suggests that there is connectivity between Umred Karhandla-Nagzira; Bor–Melghat and Pench -Melghat.

NOTE:-

As per the supplement to NTCA technical note No. NTCA/01/07 (Guidance document for preparation of tiger conservation plan) micro level ground truthing using transects for spatial presence / abundance of flora and fauna; comparison of wild animal species distribution with reference to nearest PA; profiling of micro watersheds; natural watercourses and unique topographical features is yet to be added to the current mapping exercise.

CORRIDOR 1:-

Tadoba Andhari Tiger Reserve to Bor Tiger Reserve (Bor, New Bor and Extended New Bor Wildlife Sanctuaries)

Please see Map 1 accompanying this document and Compartment list for Corridor 1 (TB) for a list of the compartments comprising this corridor. There are four gaps in this corridor, details of which are given below:

Gap 1(Gap TB1) : The first gap / disruption to the north of TATR is between the Aalesur Beat of Nagpur Division and Salebhatti Beat of Nagpur Division. The area between these two beats, Aalesur and Salebhatti, is comprised of four compartments (Compartment 377 and 378 of Bhis Beat in Chimur Range, Brahmapuri Division, two

other Compartment for which compartment numbers are not available but they fall under FDCM Brahmapuri Division as per data handed over to WCT for corridor delineation).

Action areas for Gap TB1:

- 1) There are two gaps due to this bottleneck/disruption in this area and they measure a distance of 2 km and 0.4 km respectively.
- 2) The two compartments of FDCM Brahmapuri need to be identified by their compartment number and included in the corridor map.
- 3) This bottleneck also has other land use, most likely not under the management of Forest Department. Land use in this area needs to be ground truthed and appropriate mitigation measures need to be put in place.

Gap 2 (Gap TB2): The second gap is between Sirsi Beat, Nagpur Division and Sukli Beat, Nagpur Division. The gap area is comprised of Nandra West Beat, Nagpur Division in which a lake is present. The presence of the lake has a positive impact on tiger dispersal.

Action Areas for Gap TB2:

- 1) The gap is approximately 7.4 km in Nandra West Beat, Nagpur division.
- 2) The land use in Nandra West Beat, Nagpur Division needs to be ground truthed and appropriate mitigation measures need to be put in place.

Gap 3 (Gap TB3): The third gap is between Chargaon Beat, Butibori Range, Nagpur Division and Sawali Beat, Hingna Range, Nagpur Division.

Action Areas for Gap TB3:

- 1) The total gap is approximately 23 km with the presence of a lake and two compartments (Compartment 311 of Junapani Beat, Butibori Range and Compartment 312, Butibori Beat, Butibori Range).
- 2) It is important to note that this area has been used by a dispersing tiger in August 2012, which was found near Butibori area and subsequently moved on to the Chargaon Beat.
- 3) The land use needs to be ground truthed and appropriate mitigation measures need to be put in place.

Gap 4 (Gap TB4): This gap is between the Pitichuha Beat, Butibori Range, Nagpur Division and Pimpaldhara Beat, Hingna Range, Nagpur Division.

Action Areas for Gap TB4:

- 1) The total gap is approximately 25 km but there are two forest compartments Compartment 309, Sukli Beat, Butibori Range and Compartment 310, Sukli Beat, Butibori Range.
- 2) The land use needs to be ground truthed and appropriate mitigation measures need to be put in place.

NOTE:-

Additional data in the form of Compartment boundaries for Nagpur division are required as the data handed over to WCT comprised of only beat boundaries.

Bottleneck 1: This area is a bottleneck as the total corridor width in this area is 1.5 km. This comprises of the following five compartments

- Compartment 371, Beat Chimur, Range Chimur, Brahmapuri Division
- Compartment 360, Beat Chimur, Range Chimur, Brahmapuri Division
- Compartment 357, Beat Chimur, Range Chimur, Brahmapuri Division
- Compartment 15, Beat Khadsangi, Range Chimur, Brahmapuri Division
- Compartment 27, Beat Chimur, Range Chimur, Brahmapuri Division

The State Highway No. 233 also passes through this corridor and appropriate mitigation measures need to put in place here, especially when this road may come up for expansion. A male tiger BRM-T-13 has been found in this area in year 2013 by a WTI research team. Tigers use this area regularly to move between Chimur Range, Brahmapuri and TATR Buffer.

National Highway 7 (Nagpur to Hyderabad) also bisects this corridor and the road here has been expanded. Appropriate mitigation measures need to be put in place by the NHAI. (**Appendix-II**)

CORRIDOR 2:-

Tadoba-Andhari Tiger Reserve to Umred Karhandla Wildlife Sanctuary

Please see Map 2 accompanying this document and Compartment list for Corridor 2 (TUK) for a list of the compartments comprising this corridor. This corridor is mostly unbroken with one narrow gap of about 200 meters which is mostly a digitising error (needs to be verified) and therefore it has been classified as a

bottleneck. The entire corridor has tiger presence as determined by the occupancy study carried out by WTI. The entire corridor needs to be ground truthed for encroachments

Bottleneck 1: (TUK 1): The first bottleneck in this corridor is of a width of 627 meters in compartment 73, Beat Girgaon, Talodhi Range, Division Brahmapuri and Compartment No. 234, Navargaon Beat, Sindewahi Range, Division Brahmapuri.

Bottleneck 2: (TUK 2): The second bottleneck in this corridor is of a width of 860 meters in compartment No. 70, Kachepar Beat, Talodhi Range, Brahmapuri Division and Compt. No. 38, Kajalsar Beat, Talodhi Range, Brahmapuri Division.

Bottleneck 3: (TUK 3): The third bottleneck in this corridor is of a width of 870 meters in compartment no. 494, Rengatur Beat Nagbhid Range, Brahmapuri Division. The state highway from Nagpur to Sindewahi/Nagbhid passes through this corridor and appropriate mitigation measures need to be put in place.

Bottleneck 4 (TUK 4): The fourth bottleneck in this corridor is of width of 2 km in compartment no. 324, Nisti Beat, Pauni Range, Bhandara Division. There is some gap in forest cover due to lake backwaters in Nisti beat where ground truthing for land ownership needs to be done. A highway from Nilaj to Pauni also cuts through this corridor and appropriate mitigation measures need to be put in place. (**Appendix–III**)

CORRIDOR 3:-

Tadoba-Andhari Tiger Reserve to Navegaon-Nagzira Tiger Reserve

Please see Map 3 accompanying this document and Compartment list for Corridor 3 (TN) for a list of the compartments comprising this corridor.

The following two bottlenecks (Bottlenecks 1 and 2) are common with the Corridor 2.

Bottleneck 1 (TUK 1): The first bottleneck in this corridor is of a width of 627 meters in compartment 73, Beat Girgaon, Talodhi Range, Division Brahmapuri and Compartment No. 234, Navargaon Beat, Sindewahi Range, Division Brahmapuri.

Bottleneck 2 (TUK 2): The second bottleneck in this corridor is of a width of 860 meters in compartment No. 70, Kachepar Beat, Talodhi Range, Brahmapuri Division and Compartment No. 38, Kajalsar Beat, Talodhi Range, Brahmapuri Division.

Bottleneck 3 (TN1): The third bottleneck is of width of 1.8 km in compartment no. 635, Mindhala Beat, Nagbhid Range, Brahmapuri Division, and compartment no. 87, Mindhala Beat, Nagbhid Range, Brahmapuri Division. The Nagpur to Mul state highway passes through this corridor and appropriate mitigation measures need to be put in place as this corridor is heavily used by tigers.

Bottleneck 4 (TN2): The fourth bottleneck is of width 2.8 km between New Navegaon Wildlife Sanctuary and two adjoining compartments no. 545, Maramjob Beat, Deori Range and Compartment 1576, Sahakepar Beat, Sadak Arjuni Range. National Highway 6 passes through this area and is scheduled for expansion into a 4/6 lane expressway and appropriate mitigation measures need to be put in place.

Gaps / Disruptions

Gap 1 (Gap TN3): There is a 1.6 km gap between Compartment no. 555, Duggipar Beat, Sadak Arjuni Range, Gondiya Division and compartment no. 554, Bamhni Beat, Sadak Arjuni Range, Gondiya Division. Land use and ownership needs to be ground truthed and encroachments assessed to plan appropriate mitigation measures. National Highway 6 passes through this area and is scheduled for expansion into a 4/6 lane expressway and appropriate mitigation measures need to be put in place.

Gap 2 (Gap TN4): This gap separates the entire South-Bramhapuri range (Bramhapuri Division) from the Porla range (Gadchiroli Division).

Gap 3 (Gap TN5): This gap separates Pauni range (Bhandara Division) and North-Bramhapuri range (Bramhapuri Division) from Lakhandur range (Bhandara Division) and ArjuniMorgaon range (Gondia Division).

Gap 4 (Gap TN6): This is the third disconnected zone between Lakhandur range (Bhandara Division), Arjuni Morgaon range (Gondia Division) and Adyal range (Bhandara Division).

Gap 5 (Gap TN7): This gap exists between Adyal range (Bhandara Div.) and Koka WLS.

There are four major gaps (Gap 2,3,4&5) where forest connectivity is severely affected and need immediate attention. Of these, two are around the river Wainganga. Vast stretch of forestland has been diverted for the construction of the Gosekhurd irrigation canals. This canal starts from the Gosekhurd dam on the *Waingangā* river

near the Umred-Karhandla WLS and passes through the forest bifurcating the Bramhapuri division into three fragments. As the canal reaches Bramhapuri it splits into two, the Right Bank Canal (RBC) and the Left Bank Canal (LBC) both running in the north-south direction through the forest. These canals are deep with steep concrete walls which is a death trap for wild animals. There has been already a case of tiger getting trapped along the canal in addition to several other animal casualties. Safe crossing-paths (at least 30 meter wide) should be created at regular intervals all along these canal sections that fall in the corridor, for safe passage of wild animals. These over-passes should be sufficiently wide (at least 30 meter wide) for animals to be use them without inhibitions. Detailed maps of the Gosekhurd Canal system are required to work out necessary, compartment-wise mitigation measures.

Roads and Railways: With several villages being connected with metalled road network, there has been an increase in vehicular traffic even in the remote forest areas leading to regular road-kills of wild animals. Speed breakers and signboards on roads passing through areas with high tiger and tiger prey occupancy will help create awareness and reduce mortalities, but in future with increasing traffic, the only viable solution for mitigating the negative impact of roads is to build flyovers with sufficient height to allow both the vehicles and animals to pass safely. National Highway 6, State Highways 9 and 233 are roads with heavy traffic. They cut across vital forest linkages in this corridor. NH 6, which is proposed to be expanded cuts through the Nagzira-Navegaon corridor. SH 9 cuts the prime linkage of the TATR with Bramhapuri Division and SH 233 cuts the Bramhapuri–Umred Karhandla corridor. With increase in vehicular traffic and road-connectivity, roads like the Sindewahi-Pathri road and Sindewahi-Gunjewahi road will pose serious threat in the near future. Upgradation of narrow gauge railways to broad-gauge such as the Gondia-Chandrapur line will lead to increase in animal mortalities, as it will lead to increase in a) train frequency, b) train speed and c) number of bogies. Strict implementation of speed limits on trains while passing through the forest areas will have to be implemented to reduce animal mortalities with coordinative of railway department regular meetings will held along with site inspection it necessary workshop for train staff and forest department will be organized.

Tadoba-Nawegaon-Nagzira corridor delineated by Wildlife Institute of India. Data is collected and analysis of data is under progress. Report of WII will be treated as part of this plan in future. **(Appendix-IV)**

CORRIDOR 4:

Tadoba-Andhari Tiger Reserve to Kanhargaon to Tipeshwar Wildlife Sanctuary Please see Map 4 accompanying this document and Compartment list for Corridor 4 (TT) for a list of the compartments comprising this corridor.

Bottleneck 1 (TT1): This is a bottleneck with a width of 2 km between compartment no. D-447, Manora Beat, Ballarshah Range, Central Chanda Division.

Bottleneck 2 (TT2): This is a bottleneck with a width of 800 meters between compartment 367 of Chandrapur Buffer Range (Beat Haldi) and Compartment No. 519, Walni Beat, Chichpalli Range, Division Chandrapur. The Chandrapur-Mul Highway and the National Highway 7 pass through this corridor.

NH-7 separates Tipeshwar WLS from Patanbori Range and Pandharkawda Range of Pandharkawda Division in Maharashtra. One more area where the NH-7 bisects the TATR- Tipeshwar corridor is in the Telangana section area and is scheduled for expansion into a 4/6 lane expressway and appropriate mitigation measures need to be put in place in consultation with the SBWL, NBWL and NHAI.

Bottleneck 3 (TT3): Most of the areas falling within Wirur Range and Wansadi Range of Central Chanda division are along a narrow ridgeline and at some places as thin as 1 km.

In the area joining the Central Chanda Division and the FDCM compartments under the proposed Kanhargaon WLS, there is a state highway with very heavy traffic passing from Ballarshah to Kothari to Gondpipri. Appropriate mitigation measures along this crucial linkage need to be put in place.

Gap / Disruptions:

Gap 1 (Gap TT4): The first disruption is between Wirur Range, Central Chanda Division and Dhaba Range and FDCM-Central Chanda Division, which falls under the proposed Kanhargaon WLS. Along the river Wardha, Rajura Range the area falling under the Central Chanda Division is completely isolated from the proposed Kanhargaon WLS due to human settlements and agricultural fields along the river.

Gap 2 (Gap TT5): This gap is between Tejapur Beat, Mukutban Range-Pandharkawda Division and Jambuldhara and Mandwa Beats, Wansadi Range-Central Chanda Division.

Gap 3 (Gap TT6): This gap is between Hirapur Beat, Mukutban Range-Pandharkawda Division and Durghadi and Rupapeth Beats, Wansadi Range-Central Chanda Division. There is a very narrow area under the Pandharkawda Division but shows tiger presence and therefore restoration plans in this area are crucial.

NOTE:

Additional data requirement for inter-state corridors. The corridor from TATR to Kawal Tiger Reserve (Telangana) and Indravati Tiger Reserve (Chhattisgarh) have been identified partially at compartment level, within the state boundaries of Maharashtra. Maps at compartment level for the areas falling within Telangana and Chhattisgarh will be needed so that delineation of corridors on their side can be done systematically. (Appendix-V)

CORRIDOR 5:

Tadoba-Indravati corridor as delineated by Wildlife Institute of India ground truthing is done by visiting all the villages in the corridors and GPS readings were taken and chart is prepared which is enclosed. (Appendix-VI) Village area is the bottleneck for dispersal of the tiger as almost all the villages fall in the corridor.

5.2 Prioritization of Linkages

After the study of Wildlife Institute of India linkages will be confirmed and in next plan prioritization can be possible. During this Plan period, wildlife management inputs will be provided for all the areas of Chandrapur district.

5.3 Development of integrated land use approach for the area commensurate with Tiger conservation and co existence agenda.

Most of the land is under Reserved and Protected forests. Some areas are also Unclassed Forests and some under Revenue Department as 'Khadak pahad' or 'Zudapi jungle'. The agriculture areas forming the part of broken corridor are of immense importance and the agricultural practices in these areas may have to be suitably modified to help movement of wild animals. Social Forestry Department can tackle other Govt. lands in this area.

5.4 Wild life management in forest areas of the territorial/ FDCM divisions.

The management of the forest of territorial divisions are done as per respective division's Working Plan and of FDCM divisions are done as per respective division's Management Plan.

Sr. No.	Name of Division	Working Plan/ Management Plan written by	Period
1	Bramhapuri (T)	Shri. T.K. Choube	2005-06 to 2014-15
2	Central Chandra (T)	Shri. R.S. Yadav & Shri. G.P. Garad	2004-05 to 2013-14
3	Chandrapur (T)	Dr. S.S. Shrivastava	2002-03 to 2011-12
4	West Chanda (FDCM)	Smt. Nina Khandekar	2006-07 to 2015-16
5	Central Chanda (FDCM)	Shri. G.S. Balki	2006-07 to 2015-16
6	Bramhapuri (FDCM)	Shri. H.N. Bhosle	2005-06 to 2014-15

The provisions for wild life management have been provided in each working Plan/ Management Plan under Wildlife (Overlapping) Working Circle as per National Working Plan code June 2004, issued by Ministry of Environment & Forests, New Delhi.

The general prescription given under Wildlife (Overlapping) Working Circle in the Working Plan/ Management Plan are as follows :-

- Creation of awareness among the young generation about the importance of wildlife with the help of school teachers.
- Motivating general people for conservation of wildlife.
- Listing of wild animals along with their local names found in the area of plan.
- Strict enforcement of Wildlife (Protection) Act-1972 and rewarding staff and informers for controlling wildlife offences.
- Villagers and Gram Panchayat will be motivated for Forest and Wildlife Protection.
- While preparing a treatment of a coupe for felling in any working circle potential habitat of wild animals and existing waterholes will be identified and marked on the treatment map.
- Marking of dead trees in any felling coupe will be done only if their number is more than 2 per hectare. These trees (snags) will be required for nesting and resting of the wild animals.

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- During harvesting some unsound and hollow logs of commercially low utility not exceeding 3 per hectare will be left in the forest to serve as shelter for wild animals.
 - Suitable locations will be identified for construction of waterhole for wild animals.
 - The labour camps and transit depot will be established away from the areas having high density of wild animals.

5.5 Zone Plan Management Strategies (Forestry, Protection, Habitat Management)

The strategies proposed in this part of plan are briefly discussed in the following paragraphs. As mentioned earlier these will be in consonance with the prescriptions laid down in the Working Plan and if needed suitable modifications to be done.

5.5.1 Forestry:-

The forestry working in the adjoining area included in this plan will be as per working plan/ working scheme with following generic prescription to fine tune the forestry operation. An overarching safeguard should be provided for tree fellings/ thinings under various systems of silviculture as indicated below;

- Clear felling resulting in concentrated regeneration should be avoided.
- A high forest system with diffused regeneration (selection/ group selection etc.) or accessory system (improvement felling etc.) should be allowed.
- The status of regeneration should be used as an overarching condition for permitting tree felling. An area with unestablished regeneration should be avoided for concentrated fellings.
- The tree removal/ thinning can be permitted in a selective manner so that the canopy cover does not fall below 40% in winter months. However, if the marking prescribed earlier for the area resulted in lesser canopy opening, then the same should be adopted.
- The timber exploitation activities in coups should be staggered.
- The plantation activity should be staggered to safeguard from induced edge effect, especially near human settlements.
- Only species indigenous to the area should be taken up for plantation.

5.5.2 Protection:-

This is the most important activity as the existing wildlife and their habitat needs to be protected for posterity. Various factors influence the protection activities and under the changed conditions it is one of the most challenging tasks. The various measures suggested in this regard are as under:-

5.5.2(a) Check Naka:-

The large patches of forest land are traversed by cart roads constructed for various purposes e.g. for coupe working, plantation activities etc. These roads are easy portal of entry for poachers. Hence, entry into such forest areas with Tiger population needs to be controlled by erecting check *naka* and putting up a barrier. One check naka will be manned by 3 van majoors who will be doing their duties by rotation. The list of proposed check *nakas* is appended at **Appendix–VII**.

5.5.2(b) Protection Hut :-

Some of the forest areas are situated far off from human habitation. There is no camping facility in such remote areas. Sites have been identified where camping of forest staff will help in according better protection to forests & wildlife. The continuous presence of patrolling party at Protection Hut has a deterrent effect on poachers. This concept has been in practice in many Protected Areas including Tiger Reserves and has given very good results. The list of proposed protection huts is appended at **Appendix–VIII**.

5.5.2(c) Watch Tower:-

Watch towers are required to be constructed so that areas can be better protected from fire during summer. The vision from elevated platforms will provide view of large areas and earlier detection of fire will help in taking quick remedial actions. The watch towers can also be useful for observing the activities of wild animals. The list of proposed watch tower is appended at **Appendix–IX**.

5.5.2(d) Wireless Maintenance :-

The wireless facility already exists in Chandrapur division, Bramhapuri division, West Chanda FDCM division, Central Chanda FDCM division and Bramhapuri FDCM division, it needs to be strengthened. The efforts are on to install wireless facility in Central Chanda Forest Division. Many of the forest areas do not

have coverage of mobile phones, hence, wireless communication plays important role in wildlife protection in remote areas. Hence, adequate funds need to be made available for maintenance of the wireless network.

5.5.2(e) Hiring of vehicles :-

At present the vehicles have been provided to the officers of the level of Assistant Conservator of Forests only. Main protection measures are being implemented at Range level. The task is most challenging during 6 months from January to June. This is the season when the water level in various water holes starts receding and in the later part of summer it is limited to a very few water holes. As these water holes are frequented by the wild animals, better protection from poaching needs to be provided. Further, this being fire season, movement of forest staff helps in controlling the fire in a better way.

Hence, it is proposed to provide one vehicle to each Range. In initial years the vehicle will be hired for six months. During this plan period purchase of new four wheel vehicle will be done in phased manner.

5.5.2(f) Appointment of Temporary Labourers:-

The regular staff is engaged in various activities besides protection, such as plantation, exploitations, sales, tendu collection, constructions etc. Hence, in order to provide better protection to forest areas particularly during fire season, deployment of additional labourers is proposed. They will help in monitoring works, fire protection, 24 hours vigilance at water holes, tracking of important animals like Tigers etc. It is proposed to appoint a team of 20 labourers per Range for 6 months.

5.5.3 Habitat Management and restoration:-

The present habitat though good needs to be improved as much as possible. By better protection measures the shelter or cover will automatically improve. The other two important factors in Habitat Improvement are making available sufficient quantity of fodder and water. Following activities have been proposed in this respect :-

5.5.3.1 WATER AUGMENTATION:-

5.5.3.1(a) Deepening/ desilting of existing water holes :-

A survey of existing water hole should be done. All the existing water holes should be deepened/ desilted every 5 years depending on site eligibility, while deepening/desilting the approaches should be made proper so that wild animal can access the water hole. The work of deepening/desilting should be done just before rains. The list of existing water holes is enclosed at **Appendix-X**.

5.5.3.1(b) Creation of new water holes :-

New water holes should be created in the form of *nala plugs*, dug out ponds or small forest tanks. Site selected for new water holes should be deep inside the forest, where domestic cattle should not reach. The site should be selected on the basis of one water hole in 2.5 Sq.km. area.

5.5.3.1(c) Construction of temporary earthen bunds:-

Some *nalas* in the forest flow perennially but some *nalas* stops flowing after December/January. Small earthen bunds should be constructed across the *nalas* after December/January at suitable site where impermissible strata exist. These earthen structures should be constructed every year in the month of December/January before *nalas* stops flowing.

5.5.3.2 Meadow Development:-

It is very difficult to develop the meadow for wild herbivores and keep it free from grazing of cattle in the non protected area forest. But the meadow/grass lands are very essential constituent of habitat especially for animals like Spotted deers. Though the grass in plantations where grazing of cattle is prohibited serves as meadow, it is necessary to develop some grass land at secluded place deep inside the forest. The work can consist of selection of site with minimum number of trees, shrubs and good soil depth. The area should be well demarcated. All grasses e.g. Bhurbhusi grass, Broomgrass, Tarota, Parthenium, Bhutganja should be uprooted. All tree growth except fruit tree, browsable species tree and few big trees for shadow should be removed. The areas should be controlled burnt in month of December /January. The area without grasses should be ploughed and local grass species like Sheda, Pawanya should be broadcasted at the beginning of Monsoon. At least 5 ha of such area should be selected every year in each range.

5.5.4 Purchase of Equipments :-

For effective wildlife management the field units should be well equipped. Hence, they need to be provided with gadgets which are useful in day to day monitoring (e.g.GPS) or those required in case of eventuality (e.g. post mortem kit)

5.5.4(a) Purchase of Tranquilizing equipments :-

The adjoining area is prone to man animal conflict. Many times Tiger/ Panther sneak in to the village area and capturing the animal become necessary every time it is not possible to capture the animal in cages, so each division of adjoining area needs to possess tranquilizing gun with accessories and drugs. Purchase of tranquilizing gun at least one per division is provided in the plan. Purchase of drugs every year is also provided in the plan.

5.5.4(b) GPS :-

This instrument is useful for daily monitoring of wildlife. The exact location of any event or sighting of wildlife can be recorded with this. Each Forest Guard needs to be provided with GPS. It is proposed to procure GPS for all beat guards during the plan period.

5.5.4(c) Camera Traps:-

These are useful for confirming the presence of wildlife as well as identification of particular animal and helps in monitoring works in a big way. It is proposed to implement NTCA phase-IV monitoring protocol in the adjoining area once in a year, so purchase of required camera traps are proposed.

5.5.4(d) Post-mortem Kits :-

In case of reported death of wild animal, post mortem has to be conducted at the earliest to ascertain the actual cause of death. Many a time, the veterinary doctor has to be taken to the site at odd hours or holidays. The post-mortem kit available with Department comes in handy under such conditions which save lot of time in going to the Veterinary units only for getting the kit. It is proposed to equip each Range office with this kit.

5.5.4(e) Purchase of cages :-

The adjoining area is prone to man animal conflict. Many times Tiger/ Panther/ Sloth bear sneak in to the village area and capturing the animal become necessary, so each division of adjoining area needs to possess a set of trap cage, transport cage and treatment cage the purchase of one set for each division is provided in the plan.

5.5.5 Training & Awareness Generation:-

Capacity building of the staff members plays important role in overall efficient management of any activity. Wildlife management is a specialized job and hence the staff needs to be imparted training in various aspects. The training in use of GPS/PDA, anti-poaching operations, wildlife crime, habitat enrichment techniques, eco-development initiatives and legal issues and tranquilizing needs to be imparted to grass root level staff. It is also desirable to arrange study/exposure tours of wildlife protected areas for the appraisal of good practices in that area.

At the same time, there is a need to increase the level of awareness about wildlife conservation amongst the people in general and those living in the vicinity of forest area in particular. The rise in man-wild animal conflict is a very sensitive issue and needs to be tackled very carefully. The members of all JFM Committees need to be sensitized on priority. For that, trainings, exposure visits, workshops need to be organized on regular basis. Once the rapport is developed between the field staff and villagers, the burden on the staff will be lowered considerably.

CHAPTER – 6

ECO DEVELOPMENT AND LIVELIHOODS

6.1 Constitution of Conservation Area Management Committee

To facilitate coordination and main streaming of biodiversity concern the JFM committees already existing at range level, division level and district level will be used for this purpose.

6.2 Formation of Eco development Committees and supporting institutional frameworks

As the adjoining area does not fall within category of wildlife protected area constitution of Eco Development Committees will not be possible. Existing JFM committees can be entrusted with the work of EDC's.

6.3 Livelihood Support Initiatives through village Micro plans.

- Village level micro plans already prepared for JFMC's can be suitably modified to incorporate activities of EDC's. This should include training for creation of value-added products of Bamboos and other local material viz. handicraft articles etc. So that more employment can be generated.
- Now a days man animal conflict issues has become sensitive as there is increase in Human injuries and deaths due to wild animals, livestock depredation by carnivores, crop depredation by wild ungulates. It is essential to provide timely compensation to the people who are put to loss. Even providing solar power fencing to field of villagers can be thought of.
- To minimize the dependence of villagers on the forest, some measures like supply of LPG connections, solar light panels, and improved *chullas* will be taken up.

6.4 Monitoring and Evaluation

Monitoring and evaluation of the activity is an important part of any plan for further improvement. The monitoring can be physical and qualitative. The monitoring and evaluation of the work carried out will be done by concerned Dy.CF/D.M. and should be reviewed by CCF (T)/G.M. (FDCM).

CHAPTER 7

TIGER POPULATION AND HABITAT ASSESSMENT

7.1 Day to Day Monitoring Protocol

It is difficult to report the happenings in the area on daily basis like protected area as the territorial staff has multifarious activities to be done. The territorial staff, however, can report daily happenings about wildlife like sighting of Tigers or kill and wildlife offences to respective divisions through concerned Range Forest Officers. These matters should also be written by the field staff in their day to day diaries submitted regularly to their concerned superiors.

7.2 Tiger Population Estimation Framework (Phase IV Protocol):-

Presently there is no regular population estimation of animals done by the territorial divisions. Even during the population estimation exercise done by Wildlife Institute of India (WLII), Dehra Dun the Tiger beats could not be identified though there is presence of Tigers in many areas. This estimation exercise will be done annually as Phase-IV monitoring protocol given by the NTCA and Wildlife Institute of India in 2012. The provision for purchase of camera trap and batteries are made in the plan.

7.3 Analysis and Reporting Framework and Periodicity.

The population estimation will be done annually and analyzed as per guidelines. It will be reported to Principal Chief Conservator of Forests (Wildlife) M.S. through concerned Chief Conservator of Forests (Territorial) and General Manager (FDCM).

CHAPTER 8

ORGANIZATION, ADMINISTRATION AND BUDGET

8.1 Eco Development Committee Coordination:-

Eco development committee will report their suggestion/ recommendation through concerned R.F.O. to Dy. Conservator of Forests/Divisional Manager who will further submit the plan of activity and requirements of funds etc. to Chief Conservator Forests (Territorial)/ General Manger (FDCM) for sanction.

8.2 Staff deployment, Protection strategy and Linkages with Tiger cell and Buffer Zone:-

Field staff viz., R.F.Os, Foresters, Forest Guards, will work for the implementation of the Plan. Protection and habitat improvement works will be carried out by them.

At district level there are regular meetings of Tiger Cell. Remarkable happenings in the forest areas about poaching/ protection related issues can be taken up in Tiger Cell meetings. This will help in generating grass root level police support for the protection squads.

8.3 Schedule of Operations:-

The schedule of operations will be decided by the concerned Dy. Conservator of forest/ Divisional Manager considering availability of funds in consultation with respective Chief Conservator Forests (Territorial)/ General Manger (FDCM).

8.4 Source of Funding:-

The funds for salary of staff, general administration and protection, plantation, production works will be continued to receive from general state plan/non plan, District Development Scheme etc.

The funds for Special Works of Wildlife Management and Special Protection will be made available from NTCA (NTCA has made available Rs. 54.166 lakh for adjoining area during 2012-13 through F.D. TATR), MoEF Government of India

Scheme of Integrated Wildlife Management outside Protected Areas, CAMPA, Finance Commission etc. An Annual Plan of Operation (APO) for NTCA funds will be prepared in the month of February every year and submitted to NTCA through Field Director TATR. An Annual Plan of Operation for seeking funds from MoEF should also be prepared separately and submitted through Chief Conservator of Forest (T) and General Manager FDCM Ltd. The other work of wildlife conservation not covered under preceding two funding sources should be incorporated in their routine Annual Plan of Operation for CAMPA, Finance Commission, District Plan, State Plans etc.

8.5 Activity Budget:-

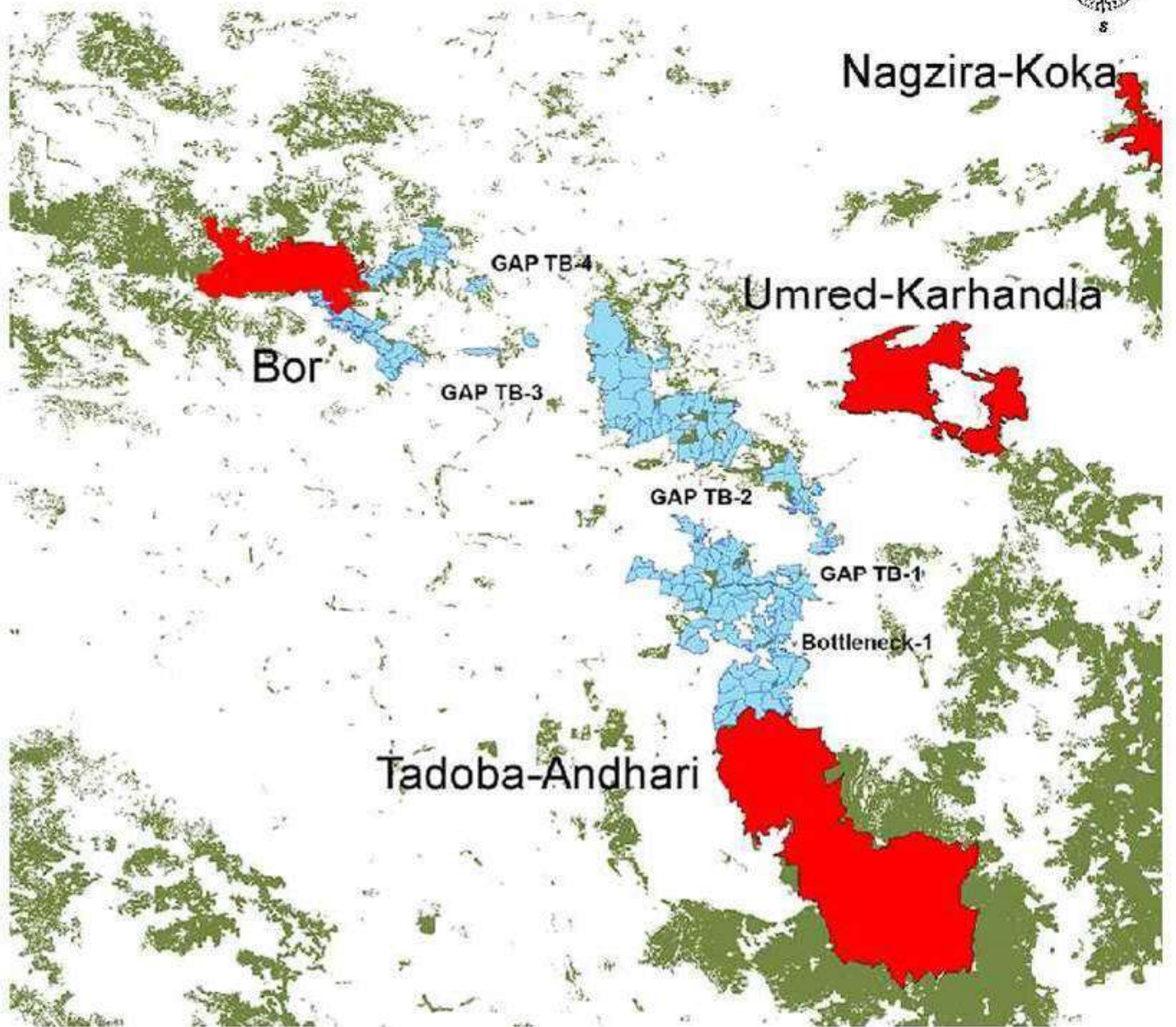
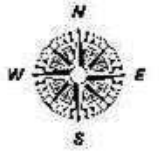
The budget for activities proposed in the plan is prepared on the basis of current rates. While preparing Annual Plan of Operation the rates of that year should be adopted. The activity budget is enclosed at **Appendix–XI**.

APPENDIX – I
STATEMENT SHOWING MAJOR WILD ANIMALS
AS PER THE LAST CENSUS (2011)
(Para No. 1.11)

Sr. No.	Species with Local Name	Division					
		Central Chanda (T)	Chandrapur (T)	Bramhapuri (T)	Central Chanda (FDCM)	West Chanda (FDCM)	Bramhapuri (FDCM)
1	2	3	4	5	6	7	8
1	Barking Deer	105	87	269	23	10	29
2	Chital	973	515	587	74	114	44
3	Sambar	76	113	186	21	41	30
4	Four Horned Antelope	1	2	NA	NA	NA	NA
5	Nilgai	192	214	273	5	46	13
6	Gaur	18	247	86	53	NA	13
7	Common Langur	853	984	2820	220	263	214
8	Sloth Bear	42	85	29	97	11	1
9	Wild Dog	1	78	155	12	9	32
10	Jackal	9	14	115	NA	2	NA
11	Wild Boar	943	688	1417	195	17	263
14	Porcupine	2	5	NA	NA	NA	NA
17	Tiger	10	6	18	4	3	10
18	Panther	9	12	19	NA	5	5

APPENDIX - II

MAP OF TADOBA - BOR CORRIDOR AND AREA STATEMENT



Tadoba – Bor

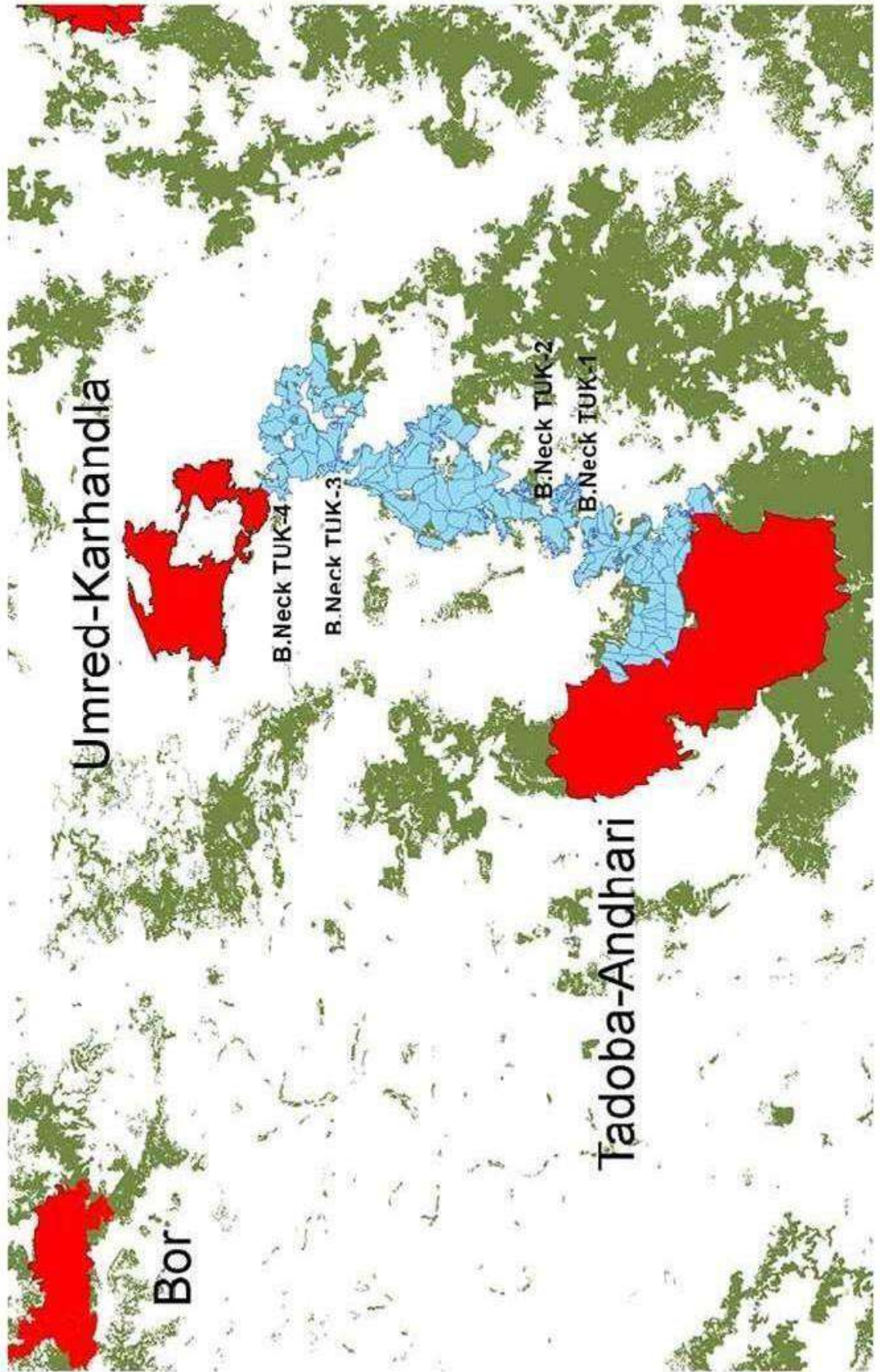
ID	Beat Name	Compt. Area	District	Division	Range	Round	Status	Compt. No
Bramhapuri								
110	Chimur	85.75	Chandrapur	Bramhpuri	Chimur	Chimur	PF	360
116	Gadgaon	347.08	Chandrapur	Bramhpuri	Chimur	Chimur	PF	372
119	Bhisi	114.80	Chandrapur	Bramhpuri	Chimur	Bhisi	PF	378
120	Bhisi	135.66	Chandrapur	Bramhpuri	Chimur	Bhisi	PF	377
192	Khandhala	296.22	Chandrapur	Bramhpuri	Chimur	Khadsangi	RF	6
193	Murpar	348.85	Chandrapur	Bramhpuri	Chimur	Murpar	RF	8
194	Minzari	473.50	Chandrapur	Bramhpuri	Chimur	Murpar	RF	10
195	Navegaon	306.75	Chandrapur	Bramhpuri	Chimur	Bhisi	RF	12
198	Gadgaon	333.46	Chandrapur	Bramhpuri	Chimur	Chimur	RF	28
199	Murpar	268.71	Chandrapur	Bramhpuri	Chimur	Murpar	RF	9
200	Bansuli	589.22	Chandrapur	Bramhpuri	Chimur	Murpar	RF	5
213	Nimdhela	300.68	Chandrapur	Bramhpuri	Chimur	Bothali	RF	20
214	Nimdhela	292.59	Chandrapur	Bramhpuri	Chimur	Bothali	RF	21
218	Talodhi	19.68	Chandrapur	Bramhpuri	Chimur	Chimur	RF	24
220	Chimur	61.05	Chandrapur	Bramhpuri	Chimur	Chimur	RF	27
225	Zari	594.08	Chandrapur	Bramhpuri	Chimur	Bothali	RF	18
226	Alianza	657.21	Chandrapur	Bramhpuri	Chimur	Chimur	RF	22
359	Amdi	590.83	Chandrapur	Bramhpuri	Chimur	Khadsangi	RF	1
550	Sonegaon	298.66	Chandrapur	Bramhpuri	Chimur	Khadsangi	RF	2
551	Khadsangi	401.05	Chandrapur	Bramhpuri	Chimur	Khadsangi	RF	14
561	Talodhi	337.91	Chandrapur	Bramhpuri	Chimur	Chimur	RF	23
562	Talodhi	120.60	Chandrapur	Bramhpuri	Chimur	Chimur	RF	26
563	Talodhi	191.01	Chandrapur	Bramhpuri	Chimur	Chimur	RF	17
565	Bothali	665.70	Chandrapur	Bramhpuri	Chimur	Bothali	RF	19
570	Khandhala	340.35	Chandrapur	Bramhpuri	Chimur	Khadsangi	RF	7
572	Bansuli	421.28	Chandrapur	Bramhpuri	Chimur	Murpar	RF	4
1485	Khadsangi	170.77	Chandrapur	Bramhpuri	Chimur	Khadsangi	RF	15
1593	Khadsangi	37.33	Chandrapur	Bramhpuri	Chimur	Khadsangi	PF	325
1594	Khadsangi	9.83	Chandrapur	Bramhpuri	Chimur	Khadsangi	PF	326
1598	Bansuli	53.97	Chandrapur	Bramhpuri	Chimur	Murpar	PF	336
1599	Murpar	140.48	Chandrapur	Bramhpuri	Chimur	Murpar	P.F.	348
1601	Chimur	27.95	Chandrapur	Bramhpuri	Chimur	Chimur	P.F.	355
1602	Chimur	39.51	Chandrapur	Bramhpuri	Chimur	Chimur	P.F.	357
1605	Chimur	127.61	Chandrapur	Bramhpuri	Chimur	Chimur	P.F.	368
1607	Chimur	253.15	Chandrapur	Bramhpuri	Chimur	Chimur	P.F.	371
1613	Alianza	166.53	Chandrapur	Bramhpuri	Chimur	Chimur	PF	390
1848	Minzari	141.24	Chandrapur	Bramhpuri	Chimur	Murpar	RF	13
1911	Talodhi	0.83	Chandrapur	Bramhpuri	Chimur	Chimur	PF	3P
Wardha								
24	Seldoh	272.09	Wardha	Wardha	Hingni	Kelzar	RF	275
78	Wadgaon	130.91	Wardha	Wardha	Hingni	Kelzar	RF	273
79	Seldoh	337.68	Wardha	Wardha	Hingni	Kelzar	RF	274
80	Wadgaon	252.11	Wardha	Wardha	Hingni	Kelzar	RF	271
81	Khadki	154.59	Wardha	Wardha	Hingni	Kelzar	RF	272
82	Khadki	207.70	Wardha	Wardha	Hingni	Kelzar	RF	270
83	Tadgaon East	320.20	Wardha	Wardha	Samudrapur	Mangrul	RF	325
84	Tavi	328.54	Wardha	Wardha	Samudrapur	Girad	RF	330
85	Mangrul	296.60	Wardha	Wardha	Samudrapur	Mangrul	RF	326
86	Mangrul	316.01	Wardha	Wardha	Samudrapur	Mangrul	RF	327
87	Tavi	248.99	Wardha	Wardha	Samudrapur	Girad	RF	329
88	Wanarchuwa	263.36	Wardha	Wardha	Samudrapur	Wanarchuwa	RF	328
89	Wanarchuwa	144.95	Wardha	Wardha	Samudrapur	anarchuwa	RF	320
90	Shivanfal	354.21	Wardha	Wardha	Samudrapur	Girad	RF	319

91	Shivanfal	154.56	Wardha	Wardha	Samudrapur	Girad	RF	318
92	Mohagaon	302.82	Wardha	Wardha	Samudrapur	Girad	RF	317
93	Tadgaon East	283.01	Wardha	Wardha	Samudrapur	Mangrul	RF	324
94	Tadgaon west	267.24	Wardha	Wardha	Samudrapur	Mangrul	RF	323
193	Tadgaon west	26.68	Wardha	Wardha	Samudrapur	Mangrul	RF	269A
388	Bori	219.47	Wardha	Wardha	Hingni	Hingni	PF	236/2
402	Bori	149.53	Wardha	Wardha	Hingni	Hingni	PF	245
403	Wanarvihira	97.01	Wardha	Wardha	Hingni	Hingni	PF	246/1
404	Wanarvihira	40.72	Wardha	Wardha	Hingni	Hingni	PF	246/2
405	Wanarvihira	22.15	Wardha	Wardha	Hingni	Hingni	PF	247/1
407	Wanarvihira	179.41	Wardha	Wardha	Hingni	Hingni	PF	248/1
409	Jungarh	122.51	Wardha	Wardha	Hingni	Kelzar	PF	249/1
416	Jungarh	80.18	Wardha	Wardha	Hingni	Kelzar	PF	252
417	Wadgaon	113.78	Wardha	Wardha	Hingni	Kelzar	PF	253
420	Seladoh	62.23	Wardha	Wardha	Hingni	Kelzar	PF	255/1
421	Seladoh	21.33	Wardha	Wardha	Hingni	Kelzar	PF	255/2
422	Khadki	89.96	Wardha	Wardha	Hingni	Kelzar	PF	256
423	Khadki	103.54	Wardha	Wardha	Hingni	Kelzar	PF	257
431	Mohgaon	207.79	Wardha	Wardha	Samudrapur	Girad	PF	262/1
Nagpur								
531	Urkudapar	215.73	Nagpur	Nagpur	South Umrer	Zamkoli	-	335
534	Nandra (East)	401.41	Nagpur	Nagpur	South Umrer	Chargaon	-	381
591	Degma (khu)	183.19	Nagpur	Nagpur	Hingna	Sawangi (Deoli)	-	304
592	Degma (bz)	273.01	Nagpur	Nagpur	Hingna	Sawangi (Deoli)	-	306
593	Degma (bz)	235.91	Nagpur	Nagpur	Hingna	Sawangi (Deoli)	-	307
594	Degma (bz)	184.39	Nagpur	Nagpur	Higna	Higna	-	308
595	Borgaon	184.85	Nagpur	Nagpur	Hingna	Sawangi (Deoli)	-	302
596	Borgaon	249.01	Nagpur	Nagpur	Hingna	Sawangi (Deoli)	-	301
597	Degma (khu)	185.68	Nagpur	Nagpur	Hingna	Sawangi (Deoli)	-	303
598	Kawdas	227.98	Nagpur	Nagpur	Hingna	Kawdas	-	305
622	Mandavghorad	213.55	Nagpur	Nagpur	Hingna	Sawangi (Deoli)	-	299
623	Mandavghorad	200.82	Nagpur	Nagpur	Hingna	Sawangi (Deoli)	-	300
625	Sukali (Gha)	192.05	Nagpur	Nagpur	Butibori	Butibori (West)	-	310
626	Sukali (Gha)	190.38	Nagpur	Nagpur	Butibori	Butibori (West)	-	309
687	Mahalgaon	189.71	Nagpur	Nagpur	South Umrer	Zamkoli	-	336
688	Sirsi	198.05	Nagpur	Nagpur	South Umrer	Zamkoli	-	333
689	Zamkoli	250.94	Nagpur	Nagpur	South Umrer	Zamkoli	-	331
690	Urkudapar	175.98	Nagpur	Nagpur	South Umrer	Zamkoli	-	334
691	Belarpar (West)	231.58	Nagpur	Nagpur	South Umrer	Zamkoli	-	338
692	Belarpar (East)	142.16	Nagpur	Nagpur	South Umrer	Zamkoli	-	337
693	Zamkoli	286.77	Nagpur	Nagpur	South Umrer	Zamkoli	-	332
694	Alesur	249.69	Nagpur	Nagpur	South Umrer	Dhamangaon	-	349
695	Alesur	309.07	Nagpur	Nagpur	South Umrer	Dhamangaon	-	348
696	Kholdoda	81.55	Nagpur	Nagpur	South Umrer	Dhamangaon	-	347
698	Kholdoda	262.78	Nagpur	Nagpur	South Umrer	Dhamangaon	-	345
699	Lonara	250.88	Nagpur	Nagpur	South Umrer	Dhamangaon	-	344
700	Lonara	226.12	Nagpur	Nagpur	South Umrer	Dhamangaon	-	343
701	Belarpar (South)	231.66	Nagpur	Nagpur	South Umrer	Dhamangaon	-	342
702	Belarpar (South)	206.24	Nagpur	Nagpur	South Umrer	Dhamangaon	-	340
703	Belarpar (East)	198.14	Nagpur	Nagpur	South Umrer	Zamkoli	-	339
704	Belarpar (South)	219.90	Nagpur	Nagpur	South Umrer	Dhamangaon	-	341
707	Junapani	314.68	Nagpur	Nagpur	Butibori	Butibori (West)	-	311
730	Butibori	245.60	Nagpur	Nagpur	Butibori	Butibori (East)	-	312
745	Malewada	414.09	Nagpur	Nagpur	South Umrer	Botezari	-	351
746	Salebhatti	304.25	Nagpur	Nagpur	South Umrer	Botezari	-	350
747	Tembekhani	177.93	Nagpur	Nagpur	North Umrer	Deoli	-	401
750	Tembekhani	234.27	Nagpur	Nagpur	North Umrer	Deoli	-	400
751	Pipaldoh	253.76	Nagpur	Nagpur	North Umrer	Lohara	-	366
752	Deoli	185.67	Nagpur	Nagpur	North Umrer	Deoli	-	390

753	Panjarepar	152.73	Nagpur	Nagpur	North Umrer	Deoli	-	387
823	Lohara 2	304.61	Nagpur	Nagpur	North Umrer	Lohara	-	370
824	Dongargaon	295.02	Nagpur	Nagpur	North Umrer	Lohara	-	368
825	Lohara 1	331.97	Nagpur	Nagpur	North Umrer	Lohara	-	369
826	Lohara 2	392.19	Nagpur	Nagpur	North Umrer	Lohara	-	371
827	Mhasala	308.32	Nagpur	Nagpur	South Umrer	Chargaon	-	372
828	Mhasala	277.75	Nagpur	Nagpur	South Umrer	Chargaon	-	373
829	Mhasala	167.73	Nagpur	Nagpur	South Umrer	Chargaon	-	374
830	Mandawa	260.16	Nagpur	Nagpur	South Umrer	Chargaon	-	375
831	Indapur	237.56	Nagpur	Nagpur	South Umrer	Chargaon	-	376
832	Nandra (East)	285.01	Nagpur	Nagpur	South Umrer	Chargaon	-	380
833	Indapur	260.10	Nagpur	Nagpur	South Umrer	Chargaon	-	377
834	-	313.60	Nagpur	Nagpur	S. Umrer	-	-	379
835	-	368.42	Nagpur	Nagpur	S. Umrer	-	-	378
836	Pipaldoh	370.25	Nagpur	Nagpur	North Umrer	Lohara	-	367
837	Panjarepar	219.43	Nagpur	Nagpur	North Umrer	Deoli	-	386
860	Kohala	179.40	Nagpur	Nagpur	Butibori	Amghat	-	398
861	Kohala	236.13	Nagpur	Nagpur	Butibori	Amghat	-	397
862	Amghat 3	278.14	Nagpur	Nagpur	Butibori	Amghat	-	396
863	Mendhepathar	309.28	Nagpur	Nagpur	North Umrer	Deoli	-	391
864	Dongargaon	254.54	Nagpur	Nagpur	North Umrer	Lohara	-	384
865	Amghat 2	181.43	Nagpur	Nagpur	Butibori	Amghat	-	385
866	Chikhaldhokada	252.78	Nagpur	Nagpur	South Umrer	Nandra	-	383
867	Amghat 2	258.70	Nagpur	Nagpur	Butibori	Amghat	-	388
868	Amghat 2	223.05	Nagpur	Nagpur	Butibori	Amghat	-	389
869	Amghat 1	247.42	Nagpur	Nagpur	Butibori	Amghat	-	394
870	Amghat 1	223.80	Nagpur	Nagpur	Butibori	Amghat	-	392
871	Amghat 3	271.82	Nagpur	Nagpur	Butibori	Amghat	-	395
891	Botezari	375.91	Nagpur	Nagpur	South Umrer	Botezari	-	354
892	Chargaon (Mu)	295.69	Nagpur	Nagpur	South Umrer	Chargaon	-	353
893	Chargaon (Mu)	328.50	Nagpur	Nagpur	South Umrer	Chargaon	-	352
956	Deoli (Pendhari)	283.92	Nagpur	Nagpur	Hingna	Chouki	-	282
957	Deoli (Pendhari)	293.75	Nagpur	Nagpur	Hingna	Chouki	-	281
958	Chouki	247.73	Nagpur	Nagpur	Hingna	Chouki	-	276
959	Chouki	273.05	Nagpur	Nagpur	Hingna	Chouki	-	277
960	Chouki	181.93	Nagpur	Nagpur	Hingna	Chouki	-	280
961	Sawali	278.08	Nagpur	Nagpur	Hingna	Kanholi bara	-	279
1003	Chouki	67.77	Nagpur	Nagpur	Hingna	Chouki	-	278
68	Yerangaon	431.89	Nagpur	Nagpur	Hingana	Umari Wagh	NRF	776 A
73	Nawegaon	770.09	Nagpur	Nagpur	Hingana	Pendhari	NRF	787
74	Khapa (Kori)	613.15	Nagpur	Nagpur	Hingana	Pendhari	NRF	786
75	Nawegaon	505.21	Nagpur	Nagpur	Hingana	Pendhari	NRF	785
91	-	263.00	Nagpur	Nagpur	Umrer	-	NRF	733B/773
94	Jamgad	263.00	Nagpur	Nagpur	Butibori	Khapari	NRF	733B/769
95	-	263.00	Nagpur	Nagpur	Umrer	-	NRF	733B/769
207	Mendhepathar	-	-	Nagpur	North Umarer	Deoli	-	-
208	Bhiwagad	-	-	Nagpur	North Umarer	Deoli	-	-
209	Panjarepar	-	-	Nagpur	North Umarer	Deoli	-	-
262	Jamgad	-	-	Nagpur	Buttibori	Khapari	-	-
265	Chargaon	-	-	Nagpur	Buttibori	Chargaon	-	-
267	Khairi	-	-	Nagpur	Buttibori	Chargaon	-	-
268	Muradpur	-	-	Nagpur	Buttibori	Chargaon	-	-
269	Pitichuha	-	-	Nagpur	Buttibori	Chargaon	-	-

APPENDIX - III

MAP OF TADOBA - UMRED-KARHANDLA AND AREA STATEMENT



Tadoba - Umred Karhandla

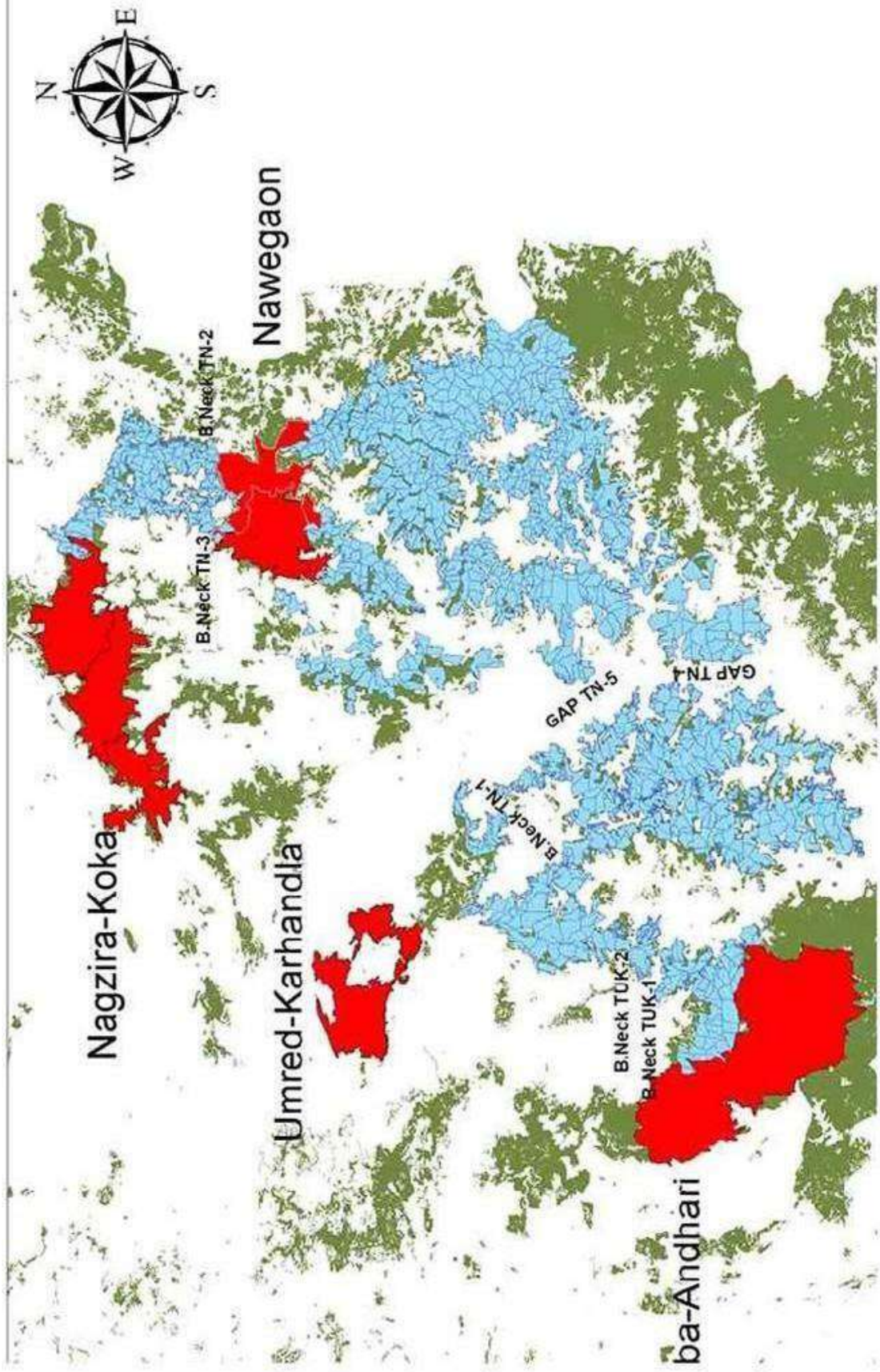
ID	Beat_Name	Compt. Area	District	Division	Range	Round	Status	Compt. No
Bhandara								
37	Dhanori 1	533.792	Bhandara	Bhandara	Pauni	Dhanori	RF	308
38	Sawarla-1	671.778	Bhandara	Bhandara	Pauni	Bhuyar	RF	319
39	Bhuyar-2	428.967	Bhandara	Bhandara	Pauni	Bhuyar	RF	320
40	Waigaon	607.838	Bhandara	Bhandara	Pauni	Bhuyar	RF	321
41	Sirsala 2	421.605	Bhandara	Bhandara	Pauni	Amgaon	RF	322
42	Nisti 1	455.554	Bhandara	Bhandara	Pauni	Amgaon	RF	393
43	Sisala 2	10.41	Bhandara	Bhandara	Paoni	Amgaon	NRF	394 B
44	Sisala 2	26.44	Bhandara	Bhandara	Paoni	Amgaon	NRF	394 C
45	Dhanori 1	19.96	Bhandara	Bhandara	Paoni	Dhanori	NRF	394 D
46	Mandawgota 1	628.909	Bhandara	Bhandara	Pauni	Dhanori	RF	309
47	Mandavgota 1	51.65	Bhandara	Bhandara	Paoni	Dhanori	NRF	394 E
48	Mandawgota-2	236.356	Bhandara	Bhandara	Pauni	Dhanori	RF	394
56	Gudegaon	11.87	Bhandara	Bhandara	Paoni	Sawartala	RF	394
57	Dhanori 2	518.928	Bhandara	Bhandara	Pauni	Dhanori	RF	307
81	Gudegaon	428.87	Bhandara	Bhandara	Pauni	Sawarla	RF	310
82	Gudegaon	510.06	Bhandara	Bhandara	Pauni	Sawarla	RF	311
83	Kanhalgaon	666.47	Bhandara	Bhandara	Pauni	Sawarla	RF	313
84	Kanhalgaon	564.6	Bhandara	Bhandara	Pauni	Sawarla	RF	314
85	Chanewada	401.5	Bhandara	Bhandara	Pauni	Sawarla	RF	316
86	Chanewada	504.7	Bhandara	Bhandara	Pauni	Sawarla	RF	317
110	Sisala 2	35.85	Bhandara	Bhandara	Paoni	Amgaon	NRF	394 A
111	Nisti 2	266.283	Bhandara	Bhandara	Pauni	Amgaon	RF	324
112	Bhuyar-1	573.44	Bhandara	Bhandara	Pauni	Bhuyar	RF	318
113	Chanewada	582.75	Bhandara	Bhandara	Pauni	Sawarla	RF	315
114	Sawarla	428.562	Bhandara	Bhandara	Pauni	Sawarla	RF	312
124	Nisti 2	39.255	Bhandara	Bhandara	Pauni	Amgaon	RF	323
197	Chanewada	62.382	Bhandara	Bhandara	Pauni	Sawarla	NRF	394 G
198	Sawarla	19.80	Bhandara	Bhandara	Pauni	Sawarla	NRF	394 H
146	Nistti-2	61.44	Bhandara	Bhandara	Paoni	Amgaon	NRF	235
147	Waigaon	73.94	Bhandara	Bhandara	Paoni	Bhuyar	NRF	240
173	Dhanori-1	207.51	Bhandara	Bhandara	Paoni	Dhanori	NRF	232
178	Gudegaon	175.83	Bhandara	Bhandara	Paoni	Sawarla	NRF	236
Chandrapur								
307	Madnapur	330.21	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	244
308	Karwa 2	454.07	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	240
309	Karwa 1	347.90	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	247
310	Karwa 1	397.40	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	246
311	Vihirgaon 1	333.06	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	243
312	Karwa 1	237.40	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	244
313	Gondmohadi	313.20	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	241
314	Palasgaon 1	255.75	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	239
315	Palasgaon 1	152.16	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	238
316	Karwa 3	820.31	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	237
317	Piparheti 2	197.50	Chandrapur	Chandrapur	Shioni	Shioni	RF	262
318	Palasgaon 2	387.69	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	225
319	Karwa 3	301.48	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	226
320	Piparheti 2	442.70	Chandrapur	Chandrapur	Shioni	Shioni	RF	236
321	Sirkada	337.30	Chandrapur	Chandrapur	Shioni	Shioni	RF	235
322	Sirkada	264.26	Chandrapur	Chandrapur	Shioni	Shioni	RF	227
323	Sirkada	241.70	Chandrapur	Chandrapur	Shioni	Shioni	RF	228
324	Karbada	206.79	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	102
325	Madnapur	369.89	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	105
326	Vihirgaon 1	297.86	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	221

327	Karbada	322.53	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	103
328	Madnapur	275.18	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	104
329	Vihirgaon 2	204.87	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	220 A
330	Vihirgaon 1	311.21	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	222
331	Gondmohadi	354.00	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	223
332	Palasgaon 2	222.56	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	224
333	Piparda	264.10	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	229
339	Jamsara	204.70	Chandrapur	Chandrapur	Shioni	Naleshwar	PF	268
341	Naleshwar	37.03	Chandrapur	Chandrapur	Shioni	Naleshwar	PF	804
342	Naleshwar	12.42	Chandrapur	Chandrapur	Shioni	Naleshwar	PF	805
343	Piparheti 1	246.10	Chandrapur	Chandrapur	Shioni	Shioni	RF	261
344	Piparheti 1	262.90	Chandrapur	Chandrapur	Shioni	Shioni	RF	263
349	Piparheti 1	18.50	Chandrapur	Chandrapur	Shioni	Shioni	PF	967
350	Piparheti 1	32.60	Chandrapur	Chandrapur	Shioni	Shioni	PF	971
351	Wasera	220.70	Chandrapur	Chandrapur	Shioni	Shioni	RF	264
352	Shioni	379.60	Chandrapur	Chandrapur	Shioni	Shioni	RF	234
353	Sirkada	26.00	Chandrapur	Chandrapur	Shioni	Shioni	PF	841
354	Sirkada	36.20	Chandrapur	Chandrapur	Shioni	Shioni	PF	567
355	Sirkada	414.80	Chandrapur	Chandrapur	Shioni	Shioni	PF	838
357	Shioni	263.86	Chandrapur	Chandrapur	Shioni	Shioni	RF	233
358	Sirkada	0.73	Chandrapur	Chandrapur	Shioni	Shioni	PF	839
359	Shioni	20.70	Chandrapur	Chandrapur	Shioni	Shioni	PF	847
360	Shioni	6.00	Chandrapur	Chandrapur	Shioni	Shioni	PF	846
361	Sirkada	41.30	Chandrapur	Chandrapur	Shioni	Shioni	PF	840
362	Sirkada	30.10	Chandrapur	Chandrapur	Shioni	Shioni	PF	837
363	Shioni	64.40	Chandrapur	Chandrapur	Shioni	Shioni	PF	842
364	Wasera	19.50	Chandrapur	Chandrapur	Shioni	Shioni	PF	836
365	Wasera	7.90	Chandrapur	Chandrapur	Shioni	Shioni	PF	831
366	Wasera	3.90	Chandrapur	Chandrapur	Shioni	Shioni	PF	829
367	Wasera	17.00	Chandrapur	Chandrapur	Shioni	Shioni	PF	570
369	Wasera	462.60	Chandrapur	Chandrapur	Shioni	Shioni	RF	265
370	Wasera	3.69	Chandrapur	Chandrapur	Shioni	Shioni	RF	835
371	Wasera	4.30	Chandrapur	Chandrapur	Shioni	Shioni	PF	830
372	Wasera	158.20	Chandrapur	Chandrapur	Shioni	Shioni	PF	828
373	Jamsara	573.20	Chandrapur	Chandrapur	Shioni	Naleshwar	PF	269
374	Shioni	45.40	Chandrapur	Chandrapur	Shioni	Shioni	PF	845
394	Parna	270.20	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	231
395	Parna	405.49	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	230
396	Sirkada	66.10	Chandrapur	Chandrapur	Shioni	Shioni	PF	568
Bramhapuri								
60	Pendhari	112.89	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	233
61	Pendhari	83.81	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	230
63	Navargaon 2	26.35	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	236
64	Navargaon 2	15.17	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	237
142	Kajalsar	21.07	Chandrapur	Bramhpuri	Talodhi	Neri	PF	453
148	Nawatala	58.76	Chandrapur	Bramhpuri	Chimur	Shankarpur	PF	463
152	Gondeda	318.19	Chandrapur	Bramhpuri	Talodhi	Neri	P.F.	431
169	Bodadha	70.92	Chandrapur	Bramhpuri	Talodhi	Neri	PF	455
171	Saranggad	108.72	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	61
172	Saranggad	44.86	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	503
187	Shankarpur	68.91	Chandrapur	Bramhpuri	Chimur	Shankarpur	PF	488
206	Mangli	116.55	Chandrapur	Bramhpuri	Naghbbhid	Mindala	RF	86
207	Dongargaon	308.78	Chandrapur	Bramhpuri	Naghbbhid	Dongargaon	RF	43
208	Dongargaon	411.17	Chandrapur	Bramhpuri	Naghbbhid	Dongargaon	RF	44
209	Rengatur	528.92	Chandrapur	Bramhpuri	Naghbbhid	Dongargaon	RF	42
210	Rengatur	624.44	Chandrapur	Bramhpuri	Naghbbhid	Dongargaon	RF	41
215	Navargaon 2	218.52	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	228
222	Gondeda	490.68	Chandrapur	Bramhpuri	Talodhi	Neri	RF	33
223	Kajalsar	33.63	Chandrapur	Bramhpuri	Talodhi	Neri	RF	36

228	Shankarpur	212.46	Chandrapur	Bramhpuri	Chimur	Shankarpur	RF	47
229	Kachepar	17.09	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	515
230	Kachepar	21.84	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	516
231	Kachepar	2.36	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	517
232	Kachepar	0.82	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	518
256	Kachepar	6.26	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	511
281	Korambi(North)	18.53	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	500
374	Navargaon 1	294.21	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	238
375	Navargaon 2	355.32	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	239
376	Ratnapur	261.83	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	240
378	Ratnapur	284.09	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	242
379	Nachanbhatti	220.15	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	243
390	Mangrool	1042.87	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	55
422	Shankarpur	106.43	Chandrapur	Bramhpuri	Chimur	Shankarpur	RF	46
423	Dongargaon	248.08	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	45
424	Shankarpur	151.76	Chandrapur	Bramhpuri	Chimur	Shankarpur	RF	48
425	Korambi(North)	682.31	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	50
426	Korambi(North)	628.87	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	49
427	Korambi(South)	554.01	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	52
428	Korambi(South)	466.61	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	51
429	Korambi(South)	417.23	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	53
431	Navkhala	1138.37	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	54
433	Ghodejhari	571.82	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	58
434	Ghodejhari	736.53	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	57
435	Ghodejhari	366.63	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	56
436	Nagbhid	787.53	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	82
438	Huma	450.42	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	81
439	Govindpur	435.03	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	63
440	Saranggad	308.77	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	62
455	Yenoli	559.27	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	65
456	Yenoli	499.79	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	66
457	Kachepar	477.13	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	70
458	Kajalsar	814.22	Chandrapur	Bramhpuri	Talodhi	Neri	RF	38
459	Govindpur	436.26	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	64
460	Girgaon	154.18	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	72
461	Girgaon	312.01	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	73
462	Navargaon 1	334.68	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	234
463	Pendhari	373.93	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	229
558	Saranggad	486.03	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	59
579	Kachepar	10.20	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	69
580	Kachepar	29.27	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	68
583	Nagbhid	248.99	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	84
584	Dongargaon	88.44	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	85
599	Pendhari	37.75	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1198
621	Nagbhid	177.38	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	PF	634
662	Mangrool	5.83	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	PF	599
663	Nagbhid	384.01	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	PF	604
667	Navkhala	28.45	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	608
668	Dongargaon	73.20	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	609
669	Dongargaon	56.67	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	610
670	Dongargaon	287.81	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	612
672	Navkhala	69.32	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	614
674	Rengatur	20.46	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	617
675	Rengatur	7.27	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	618
759	Navargaon 2	6.07	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1206
1232	Huma	15.33	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	PF	603
1243	Mangli	28.52	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	623
1254	Pendhari	0.51	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	232
1352	Ratnapur	18.87	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1191

1353	Ratnapur	8.89	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1196
1364	Nachanbhatti	46.22	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1223
1556	Mangli	54.05	Chandrapur	Bramhpuri	Nagbhid	Mindala	UN	1817
1581	Ratnapur	43.34	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	227
1600	Gondeda	151.35	Chandrapur	Bramhpuri	Talodhi	Neri	RF	34
1606	Kajalsar	61.97	Chandrapur	Bramhpuri	Talodhi	Neri	RF	35
1635	Gondeda	123.10	Chandrapur	Bramhpuri	Talodhi	Neri	P.F.	433
1636	Kajalsar	44.99	Chandrapur	Bramhpuri	Talodhi	Neri	P.F.	439
1643	Bodadha	214.34	Chandrapur	Bramhpuri	Talodhi	Neri	PF	456
1646	Doma	412.56	Chandrapur	Bramhpuri	Chimur	Shankarpur	PF	470
1651	Shankarpur	19.06	Chandrapur	Bramhpuri	Chimur	Shankarpur	PF	492
1652	Rengatur	507.82	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	494
1654	Mangli	77.41	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	496
1655	Mangli	166.79	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	498
1657	Govindpur	44.03	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	504
1662	Kachepar	4.91	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	508
1663	Kachepar	5.66	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	510
1664	Kachepar	10.74	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	520
1665	Yenoli	101.97	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	521
1669	Kachepar	373.45	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	532
1671	Girgaon	175.72	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	534
1672	Girgaon	261.06	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	535
1695	Mangrool	30.06	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	PF	594
1723	Kachepar	93.65	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	67
1733	Kotalpar	9.38	Chandrapur	Bramhpuri	Talodhi	Talodhi	PF	706
1751	Kachepar	109.03	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	74
1771	Mangrool	114.05	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	79
1775	Mangrool	5.84	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	80

APPENDIX - IV
MAP OF TADOBA - NAVEGAON NAGZIRA AND AREA STATEMENT



Tadoba – Nagzira

ID	Beat_Name	Compt. Area	District	Division	Range	Round	Status	Compt. No
Chandrapur								
307	Madnapur	330.21	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	244
308	Karwa 2	454.07	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	240
309	Karwa 1	347.90	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	247
310	Karwa 1	397.40	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	246
311	Vihirgaon 1	333.06	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	243
312	Karwa 1	237.40	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	244
313	Gondmohadi	313.20	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	241
314	Palasgaon 1	255.75	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	239
315	Palasgaon 1	152.16	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	238
316	Karwa 3	820.31	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	237
317	Piparheti 2	197.50	Chandrapur	Chandrapur	Shioni	Shioni	RF	262
318	Palasgaon 2	387.69	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	225
319	Karwa 3	301.48	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	226
320	Piparheti 2	442.70	Chandrapur	Chandrapur	Shioni	Shioni	RF	236
321	Sirkada	337.30	Chandrapur	Chandrapur	Shioni	Shioni	RF	235
322	Sirkada	264.26	Chandrapur	Chandrapur	Shioni	Shioni	RF	227
323	Sirkada	241.70	Chandrapur	Chandrapur	Shioni	Shioni	RF	228
324	Karbada	206.79	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	102
325	Madnapur	369.89	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	105
326	Vihirgaon 1	297.86	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	221
327	Karbada	322.53	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	103
328	Madnapur	275.18	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	104
329	Vihirgaon 2	204.87	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	220 A
330	Vihirgaon 1	311.21	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	222
331	Gondmohadi	354.00	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	223
332	Palasgaon 2	222.56	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	224
333	Piparda	264.10	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	229
339	Jamsara	204.70	Chandrapur	Chandrapur	Shioni	Naleshwar	PF	268
341	Naleshwar	37.03	Chandrapur	Chandrapur	Shioni	Naleshwar	PF	804
342	Naleshwar	12.42	Chandrapur	Chandrapur	Shioni	Naleshwar	PF	805
343	Piparheti 1	246.10	Chandrapur	Chandrapur	Shioni	Shioni	RF	261
344	Piparheti 1	262.90	Chandrapur	Chandrapur	Shioni	Shioni	RF	263
349	Piparheti 1	18.50	Chandrapur	Chandrapur	Shioni	Shioni	PF	967
350	Piparheti 1	32.60	Chandrapur	Chandrapur	Shioni	Shioni	PF	971
351	Wasera	220.70	Chandrapur	Chandrapur	Shioni	Shioni	RF	264
352	Shioni	379.60	Chandrapur	Chandrapur	Shioni	Shioni	RF	234
353	Sirkada	26.00	Chandrapur	Chandrapur	Shioni	Shioni	PF	841
354	Sirkada	36.20	Chandrapur	Chandrapur	Shioni	Shioni	PF	567
355	Sirkada	414.80	Chandrapur	Chandrapur	Shioni	Shioni	PF	838
357	Shioni	263.86	Chandrapur	Chandrapur	Shioni	Shioni	RF	233
358	Sirkada	0.73	Chandrapur	Chandrapur	Shioni	Shioni	PF	839
359	Shioni	20.70	Chandrapur	Chandrapur	Shioni	Shioni	PF	847
360	Shioni	6.00	Chandrapur	Chandrapur	Shioni	Shioni	PF	846
361	Sirkada	41.30	Chandrapur	Chandrapur	Shioni	Shioni	PF	840
362	Sirkada	30.10	Chandrapur	Chandrapur	Shioni	Shioni	PF	837
363	Shioni	64.40	Chandrapur	Chandrapur	Shioni	Shioni	PF	842
364	Wasera	19.50	Chandrapur	Chandrapur	Shioni	Shioni	PF	836
365	Wasera	7.90	Chandrapur	Chandrapur	Shioni	Shioni	PF	831
366	Wasera	3.90	Chandrapur	Chandrapur	Shioni	Shioni	PF	829
367	Wasera	17.00	Chandrapur	Chandrapur	Shioni	Shioni	PF	570
369	Wasera	462.60	Chandrapur	Chandrapur	Shioni	Shioni	RF	265
370	Wasera	3.69	Chandrapur	Chandrapur	Shioni	Shioni	RF	835
371	Wasera	4.30	Chandrapur	Chandrapur	Shioni	Shioni	PF	830

372	Wasera	158.20	Chandrapur	Chandrapur	Shioni	Shioni	PF	828
373	Jamsara	573.20	Chandrapur	Chandrapur	Shioni	Naleshwar	PF	269
374	Shioni	45.40	Chandrapur	Chandrapur	Shioni	Shioni	PF	845
394	Parna	270.20	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	231
395	Parna	405.49	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	230
396	Sirkada	66.10	Chandrapur	Chandrapur	Shioni	Shioni	PF	568
Bramhapuri								
60	Pendhari	112.89	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	233
61	Pendhari	83.81	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	230
63	Navargaon 2	26.35	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	236
64	Navargaon 2	15.17	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	237
142	Kajalsar	21.07	Chandrapur	Bramhpuri	Talodhi	Neri	PF	453
148	Nawatala	58.76	Chandrapur	Bramhpuri	Chimur	Shankarpur	PF	463
152	Gondeda	318.19	Chandrapur	Bramhpuri	Talodhi	Neri	P.F.	431
169	Bodadha	70.92	Chandrapur	Bramhpuri	Talodhi	Neri	PF	455
171	Saranggad	108.72	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	61
172	Saranggad	44.86	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	503
187	Shankarpur	68.91	Chandrapur	Bramhpuri	Chimur	Shankarpur	PF	488
206	Mangli	116.55	Chandrapur	Bramhpuri	Nagbhid	Mindala	RF	86
207	Dongargaon	308.78	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	43
208	Dongargaon	411.17	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	44
209	Rengatur	528.92	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	42
210	Rengatur	624.44	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	41
215	Navargaon 2	218.52	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	228
222	Gondeda	490.68	Chandrapur	Bramhpuri	Talodhi	Neri	RF	33
223	Kajalsar	33.63	Chandrapur	Bramhpuri	Talodhi	Neri	RF	36
228	Shankarpur	212.46	Chandrapur	Bramhpuri	Chimur	Shankarpur	RF	47
229	Kachepar	17.09	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	515
230	Kachepar	21.84	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	516
231	Kachepar	2.36	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	517
232	Kachepar	0.82	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	518
256	Kachepar	6.26	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	511
281	Korambi(North)	18.53	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	500
374	Navargaon 1	294.21	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	238
375	Navargaon 2	355.32	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	239
376	Ratnapur	261.83	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	240
378	Ratnapur	284.09	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	242
379	Nachanbhatti	220.15	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	243
390	Mangrool	1042.87	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	55
422	Shankarpur	106.43	Chandrapur	Bramhpuri	Chimur	Shankarpur	RF	46
423	Dongargaon	248.08	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	45
424	Shankarpur	151.76	Chandrapur	Bramhpuri	Chimur	Shankarpur	RF	48
425	Korambi(North)	682.31	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	50
426	Korambi(North)	628.87	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	49
427	Korambi(South)	554.01	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	52
428	Korambi(South)	466.61	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	51
429	Korambi(South)	417.23	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	53
431	Navkhala	1138.37	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	54
433	Ghodejhari	571.82	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	58
434	Ghodejhari	736.53	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	57
435	Ghodejhari	366.63	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	56
436	Nagbhid	787.53	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	82
438	Huma	450.42	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	81
439	Govindpur	435.03	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	63
440	Saranggad	308.77	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	62
455	Yenoli	559.27	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	65
456	Yenoli	499.79	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	66
457	Kachepar	477.13	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	70
458	Kajalsar	814.22	Chandrapur	Bramhpuri	Talodhi	Neri	RF	38

459	Govindpur	436.26	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	64
460	Girgaon	154.18	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	72
461	Girgaon	312.01	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	73
462	Navargaon 1	334.68	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	234
463	Pendhari	373.93	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	229
558	Saranggad	486.03	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	59
579	Kachepar	10.20	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	69
580	Kachepar	29.27	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	68
583	Nagbhid	248.99	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	84
584	Dongargaon	88.44	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	RF	85
599	Pendhari	37.75	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1198
621	Nagbhid	177.38	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	PF	634
662	Mangrool	5.83	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	PF	599
663	Nagbhid	384.01	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	PF	604
667	Navkhala	28.45	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	608
668	Dongargaon	73.20	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	609
669	Dongargaon	56.67	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	610
670	Dongargaon	287.81	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	612
672	Navkhala	69.32	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	614
674	Rengatur	20.46	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	617
675	Rengatur	7.27	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	618
759	Navargaon 2	6.07	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1206
1232	Huma	15.33	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	PF	603
1243	Mangli	28.52	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	623
1254	Pendhari	0.51	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	232
1352	Ratnapur	18.87	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1191
1353	Ratnapur	8.89	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1196
1364	Nachanbhatti	46.22	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1223
1556	Mangli	54.05	Chandrapur	Bramhpuri	Nagbhid	Mindala	UN	1817
1581	Ratnapur	43.34	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	227
1600	Gondeda	151.35	Chandrapur	Bramhpuri	Talodhi	Neri	RF	34
1606	Kajalsar	61.97	Chandrapur	Bramhpuri	Talodhi	Neri	RF	35
1635	Gondeda	123.10	Chandrapur	Bramhpuri	Talodhi	Neri	P.F.	433
1636	Kajalsar	44.99	Chandrapur	Bramhpuri	Talodhi	Neri	P.F.	439
1643	Bodadha	214.34	Chandrapur	Bramhpuri	Talodhi	Neri	PF	456
1646	Doma	412.56	Chandrapur	Bramhpuri	Chimur	Shankarpur	PF	470
1651	Shankarpur	19.06	Chandrapur	Bramhpuri	Chimur	Shankarpur	PF	492
1652	Rengatur	507.82	Chandrapur	Bramhpuri	Nagbhid	Dongargaon	PF	494
1654	Mangli	77.41	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	496
1655	Mangli	166.79	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	498
1657	Govindpur	44.03	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	504
1662	Kachepar	4.91	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	508
1663	Kachepar	5.66	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	510
1664	Kachepar	10.74	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	520
1665	Yenoli	101.97	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	521
1669	Kachepar	373.45	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	532
1671	Girgaon	175.72	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	534
1672	Girgaon	261.06	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	535
1695	Mangrool	30.06	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	PF	594
1723	Kachepar	93.65	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	67
1733	Kotalpar	9.38	Chandrapur	Bramhpuri	Talodhi	Talodhi	PF	706
1751	Kachepar	109.03	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	74
1771	Mangrool	114.05	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	79
1775	Mangrool	5.84	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	80
4	Kargatta	16.16	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	PF	1342
11	Gewara	67.07	Chandrapur	Bramhpuri	Sawali	Pathari	P.F.	1433
12	Gewara	13.93	Chandrapur	Bramhpuri	Sawali	Pathari	P.F.	1434
18	Gewara	91.51	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1441
20	Paharni	307.56	Chandrapur	Bramhpuri	Nagbhid	Mindala	RF	114

21	Paharni	164.24	Chandrapur	Bramhpuri	Nagbhid	Mindala	RF	115
22	Torgaon	9.83	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	117
23	Saigatta	140.49	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	118
25	Brahampuri	45.62	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	121
26	Dhamangaon	30.35	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	128
28	Thalodhi Kh.	131.56	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	137
30	Thalodhi Kh.	93.36	Chandrapur	Bramhpuri	Brahampuri	Mendki	R.F	139
34	Parsodi	77.62	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	145
35	Rampuri	103.06	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	148
37	Rampuri	27.45	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	150
38	Chichkheda	77.70	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	152
39	Kalamgaon	208.57	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	162
40	Murpar	43.60	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	167
41	Murpar	11.13	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	169
43	Kosambi	39.28	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	172
44	Kosambi	42.39	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	173
45	Kosambi	85.93	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	174
46	Murpar	51.70	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	176
47	Murpar	26.07	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	177
48	Kitadi	17.57	Chandrapur	Bramhpuri	Ekara	Ekara	RF	183
58	Bhuj	263.53	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	211
67	Kargatta	163.96	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	251
69	Maregaon	93.79	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	262
71	Tambegadi Mendha	28.59	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	270
73	Chikmara	219.53	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	275
75	Pawanpar 2	80.80	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	277
77	Kanhargaon	66.63	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	287
79	Gewara	189.54	Chandrapur	Bramhpuri	Sawali	Pathari	RF	290
80	Gewara	36.69	Chandrapur	Bramhpuri	Sawali	Pathari	RF	291
81	Meha	21.30	Chandrapur	Bramhpuri	Sawali	Pathari	RF	292
83	Mundala	47.15	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	299
84	Mundala	330.58	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	300
85	Pendhari	114.49	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	301
246	Paharni	24.30	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	787
248	Paharni	256.46	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	792
250	Paharni	64.23	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	796
260	Maregaon	19.34	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1411
261	Maregaon	60.57	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1412
262	Pawanpar 2	93.91	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1413
266	Kanhargaon	47.11	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1422
282	Murpar	20.80	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1075
284	Arjuni	6.81	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1077
285	Arjuni	1.13	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1078
286	Arjuni	1.06	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1079
287	Arjuni	4.56	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1080
288	Arjuni	6.33	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1081
289	Arjuni	3.68	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1082
290	Arjuni	3.13	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1083
291	Kitadi	2.17	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1086
292	Kitadi	1.02	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1087
293	Kitadi	9.38	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1088
295	Kitadi	1.52	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1091
317	Thalodhi Kh.	154.80	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	938
320	Mendki	10.47	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	947
332	Mindhala	42.50	Chandrapur	Bramhpuri	Nagbhid	Mindhala	RF	109
371	Bodegaon	411.98	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	215
372	Kanhargaon	500.61	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	288
373	Bodegaon	243.21	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	217
380	Kargatta	449.61	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	257

381	Dongargaon	196.28	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	258
387	Ghot	487.23	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	264
388	Murpar	643.04	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	265
391	Lonkhairi	116.55	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	248
392	Lonkhairi	522.04	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	267
393	Chikmara	494.53	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	273
394	Chikmara	378.38	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	266
395	Tambegadi mendha	305.54	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	268
396	Tambegadi Mendha	383.64	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	269
397	Mundala	392.55	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	311
398	Golabhuj	373.53	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	312
399	Rajoli	515.58	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	314
405	Mundala	358.96	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	309
406	Mundala	374.74	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	308
407	Pendhari	453.26	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	303
408	Chargaon	229.44	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	302
409	Chargaon	530.13	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	304
410	Kacchepar 2	186.97	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	256
413	Dhamangaon	604.60	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	129
420	Deopayalli	81.75	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	131
421	Tulan	477.53	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	133
437	Huma	271.95	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	83
446	Parsodi	450.42	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	134
447	Mendki	346.00	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	136
448	Parsodi	441.11	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	135
450	Rampuri	401.45	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	154
451	Koregaon	252.11	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	157
452	Rampuri	202.34	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	153
465	Koregaon	231.07	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	158
466	Kotalpar	513.15	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	100
467	Sadagad	602.58	Chandrapur	Bramhpuri	Sawali	Sawali	RF	305
468	Rajoli	592.05	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	315
469	Murmadi	203.15	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	310
470	Murmadi	584.76	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	307
471	Tekadi	713.86	Chandrapur	Bramhpuri	Sawali	Sawali	RF	306
472	Chitegaon	350.87	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	317
475	Lonkhairi	148.93	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	247
477	Chitegaon	481.99	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	318
487	Navegaon	456.89	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	161
488	Navegaon	431.80	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	178
489	Kalamgaon	184.94	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	163
490	Murpar	165.64	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	207
491	Ekara	377.98	Chandrapur	Bramhpuri	Ekara	Ekara	RF	206
492	Khatgaon	229.05	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	208
493	Murpar	439.91	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	164
494	Kosambi	417.64	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	175
495	Kosambi	193.44	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	219
496	Kosambi	444.34	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	220
497	Awalgaon	540.25	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	224
498	Halda	455.67	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	222
499	Awalgaon	254.95	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	221
500	Kacchepar 2	429.37	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	254
501	Kacchepar 2	492.11	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	255
502	Bodra	362.60	Chandrapur	Bramhpuri	Ekara	Ekara	RF	197
503	Seldha	413.59	Chandrapur	Bramhpuri	Ekara	Ekara	RF	198
504	Seldha	330.63	Chandrapur	Bramhpuri	Ekara	Ekara	RF	200
505	Allewhahi	226.62	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	93
506	Kitadi	188.58	Chandrapur	Bramhpuri	Ekara	Ekara	RF	194
507	Kitadi	474.69	Chandrapur	Bramhpuri	Ekara	Ekara	RF	195

508	Bodra	416.43	Chandrapur	Bramhpuri	Ekara	Ekara	RF	199
509	Khatgaon	248.07	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	204
510	Khatgaon	408.34	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	203
511	Bhuj	398.21	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	212
512	Padmapur	434.64	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	213
516	Arjuni	312.82	Chandrapur	Bramhpuri	Ekara	Ekara	RF	179
519	Ekara	281.20	Chandrapur	Bramhpuri	Ekara	Ekara	RF	205
520	Arjuni	548.76	Chandrapur	Bramhpuri	Ekara	Ekara	RF	156
521	Kotalpar	292.59	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	99
522	Arjuni	415.21	Chandrapur	Bramhpuri	Ekara	Ekara	RF	155
523	Gangasagar Hetti	206.79	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	97
524	Gangasagar Hetti	265.48	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	98
525	Gangasagar Hetti	203.15	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	96
526	Allewahi	263.05	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	95
527	Allewahi	252.52	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	94
531	Pawanpar 1	807.76	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	282
532	Pawanpar 2	251.71	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	283
534	Kacchepar 1	220.96	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	285
537	Kacchepar 1	261.83	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	284
539	Halda	254.14	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	223
540	Bodegaon	233.10	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	216
541	Mudza	469.04	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	214
542	Padmapur	305.53	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	218
545	Maregaon	519.72	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	261
577	Golabhuj	367.46	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	313
585	Kotalpar	22.38	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	102
586	Kotalpar	14.01	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	103
593	Dhamangaon	43.33	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	877
606	Rampuri	4.15	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	979
607	Rampuri	5.15	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	980
737	Saigatta	35.25	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	882
752	Chichkheda	137.25	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	1008
753	Chichkheda	17.06	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	1011
754	Wandra	41.12	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1013
776	Dhamangaon	67.10	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	913
777	Dhamangaon	53.21	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	915
778	Dhamangaon	3.75	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	916
779	Dhamangaon	0.96	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	917
807	Kitadi	4.87	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1101
810	Rampuri	0.96	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1022
811	Rampuri	1.44	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1023
812	Rampuri	4.10	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1024
813	Rampuri	2.55	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1025
814	Rampuri	4.74	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1026
819	Navegaon	19.23	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1036
826	Wandra	296.94	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1049
835	Seldha	19.54	Chandrapur	Bramhpuri	Ekara	Ekara	RF	201
837	Seldha	15.76	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1122
862	Halda	225.16	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1168
867	Mudza	69.41	Chandrapur	Bramhpuri	Ekara	Bhuj	PF	1182
875	Awalgaon	55.38	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1142
921	Sindewahi	58.00	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	PF	1288
973	Maregaon	67.31	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1375
1002	Chikmara	4.63	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1399
1003	Chikmara	4.67	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1400
1019	Maregaon	27.11	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1408
1031	Navegaon	99.05	Chandrapur	Bramhpuri	Sawali	Vihayad	PF	1559
1037	Navegaon	104.94	Chandrapur	Bramhpuri	Sawali	Vihayad	PF	1565
1073	Meha	23.83	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1626

1078	Mundala	31.16	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1636
1101	Pendhari	36.74	Chandrapur	Bramhpuri	Sawali	Pendhari	P.F.	1664
1102	Pendhari	32.03	Chandrapur	Bramhpuri	Sawali	Pendhari	P.F.	1665
1104	Pendhari	52.33	Chandrapur	Bramhpuri	Sawali	Pendhari	P.F.	1668
1109	Pendhari	53.09	Chandrapur	Bramhpuri	Sawali	Pendhari	P.F.	1673
1133	Sadagad	94.70	Chandrapur	Bramhpuri	Sawali	Sawali	PF	1714
1142	Chitegaon	83.47	Chandrapur	Bramhpuri	Sawali	Rajoli	PF	1786
1144	Chargaon	92.57	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1724
1146	Chargaon	24.48	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1726
1149	Chargaon	23.63	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1729
1184	Sadagad	35.00	Chandrapur	Bramhpuri	Sawali	Sawali	PF	1717
1185	Sadagad	205.30	Chandrapur	Bramhpuri	Sawali	Sawali	PF	1718
1186	Sadagad	108.46	Chandrapur	Bramhpuri	Sawali	Sawali	PF	1719
1192	Chargaon	7.88	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1733
1194	Chargaon	52.97	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1735
1195	Chargaon	13.31	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1736
1201	Chitegaon	9.50	Chandrapur	Bramhpuri	Sawali	Rajoli	PF	1781
1234	Wandra	51.80	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	166
1265	Dhamangaon	200.01	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	122
1291	Chichkheda	124.61	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	1012
1292	Wandra	81.21	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1015
1296	Kalamgaon	39.88	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1037
1298	Kalamgaon	59.55	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1041
1304	Wandra	129.85	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1052
1305	Murpar	48.70	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1056
1309	Kosambi	5.21	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1067
1311	Mindhala	108.26	Chandrapur	Bramhpuri	Naghbhid	Mindhala	RF	106
1314	Murpar	43.46	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1074
1315	Kitadi	5.28	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1085
1317	Kitadi	39.17	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1098
1319	Ekara	112.02	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1103
1329	Seldha	9.04	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1123
1334	Awalgaon	661.60	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1138
1335	Paharni	269.73	Chandrapur	Bramhpuri	Naghbhid	Mindala	RF	113
1337	Halda	330.03	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1145
1338	Halda	116.39	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1146
1340	Padmapur	62.30	Chandrapur	Bramhpuri	Ekara	Bhuj	PF	1150
1342	Padmapur	279.79	Chandrapur	Bramhpuri	Ekara	Bhuj	PF	1156
1344	Torgaon	18.79	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	116
1348	Mudza	337.32	Chandrapur	Bramhpuri	Ekara	Bhuj	PF	1179
1356	Saigatta	170.21	Chandrapur	Bramhpuri	Bramhpuri	Bramhpuri	RF	119
1370	Dhamangaon	129.12	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	123
1378	Kargatta	23.25	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	PF	1340
1385	Kargatta	40.69	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	PF	1372
1388	Chikmara	21.28	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1401
1389	Chikmara	222.41	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1402
1392	Maregaon	127.48	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1407
1394	Maregaon	23.51	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1410
1395	Pawanpar 2	40.85	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1416
1396	Pawanpar 2	50.23	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1417
1398	Gewara	89.94	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1428
1399	Gewara	20.73	Chandrapur	Bramhpuri	Sawali	Pathari	P.F.	1430
1400	Gewara	94.47	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1435
1405	Gewara	31.31	Chandrapur	Bramhpuri	Sawali	Pathari	P.F.	1451
1411	Rampuri	20.17	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	146
1412	Meha	90.88	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1473
1415	Rampuri	44.30	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	147
1427	Saigatta	105.73	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	124
1430	Bhagwanpur	184.67	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	125

1449	Lonkhairi	73.15	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	PF	1312
1459	Chikmara	76.23	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1398
1474	Gaidongri	116.84	Chandrapur	Bramhpuri	Sawali	Vihayad	PF	1572
1477	Meha	57.33	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1581
1484	Koregaon	51.29	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	159
1493	Meha	75.20	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1623
1500	Mundala	59.95	Chandrapur	Bramhpuri	Sawali	Pendhari	P.F.	1644
1507	Piranji chek	131.42	Chandrapur	Bramhpuri	Sawali	Sawali	PF	1687
1523	Rajoli	198.50	Chandrapur	Bramhpuri	Sawali	Rajoli	PF	1744
1537	Chitegaon	47.32	Chandrapur	Bramhpuri	Sawali	Rajoli	PF	1776
1539	Chitegaon	47.12	Chandrapur	Bramhpuri	Sawali	Rajoli	PF	1778
1551	Arjuni	40.19	Chandrapur	Bramhpuri	Ekara	Ekara	RF	180
1553	Mindhala	142.99	Chandrapur	Bramhpuri	Nagbhid	Mindhala	UN	1813
1562	Kitadi	59.34	Chandrapur	Bramhpuri	Ekara	Ekara	RF	182
1564	Chikmara	42.54	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	UN	1836
1575	Kitadi	115.34	Chandrapur	Bramhpuri	Ekara	Ekara	RF	185
1576	Ekara	192.15	Chandrapur	Bramhpuri	Ekara	Ekara	RF	190
1577	Seldha	334.06	Chandrapur	Bramhpuri	Ekara	Ekara	RF	202
1578	Bhuj	109.19	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	210
1580	Mudza	440.21	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	226
1584	Kargatta	204.25	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	250
1587	Chikmara	49.02	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	274
1588	Gewara	48.37	Chandrapur	Bramhpuri	Sawali	Pathari	RF	289
1589	Navegaon	84.17	Chandrapur	Bramhpuri	Sawali	Vihayad	RF	295
1590	Gaidongri	63.66	Chandrapur	Bramhpuri	Sawali	Vihayad	RF	296
1707	Mindhala	111.98	Chandrapur	Bramhpuri	Nagbhid	Mindhala	PF	635
1710	Mangrool	156.38	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	PF	643
1716	Mindhala	172.29	Chandrapur	Bramhpuri	Nagbhid	Mindhala	PF	659
1737	Deopayalli	168.40	Chandrapur	Bramhpuri	Talodhi	Talodhi	PF	718
1738	Deopayalli	137.92	Chandrapur	Bramhpuri	Talodhi	Talodhi	PF	721
1740	Deopayalli	139.73	Chandrapur	Bramhpuri	Talodhi	Talodhi	PF	725
1741	Deopayalli	30.78	Chandrapur	Bramhpuri	Talodhi	Talodhi	PF	726
1748	Kosmbi Gawali	140.28	Chandrapur	Bramhpuri	Nagbhid	Mindhala	PF	742
1764	Masli	49.88	Chandrapur	Bramhpuri	Nagbhid	Mindhala	PF	776
1765	Masli	91.15	Chandrapur	Bramhpuri	Nagbhid	Mindhala	PF	777
1767	Paharni	84.38	Chandrapur	Bramhpuri	Nagbhid	Mindhala	PF	783
1768	Paharni	158.38	Chandrapur	Bramhpuri	Nagbhid	Mindhala	PF	791
1769	Paharni	174.87	Chandrapur	Bramhpuri	Nagbhid	Mindhala	PF	793
1770	Paharni	246.38	Chandrapur	Bramhpuri	Nagbhid	Mindhala	PF	794
1772	Torgaon	342.16	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	801
1773	Torgaon	38.21	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	807
1777	Torgaon	51.86	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	814
1779	Torgaon	58.30	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	816
1784	Saigatta	76.81	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	832
1799	Dhamangaon	16.91	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	872
1802	Mindhala	135.64	Chandrapur	Bramhpuri	Nagbhid	Mindhala	RF	87
1805	Bhagwanpur	156.94	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	890
1809	Bhagwanpur	161.69	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	905
1813	Bhagwanpur	120.93	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	918
1821	Thalodhi Kh.	92.90	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	939
1824	Thalodhi Kh.	183.23	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	943
1827	Mendki	463.32	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	950
1829	Thalodhi Kh.	327.92	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	952
1839	Rampuri	18.91	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	977
1840	Rampuri	27.62	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	978
1843	Rampuri	67.23	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	987
1844	Rampuri	52.50	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	988
1851	Wandra	217.31	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	165
1852	Arjuni	15.26	Chandrapur	Bramhpuri	Ekara	Ekara	RF	181

1857	Mindhala	203.62	Chandrapur	Bramhpuri	Nagbhid	Mindhala	PF	636
1862	Dhamangaon	34.70	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	871
1867	Chichkheda	597.97	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	1004
1870	Rampuri	16.37	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1027
1872	Kitadi	32.46	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1084
1873	Kitadi	6.66	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1090
1881	Chikmara	85.76	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	UN	1835
1882	Pathari	235.12	Chandrapur	Bramhpuri	Sawali	Pathari	RF	298
1887	Masli	91.70	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	771
1894	Pawanpar 2	40.70	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1415
1906	Deopayalli	718.31	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	132
1909	Kosambi	66.98	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	171

Wadsa

3	Khedegaon	182.15	Gadchiroli	Wadsa	Kurkheda	Gewardha	RF	143
4	Gewardha	76.60	Gadchiroli	Wadsa	Kurkheda	Gewardha	rf	133
6	Bhagwanpur	131.21	Gadchiroli	Wadsa	Wadsa	Shirpur	PF	814
7	Bhagwanpur	172.41	Gadchiroli	Wadsa	Wadsa	Shirpur	RF	74
8	Bhagwanpur	174.14	Gadchiroli	Wadsa	Wadsa	Shirpur	RF	75
9	Bhagwanpur	221.25	Gadchiroli	Wadsa	Wadsa	Shirpur	RF	76
11	Shirpur	129.06	Gadchiroli	Wadsa	Wadsa	Shirpur	RF	78
18	Palasgaon	78.98	Gadchiroli	Wadsa	Armori	Palasgaon	RF	86
19	Palasgaon	236.36	Gadchiroli	Wadsa	Armori	Palasgaon	PF	822
39	Dongargaon	84.53	Gadchiroli	Wadsa	Wadsa	Vhirgaon	RF	95
52	Shivrajpur	51.97	Gadchiroli	Wadsa	Wadsa	Wadsa	PF	853
76	Wadsa	87.58	Gadchiroli	Wadsa	Wadsa	Wadsa	PF	878
77	Wadsa	130.08	Gadchiroli	Wadsa	Wadsa	Wadsa	PF	876
82	Eklapur	184.96	Gadchiroli	Wadsa	Wadsa	Wadsa	PF	882
88	Bodadha	95.34	Gadchiroli	Wadsa	Wadsa	Shankarpur	RF	99
99	Kasari	59.51	Gadchiroli	Wadsa	Wadsa	Shankarpur	PF	897
101	Kasari	43.41	Gadchiroli	Wadsa	Wadsa	Shankarpur	PF	899
102	Chop	58.01	Gadchiroli	Wadsa	Wadsa	Shankarpur	PF	112
103	Chop	115.05	Gadchiroli	Wadsa	Wadsa	Shankarpur	PF	902
105	Chop	203.69	Gadchiroli	Wadsa	Wadsa	Shankarpur	PF	904
107	Shankarpur	136.04	Gadchiroli	Wadsa	Wadsa	Shankarpur	PF	906
116	Pimpalgaon	148.70	Gadchiroli	Wadsa	Wadsa	Vhirgaon	RF	117
119	Pimpalgaon	167.00	Gadchiroli	Wadsa	Wadsa	Vhirgaon	RF	118
120	Pimpalgaon	110.87	Gadchiroli	Wadsa	Wadsa	Vhirgaon	RF	120
121	Pimpalgaon	118.53	Gadchiroli	Wadsa	Wadsa	Vhirgaon	RF	119
126	Pimpalgaon	173.80	Gadchiroli	Wadsa	Wadsa	Vhirgaon	RF	121
127	Arattondi	284.22	Gadchiroli	Wadsa	Wadsa	Shirpur	RF	124
129	Arattondi	179.14	Gadchiroli	Wadsa	Wadsa	Shirpur	PF	923
132	Arattondi	209.85	Gadchiroli	Wadsa	Wadsa	Shirpur	RF	127
134	Arattondi	86.21	Gadchiroli	Wadsa	Wadsa	Shirpur	PF	927
137	Gurnuli	246.30	Gadchiroli	Wadsa	Kurkheda	Gewardha	PF	130
138	Gurnuli	192.00	Gadchiroli	Wadsa	Kurkheda	Gewardha	PF	131
139	Gurnuli	332.11	Gadchiroli	Wadsa	Kurkheda	Gewardha	PF	129
140	Arattondi	151.87	Gadchiroli	Wadsa	Wadsa	Shirpur	PF	122
141	Arattondi	200.20	Gadchiroli	Wadsa	Wadsa	Shirpur	PF	123
142	Khedegaon	211.98	Gadchiroli	Wadsa	Kurkheda	Gewardha	RF	146
144	Khedegaon	135.39	Gadchiroli	Wadsa	Kurkheda	Gewardha	RF	144
147	Khedegaon	116.33	Gadchiroli	Wadsa	Kurkheda	Gewardha	PF	942
148	Khedegaon	218.94	Gadchiroli	Wadsa	Kurkheda	Gewardha	RF	142
149	Khairitola	94.62	Gadchiroli	Wadsa	Kurkheda	Gewardha	PF	939
150	Gewardha	202.66	Gadchiroli	Wadsa	Kurkheda	Gewardha	RF	134
151	Gewardha	162.80	Gadchiroli	Wadsa	Kurkheda	Gewardha	RF	135
152	Gewardha	109.34	Gadchiroli	Wadsa	Kurkheda	Gewardha	RF	136
154	Khairitola	286.75	Gadchiroli	Wadsa	Kurkheda	Gewardha	RF	138
155	Gewardha	73.49	Gadchiroli	Wadsa	Kurkheda	Gewardha	RF	139
156	Khairitola	300.04	Gadchiroli	Wadsa	Kurkheda	Gewardha	RF	140

157	Khairitola	160.81	Gadchiroli	Wadsa	Kurkheda	Gewardha	RF	141
161	Gewardha	134.39	Gadchiroli	Wadsa	Kurkheda	Gewardha	PF	938
178	Churchura	325.80	Gadchiroli	Wadsa	Porla	Churchura	PF	566
180	Churchura	115.06	Gadchiroli	Wadsa	Porla	Churchura	PF	573
221	Sukala	64.76	Gadchiroli	Wadsa	Armori	Wairagad	PF	711
224	Sukala	78.11	Gadchiroli	Wadsa	Armori	Wairagad	PF	28
248	Injewari	53.18	Gadchiroli	Wadsa	Armori	Armori	pf	786
254	Injewari	132.07	Gadchiroli	Wadsa	Armori	Armori	PF	791
255	Injewari	125.25	Gadchiroli	Wadsa	Armori	Armori	RF	53
256	Injewari	57.67	Gadchiroli	Wadsa	Armori	Armori	PF	798
266	Mangda	123.67	Gadchiroli	Wadsa	Delanwadi	Mangda	RF	312
267	Mangda	133.49	Gadchiroli	Wadsa	Delanwadi	Mangda	RF	313
290	Mangda	119.26	Gadchiroli	Wadsa	Delanwadi	Mangda	RF	320
293	Mangda	175.00	Gadchiroli	Wadsa	Delanwadi	Mangda	RF	321
299	Sonerangi	70.96	Gadchiroli	Wadsa	Delanwadi	Delanwadi	PF	303
300	Sonerangi	106.11	Gadchiroli	Wadsa	Delanwadi	Delanwadi	PF	1147
304	Sonerangi	264.21	Gadchiroli	Wadsa	Delanwadi	Delanwadi	PF	1140
325	Ghati	77.96	Gadchiroli	Wadsa	Kurkheda	Gotangaon	PF	1135
339	Ghati	93.69	Gadchiroli	Wadsa	Kurkheda	Gotangaon	PF	1136
346	Uradi	121.26	Gadchiroli	Wadsa	Delanwadi	Delanwadi	RF	310
348	Uradi	104.20	Gadchiroli	Wadsa	Delanwadi	Delanwadi	PF	1150
349	Uradi	81.46	Gadchiroli	Wadsa	Delanwadi	Delanwadi	PF	1151
350	Uradi	72.05	Gadchiroli	Wadsa	Delanwadi	Delanwadi	PF	1152
351	Palasgad	122.68	Gadchiroli	Wadsa	Kurkheda	Palasgad	PF	996
352	Palasgad	27.68	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	172
353	Palasgad	116.52	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	171
358	Kurkheda	198.54	Gadchiroli	Wadsa	Kurkheda	Kurkheda	RF	166
361	Kurkheda	52.97	Gadchiroli	Wadsa	Kurkheda	Kurkheda	RF	165
365	Kurkheda	156.36	Gadchiroli	Wadsa	Kurkheda	Kurkheda	PF	987
367	Andhali	143.61	Gadchiroli	Wadsa	Purada	Ramgad	RF	206
368	Andhali	141.22	Gadchiroli	Wadsa	Purada	Ramgad	RF	207
371	Chipri	128.87	Gadchiroli	Wadsa	Purada	Ramgad	RF	250
372	Chipari	112.25	Gadchiroli	Wadsa	Purada	Ramgad	RF	251
373	Chipari	174.13	Gadchiroli	Wadsa	Purada	Ramgad	RF	252
382	Chipari	161.31	Gadchiroli	Wadsa	Purada	Ramgad	RF	253
383	Chipari	246.87	Gadchiroli	Wadsa	Purada	Ramgad	RF	254
384	Chipari	38.49	Gadchiroli	Wadsa	Purada	Ramgad	RF	1075
385	Jambhulkheda	198.24	Gadchiroli	Wadsa	Kurkheda	Kurkheda	RF	161
386	Jambhulkheda	63.72	Gadchiroli	Wadsa	Kurkheda	Kurkheda	PF	980
387	Jambhulkheda	91.86	Gadchiroli	Wadsa	Kurkheda	Kurkheda	PF	981
391	Palasgad	173.93	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	169
392	Palasgad	278.41	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	170
394	Charbhatti	200.98	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	173
395	Charbhatti	170.40	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	174
401	Pitesur	187.18	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	175
402	Pitesur	193.46	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	176
404	Pitesur	21.35	Gadchiroli	Wadsa	Kurkheda	Palasgad	PF	1003
405	Pitesur	187.89	Gadchiroli	Wadsa	Kurkheda	Palasgad	PF	184
406	Pitesur	183.55	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	185
407	Pitesur	23.07	Gadchiroli	Wadsa	Kurkheda	Palasgad	PF	1005
408	Pitesur	101.85	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	186
409	Pitesur	137.69	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	187
417	Lendari	238.64	Gadchiroli	Wadsa	Purada	Purada	RF	194
418	Lendari	240.77	Gadchiroli	Wadsa	Purada	Purada	RF	195
422	Lendari	119.95	Gadchiroli	Wadsa	Purada	Purada	RF	192
426	Lendari	55.39	Gadchiroli	Wadsa	Purada	Purada	PF	1020
428	Yedapur	168.97	Gadchiroli	Wadsa	Purada	Ramgad	RF	217
435	Purada	59.97	Gadchiroli	Wadsa	Purada	Purada	RF	221
437	Purada	91.66	Gadchiroli	Wadsa	Purada	Purada	PF	1040

439	Purada	123.96	Gadchiroli	Wadsa	Purada	Purada	PF	1041
442	Purada	132.10	Gadchiroli	Wadsa	Purada	Purada	RF	222
443	Purada	91.83	Gadchiroli	Wadsa	Purada	Purada	PF	1046
446	Charbhatti	122.29	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	223
447	Charbhatti	76.62	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	224
449	Charbhatti	104.54	Gadchiroli	Wadsa	Kurkheda	Palasgad	PF	1050
450	Lawari	309.52	Gadchiroli	Wadsa	Purada	Hadikanhar	RF	225
451	Lawari	139.76	Gadchiroli	Wadsa	Purada	Hadikanhar	RF	226
453	Charvidand	105.87	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	228
455	Dongargaon	61.38	Gadchiroli	Wadsa	Purada	Purada	RF	235
456	Dongargaon	95.08	Gadchiroli	Wadsa	Purada	Purada	RF	236
457	Dongargaon	192.42	Gadchiroli	Wadsa	Purada	Purada	RF	237
462	Dongargaon	109.05	Gadchiroli	Wadsa	Purada	Purada	RF	238
465	Dongargaon	195.39	Gadchiroli	Wadsa	Purada	Purada	RF	240
468	Dongargaon	65.07	Gadchiroli	Wadsa	Purada	Purada	PF	1060
471	Yedapur	140.75	Gadchiroli	Wadsa	Purada	Ramgad	RF	256
479	Ranwahi	93.66	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	337
480	Ranwahi	97.52	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	338
481	Ranwahi	105.45	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	339
482	Ranwahi	124.41	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	340
483	Ranwahi	117.99	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	341
491	Damesar	197.17	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	342
492	Damesar	125.15	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	343
493	Damesar	179.89	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	344
494	Damesar	97.77	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	345
495	Damesar	98.20	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	346
504	Ranwahi	156.95	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	347
510	Ranwahi	127.24	Gadchiroli	Wadsa	Malewada	Ranwahi	PF	1230
542	Wadeagaon	91.38	Gadchiroli	Wadsa	Kurkheda	Kurkheda	RF	147
543	Wadeagaon	169.36	Gadchiroli	Wadsa	Kurkheda	Kurkheda	RF	148
548	Wadeagaon	121.00	Gadchiroli	Wadsa	Kurkheda	Kurkheda	PF	949
557	Wadeagaon	236.59	Gadchiroli	Wadsa	Kurkheda	Kurkheda	PF	149
559	Khapri	239.59	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	150
566	Khapri	81.75	Gadchiroli	Wadsa	Kurkheda	Gothangaon	PF	966
567	Khapri	73.57	Gadchiroli	Wadsa	Kurkheda	Gothangaon	PF	967
568	Khapri	169.88	Gadchiroli	Wadsa	Kurkheda	Gothangaon	PF	968
569	Khapri	52.13	Gadchiroli	Wadsa	Kurkheda	Gothangaon	PF	969
570	Khapri	147.07	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	151
571	Chandad	146.55	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	153
572	Chandad	137.94	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	152
574	Khapri	192.75	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	154
575	Khapri	156.95	Gadchiroli	Wadsa	Kurkheda	Gothangaon	PF	971
576	Gothangaon	244.23	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	155
577	Gothangaon	117.93	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	156
579	Gothangaon	1.80	Gadchiroli	Wadsa	Kurkheda	Gothangaon	PF	972
580	Gothangaon	4.94	Gadchiroli	Wadsa	Kurkheda	Gothangaon	PF	973
581	Gothangaon	144.23	Gadchiroli	Wadsa	Kurkheda	Gothangaon	PF	974
583	Gothangaon	107.28	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	159
584	Gothangaon	183.33	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	160
585	Gothangaon	114.68	Gadchiroli	Wadsa	Kurkheda	Gothangaon	PF	977
587	Gothangaon	96.33	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	157
588	Gothangaon	127.10	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	158
590	Ramgad	211.84	Gadchiroli	Wadsa	Purada	Ramgad	RF	219
599	Ramgad	195.66	Gadchiroli	Wadsa	Purada	Ramgad	RF	241
600	Ramgad	86.47	Gadchiroli	Wadsa	Purada	Ramgad	PF	1061
602	Ramgad	192.00	Gadchiroli	Wadsa	Purada	Ramgad	RF	242
603	Ramgad	182.20	Gadchiroli	Wadsa	Purada	Ramgad	RF	243
608	Ramgad	187.36	Gadchiroli	Wadsa	Purada	Ramgad	RF	244
609	Chechewada	92.71	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	262

610	Chechewada	113.50	Gadchiroli	Wadsa	Delanwadi	Sonsari	PF	1085
613	Bandhagaon	67.60	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	263
614	Doldongari	222.00	Gadchiroli	Wadsa	Delanwadi	Mangda	RF	264
615	Bandhagaon	244.53	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	267
616	Bandhagaon	86.07	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	266
621	Bandhagaon	133.81	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	268
622	Bandhagaon	66.07	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	269
623	Bandhagaon	59.43	Gadchiroli	Wadsa	Delanwadi	Sonsari	PF	1092
624	Bandhagaon	218.13	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	271
625	Bandhagaon	106.49	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	270
626	Sonsari	199.72	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	273
627	Sonsari	241.45	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	272
628	Sonsari	51.75	Gadchiroli	Wadsa	Delanwadi	Sonsari	PF	1094
630	Sonsari	109.70	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	274
634	Sonsari	87.55	Gadchiroli	Wadsa	Delanwadi	Sonsari	PF	1098
635	Sonsari	78.67	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	275
636	Sonsari	148.08	Gadchiroli	Wadsa	Delanwadi	Sonsari	PF	1101
637	Sonsari	111.17	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	276
638	Sonsari	91.10	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	277
640	Sonsari	164.04	Gadchiroli	Wadsa	Delanwadi	Sonsari	PF	1100
641	Chechewada	181.93	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	281
642	Chechewada	170.05	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	282
650	Chechewada	130.79	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	284
651	Chechewada	143.18	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	283
652	Chechewada	86.02	Gadchiroli	Wadsa	Delanwadi	Sonsari	PF	1113
655	Shivni	144.17	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	285
656	Shivni	194.67	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	286
657	Shivni	287.84	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	287
659	Shivni	98.96	Gadchiroli	Wadsa	Delanwadi	Sonsari	PF	1118
660	Shivni	17.69	Gadchiroli	Wadsa	Delanwadi	Sonsari	PF	1119
661	Chandad	171.28	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	288
665	Chandad	93.02	Gadchiroli	Wadsa	Kurkheda	Gothangaon	PF	1124
667	Sonsari	88.46	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	290
669	Sonsari	173.08	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	289
670	Chandad	72.70	Gadchiroli	Wadsa	Kurkheda	Gothangaon	PF	1126
671	Chandad	151.00	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	291
675	Ghati	62.53	Gadchiroli	Wadsa	Kurkheda	Gotangaon	RF	292
676	Ghati	120.95	Gadchiroli	Wadsa	Kurkheda	Gotangaon	RF	293
677	Ghati	57.09	Gadchiroli	Wadsa	Kurkheda	Gotangaon	RF	294
678	Ghati	55.06	Gadchiroli	Wadsa	Kurkheda	Gotangaon	PF	1130
681	Chandad	138.55	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	296
682	Chandad	131.96	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	295
683	Chandad	103.96	Gadchiroli	Wadsa	Kurkheda	Gothangaon	RF	1133
684	Ghati	96.52	Gadchiroli	Wadsa	Kurkheda	Gotangaon	RF	298
685	Ghati	58.89	Gadchiroli	Wadsa	Kurkheda	Gotangaon	PF	1137
687	Uradi	107.92	Gadchiroli	Wadsa	Delanwadi	Delanwadi	RF	301
692	Bandhagaon	184.06	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	280
693	Bandhagaon	91.24	Gadchiroli	Wadsa	Delanwadi	Sonsari	PF	1102
707	Dawandi	303.40	Gadchiroli	Wadsa	Bedgaon	Korchi	RF	490
708	Dawandi	346.74	Gadchiroli	Wadsa	Bedgaon	Korchi	RF	491
713	Korchi	137.04	Gadchiroli	Wadsa	Bedgaon	Korchi	RF	487
714	Korchi	96.13	Gadchiroli	Wadsa	Bedgaon	Korchi	PF	1324
715	Bedgaon	243.75	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	486
716	Bedgaon	109.39	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	1323
737	Temli	156.28	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	481
744	Bedgaon	170.07	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	483
745	Bedgaon	214.08	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	484
746	Bedgaon	283.12	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	485
896	Dodke	136.83	Gadchiroli	Wadsa	Bedgaon	Maseli	PF	559

911	Dabri	432.92	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	543
913	Dodke	170.98	Gadchiroli	Wadsa	Bedgaon	Maseli	RF	558
915	Bonde	61.97	Gadchiroli	Wadsa	Bedgaon	Navezari	PF	1475
922	Belargondi	315.60	Gadchiroli	Wadsa	Bedgaon	Maseli	RF	525
927	Korchi	211.88	Gadchiroli	Wadsa	Bedgaon	Korchi	PF	1528
928	Bonde	233.97	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	556
931	Bonde	98.16	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	557
933	Korchi	313.19	Gadchiroli	Wadsa	Bedgaon	Korchi	RF	563
939	Navezari	200.19	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	552
942	Navezari	383.15	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	551
948	Pranpur	414.27	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	547
949	Pranpur	215.22	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	546
951	Dabri	327.18	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	548
963	Dodke	194.63	Gadchiroli	Wadsa	Bedgaon	Maseli	RF	564
975	Bodena	260.74	Gadchiroli	Wadsa	Bedgaon	Maseli	RF	539
998	Kobramend(E)	184.93	Gadchiroli	Wadsa	Malewada	Kobramenda	RF	423
1000	Khobramendha(W)	8.38	Gadchiroli	Wadsa	Malewada	Khobramendha	PF	1299
1002	Dawandi	318.96	Gadchiroli	Wadsa	Bedgaon	Korchi	RF	492
1010	Kitadi	74.08	Gadchiroli	Wadsa	Porla	Porla	PF	792
1042	Dibhana	417.79	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	1
1043	Dibhana	476.42	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	2
1044	Churchura	1027.27	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	3
1045	Sakhara	427.81	Gadchiroli	Wadsa	Porla	Porla	A Class RF	5
1046	Porla	277.30	Gadchiroli	Wadsa	Porla	Porla	A Class RF	6
1047	Nawargaon(N)	630.12	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	7
1048	Nawargaon(S)	519.64	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	8
1049	Nawargaon(S)	420.73	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	9
1050	Deloda	736.56	Gadchiroli	Wadsa	Porla	Maregaon	A Class RF	10
1051	Nawargaon(S)	763.22	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	11
1052	Porla	370.84	Gadchiroli	Wadsa	Porla	Porla	A Class RF	12
1053	Porla	407.10	Gadchiroli	Wadsa	Porla	Porla	A Class RF	13
1054	Kitadi	237.03	Gadchiroli	Wadsa	Porla	Porla	A Class RF	14
1055	Kitadi	386.55	Gadchiroli	Wadsa	Porla	Porla	A Class RF	15
1056	Naroti	689.73	Gadchiroli	Wadsa	Porla	Sirsi	A Class RF	17
1058	Maregaon	269.51	Gadchiroli	Wadsa	Porla	Maregaon	A Class RF	19
1059	Mausikhamb	213.70	Gadchiroli	Wadsa	Porla	Maregaon	A Class RF	20
1063	Sirsi	721.15	Gadchiroli	Wadsa	Porla	Sirsi	PF	48
1064	Kitadi	325.93	Gadchiroli	Wadsa	Porla	Porla	A Class RF	51
1065	Sirsi	539.52	Gadchiroli	Wadsa	Porla	Sirsi	A Class RF	62
1066	Darli	1281.64	Gadchiroli	Wadsa	Porla	Sirsi	A Class RF	63
1067	Bori	336.79	Gadchiroli	Wadsa	Porla	Sirsi	B Class RF	52
1069	Shivni	147.80	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	202
1070	Shivni	147.80	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	203
1071	Chechewada	142.95	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	278
1072	Chechewada	182.26	Gadchiroli	Wadsa	Delanwadi	Sonsari	RF	279
1073	Kasari	218.78	Gadchiroli	Wadsa	Delanwadi	Delanwadi	A Class RF	316
1074	Kasari	319.16	Gadchiroli	Wadsa	Delanwadi	Delanwadi	A Class RF	317
1076	Sonerangi	228.01	Gadchiroli	Wadsa	Delanwadi	Delanwadi	A Class RF	305
1077	Delanwadi	487.43	Gadchiroli	Wadsa	Delanwadi	Delanwadi	A Class RF	306
1078	Delanwadi	465.32	Gadchiroli	Wadsa	Delanwadi	Delanwadi	A Class RF	308
1079	Sonerangi	579.88	Gadchiroli	Wadsa	Delanwadi	Delanwadi	A Class RF	309
1081	Uradi	193.90	Gadchiroli	Wadsa	Delanwadi	Delanwadi	A Class RF	311
1084	Injewari	35.47	Gadchiroli	Wadsa	Armori	Armori	PF	781
1091	Sawalkheda	102.41	Gadchiroli	Wadsa	Armori	Palasgaon	RF	29
1093	Sawalkheda	65.89	Gadchiroli	Wadsa	Armori	Palasgaon	PF	726
1109	Wairagad	202.54	Gadchiroli	Wadsa	Armori	Wairagad	PF	740
1125	Kuirandi	57.62	Gadchiroli	Wadsa	Armori	Wairagad	RF	27
1127	Kurandi	68.54	Gadchiroli	Wadsa	Armori	Wairagad	RF	72
1129	Kurandi	146.02	Gadchiroli	Wadsa	Armori	Wairagad	RF	26

1137	Kurandi	47.62	Gadchiroli	Wadsa	Armori	Wairagad	PF	676
1149	Kurandi	30.59	Gadchiroli	Wadsa	Armori	Wairagad	PF	696
1153	Pisewadha	40.58	Gadchiroli	Wadsa	Armori	Wairagad	PF	648
1157	Pisewadha	64.12	Gadchiroli	Wadsa	Armori	Wairagad	PF	655
1161	Pisewadha	120.82	Gadchiroli	Wadsa	Armori	Wairagad	RF	21
1162	Pisewadha	62.76	Gadchiroli	Wadsa	Armori	Wairagad	RF	66
1164	Pisewadha	80.02	Gadchiroli	Wadsa	Armori	Wairagad	PF	671
1166	Vhirgaon	346.84	Gadchiroli	Wadsa	Armori	Wairagad	RF	25
1167	Vhirgaon	173.10	Gadchiroli	Wadsa	Armori	Wairagad	RF	24
1175	Vhirgaon	160.70	Gadchiroli	Wadsa	Armori	Wairagad	PF	657
1180	Vhirgaon	41.15	Gadchiroli	Wadsa	Armori	Wairagad	PF	689
1182	Wairagad	626.06	Gadchiroli	Wadsa	Armori	Wairagad	A Class RF	37
1183	Sawalkheda	402.27	Gadchiroli	Wadsa	Armori	Palasgaon	A Class RF	30
1184	Sawalkheda	260.43	Gadchiroli	Wadsa	Armori	Plasgaon	A Class RF	31
1185	Manjewada	543.37	Gadchiroli	Wadsa	Armori	Palasgaon	A Class RF	32
1186	Jogiskhara	251.82	Gadchiroli	Wadsa	Armori	Palasgaon	A Class RF	35
1187	Saimara	366.72	Gadchiroli	Wadsa	Armori	Palasgaon	A Class RF	36
1188	Saimara	366.13	Gadchiroli	Wadsa	Armori	Palasgaon	A Class RF	39
1189	Ramala	596.12	Gadchiroli	Wadsa	Armori	Armori	A Class RF	40
1190	Ramala	579.67	Gadchiroli	Wadsa	Armori	Armori	A Class RF	41
1191	Armori	474.04	Gadchiroli	Wadsa	Armori	Armori	A Class RF	42
1192	Kurandi	259.35	Gadchiroli	Wadsa	Armori	Wairagad	A Class RF	46
1193	Ravi	188.54	Gadchiroli	Wadsa	Armori	Armori	A Class RF	55
1194	Ravi	240.83	Gadchiroli	Wadsa	Armori	Armori	A Class RF	57
1195	Ravi	191.90	Gadchiroli	Wadsa	Armori	Armori	A Class RF	56
1196	Sawalkheda	98.57	Gadchiroli	Wadsa	Armori	Palasgaon	A Class RF	60
1197	Palasgaon	91.28	Gadchiroli	Wadsa	Armori	Palasgaon	A Class RF	87
1198	Palasgaon	103.49	Gadchiroli	Wadsa	Armori	Palasgaon	A Class RF	88
1199	Palasgaon	390.75	Gadchiroli	Wadsa	Armori	Palasgaon	A Class RF	89
1200	Palasgaon	264.63	Gadchiroli	Wadsa	Armori	Palasgaon	A Class RF	85
1207	Kondhala	167.99	Gadchiroli	Wadsa	Wadsa	Wadsa	PF	808
1208	Kondhala	583.77	Gadchiroli	Wadsa	Wadsa	Wadsa	A Class RF	58
1209	Usegaon	430.02	Gadchiroli	Wadsa	Wadsa	Wadsa	A Class RF	90
1210	Usegaon	419.39	Gadchiroli	Wadsa	Wadsa	Wadsa	A Class RF	91
1211	Shivrajpur	259.84	Gadchiroli	Wadsa	Wadsa	Wadsa	A Class RF	93
1212	Dongargaon	394.53	Gadchiroli	Wadsa	Wadsa	Vhirgaon	A Class RF	84
1213	Vhirgaon	230.56	Gadchiroli	Wadsa	Wadsa	Vhirgaon	A Class RF	81
1214	Shirpur	398.47	Gadchiroli	Wadsa	Wadsa	Shirpur	A Class RF	79
1215	Vhirgaon	324.84	Gadchiroli	Wadsa	Wadsa	Vhirgaon	A Class RF	82
1216	Vhirgaon	466.03	Gadchiroli	Wadsa	Wadsa	Vhirgaon	A Class RF	80
1217	Eklapur	921.66	Gadchiroli	Wadsa	Wadsa	Wadsa	A Class RF	97
1219	Chop	419.21	Gadchiroli	Wadsa	Wadsa	Shankarpur	A Class RF	104
1220	Chop	358.43	Gadchiroli	Wadsa	Wadsa	Shankarpur	A Class RF	105
1221	Bodadha	374.93	Gadchiroli	Wadsa	Wadsa	Shankarpur	A Class RF	102
1222	Rawanwadi	609.19	Gadchiroli	Wadsa	Wadsa	Shankarpur	A Class RF	103
1223	Kasari	357.32	Gadchiroli	Wadsa	Wadsa	Shankarpur	A Class RF	109
1224	Shankarpur	442.72	Gadchiroli	Wadsa	Wadsa	Shankarpur	A Class RF	110
1225	Kasari	375.33	Gadchiroli	Wadsa	Wadsa	Shankarpur	A Class RF	107
1226	Kasari	303.19	Gadchiroli	Wadsa	Wadsa	Shankarpur	A Class RF	108
1227	Pimpalgaon	167.76	Gadchiroli	Wadsa	Wadsa	Vhirgaon	A Class RF	111
1228	Andhali	817.73	Gadchiroli	Wadsa	Purada	Ramgad	A Class RF	336
1232	Lendari	154.84	Gadchiroli	Wadsa	Purada	Purada	RF	198
1233	Chircadi	119.10	Gadchiroli	Wadsa	Purada	Purada	RF	212
1234	Lendari	138.11	Gadchiroli	Wadsa	Purada	Purada	RF	213
1235	Chircadi	239.34	Gadchiroli	Wadsa	Purada	Purada	RF	209
1236	Chircadi	118.26	Gadchiroli	Wadsa	Purada	Purada	RF	210
1237	Chircadi	140.44	Gadchiroli	Wadsa	Purada	Purada	RF	208
1238	Chircadi	194.25	Gadchiroli	Wadsa	Purada	Purada	RF	204
1239	Hadikanhar(N)	529.59	Gadchiroli	Wadsa	Purasa	Hadikanhar	RF	179

1240	Hadikanhar(N)	446.84	Gadchiroli	Wadsa	Purada	Hadikanhar	RF	180
1241	Hadikanhar(N)	397.83	Gadchiroli	Wadsa	Purada	Hadikanhar	RF	181
1242	Hadikanhar(N)	531.54	Gadchiroli	Wadsa	Purada	Hadikanhar	RF	178
1243	Hadikanhar	445.51	Gadchiroli	Wadsa	Purada	Hadikanhar(S)	RF	183
1244	Hadikanhar	397.57	Gadchiroli	Wadsa	Purada	Hadikanhar(S)	RF	227
1245	Hadikanhar	402.77	Gadchiroli	Wadsa	Purada	Hadikanhar(S)	RF	177
1246	Hadikanhar	353.14	Gadchiroli	Wadsa	Purada	Hadikanhar(S)	RF	182
1247	Lawari	392.04	Gadchiroli	Wadsa	Purada	Hadikanhar	RF	232
1248	Lawari	487.92	Gadchiroli	Wadsa	Purada	Hadikanhar	RF	234
1249	Kohaka(E)	190.22	Gadchiroli	Wadsa	Purada	Kohaka	RF	438
1250	Kohaka(E)	161.70	Gadchiroli	Wadsa	Purada	Kohaka	RF	439
1251	Kohaka(E)	239.57	Gadchiroli	Wadsa	Purada	Kohaka	RF	440
1252	Kohaka(E)	302.78	Gadchiroli	Wadsa	Purada	Kohaka	RF	441
1253	Kohaka(E)	184.27	Gadchiroli	Wadsa	Purada	Kohaka	RF	442
1254	Kohaka(E)	410.54	Gadchiroli	Wadsa	Purada	Kohaka	RF	443
1255	Kohaka(E)	480.89	Gadchiroli	Wadsa	Purada	Kohaka	RF	444
1256	Kohaka(E)	309.76	Gadchiroli	Wadsa	Purada	Kohaka	RF	476
1257	Banjari(W)	345.70	Gadchiroli	Wadsa	Purada	Kohaka	RF	446
1258	Banjari(W)	374.28	Gadchiroli	Wadsa	Purada	Kohaka	RF	448
1259	Banjari(W)	179.96	Gadchiroli	Wadsa	Purada	Kohaka	RF	450
1260	Banjari(E)	315.15	Gadchiroli	Wadsa	Purada	Kohaka	RF	445
1261	Banjari(E)	226.11	Gadchiroli	Wadsa	Purada	Kohaka	RF	449
1262	Banjari(E)	296.03	Gadchiroli	Wadsa	Purada	Kohaka	RF	452
1263	Banjari(E)	344.75	Gadchiroli	Wadsa	Purada	Kohaka	RF	454
1264	Andhali	221.36	Gadchiroli	Wadsa	Purada	Ramgad	RF	257
1265	Yedapur	117.42	Gadchiroli	Wadsa	Purada	Ramgad	RF	255
1266	Andhali	184.17	Gadchiroli	Wadsa	Purada	Ramgad	RF	261
1267	Andhali	228.42	Gadchiroli	Wadsa	Purada	Ramgad	RF	260
1268	Andhali	146.94	Gadchiroli	Wadsa	Purada	Ramgad	RF	258
1269	Andhali	160.31	Gadchiroli	Wadsa	Purada	Ramgad	RF	259
1270	Kurandi (rith)	296.49	Gadchiroli	Wadsa	Purada	Purada	RF	245
1272	Kurandi (rith)	304.84	Gadchiroli	Wadsa	Purada	Purada	RF	247
1273	Kurandi (rith)	259.76	Gadchiroli	Wadsa	Purada	Purada	RF	248
1274	Kurandi (rith)	372.69	Gadchiroli	Wadsa	Purada	Purada	RF	249
1285	Deogad	381.64	Gadchiroli	Wadsa	Malewada	Khobramendha	RF	417
1286	Kobramend(E)	308.64	Gadchiroli	Wadsa	Malewada	Kobramenda	RF	418
1287	Deogad	448.45	Gadchiroli	Wadsa	Malewada	Khobramendha	RF	419
1288	Deogad	404.52	Gadchiroli	Wadsa	Malewada	Khobramendha	RF	420
1290	Kobramend(E)	561.50	Gadchiroli	Wadsa	Malewada	Kobramenda	RF	422
1291	Kobramend(E)	466.46	Gadchiroli	Wadsa	Malewada	Kobramenda	RF	416
1292	Khobramendha(W)	193.78	Gadchiroli	Wadsa	Malewada	Khobramendha	RF	437
1293	Nadecal	226.42	Gadchiroli	Wadsa	Malewada	Godari	RF	475
1294	Nadecal	281.45	Gadchiroli	Wadsa	Malewada	Godari	RF	474
1295	Nadecal	263.60	Gadchiroli	Wadsa	Malewada	Godari	RF	414
1296	Nadecal	396.02	Gadchiroli	Wadsa	Malewada	Godari	RF	415
1297	Nadecal	270.48	Gadchiroli	Wadsa	Malewada	Godari	RF	477
1312	Khedegaon	370.08	Gadchiroli	Wadsa	Kurkheda	Gewardha	RF	106
1313	Ghati	427.20	Gadchiroli	Wadsa	Kurkheda	Gotangaon	RF	297
1314	Jambhulkheda	138.16	Gadchiroli	Wadsa	Kurkheda	Kurkheda	RF	196
1315	Jambhulkheda	217.29	Gadchiroli	Wadsa	Kurkheda	Kurkheda	RF	197
1316	Jambhulkheda	182.84	Gadchiroli	Wadsa	Kurkheda	Kurkheda	RF	199
1317	Jambhulkheda	98.99	Gadchiroli	Wadsa	Kurkheda	Kurkheda	RF	200
1318	Jambhulkheda	144.31	Gadchiroli	Wadsa	Kurkheda	Kurkheda	RF	201
1319	Chircadi	178.08	Gadchiroli	Wadsa	Purada	Purada	RF	211
1369	Kalapani	474.06	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	460
1370	Kalapani	334.90	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	462
1371	Laxmipur	564.20	Gadchiroli	Wadsa	Bedgaon	Korchi	RF	463
1372	Laxmipur	380.02	Gadchiroli	Wadsa	Bedgaon	Korchi	RF	464
1373	Laxmipur	525.57	Gadchiroli	Wadsa	Bedgaon	Korchi	RF	465

1374	Kalapani	337.88	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	461
1375	Laxmipur	335.52	Gadchiroli	Wadsa	Bedgaon	Korchi	RF	466
1376	Gadheli	336.68	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	457
1377	Gadheli	467.29	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	458
1378	Gadheli	466.06	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	451
1379	Gadheli	623.97	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	456
1380	Gadheli	429.18	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	459
1381	Gadheli	337.15	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	455
1382	Fulgondi	462.75	Gadchiroli	Wadsa	Bedgaon	Maseli	RF	468
1383	Fulgondi	507.76	Gadchiroli	Wadsa	Bedgaon	Maseli	RF	469
1384	Pranpur	599.47	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	473
1385	Mayalghat	331.95	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	472
1386	Charvidand	387.44	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	230
1387	Charvidand	440.71	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	229
1388	Charvidand	481.98	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	231
1389	Fulgondi	387.09	Gadchiroli	Wadsa	Bedgaon	Maseli	RF	467
1390	Temli	336.33	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	453
1391	Kohaka(E)	365.93	Gadchiroli	Wadsa	Purada	Kohaka	RF	479
1392	Churchura	429.95	Gadchiroli	Wadsa	Porla	Churchura	B Class RF	54
1394	Sakhara	121.24	Gadchiroli	Wadsa	Porla	Porla	PF	580
1403	Kurkheda	83.54	Gadchiroli	Wadsa	Kurkheda	Kurkheda	RF	168
1413	Palasgad	233.73	Gadchiroli	Wadsa	Kurkheda	Palasgad	RF	188
1414	Doldongari	283.95	Gadchiroli	Wadsa	Delanwadi	Mangda	RF	265
1420	Jogiskhara	403.64	Gadchiroli	Wadsa	Armori	Palasgaon	B Class RF	47
1422	Manjewada	296.06	Gadchiroli	Wadsa	Armori	Palasgaon	A Class RF	34
1423	Manjewada	216.58	Gadchiroli	Wadsa	Armori	Palasgaon	A Class RF	33
1427	Pisewadha	64.09	Gadchiroli	Wadsa	Armori	Wairagad	RF	22
1440	Katalwada	204.12	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	431
1441	Katalwada	340.92	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	430
1442	Katalwada	159.47	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	429
1443	Khobramendha(W)	139.26	Gadchiroli	Wadsa	Malewada	Khobramendha	PF	426
1444	Khobramendha(W)	234.65	Gadchiroli	Wadsa	Malewada	Khobramendha	RF	425
1453	Katalwada	252.18	Gadchiroli	Wadsa	Malewada	Ranwahi	RF	427
1461	Khapri	359.81	Gadchiroli	Wadsa	Porla	Maregaon	A Class RF	16
1462	Vihirgaon	125.28	Gadchiroli	Wadsa	Wadsa	Vihirgaon	PF	862
1463	Sukala	93.69	Gadchiroli	Wadsa	Armori	Wairagad	PF	720
1464	Armori	129.01	Gadchiroli	Wadsa	Armori	Armori	ZJ	1535
1507	Bori	72.06	Gadchiroli	Wadsa	Porla	Sirshi	ZJ	1579
1554	Mayalghat	268.27	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	550
1555	Dabri	295.13	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	544
1556	Dabri	534.05	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	545
1558	Wairagad	248.58	Gadchiroli	Wadsa	Armori	Wairagad	RF	38
1559	Pisewadha	147.43	Gadchiroli	Wadsa	Armori	Wairagad	RF	23
1570	Wasala	323.10	Gadchiroli	Wadsa	Armori	Armori	A Class RF	44
1571	Sukala	540.71	Gadchiroli	Wadsa	Armori	Wairagad	B Class RF	45
1572	Injewari	396.50	Gadchiroli	Wadsa	Armori	Armori	RF	49
1573	Bori	574.06	Gadchiroli	Wadsa	Porla	Sirsi	RF	50
1575	Vihirgaon	139.59	Gadchiroli	Wadsa	Armori	Wairagad	RF	61
1576	Kondhala	385.43	Gadchiroli	Wadsa	Wadsa	Wadsa	A Class RF	59
1577	Lawari	298.24	Gadchiroli	Wadsa	Purada	Hadikanhar	RF	233
1580	Belargondi	252.68	Gadchiroli	Wadsa	Bedgaon	Maseli	R.F	542
1583	Temli	78.22	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	482
1584	Temli	351.44	Gadchiroli	Wadsa	Bedgaon	Bedgaon	RF	480
1587	Mayalghat	400.14	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	470
1588	Mayalghat	352.82	Gadchiroli	Wadsa	Bedgaon	Navezari	RF	471
1592		1073.74	Gadchiroli	Wadsa			RF	329 A
1593		1212.80	Gadchiroli	Wadsa			RF	329 C
1594		788.33	Gadchiroli	Wadsa			RF	329 B
1595	Sonerangi	158.30	Gadchiroli	Wadsa	Delanwadi	Delanwadi	PF	1146

1596	Porla	264.69	Gadchiroli	Wadsa	Porla	Porla	RF	4A
1597	Nawargaon(S)	265.54	Gadchiroli	Wadsa	Porla	Churchura	RF	4B
1598	Armor	314.90	Gadchiroli	Wadsa	Armor	Armor	A Class RF	67
1601	Uradi	68.27	Gadchiroli	Wadsa	Delanwadi	Delanwadi	RF	300
1602	Banjari(W)	380.94	Gadchiroli	Wadsa	Purada	Kohaka	RF	447
1606	Mangda	5.24	Gadchiroli	Wadsa	Delanwadi	Mangda	PF	1159
Gondia								
3	Kawatha I I	224.74	Gondia	Gondia	Navegaon Ban.	Kawatha	RF	769
6	Jambhadi II	194.70	Gondia	Gondia	Navegaon Ban.	Pawani	RF	727
7	Pawani	214.88	Gondia	Gondia	Navegaon Ban.	Pawani	RF	728
8	Pawani	109.84	Gondia	Gondia	Navegaon Ban.	Pawani	RF	730
9	Pawani	155.37	Gondia	Gondia	Navegaon Ban.	Pawani	RF	729
10	Yerandi	209.50	Gondia	Gondia	Navegaon Ban.	Bortekari	RF	732
11	Yerandi	148.52	Gondia	Gondia	Navegaon Ban.	Bortekari	RF	731
12	Kanholi	176.68	Gondia	Gondia	Navegaon Ban.	Navegaon Ban.	RF	734
13	Surtoli I	217.86	Gondia	Gondia	Navegaon Ban.	Bortekari	RF	735
17	Kawatha I	223.27	Gondia	Gondia	Navegaon Ban.	Kawatha	RF	739
18	Kawatha I	267.52	Gondia	Gondia	Navegaon Ban.	Kawatha	RF	738
19	Kawatha I I	199.36	Gondia	Gondia	Navegaon Ban.	Kawatha	RF	737
20	Kawatha III	166.95	Gondia	Gondia	Navegaon Ban.	Kawatha	RF	768
21	Kawatha III	110.05	Gondia	Gondia	Navegaon Ban.	Kawatha	RF	767
26	Ramghat II	196.66	Gondia	Gondia	Arjuni Morgaon	Arjuni Morgaon	RF	759
37	Surtoli I	78.99	Gondia	Gondia	Navegaon Ban.	Bortekari	RF	736
40	Mahurkuda	65.40	Gondia	Gondia	Arjuni Morgaon	Mahagaon	RF	760
41	Butai I	503.85	Gondia	Gondia	Arjuni Morgaon	Mahagaon	RF	255
42	Umarpayali	451.54	Gondia	Gondia	Gothangaon	Gothangaon	RF	247
43	Pratapgarh	321.84	Gondia	Gondia	Gothangaon	Gothangaon	RF	237
44	Ramghat II	454.47	Gondia	Gondia	Arjuni Morgaon	Arjuni Morgaon	RF	253
45	Ambhora II	225.41	Gondia	Gondia	Gothangaon	Keshori	RF	777
94	Wadegaon	213.41	Gondia	Gondia	Arjuni Morgaon	Wadegaon	RF	748
100	Pimparkhari III	271.53	Gondia	Gondia	Chichgarh	Pimparkhari	RF	636
101	Pimparkhari IV	287.40	Gondia	Gondia	Chichgarh	Pimparkhari	RF	638
102	Pimparkhari IV	225.39	Gondia	Gondia	Chichgarh	Pimparkhari	RF	639
103	Pimparkhari III	212.09	Gondia	Gondia	Chichgarh	Pimparkhari	RF	637
105	Magardoh I	252.40	Gondia	Gondia	Chichgarh	Magardoh	RF	797
106	Magardoh II	248.81	Gondia	Gondia	Chichgarh	Magardoh	RF	799
107	Magardoh II	296.85	Gondia	Gondia	Chichgarh	Magardoh	RF	800
108	Malkazari II	278.96	Gondia	Gondia	Chichgarh	Magardoh	RF	802
109	Malkazari II	203.90	Gondia	Gondia	Chichgarh	Magardoh	RF	801
110	Malkazari II	217.76	Gondia	Gondia	Chichgarh	Magardoh	RF	811
111	Malkazari I	304.71	Gondia	Gondia	Chichgarh	Magardoh	RF	810
112	Magardoh II	272.90	Gondia	Gondia	Chichgarh	Magardoh	RF	803
113	Akata I	181.50	Gondia	Gondia	Chichgarh	Palandur	RF	791
121	Ghonadi II	282.26	Gondia	Gondia	South Deori	Bonde	RF	662
122	Mohandi	204.44	Gondia	Gondia	Chichgarh	Chichgarh	RF	657
123	Mohandi	172.01	Gondia	Gondia	Chichgarh	Chichgarh	RF	654
124	Mohandi	176.24	Gondia	Gondia	Chichgarh	Chichgarh	RF	640
125	Sukadi III	306.25	Gondia	Gondia	Chichgarh	Piparkhari	RF	650
126	Sukadi II	209.55	Gondia	Gondia	Chichgarh	Chichgarh	RF	653
127	Sukadi II	256.69	Gondia	Gondia	Chichgarh	Chichgarh	RF	651
128	Pimparkhari IV	208.42	Gondia	Gondia	Chichgarh	Pimparkhari	RF	644
129	Sukadi III	271.32	Gondia	Gondia	Chichgarh	Piparkhari	RF	646
130	Sukadi III	291.59	Gondia	Gondia	Chichgarh	Piparkhari	RF	645
132	Itkheda	186.59	Gondia	Gondia	Arjuni Morgaon	Wadegaon	RF	749
143	Pimparkhari II	205.56	Gondia	Gondia	Chichgarh	Pimparkhari	RF	634
144	Pimparkhari III	237.72	Gondia	Gondia	Chichgarh	Pimparkhari	RF	635
145	Pimparkhari II	311.12	Gondia	Gondia	Chichgarh	Pimparkhari	RF	633
157	Pimparkhari II	237.60	Gondia	Gondia	Chichgarh	Pimparkhari	RF	632
162	Gawarra	34.18	Gondia	Gondia	Gothangaon	Keshori	RF	779

163	Parastola	155.75	Gondia	Gondia	Gothangaon	Rajoli	RF	778
169	Bortekari	476.17	Gondia	Gondia	Navegaon Ban.	Bortekari	RF	234
170	Surtoli II	472.22	Gondia	Gondia	Navegaon Ban.	Botekhari	RF	233
174	Butai I	59.19	Gondia	Gondia	Arjuni Morgaon	Mahagaon	RF	761
176	Gothangaon	119.91	Gondia	Gondia	Gothangaon	Gothangaon	RF	772A
179	Arjuni Morgaon	259.38	Gondia	Gondia	Arjuni Morgaon	Arjuni Morgaon	RF	741
180	Nimgaon	101.33	Gondia	Gondia	Arjuni Morgaon	Bondgaon	RF	740
181	Morgaon	154.74	Gondia	Gondia	Arjuni Morgaon	Arjuni Morgaon	RF	765
183	Akata II	316.26	Gondia	Gondia	Chichgarh	Palandur	RF	790
184	Akata II	224.72	Gondia	Gondia	Chichgarh	Palandur	RF	788B
185	Ghogara II	350.74	Gondia	Gondia	Chichgarh	Magardoh	RF	788A
186	Ghogara II	199.55	Gondia	Gondia	Chichgarh	Magardoh	RF	787
187	Ghogara II	245.69	Gondia	Gondia	Chichgarh	Magardoh	RF	789
189	Silezari	406.91	Gondia	Gondia	Navegaon Ban.	Barabhathi	RF	280
190	Vihirgaon (Bardya)	638.45	Gondia	Gondia	Navegaon Ban.	Barabhathi	RF	281
191	Ambhora I	518.71	Gondia	Gondia	Gothangaon	Keshori	RF	252
192	Gawarra	357.55	Gondia	Gondia	Gothangaon	Keshori	RF	251
193	Tukumnarayan	369.16	Gondia	Gondia	Gothangaon	Gothangaon	RF	250
194	Navegaon Ban.	240.22	Gondia	Gondia	Navegaon Ban.	Navegaon Ban.	RF	227
195	Kohalgaon	440.19	Gondia	Gondia	Navegaon Ban.	Navegaon Ban.	RF	228
196	Jabbarkheda	286.34	Gondia	Gondia	Navegaon Ban.	Navegaon Ban.	RF	231
197	Kawatha IV	394.31	Gondia	Gondia	Navegaon Ban.	Bortekari	RF	236
198	Kohalgaon	328.38	Gondia	Gondia	Navegaon Ban.	Navegaon Ban.	RF	229
199	Kanholi	371.03	Gondia	Gondia	Navegaon Ban.	Navegaon Ban.	RF	232
200	Dhabetekadi	338.72	Gondia	Gondia	Arjuni Morgaon	Dhabetekadi	RF	265
203	Ramghat I	208.40	Gondia	Gondia	Arjuni Morgaon	Arjuni Morgaon	RF	254A
204	Ramghat I	341.48	Gondia	Gondia	Arjuni Morgaon	Arjuni Morgaon	RF	254B
205	Jambhadi(gandhari)II	528.85	Gondia	Gondia	Gothangaon	Gothangaon	RF	243
206	Jambhadi(Gandhari)I	455.28	Gondia	Gondia	Gothangaon	Gothangaon	RF	240
207	Tidaka V	396.69	Gondia	Gondia	Arjuni Morgaon	Dhabetekadi	RF	269
208	Tidaka IV	483.37	Gondia	Gondia	Arjuni Morgaon	Dhabetekadi	RF	274
209	Tidaka V	410.61	Gondia	Gondia	Arjuni Morgaon	Dhabetekadi	RF	268
210	Dhabetekadi	514.73	Gondia	Gondia	Arjuni Morgaon	Dhabetekadi	RF	266
211	Tidaka III	470.55	Gondia	Gondia	Arjuni Morgaon	Bondgaon	RF	275
212	Tidaka II	527.04	Gondia	Gondia	Arjuni Morgaon	Bondgaon	RF	276
213	Tidaka I	390.84	Gondia	Gondia	Arjuni Morgaon	Bondgaon	RF	277
214	Tidaka I	442.42	Gondia	Gondia	Arjuni Morgaon	Bondgaon	RF	278
215	Bodara	559.46	Gondia	Gondia	Arjuni Morgaon	Bondgaon	RF	279
216	Nimgaon	321.01	Gondia	Gondia	Arjuni Morgaon	Bondgaon	RF	258
217	Bondgaon	619.18	Gondia	Gondia	Arjuni Morgaon	Bondgaon	RF	282
218	Dongargaon	499.83	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	246
219	Umarpayali	314.99	Gondia	Gondia	Gothangaon	Gothangaon	RF	248
220	Khamkhurra	499.05	Gondia	Gondia	Arjuni Morgaon	Wadegaon	RF	259
221	Korambi	316.16	Gondia	Gondia	Arjuni Morgaon	Wadegaon	RF	260
240	Bonde	240.99	Gondia	Gondia	South Deori	Bonde	RF	665
241	Bonde	213.01	Gondia	Gondia	South Deori	Bonde	RF	664
242	Ghonadi II	226.14	Gondia	Gondia	South Deori	Bonde	RF	663
243	Pindkepar I	203.29	Gondia	Gondia	South Deori	Parsodi	RF	667
255	Ramghat I	107.96	Gondia	Gondia	Arjuni Morgaon	Arjuni Morgaon	RF	766
256	Kawatha III	216.04	Gondia	Gondia	Navegaon Ban.	Kawatha	RF	770
257	Kawatha IV	189.68	Gondia	Gondia	Navegaon Ban.	Kawatha	RF	771
258	Ramghat II	177.89	Gondia	Gondia	Arjuni Morgaon	Arjuni Morgaon	RF	758
259	Butai II	147.08	Gondia	Gondia	Arjuni Morgaon	Arjuni Morgaon	RF	757
260	Butai II	172.48	Gondia	Gondia	Arjuni Morgaon	Arjuni Morgaon	RF	756
261	Butai II	174.81	Gondia	Gondia	Arjuni Morgaon	Arjuni Morgaon	RF	755
280	Jambhadi I	195.12	Gondia	Gondia	Navegaon Ban.	Pawani	RF	721
281	Yelodi	246.50	Gondia	Gondia	Navegaon Ban.	Pawani	RF	719
282	Yelodi	131.41	Gondia	Gondia	Navegaon Ban.	Pawani	RF	720
287	Navegaon Ban.	108.84	Gondia	Gondia	Navegaon Ban.	Navegaon Ban.	UF	1029

291	Dongargaon (A)	480.14	Gondia	Gondia	Chichgarh	Palandur	PF	941
294	Nagandoh II	254.34	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	355
295	Nagandoh I	273.64	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	354
296	Nagandoh II	220.99	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	350
297	Nagandoh III	254.09	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	349
298	Nagandoh III	258.15	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	348
299	Nagandoh IV	270.70	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	347
300	Nagandoh IV	142.59	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	346
301	Nagandoh III	167.99	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	351
302	Nagandoh IV	93.08	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	352
303	Nagandoh II	271.21	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	353
304	Nagandoh I	248.73	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	343
320	Tirkhuri III	125.95	Gondia	Gondia	Gothangaon	Tirkhuri I	RF	340
321	Nagandoh I	142.05	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	342
322	Nagandoh IV	256.89	Gondia	Gondia	Gothangaon	Tirkhuri II	RF	344
323	Tirkhuri II	224.57	Gondia	Gondia	Gothangaon	Tirkhuri I	RF	345
324	Tirkhuri II	163.42	Gondia	Gondia	Gothangaon	Tirkhuri I	RF	336
325	Tirkhuri II	305.37	Gondia	Gondia	Gothangaon	Tirkhuri I	RF	335
326	Tirkhuri III	261.05	Gondia	Gondia	Gothangaon	Tirkhuri I	RF	334
327	Tirkhuri III	154.57	Gondia	Gondia	Gothangaon	Tirkhuri I	RF	333
328	Tukumnarayan	172.65	Gondia	Gondia	Gothangaon	Gothangaon	RF	325
329	Junewani I	242.09	Gondia	Gondia	Gothangaon	Rajoli	RF	327
330	Junewani I	196.66	Gondia	Gondia	Gothangaon	Rajoli	RF	326
331	Junewani II	736.26	Gondia	Gondia	Gothangaon	Rajoli	RF	780
394	Arjuni morgaon	231.63	Gondia	Gondia	Arjuni morgaon	Arjuni morgaon	PF	1172
766	Morgaon	226.82	Gondia	Gondia	Arjuni morgaon	Arjuni morgaon	PF	1202
771	Mahurkuda	221.84	Gondia	Gondia	Arjuni morgaon	Mahagaon	PF	1073
789	Wadegaon	136.00	Gondia	Gondia	Gothangaon	Keshori	PF	1233
1092	maisuli I	452.46	Gondia	Gondia	South Deori	Parsodi	PF	1434
1122	Pimparkhari I	275.01	Gondia	Gondia	Chichgarh	Pimparkhari	PF	1400
1123	Pimparkhari I	277.25	Gondia	Gondia	Chichgarh	Pimparkhari	PF	1401
1196	Chichgarh	197.04	Gondia	Gondia	Chichgarh	Chichgarh	PF	1253
1198	Chichgarh	172.13	Gondia	Gondia	Chichgarh	Chichgarh	PF	1254
1279	Jambhadi(Gandhari)I	150.59	Gondia	Gondia	Gothangaon	Gothangaon	PF	925
1282	Malkazari I	210.01	Gondia	Gondia	Chichgarh	Magardoh	PF	960
1313	Wadegaon	384.07	Gondia	Gondia	Arjuni morgaon	Wadegaon	PF	1035
1338	Saigaon II	217.00	Gondia	Gondia	Gothangaon	Tirkhuri I	RF	781
1341	Chutiya	97.95	Gondia	Gondia	Navegaon Ban.	Pawani	PF	989
1387	Tirkhuri I	144.36	Gondia	Gondia	Gothangaon	Tirkhuri I	UF	815
1430	Mohandi	75.58	Gondia	Gondia	Chichgarh	Chichgarh	PF	1437
1590	Asoli	429.76	Gondia	Gondia	Arjuni Morgaon	Wadegaon	RF	263
1594	Parastola	337.76	Gondia	Gondia	Gothangaon	Rajoli	RF	328
1596	Kholda	230.59	Gondia	Gondia	Arjuni Morgaon	Mahagaon	RF	753
1597	Wadegaon	228.02	Gondia	Gondia	Gothangaon	Keshori	RF	774
1598	Wadegaon	225.37	Gondia	Gondia	Gothangaon	Keshori	RF	775
1599	Gawarra	130.32	Gondia	Gondia	Gothangaon	Keshori	RF	776
1671	Jambhadi II	251.04	Gondia	Gondia	Navegaon Ban.	Pawani	RF	814
1754	Jabbarkheda	332.56	Gondia	Gondia	Navegaon Ban.	Navegaon Ban.	RF	230A
1755	Jabbarkheda	108.78	Gondia	Gondia	Navegaon Ban.	Navegaon Ban.	RF	230B
1799	Yedmagondi	407.96	Gondia	Gondia	Chichgarh	Kadikasa	RF	628
1856	Tidaka VI	514.55	Gondia	Gondia	Arjuni Morgaon	Dhabetekadi	RF	267
1868	Kanholi	53.47	Gondia	Gondia	Navegaon Ban.	Navegaon Ban.	PF	1016
1875	Kanholi	7.80	Gondia	Gondia	Navegaon Ban.	Navegaon Ban.	PF	1010A
1876	Ambhora II	128.26	Gondia	Gondia	Gothangaon	Keshori	PF	859A
17		50.181	Gondia	Gondia	Navegaon		RF	210
18		77.700	Gondia	Gondia	Navegaon		RF	209
20		182.513	Gondia	Gondia	Navegaon		RF	211
22		705.237	Gondia	Gondia	Navegaon Bandh		RF	212
25		457.833	Gondia	Gondia	Navegaon Bandh		RF	213

59	Rengepar I	126.69	Gondia	Gondia	Sadak Arjuni	Rengepar	RF	528
60	Rengepar I	188.12	Gondia	Gondia	Sadak Arjuni	Rengepar	RF	529
61	Kanharpayali	158.81	Gondia	Gondia	Sadak Arjuni	Rengepar	RF	530
62	Dalli	175.09	Gondia	Gondia	Sadak Arjuni	Rengepar	RF	548
63	Rengepar II	164.08	Gondia	Gondia	Sadak Arjuni	Rengepar	RF	550
64	Rengepar II	213.45	Gondia	Gondia	Sadak Arjuni	Rengepar	RF	553
65	Rengepar II	188.15	Gondia	Gondia	Sadak Arjuni	Rengepar	RF	551
66	Bamhni	188.69	Gondia	Gondia	Sadak Arjuni	Kohamara	RF	552
67	Bamhni	308.54	Gondia	Gondia	Sadak Arjuni	Kohamara	RF	554
68	Duggipar	303.35	Gondia	Gondia	Sadak Arjuni	Kohamara	RF	555
69	Khamtalao	155.80	Gondia	Gondia	North Deori	Mulla	RF	500
70	Khamtalao	256.49	Gondia	Gondia	North Deori	Mulla	RF	534
72	Murdoli	105.44	Gondia	Gondia	North Deori	Bhagi	RF	496
73	Amgaon	177.38	Gondia	Gondia	North Deori	Bhagi	RF	497
74	Amgaon	161.74	Gondia	Gondia	North Deori	Bhagi	RF	539
75	Koyalari	182.45	Gondia	Gondia	Sadak Arjuni	Shenda	RF	538
76	Koyalari	216.64	Gondia	Gondia	Sadak Arjuni	Shenda	RF	537
77	Zunjaritola	260.56	Gondia	Gondia	North Deori	Bhagi	RF	498
78	Shenda	204.21	Gondia	Gondia	Sadak Arjuni	Shenda	RF	536
79	Khamtalao	180.93	Gondia	Gondia	North Deori	Mulla	RF	535
80	Kanharpayali	114.94	Gondia	Gondia	Sadak Arjuni	Rengepar	RF	531
81	Zunjaritola	196.66	Gondia	Gondia	North Deori	Bhagi	RF	499
90	Mogarra	269.01	Gondia	Gondia	Sadak Arjuni	Kohamara	RF	559
95	Murdoli	183.78	Gondia	Gondia	Goregaon	Ghumarra	RF	421
96	Murdoli	247.54	Gondia	Gondia	Goregaon	Ghumarra	RF	422
97	Murdoli	226.43	Gondia	Gondia	Goregaon	Ghumarra	RF	423
98	Ghumarra	252.95	Gondia	Gondia	Goregaon	Ghumarra	RF	425
104	Sukadi I	205.97	Gondia	Gondia	Chichgarh	Chichgarh	RF	648
131	Sukadi II	197.96	Gondia	Gondia	Chichgarh	Chichgarh	RF	649
134	Jambhulpani	101.17	Gondia	Gondia	Goregaon	Pindkepar	RF	413
136	Jambhulpani	219.81	Gondia	Gondia	Goregaon	Pindkepar	RF	414
139	Garada	145.18	Gondia	Gondia	Goregaon	Pindkepar	RF	417
140	Garada	155.73	Gondia	Gondia	Goregaon	Pindkepar	RF	418
141	Palewada	123.16	Gondia	Gondia	Goregaon	Pindkepar	RF	419
142	Ghumarra	221.64	Gondia	Gondia	Goregaon	Ghumarra	RF	424
350	Kanharpayali	42.58	Gondia	Gondia	Sadak Arjuni	Rengepar	PF	1564
354	Shenda	43.62	Gondia	Gondia	Sadak Arjuni	Shenda	PF	1560
358	Kanharpayali	178.92	Gondia	Gondia	Sadak Arjuni	Rengepar	PF	1569
443	Tilli	305.19	Gondia	Gondia	Goregaon	Nimba	PF	2282
480	Sawali	57.32	Gondia	Gondia	North Deori	Sawali	PF	2104
513	Pandharwani	215.51	Gondia	Gondia	Sadak Arjuni	Shenda	PF	2314
566	Owara	342.79	Gondia	Gondia	North Deori	Sawali	UF	2133
706	Jambhulpani	126.93	Gondia	Gondia	Goregaon	Pindkepar	PF	2300
708	Jambhulpani	52.75	Gondia	Gondia	Goregaon	Pindkepar	PF	2299
709	Mundipar	794.92	Gondia	Gondia	Goregaon	Pindkepar	PF	2291
710	Palewada	66.52	Gondia	Gondia	Goregaon	Pindkepar	PF	2297
714	Ghumarra	16.94	Gondia	Gondia	Goregaon	Ghumarra	PF	2283
742	Nimba II	154.02	Gondia	Gondia	Goregaon	Nimba	UF	2278
743	Nimba	360.36	Gondia	Gondia	Goregaon	Nimba	UF	2268
747	Nimba	173.80	Gondia	Gondia	Goregaon	Nimba	UF	2267
749	Jambhadi	130.85	Gondia	Gondia	Sadak Arjuni	Jambhadi	UF	2307
750	Jambhadi	9.96	Gondia	Gondia	Sadak Arjuni	Jambhadi	UF	2309
751	Jambhadi	45.08	Gondia	Gondia	Sadak Arjuni	Jambhadi	UF	2308
752	Jambhadi	311.66	Gondia	Gondia	Sadak Arjuni	Jambhadi	UF	2310
753	Nimba II	371.94	Gondia	Gondia	Goregaon	Nimba	UF	2311
754		162.49	Gondia	Gondia			UF	2312
755		22.86	Gondia	Gondia			UF	2313
756	Pandharwani	237.44	Gondia	Gondia	Sadak Arjuni	Shenda	PF	2315
973	Khamtalao	124.07	Gondia	Gondia	North Deori	Mulla	PF	1622

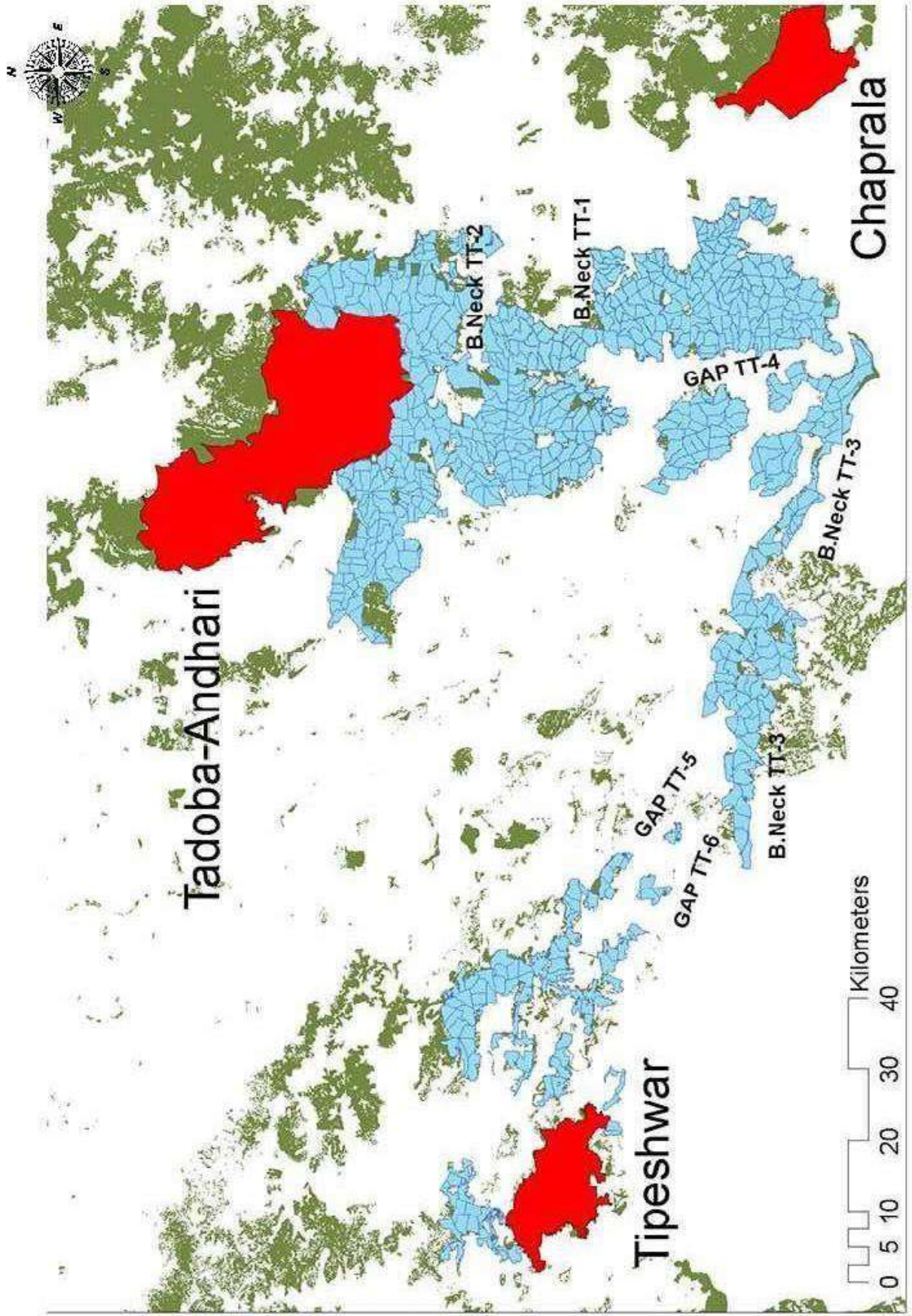
975	Murdoli	215.74	Gondia	Gondia	North Deori	Bhagi	PF	1586
981	Zunjaritola	192.64	Gondia	Gondia	North Deori	Mulla	PF	1614
982	Amgaon	34.04	Gondia	Gondia	North Deori	Bhagi	PF	1611
995	Sahakepar	294.73	Gondia	Gondia	Sadak Arjuni	Shenda	PF	1576
998	Amgaon	37.37	Gondia	Gondia	North Deori	Bhagi	PF	1605
1003	Dongargaon	108.15	Gondia	Gondia	Sadak Arjuni	Dongargaon	PF	1551
1081	Chirchadi	255.00	Gondia	Gondia	Sadak Arjuni	Jambhadi	PF	1510
1359	Dongargaon	83.41	Gondia	Gondia	Sadak Arjuni	Dongargaon	PF	1556
1362	Dongargaon	123.84	Gondia	Gondia	Sadak Arjuni	Dongargaon	PF	1555
1363	Khadaki II	252.90	Gondia	Gondia	Sadak Arjuni	Dongargaon	PF	1547
1365	Dongargaon	149.74	Gondia	Gondia	Sadak Arjuni	Dongargaon	PF	1552
1366	Dalli	117.60	Gondia	Gondia	Sadak Arjuni	Rengepar	PF	1575
1368	Dalli	52.81	Gondia	Gondia	Sadak Arjuni	Rengepar	PF	1573
1370	Dalli	207.80	Gondia	Gondia	Sadak Arjuni	Rengepar	PF	1571
1462	Mulla	72.75	Gondia	Gondia	North Deori	Mulla	PF	1788
1469	Mulla	82.60	Gondia	Gondia	North Deori	Mulla	PF	1644
1543	Ghumarra	150.42	Gondia	Gondia	Goregaon	Ghumarra	PF	2284
1545	Palewada	35.37	Gondia	Gondia	Goregaon	Pindkepar	PF	2289
1549	Garada	69.30	Gondia	Gondia	Goregaon	Pindkepar	PF	2293
1552	Pindkepar	276.73	Gondia	Gondia	Goregaon	Pindkepar	PF	2212
1553	Pindkepar	294.08	Gondia	Gondia	Goregaon	Pindkepar	PF	2213
1560	Khadaki II	14.45	Gondia	Gondia	Sadak Arjuni	Dongargaon	PF	1548
1570	Duggipar	189.82	Gondia	Gondia	Sadak Arjuni	Kohamara	PF	1538
1760	Dongargaon	98.24	Gondia	Gondia	Sadak Arjuni	Dongargaon	RF	549A
1761	Dongargaon	20.60	Gondia	Gondia	Sadak Arjuni	Dongargaon	RF	549B
1788	Tilli	157.23	Gondia	Gondia	Goregaon	Nimba	PF	2279
1789	Tilli	102.68	Gondia	Gondia	Goregaon	Nimba	PF	2280
1790	Tilli	123.19	Gondia	Gondia	Goregaon	Nimba	PF	2281
1878	Mundipar	97.00	Gondia	Gondia	Goregaon	Pindkepar	PF	2291A
1969	Dongargaon I	159.45	Gondia	Gondia	North Deori	Sawali	PF	2114
1970	Dongargaon I	274.16	Gondia	Gondia	North Deori	Sawali	PF	2115
2051	Owara	122.70	Gondia	Gondia	North Deori	Sawali	UF	2134

FDCM

2	Singandoh	378.93	Gondia	Gondia	Chichgarh	Ghonadi	RF	224
3	Singandoh	498.84	Gondia	Gondia	Chichgarh	Ghonadi	RF	225
4	Singandoh	482.26	Gondia	Gondia	Chichgarh	Ghonadi	RF	226
5	Jamdi(Gandari)	331.06	Gondia	Gondia	Rajoli	Gothangaon	RF	241
6	Jamdi(Gandari)	165.09	Gondia	Gondia	Rajoli	Gothangaon	RF	242/A
7	Jamdi(Gandari)	115.37	Gondia	Gondia	Rajoli	Gothangaon	RF	242/B
8	Umarpaili	487.98	Gondia	Gondia	Rajoli	Keshori	RF	244
9	Umarpaili	607.65	Gondia	Gondia	Rajoli	Keshori	RF	245
10	Gawarra	438.98	Gondia	Gondia	Rajoli	Keshori	RF	249
11	Korambi	749.79	Gondia	Gondia	Pratapgarh	S.Arjuni	RF	264
12	Dighori	270.13	Gondia	Gondia	Pratapgarh	Dighori	RF	283/A
13	Dighori	233.30	Gondia	Gondia	Pratapgarh	Dighori	RF	283/B
14	Rajoli	146.25	Gondia	Gondia	Rajoli	Rajoli	RF	329
15	Rajoli	165.24	Gondia	Gondia	Rajoli	Rajoli	RF	330
16	Jamdi(porla)	203.37	Gondia	Gondia	Rajoli	Rajoli	RF	331
17	Rajoli	227.02	Gondia	Gondia	Rajoli	Rajoli	RF	332
18	Jamdi(porla)	158.13	Gondia	Gondia	Rajoli	Rajoli	RF	337
19	Jamdi(porla)	205.07	Gondia	Gondia	Rajoli	Rajoli	RF	338
20	Jamdi(porla)	162.93	Gondia	Gondia	Rajoli	Rajoli	RF	339
21	Jamdi(porla)	246.68	Gondia	Gondia	Rajoli	Rajoli	RF	341
24	Murdoli	249.61	Gondia	Gondia	Goregaon	Goregaon	RF	420
25	Tilli	240.46	Gondia	Gondia	Goregaon	Chopa	RF	426
64	Khamtalao	270.28	Gondia	Gondia	Deori	N.Deori	RF	501
65	Khamtalao	227.05	Gondia	Gondia	Deori	N.Deori	RF	502
66	Khamtalao	175.95	Gondia	Gondia	Deori	N.Deori	RF	503
67	Khamtalao	219.60	Gondia	Gondia	Deori	N.Deori	RF	504

68	Khamtalao	10.52	Gondia	Gondia	Deori	N.Deori	RF	504/A
69	Alebedar	154.36	Gondia	Gondia	Goregaon	Jamdi	RF	505
70	Alebedar	257.12	Gondia	Gondia	Goregaon	Jamdi	RF	506
71	Alebedar	199.03	Gondia	Gondia	Goregaon	Jamdi	RF	507
72	Alebedar	170.81	Gondia	Gondia	Goregaon	Jamdi	RF	508
73	Alebedar	235.85	Gondia	Gondia	Goregaon	Jamdi	RF	509
74	Alebedar	273.50	Gondia	Gondia	Goregaon	Jamdi	RF	510
75	Rengepar	364.55	Gondia	Gondia	Goregaon	Jamdi	RF	511
76	Rengepar	170.93	Gondia	Gondia	Goregaon	Jamdi	RF	512
77	Rengepar	318.51	Gondia	Gondia	Goregaon	Jamdi	RF	513
78	Maramjob	184.78	Gondia	Gondia	Goregaon	Jamdi	RF	514
79	Jamdi	177.59	Gondia	Gondia	Goregaon	Jamdi	RF	515
80	Jamdi	239.42	Gondia	Gondia	Goregaon	Jamdi	RF	516
81	Maramjob	174.27	Gondia	Gondia	Goregaon	Jamdi	RF	517
82	Maramjob	330.36	Gondia	Gondia	Goregaon	Jamdi	RF	518
83	Maramjob	214.18	Gondia	Gondia	Goregaon	Jamdi	RF	519
84	Dodke	261.83	Gondia	Gondia	Goregaon	Jamdi	RF	520
85	Dodke	321.81	Gondia	Gondia	Goregaon	Jamdi	RF	521
86	Murdoli	85.39	Gondia	Gondia	Goregaon	Goregaon	RF	522
87	Murdoli	172.19	Gondia	Gondia	Goregaon	Goregaon	RF	523
88	Dawa	219.55	Gondia	Gondia	Deori	Kohmara	RF	524
89	Dawa	408.20	Gondia	Gondia	Deori	Kohmara	RF	525
90	Chirchadi	222.81	Gondia	Gondia	Deori	Kohmara	RF	526
91	Maramjob	266.03	Gondia	Gondia	Goregaon	Jamdi	RF	527
92	Pandharwani	232.01	Gondia	Gondia	Goregaon	Jamdi	RF	532
93	Rengepar	272.07	Gondia	Gondia	Goregaon	Jamdi	RF	533
94	Murdoli	252.32	Gondia	Gondia	Deori	N.Deori	RF	540
95	Koilary	268.65	Gondia	Gondia	Deori	Dongargaon	RF	541
96	Koilary	332.26	Gondia	Gondia	Deori	Dongargaon	RF	542
97	Maramjob	180.81	Gondia	Gondia	Deori	N.Deori	RF	543
98	Maramjob	180.50	Gondia	Gondia	Deori	N.Deori	RF	544
99	Maramjob	176.20	Gondia	Gondia	Deori	S.Deori	RF	545
100	Sahakepar	213.33	Gondia	Gondia	Deori	Dongargaon	RF	546
101	Sahakepar	214.60	Gondia	Gondia	Deori	Dongargaon	RF	547
123	Mohandi	333.06	Gondia	Gondia	Chichgarh	Chichgarh	RF	641
124	Piparkhairi 2	62.04	Gondia	Gondia	Chichgarh	Chichgarh	RF	642
125	Piparkhairi 2	155.29	Gondia	Gondia	Chichgarh	Chichgarh	RF	643
126	Sukadi 1	310.60	Gondia	Gondia	Chichgarh	Ghonadi	RF	647
127	Sukadi 2	272.38	Gondia	Gondia	Chichgarh	Ghonadi	RF	652
128	Mohandi	231.34	Gondia	Gondia	Chichgarh	Chichgarh	RF	655
129	Mohandi	218.71	Gondia	Gondia	Chichgarh	Chichgarh	RF	656
130	Mohandi	333.68	Gondia	Gondia	Chichgarh	Chichgarh	RF	658
131	Chichgarh	221.36	Gondia	Gondia	Chichgarh	Chichgarh	RF	659
132	Chichgarh	210.10	Gondia	Gondia	Chichgarh	Chichgarh	RF	660
133	Chichgarh	206.30	Gondia	Gondia	Chichgarh	Chichgarh	RF	661
135	Magardoh	227.63	Gondia	Gondia	Rajoli	Palandur	RF	798
136	Magardoh	328.78	Gondia	Gondia	Rajoli	Palandur	RF	804
137	Akta	250.94	Gondia	Gondia	Rajoli	Palandur	RF	805
138	Akta	273.61	Gondia	Gondia	Rajoli	Palandur	RF	806
139	Akta	304.61	Gondia	Gondia	Rajoli	Palandur	RF	807
140	Ghogra	276.94	Gondia	Gondia	Rajoli	Palandur	RF	808
141	Ghogra	205.06	Gondia	Gondia	Rajoli	Palandur	RF	809

APPENDIX - V
MAP OF TADoba - KANHARGAON TO TIPESHWAR AND AREA STATEMENT



Tadoba - Kanhalgaon - Tipeswar – Kawal

ID	Beat Name	Compt. Area	District	Division	Range	Round	Status	Compt. No
Chandrapur Division								
1	Warwat	40.10	Chandrapur	Chandrapur	Chandrapur	Warwat	PF	598
2	North Lohara	44.50	Chandrapur	Chandrapur	Chandrapur	Chandrapur	PF	577
8	Bhadrawati	150.40	Chandrapur	Chandrapur	Bhadrawati	Bhadrawati	RF	213
9	Bhadrawati	50.00	Chandrapur	Chandrapur	Bhadrawati	Bhadrawati	PF	214
11	Bhadrawati	268.90	Chandrapur	Chandrapur	Bhadrawati	Bhadrawati	RF	215
14	Chiprala	108.50	Chandrapur	Chandrapur	Bhadrawati	Bhadrawati	PF	889A
15	Chiprala	348.30	Chandrapur	Chandrapur	Bhadrawati	Bhadrawati	RF	210
16	Chora 1	122.20	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	208
17	Masal	329.80	Chandrapur	Chandrapur	Bhadrawati	Masal	RF	219
18	Chora 1	154.40	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	207
19	Tirwanja	49.50	Chandrapur	Chandrapur	Bhadrawati	Bhadrawati	PF	888
20	Tirwanja	687.20	Chandrapur	Chandrapur	Bhadrawati	Bhadrawati	RF	203
21	Pailibhatali	8.60	Chandrapur	Chandrapur	Moharli	Padmapur	PF	877 B
22	Pailibhatali	216.40	Chandrapur	Chandrapur	Moharli	Padmapur	PF	878
23	Pailibhatali	314.70	Chandrapur	Chandrapur	Moharli	Padmapur	PF	81 P
24	Pailibhatali	168.90	Chandrapur	Chandrapur	Moharli	Padmapur	PF	77 P
25	Pailibhatali	218.30	Chandrapur	Chandrapur	Moharli	Padmapur	PF	78 P
26	Kachrala	486.10	Chandrapur	Chandrapur	Bhadrawati	Bhadrawati	RF	204
27	Chiprala	455.10	Chandrapur	Chandrapur	Bhadrawati	Bhadrawati	RF	205
28	Kachrala	606.80	Chandrapur	Chandrapur	Bhadrawati	Bhadrawati	RF	202
29	Chicholi	285.30	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	201
30	Chora 1	358.20	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	206
31	Chora 2	222.50	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	903
32	Gulgaon	336.80	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	545
33	Chocoli	454.00	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	200
34	Gulgaon	182.10	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	544
35	Chicholi	243.20	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	199
36	Chora 2	197.80	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	547
37	Gulgaon	213.34	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	543
38	Pailibhatali	297.00	Chandrapur	Chandrapur	Moharli	Padmapur	PF	82 P
39	Vadholi	368.00	Chandrapur	Chandrapur	Moharli	Padmapur	RF	197
40	Vadholi	182.90	Chandrapur	Chandrapur	Moharli	Padmapur	RF	196
41	Pailibhatali	410.40	Chandrapur	Chandrapur	Moharli	Padmapur	PF	79 P
42	Vadholi	281.60	Chandrapur	Chandrapur	Moharli	Padmapur	RF	195
43	Agarzari 2	261.40	Chandrapur	Chandrapur	Moharli	Agarzari	RF	188
44	Gulgaon	259.30	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	541
45	Vadholi	244.60	Chandrapur	Chandrapur	Moharli	Padmapur	RF	198
46	Gulgaon	219.30	Chandrapur	Chandrapur	Bhadrawati	Chora	PF	540
47	Gulgaon	167.80	Chandrapur	Chandrapur	Bhadrawati	Chora	RF	542
48	Ambezari	211.50	Chandrapur	Chandrapur	Moharli	Agarzari	RF	194
49	Ambezari	188.50	Chandrapur	Chandrapur	Moharli	Agarzari	RF	193
50	Ambezari	393.30	Chandrapur	Chandrapur	Moharli	Agarzari	RF	191
73	Masal	269.20	Chandrapur	Chandrapur	Bhadrawati	Masal	PF	899
74	Masal	225.37	Chandrapur	Chandrapur	Bhadrawati	Masal	PF	896
75	Masal	268.80	Chandrapur	Chandrapur	Bhadrawati	Masal	PF	900
76	Masal	203.30	Chandrapur	Chandrapur	Bhadrawati	Masal	PF	901
81	Chora 2	196.22	Chandrapur	Chandrapur	Bhadrawati	Chora	PF	902
82	Chora 2	222.20	Chandrapur	Chandrapur	Bhadrawati	Chora	PF	904
84	Babupeth	108.10	Chandrapur	Chandrapur	Chandrapur	Chandrapur	RF	405
85	Babupeth	259.90	Chandrapur	Chandrapur	Chandrapur	Chandrapur	RF	406
87	Babupeth	391.00	Chandrapur	Chandrapur	Chandrapur	Chandrapur	RF	402
88	Babupeth	216.90	Chandrapur	Chandrapur	Chandrapur	Chandrapur	RF	403
89	Babupeth	118.50	Chandrapur	Chandrapur	Chandrapur	Chandrapur	RF	408

90	S.Lohara	81.80	Chandrapur	Chandrapur	Chandrapur	Chandrapur	RF	407
91	S.Lohara	326.50	Chandrapur	Chandrapur	Chandrapur	Chandrapur	RF	409
92	Durgapur	338.00	Chandrapur	Chandrapur	Chandrapur	Chandrapur	RF	401
93	N.Lohara	318.90	Chandrapur	Chandrapur	Chandrapur	Chandrapur	RF	398
94	N.Lohara	365.70	Chandrapur	Chandrapur	Chandrapur	Chandrapur	RF	397
95	Durgapur	384.00	Chandrapur	Chandrapur	Chandrapur	Chandrapur	RF	400
96	Durgapur	188.60	Chandrapur	Chandrapur	Chandrapur	Chandrapur	RF	399
98	Gilbili 2	84.60	Chandrapur	Chandrapur	Chichpalli	Chichpalli	RF	469
99	Gilbili 2	181.60	Chandrapur	Chandrapur	Chichpalli	Chichpalli	RF	464 A
102	Chichpalli 2	233.10	Chandrapur	Chandrapur	Chichpalli	Chichpalli	RF	463
103	Gilbili 1	239.70	Chandrapur	Chandrapur	Chichpalli	Chichpalli	RF	456
104	Borda	199.90	Chandrapur	Chandrapur	Chandrapur	Ghanta chouki	RF	520 B
105	Borda	294.20	Chandrapur	Chandrapur	Chandrapur	Ghanta chouki	RF	520 A
106	Chichpalli	78.3	Chandrapur	Chandrapur	Chichpalli	Chichpalli	PF	632
107	Chichpalli	186.90	Chandrapur	Chandrapur	Chichpalli	Chichpalli	RF	426
108	Walni	1423.90	Chandrapur	Chandrapur	Chichpalli	Chichpalli	RF	519
110	Masala	28.00	Chandrapur	Chandrapur	Moharli	Padmapur	PF	1009
111	Pailibhatali	267.40	Chandrapur	Chandrapur	Moharli	Padmapur	RF	184
112	Padmapur	213.50	Chandrapur	Chandrapur	Moharli	Padmapur	RF	183
113	Masala	194.20	Chandrapur	Chandrapur	Moharli	Padmapur	RF	180
114	Agarzari 2	109.10	Chandrapur	Chandrapur	Moharli	Agarzari	RF	187 A
115	Padmapur	208.30	Chandrapur	Chandrapur	Moharli	Padmapur	RF	186
116	Padmapur	144.20	Chandrapur	Chandrapur	Moharli	Padmapur	RF	182
117	Masala	258.50	Chandrapur	Chandrapur	Moharli	Padmapur	RF	179
118	Masala	103.60	Chandrapur	Chandrapur	Moharli	Padmapur	PF	886
119	Masala	132.20	Chandrapur	Chandrapur	Moharli	Padmapur	RF	178
120	Padmapur	312.40	Chandrapur	Chandrapur	Moharli	Padmapur	RF	181
121	Masala	330.80	Chandrapur	Chandrapur	Moharli	Padmapur	RF	177
123	Chorgaon	184.00	Chandrapur	Chandrapur	Chandrapur	Warwat	PF	588
124	Adegaon	255.90	Chandrapur	Chandrapur	Moharli	Agarzari	RF	176
125	Chorgaon	223.10	Chandrapur	Chandrapur	Chandrapur	Warwat	PF	591
126	Khandala 1	254.30	Chandrapur	Chandrapur	Chandrapur	Warwat	PF	596
127	Khandala 1	182.40	Chandrapur	Chandrapur	Chandrapur	Warwat	PF	597
128	Agarzari 1	26.30	Chandrapur	Chandrapur	Moharli	Agarzari	RF	172 B
129	Agarzari 1	13.50	Chandrapur	Chandrapur	Moharli	Agarzari	RF	171 B
130	Agarzari 2	422.20	Chandrapur	Chandrapur	Moharli	Agarzari	RF	190
131	Agarzari 1	271.30	Chandrapur	Chandrapur	Moharli	Agarzari	RF	189
132	Agarzari 1	229.10	Chandrapur	Chandrapur	Moharli	Agarzari	RF	172 A
133	Agarzari 1	325.00	Chandrapur	Chandrapur	Moharli	Agarzari	RF	171 A
134	Dewada	332.50	Chandrapur	Chandrapur	Moharli	Agarzari	RF	170
135	Dewada	136.60	Chandrapur	Chandrapur	Moharli	Agarzari	RF	164 B
136	Dewada	237.40	Chandrapur	Chandrapur	Moharli	Agarzari	RF	165
137	Ambezari	188.90	Chandrapur	Chandrapur	Moharli	Agarzari	RF	192
138	Ambezari	102.20	Chandrapur	Chandrapur	Moharli	Agarzari	PF	986
139	Moharli 1	175.70	Chandrapur	Chandrapur	Moharli	Moharli	RF	168
140	Moharli 1	123.00	Chandrapur	Chandrapur	Moharli	Moharli	PF	549
141	Moharli 2	345.90	Chandrapur	Chandrapur	Moharli	Moharli	RF	169
142	Moharli 2	284.30	Chandrapur	Chandrapur	Moharli	Moharli	RF	167
143	Moharli 1	25.80	Chandrapur	Chandrapur	Moharli	Moharli	PF	548
144	Moharli 1	252.60	Chandrapur	Chandrapur	Moharli	Moharli	RF	154
145	Adegaon	325.50	Chandrapur	Chandrapur	Moharli	Agarzari	RF	173 A
146	Adegaon	236.80	Chandrapur	Chandrapur	Moharli	Agarzari	RF	174 A
147	Adegaon	244.50	Chandrapur	Chandrapur	Moharli	Agarzari	RF	175
148	Dewada	225.00	Chandrapur	Chandrapur	Moharli	Agarzari	RF	164 A
149	Khandala 1	212.80	Chandrapur	Chandrapur	Chandrapur	Warwat	RF	592
150	Khandala 1	196.40	Chandrapur	Chandrapur	Chandrapur	Warwat	PF	594
151	Moharli 2	335.30	Chandrapur	Chandrapur	Moharli	Moharli	RF	166
152	Nimbala	395.10	Chandrapur	Chandrapur	Chandrapur	Ghanta chouki	RF	378
154	Khandala 1	150.50	Chandrapur	Chandrapur	Chandrapur	Warwat	PF	595

155	Khandala 2	224.50	Chandrapur	Chandrapur	Chandrapur	Warwat	RF	380
156	Nimbala	276.50	Chandrapur	Chandrapur	Chandrapur	Ghanta chouki	RF	379
157	Chek Nimbala	346.50	Chandrapur	Chandrapur	Chandrapur	Ghanta chouki	RF	376
158	Chek Nimbala	231.50	Chandrapur	Chandrapur	Chandrapur	Ghanta chouki	RF	375
161	Chek Nimbala	537.20	Chandrapur	Chandrapur	Chandrapur	Ghanta chouki	RF	377
162	Haldi	194.70	Chandrapur	Chandrapur	Chichpalli	Mahadwadi	RF	368
163	Haldi	306.70	Chandrapur	Chandrapur	Chichpalli	Mahadwadi	RF	370
164	Khandala 1	210.30	Chandrapur	Chandrapur	Chandrapur	Warwat	PF	593
165	Khandala 2	570.50	Chandrapur	Chandrapur	Chandrapur	Warwat	RF	374
166	Gilbili 1	352.90	Chandrapur	Chandrapur	Chichpalli	Chichpalli	RF	457
167	Satara Tu	74.40	Chandrapur	Chandrapur	Chichpalli	Kelzar	RF	438
169	Satara Tu	204.50	Chandrapur	Chandrapur	Chichpalli	Kelzar	RF	437
174	Satara Tu	522.30	Chandrapur	Chandrapur	Chichpalli	Kelzar	RF	436
175	Satara Tu	479.00	Chandrapur	Chandrapur	Chichpalli	Kelzar	RF	435
176	Kelzar	296.10	Chandrapur	Chandrapur	Chichpalli	Kelzar	RF	431
179	Kelzar	224.20	Chandrapur	Chandrapur	Chichpalli	Kelzar	RF	434
180	Kelzar	241.90	Chandrapur	Chandrapur	Chichpalli	Kelzar	RF	433
181	Kelzar	70.90	Chandrapur	Chandrapur	Chichpalli	Kelzar	RF	432
183	Kelzar	66.80	Chandrapur	Chandrapur	Chichpalli	Kelzar	PF	701
195	Chiroli	974.00	Chandrapur	Chandrapur	Mul	Janala	RF	524
235	Chiroli	106.30	Chandrapur	Chandrapur	Mul	Janala	PF	717
242	Dahegaon	898.70	Chandrapur	Chandrapur	Mul	Mul	RF	517
247	Chichala	97.30	Chandrapur	Chandrapur	Mul	Mul	PF	749
250	Peth	584.37	Chandrapur	Chandrapur	Chichpalli	Mahadwadi	RF	361
251	Peth	411.20	Chandrapur	Chandrapur	Chichpalli	Mahadwadi	RF	347
252	Doni 2	326.90	Chandrapur	Chandrapur	Mul	Janala	RF	348
253	Mahadwadi 1	590.30	Chandrapur	Chandrapur	Chichpalli	Mahadwadi	RF	357
255	Janala	528.70	Chandrapur	Chandrapur	Mul	Janala	RF	355
256	Doni 2	458.20	Chandrapur	Chandrapur	Mul	Janala	RF	349
257	Fulzari	417.60	Chandrapur	Chandrapur	Mul	Janala	RF	359
258	Fulzari	579.60	Chandrapur	Chandrapur	Mul	Janala	RF	352
259	Karwan	541.70	Chandrapur	Chandrapur	Mul	Mul	PF	351
260	Doni 1	438.40	Chandrapur	Chandrapur	Mul	Janala	RF	329
261	Doni 1	594.90	Chandrapur	Chandrapur	Mul	Janala	RF	327
262	Maroda 1	607.60	Chandrapur	Chandrapur	Mul	Maroda	RF	350`
263	Maroda 2	600.70	Chandrapur	Chandrapur	Mul	Maroda	RF	328
264	Pangdi 2	479.96	Chandrapur	Chandrapur	Shioni	Naleshwar	RF	319
265	Pangdi 2	396.60	Chandrapur	Chandrapur	Shioni	Naleshwar	RF	326
266	Pangdi 2	408.72	Chandrapur	Chandrapur	Shioni	Naleshwar	RF	320
267	Chiroli	68.40	Chandrapur	Chandrapur	Mul	Janala	PF	718
268	Janala	177.80	Chandrapur	Chandrapur	Mul	Janala	PF	715
269	Chiroli	128.20	Chandrapur	Chandrapur	Mul	Janala	PF	719
271	Janala	329.20	Chandrapur	Chandrapur	Mul	Janala	RF	353
273	Mul	210.80	Chandrapur	Chandrapur	Mul	Mul	PF	799
275	Karwan	151.00	Chandrapur	Chandrapur	Mul	Mul	PF	767
276	Mul	299.90	Chandrapur	Chandrapur	Mul	Mul	PF	752
277	Mul	130.10	Chandrapur	Chandrapur	Mul	Mul	PF	756
278	Karwan	219.10	Chandrapur	Chandrapur	Mul	Mul	PF	766
281	Chichala	263.40	Chandrapur	Chandrapur	Mul	Mul	RF	533
282	Chichala	76.30	Chandrapur	Chandrapur	Mul	Mul	PF	732
287	Mul	282.70	Chandrapur	Chandrapur	Mul	Mul	PF	762
288	Mul	213.20	Chandrapur	Chandrapur	Mul	Mul	PF	753
292	Maroda 1	112.00	Chandrapur	Chandrapur	Mul	Maroda	PF	768
293	Maroda 1	177.00	Chandrapur	Chandrapur	Mul	Maroda	PF	790
294	Maroda 2	92.90	Chandrapur	Chandrapur	Mul	Maroda	PF	774
295	Maroda 1	148.50	Chandrapur	Chandrapur	Mul	Maroda	PF	792
298	Bhadurna 2	419.00	Chandrapur	Chandrapur	Mul	Maroda	RF	325
299	Bhadurna 2	402.60	Chandrapur	Chandrapur	Mul	Maroda	RF	324
300	Bhadurna 1	646.90	Chandrapur	Chandrapur	Mul	Maroda	RF	323

301	Bhadurna 2	9.60	Chandrapur	Chandrapur	Mul	Maroda	PF	794
302	Bhadurna 2	111.70	Chandrapur	Chandrapur	Mul	Maroda	PF	795
304	Moharli 1	315.60	Chandrapur	Chandrapur	Moharli	Moharli	PF	76 P
305	Moharli 1	68.90	Chandrapur	Chandrapur	Moharli	Moharli	PF	961A
334	Pangdi 1	737.73	Chandrapur	Chandrapur	Shioni	Naleshwar	RF	274
335	Naleshwar	824.23	Chandrapur	Chandrapur	Shioni	Naleshwar	RF	275
336	Pangdi 3	774.20	Chandrapur	Chandrapur	Shioni	Kukadheti	RF	321
337	Kukadheti	438.80	Chandrapur	Chandrapur	Shioni	Kukadheti	RF	273
338	Bamni mal	496.00	Chandrapur	Chandrapur	Shioni	Kukadheti	RF	272
340	Kukadheti	354.90	Chandrapur	Chandrapur	Shioni	Kukadheti	RF	270
376	Petgaon	472.80	Chandrapur	Chandrapur	Shioni	Kukadheti	RF	322
378	Mohabodi	381.00	Chandrapur	Chandrapur	Shioni	Kukadheti	RF	271
379	Petgaon	13.50	Chandrapur	Chandrapur	Shioni	Kukadheti	PF	811
386	Kukadheti	37.70	Chandrapur	Chandrapur	Shioni	Kukadheti	PF	810
387	Kukadheti	46.80	Chandrapur	Chandrapur	Shioni	Kukadheti	PF	808
388	Kukadheti	83.00	Chandrapur	Chandrapur	Shioni	Kukadheti	PF	809
389	Petgaon	2.70	Chandrapur	Chandrapur	Shioni	Kukadheti	RF	821
390	Petgaon	0.50	Chandrapur	Chandrapur	Shioni	Kukadheti	PF	817
398	Pailibhatali	163.30	Chandrapur	Chandrapur	Moharli	Padmapur	RF	185

Central Chanda

17	Pomburna	227.10	Chandrapur	Central Chanda	Kothari	Pomburna	RF	D95
18	Kemara	73.30	Chandrapur	Central Chanda	Kothari	Pomburna	RF	D99
20	Ganeshpipari	125.80	Chandrapur	Central Chanda	Dhaba	Gondpipari	RF	D155
33	Karwa	283.00	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D489
34	Ghanoti	298.40	Chandrapur	Central Chanda	Kothari	Pombhurna	RF	D92
35	Ghanoti	210.40	Chandrapur	Central Chanda	Kothari	Pombhurna	RF	D91
37	Pomburna	176.70	Chandrapur	Central Chanda	Kothari	Pomburna	RF	D96
38	Chintaldhaba	202.90	Chandrapur	Central Chanda	Kothari	Pomburna	RF	D97AB
39	Pomburna	230.80	Chandrapur	Central Chanda	Kothari	Pomburna	RF	D98
40	Satara Komti	537.50	Chandrapur	Central Chanda	Ballarsha	Manora	RF	D454
41	Satara Komti	226.20	Chandrapur	Central Chanda	Ballarsha	Manora	RF	D453
42	Manora	321.80	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D452
43	Manora	320.40	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D449
44	Umari	270.90	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D442
45	Umari	204.70	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D439
46	Satara Komti	304.30	Chandrapur	Central Chanda	Ballarsha	Manora	RF	D443
47	Satara Komti	327.10	Chandrapur	Central Chanda	Ballarsha	Manora	RF	D506
48	Kinhi	390.10	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D507
49	Kinhi	362.90	Chandrapur	Central Chanda	Ballarsha	Manora	RF	D508
51	Kinhi	214.20	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D511
52	Kinhi	545.60	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D521
53	Manora	393.00	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D447
54	Karwa	355.00	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D499
55	Karwa	239.70	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D500
56	Karwa	214.80	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D495A
57	Ballarsha	266.60	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D495B
58	Ballarshah	185.40	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D496
59	Lawari	426.60	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D497
60	Lawari	411.70	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D498
61	Kinhi	258.00	Chandrapur	Central Chanda	Ballarshah	Manora	PF	D512
63	Lawari	147.90	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D514
64	Ballarshah	224.80	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D494
65	Satara Komti	253.40	Chandrapur	Central Chanda	Ballarsha	Manora	RF	D440
70	Ghanoti	235.40	Chandrapur	Central Chanda	Kothari	Pombhurna	RF	D87
71	Ghanoti	176.90	Chandrapur	Central Chanda	Kothari	Pombhurna	RF	D89
76	Kemera	309.40	Chandrapur	Central Chanda	Kothari	Pombhurna	RF	D100
79	Manora	145.70	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D451
80	Manora	224.40	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D450
81	Umari	331.10	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D446

82	Umari	278.10	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D445
83	Lawari	466.80	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D515
84	Gondpipari	164.90	Chandrapur	Central Chanda	Dhaba	Gondpipari	RF	D145
85	Gondpipari	153.40	Chandrapur	Central Chanda	Dhaba	Gondpipari	Rf	D144
86	Gondpipari	136.10	Chandrapur	Central Chanda	Dhaba	Gondpipari	RF	D143
88	Sukwasi	208.70	Chandrapur	Central Chanda	Dhaba	Gondpipari	RF	D156
89	Karanji	303.70	Chandrapur	Central Chanda	Kothari	Kanargaon	RF	D126
93	Umari	333.80	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D441
136	Ghanoti	227.60	Chandrapur	Central Chanda	Kothari	POmburna	RF	D88
137	Kawadjai	306.80	Chandrapur	Central Chanda	Kothari	Kothari	RF	D104
138	Ballarshah	324.70	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D493
139	Karwa	338.00	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D490
140	Karwa	332.90	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D491
141	Sukwasi	231.40	Chandrapur	Central Chanda	Dhaba	Gondpipari	RF	D157
142	Sukwasi	164.20	Chandrapur	Central Chanda	Dhaba	Gondpipari	Rf	D158
143	Sukwasi	115.20	Chandrapur	Central Chanda	Dhaba	Gondpipari	RF	D159
144	Dongargaon	155.90	Chandrapur	Central Chanda	Dhaba	Dhaba	RF	D160
145	Dongargaon	134.60	Chandrapur	Central Chanda	Dhaba	Dhaba	RF	D161
146	Dongargaon	169.70	Chandrapur	Central Chanda	Dhaba	Dhaba	Rf	D162
147	Dongargaon	195.80	Chandrapur	Central Chanda	Dhaba	Dhaba	Rf	D163
148	Gojoli	129.20	Chandrapur	Central Chanda	Dhaba	Gondpipari	RF	D151
149	Gojoli	101.00	Chandrapur	Central Chanda	Dhaba	Gondpipari	RF	D150
150	Ganeshpipari	176.00	Chandrapur	Central Chanda	Dhaba	Gondpipari	RF	D153
151	Chiwanda	251.5	Chandrapur	Central Chanda	Kothari	Kanhargaon	RF	D138
159	Karanji	300	Chandrapur	Central Chanda	Kothari	Kanargaon	RF	D127AB
160	Karanji	157.7	Chandrapur	Central Chanda	Kothari	Kanargaon	RF	D71
161	Akasapur	211.9	Chandrapur	Central Chanda	Kothari	Kanhargaon	RF	D125
177	Gojoli	82.9	Chandrapur	Central Chanda	Dhaba	Gondpipari	PF	D563Bb
181	Manora	226.4	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D444
216	Karwa	482.7	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D492
229	Kemara	60.4	Chandrapur	Central Chanda	Kothari	Pomburna	RF	D112
260	Chintaldhaba	162.7	Chandrapur	Central Chanda	Kothari	Pomburna	RF	D119
315	Chintaldhaba	192.5	Chandrapur	Central Chanda	Kothari	Pomburna	RF	D110
317	Manora	528.8	Chandrapur	Central Chanda	Ballarshah	Manora	pf	D567
331	Kothari	277.4	Chandrapur	Central Chanda	Kothari	Kothari	pf	D539
333	Kothari	389.2	Chandrapur	Central Chanda	Kothari	Kothari	pf	D540
334	Kothari	131	Chandrapur	Central Chanda	Kothari	Kothari	PF	D541A
359	Wejgaon	501.3	Chandrapur	Central Chanda	Dhaba	Tohagaon	PF	D557B
363	Wamanpalli	375.3	Chandrapur	Central Chanda	Dhaba	Tohagaon	PF	D559
364	Wamanpalli	84.6	Chandrapur	Central Chanda	Dhaba	Tohagaon	PF	D560Aa
381	Parsodi	253.3	Chandrapur	Central Chanda	Kothari	Kanhargaon	PF	D530
439	Parsodi	222.1	Chandrapur	Central Chanda	Kothari	Kanhargaon	Pf	D532
445	Pachgaon	218.8	Chandrapur	Central Chanda	Kothari	kanhargaon	PF	D535
446	Pachgaon	245.4	Chandrapur	Central Chanda	Kothari	Kanhargaon	PF	D536
447	Pachgaon	293.6	Chandrapur	Central Chanda	Kothari	Kanhargaon	PF	D537
448	Pachgaon	331	Chandrapur	Central Chanda	Kothari	Kanhargaon	PF	D534
481	Kinhi	146.1	Chandrapur	Central Chanda	Ballarshah	Manora	PF	D570CB
483	Lawari	177.8	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D571A
485	Lawari	274.5	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D572
486	Lawari	357.4	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D573
489	Visapur	348.2	Chandrapur	Central Chanda	Ballarsha	Ballarsha	PF	D578
492	Visapur	412.2	Chandrapur	Central Chanda	Ballarsha	Ballarsha	PF	D580
493	Visapur	341.2	Chandrapur	Central Chanda	Ballarsha	Ballarsha	PF	D582
494	Visapur	189.10	Chandrapur	Central Chanda	Ballarsha	Ballarsha	PF	D581
501	Dhaba	74.60	Chandrapur	Central Chanda	Dhaba	Dhaba	PF	D587C
532	Manora	26.00	Chandrapur	Central Chanda	Ballarshah	Manora	PF	D568C
549	Manora	158.20	Chandrapur	Central Chanda	Ballarshah	Manora	RF	D448
554	Wedgaon	91.00	Chandrapur	Central Chanda	Dhaba	Dhaba	PF	D561B
560	Dhaba	166.30	Chandrapur	Central Chanda	Dhaba	Dhaba	PF	D562A

578	Ballarsha	308.10	Chandrapur	Central Chanda	Ballarsha	Ballarsha	PF	D576
580	Ballarsha	294.70	Chandrapur	Central Chanda	Ballarsha	Ballarsha	PF	D577
581	Dhaba	54.60	Chandrapur	Central Chanda	Dhaba	Dhaba	PF	D587A
585	Tohagaon	38.10	Chandrapur	Central Chanda	Dhaba	Tohagaon	PF	D28A
598	Satara Komti	157.70	Chandrapur	Central Chanda	Ballarsha	Manora	RF	D455
605	Karwa	133.90	Chandrapur	Central Chanda	Ballarshah	Ballarshah	RF	D509
2	Wansadi	383.50	-	Central Chanda	Wansadi	Wansadi	RF	R021
4	Nizamgondi	267.30	-	Central Chanda	Wansadi	Wansadi	RF	R029
5	Bambezari	430.70	-	Central Chanda	Wansadi	Gadchandur	RF	R37
6	Nokari	522.00	-	Central Chanda	Wansadi	Gadchandur	RF	R32
7	Warzadi	414.40	-	Central Chanda	Wansadi	Gadchandur	RF	R39
8	Kowadgondi	412.20	-	Central Chanda	Wirur	Dewada	RF	R42
9	Kawadgondi	513.50	-	Central Chanda	Wirur	Dewada	RF	R44A
10	Dewada	400.90	-	Central Chanda	Wirur	Dewada	RF	R47
11	Pakadiguddam	312.50	-	Central Chanda	Wansadi	Wansadi	RF	R15
12	Patan	387.70	-	Central Chanda	Jiwati	Patan	RF	R57
13	Nagapur	356.30	-	Central Chanda	Jiwati	Shengaon	RF	R60
16	Nizamgondi	240.20	-	Central Chanda	Wansadi	Wansadi	RF	R028
23	Nokari	279.20	-	Central Chanda	Wansadi	Gadchandur	RF	R034
27	Shengaon	259.50	-	Central Chanda	Jiwati	Shengaon	RF	R093
90	Jambuldhara	484.90	-	Central Chanda	Wansadi	Korpana	RF	R003
91	Durghadi	379.10	-	Central Chanda	Wansadi	Pardi	RF	R001
92	Rupapeth	473.30	-	Central Chanda	Wansadi	Pardi	RF	R002
95	Dhanakdevi	324.40	-	Central Chanda	Wansadi	Wansadi	RF	R17
96	Pakadiguddam	240.10	-	Central Chanda	Wansadi	Wansadi	RF	R19
97	Nagarala	357.30	-	Central Chanda	Jiwati	Jiwati	RF	R025
98	Warzadi	340.00	-	Central Chanda	Wansadi	Gadchandur	RF	R38
101	Kakban	337.20	-	Central Chanda	Jiwati	Shengaon	RF	R63
102	Kakban	629.10	-	Central Chanda	Jiwati	Shengaon	RF	R62
103	Kakban	516.80	-	Central Chanda	Jiwati	Shengaon	RF	R61
104	Bambezari	470.00	-	Central Chanda	Wansadi	Gadchandur	RF	R35
106	Shengaon	360.90	-	Central Chanda	Jiwati	Shengaon	RF	R92
107	Nagapur	602.60	-	Central Chanda	Jiwati	Shengaon	RF	R86
119	Ganeri	250.50	-	Central Chanda	Wirur	Dewada	RF	R50B
120	Lakhadkot	202.40	-	Central Chanda	Wirur	Sidheshwar	RF	R49
121	Ganeri	474.40	-	Central Chanda	Wirur	Dewada	RF	R50A
130	Kowadgondi	351.20	-	Central Chanda	Wirur	Dewada	RF	R43
132	Chikhali	552.50	-	Central Chanda	Wirur	Dewada	RF	R40
134	Warzadi	360.70	-	Central Chanda	Wansadi	Gadchandur	RF	R056
162	Lakhadkot	130.40	-	Central Chanda	Wirur	Sidheshwar	RF	R124
164	Nizamgondi	346.70	-	Central Chanda	Wansadi	Wansadi	RF	R024
166	Gadpandharwani	480.60	-	Central Chanda	Jiwati	Jiwati	RF	R067
168	Subai	320.60	-	Central Chanda	Wirur	Wirur	RF	R125
169	Kostala 2	370.10	-	Central Chanda	Wirur	Sidheshwar	RF	R128
170	Subai	356.10	-	Central Chanda	Wirur	Wirur	RF	R129
171	Kostala 1	435.40	-	Central Chanda	Wirur	Sidheshwar	RF	R126
172	Antargaon 1	435.70	-	Central Chanda	Wirur	Wirur	RF	R134 B
173	Chunala	417.30	-	Central Chanda	Rajura	Rajura	RF	R158
175	Patan	447.70	-	Central Chanda	Jiwati	Patan	RF	R58
176	Sidheshwar	299.70	-	Central Chanda	Wirur	Sidheshwar	RF	R150
179	Nokari	465.60	-	Central Chanda	Wansadi	Gadchandur	RF	R033
183	Lakhadkot	387.90	-	Central Chanda	Wirur	Sidheshwar	RF	R151
184	Sidheshwar	517.10	-	Central Chanda	Wirur	Sidheshwar	RF	R148
185	Vihirgaon	324.50	-	Central Chanda	Rajura	Vihirgaon	RF	R170
186	Vihirgaon	323.20	-	Central Chanda	Rajura	Vihirgaon	RF	R171
187	Vihirgaon	503.00	-	Central Chanda	Rajura	Vihirgaon	RF	R172
188	Rajura	361.00	-	Central Chanda	Rajura	Rajura	RF	R165
189	Rajura	305.90	-	Central Chanda	Rajura	Rajura	RF	R155
190	Rajura	481.20	-	Central Chanda	Rajura	Rajura	RF	R156

191	Somthana	309.20	-	Central Chanda	Rajura	Rajura	RF	R153
192	Chunala	431.20	-	Central Chanda	Rajura	Rajura	RF	R157
193	Chanakha	299.00	-	Central Chanda	Rajura	Rajura	RF	R161
194	Chanakha	304.70	-	Central Chanda	Rajura	Rajura	RF	R159
195	Chanakha	451.70	-	Central Chanda	Rajura	Rajura	RF	R160
197	Mandwa	564.70	-	Central Chanda	Wansadi	Korpana	RF	R006
198	Yergawhan	459.80	-	Central Chanda	Wansadi	Wansadi	RF	R011
199	Yergawhan	455.90	-	Central Chanda	Wansadi	Wansadi	RF	R012
206	Yergawhan	344.80	-	Central Chanda	Wansadi	Wansadi	RF	R14
207	Gadchandur	347.30	-	Central Chanda	Wansadi	Gadchandur	RF	R027
208	Wansadi	391.40	-	Central Chanda	Wansadi	Wansadi	RF	R022
209	Dhanakdevi	294.70	-	Central Chanda	Wansadi	Wansadi	RF	R16
214	Lakkadkot	273.80	-	Central Chanda	Wirur	Siddheshwar	RF	R048
215	Sawalhira	303.40	-	Central Chanda	Wansadi	Korpana	RF	R010
217	Dewada	332.40	-	Central Chanda	Wirur	Dewada	RF	R45
219	Dewada	218.00	-	Central Chanda	Wirur	Dewada	RF	R46B[b]
220	Dewada	45.50	-	Central Chanda	Wirur	Dewada	RF	R46B[a]
221	Ganeri	204.70	-	Central Chanda	Wirur	Dewada	RF	R51A[b]
222	Ganeri	17.90	-	Central Chanda	Wirur	Dewada	RF	R51A[a]
223	Ganeri	162.70	-	Central Chanda	Wirur	Dewada	RF	R51B[b]
224	Ganeri	17.30	-	Central Chanda	Wirur	Dewada	RF	R51B[a]
225	Nagapur	204.30	-	Central Chanda	Jiwati	Shengaon	RF	R87
226	Shengaon	203.40	-	Central Chanda	Jiwati	Shengaon	RF	R90
230	Sidheshwar	434.00	-	Central Chanda	Wirur	Sidheshwar	RF	R142
231	Bhendala	405.20	-	Central Chanda	Wirur	Sidheshwar	RF	R143
232	Kostala 2	702.40	-	Central Chanda	Wirur	Sidheshwar	RF	R202
233	Antargaon 2	996.20	-	Central Chanda	Wirur	Wirur	RF	R203
234	Kostala 1	399.10	-	Central Chanda	Wirur	Sidheshwar	RF	R127
235	Subai	397.60	-	Central Chanda	Wirur	Wirur	RF	R130
236	Subai	352.10	-	Central Chanda	Wirur	Wirur	RF	R131
237	Subai	338.80	-	Central Chanda	Wirur	Wirur	RF	R132
238	Chincholi	319.20	-	Central Chanda	Wirur	Wirur	RF	R141
239	Antargaon 1	372.00	-	Central Chanda	Wirur	Wirur	RF	R133
240	Chincholi	160.10	-	Central Chanda	Wirur	Wirur	RF	R140
241	Chicholi	307.00	-	Central Chanda	Wirur	Wirur	RF	R138
242	Chicholi	462.10	-	Central Chanda	Wirur	Wirur	RF	R139
243	Wirur	612.10	-	Central Chanda	Wirur	Wirur	RF	R137
244	Wirur	221.10	-	Central Chanda	Wirur	Wirur	RF	R136
245	Wirur	371.60	-	Central Chanda	Wirur	Wirur	RF	R135
246	Khambada	331.00	-	Central Chanda	Rajura	Vihirgaon	RF	R177
247	Khambada	525.20	-	Central Chanda	Rajura	Vihirgaon	RF	R178
248	Nalfadi	568.10	-	Central Chanda	Rajura	Vihirgaon	RF	R179
249	Khambada	393.20	-	Central Chanda	Rajura	Vihirgaon	RF	R176
250	Tembhurwahi	368.30	-	Central Chanda	Rajura	Vihirgaon	RF	R169
251	Tembhurwahi	402.20	-	Central Chanda	Rajura	Vihirgaon	RF	R168
252	Nalfadi	337.80	-	Central Chanda	Rajura	Vihirgaon	RF	R175
253	Nalfadi	617.90	-	Central Chanda	Rajura	Vihirgaon	RF	R174
254	Vihirgaon	257.60	-	Central Chanda	Rajura	Vihirgaon	RF	R173
255	Somthana	181.90	-	Central Chanda	Rajura	Rajura	RF	R166
256	Tembhurwahi	295.00	-	Central Chanda	Rajura	Vihirgaon	RF	R167
257	Rajura	359.40	-	Central Chanda	Rajura	Rajura	RF	R164
258	Tembhurwahi	308.20	-	Central Chanda	Rajura	Vihirgaon	RF	R163
259	Chunala	138.70	-	Central Chanda	Rajura	Rajura	RF	R162
261	Bhendala	566.90	-	Central Chanda	Wirur	Shideshwar	RF	R144
269	Bambezari	363.50	-	Central Chanda	Wansadi	Gadchandur	RF	R036
270	Sawalhira	480.50	-	Central Chanda	Wansadi	Korpana	RF	R009
313	Nalfadi	331.50	-	Central Chanda	Rajura	Vihirgaon	RF	R200
367	Jambuldhara	442.20	-	Central Chanda	Wansadi	Korpana	RF	R004
368	Mahapandharwani	417.10	-	Central Chanda	Jiwati	Jiwati	RF	R068

369	Gadpandharwani	252.10	-	Central Chanda	Jiwati	Jiwati	RF	R066
374	Yelapur	315.10	-	Central Chanda	Jiwati	Wani	RF	R005
375	Mahapandharwani	393.40	-	Central Chanda	Jiwati	Jiwati	RF	R069
377	Bhendala	510.90	-	Central Chanda	Wirur	Shideshawar	RF	R145
378	Sidheshwar	627.40	-	Central Chanda	Wirur	Sidheshwar	RF	R149
379	Kostala 1	393.90	-	Central Chanda	Wirur	Sidheshwar	RF	R201
384	Dhanakdevi	318.80	-	Central Chanda	Wansadi	Wansadi	RF	R018
385	Warzadi	296.10	-	Central Chanda	Wansadi	Gadchandur	RF	R055
386	Yergawhan	434.90	-	Central Chanda	Wansadi	Wansadi	RF	R013
387	Nizamgondi	331.31	-	Central Chanda	Wansadi	Wansadi	RF	R023
388	Mahapandharwani	399.70	-	Central Chanda	Jiwati	Jiwati	RF	R070
389	Pakadiguddam	310.60	-	Central Chanda	Wansadi	Wansadi	RF	R020
390	Nagarala	370.60	-	Central Chanda	Jiwati	Jiwati	RF	R026
391	Nagarala	309.80	-	Central Chanda	Jiwati	Jiwati	RF	R065
396	Antargaon 1	211.10	-	Central Chanda	Wirur	Wirur	RF	R134A
397	Lakhadkot	521.90	-	Central Chanda	Wirur	Sidheshwar	RF	R147
398	Bhendala	476.70	-	Central Chanda	Wirur	Shideshawar	RF	R146
399	Sumthana	468.40	-	Central Chanda	Rajura	Rajura	RF	R152
546	Chanakha	6.23	-	Central Chanda	Rajura	Rajura	UF	R594
547	Wirur	6.50	-	Central Chanda	Wirur	Wirur	PF	R595
574	Chincholi	17.20	-	Central Chanda	Wirur	Wirur	PF	R596A
575	Wirur	30.90	-	Central Chanda	Wirur	Wirur	PF	R597AB
576	Antargaon 1	26.30	-	Central Chanda	Wirur	Wirur	PF	R598A
589	Nalfadi	39.61	-	Central Chanda	Rajura	Vihirgaon	PF	R590
590	Nalfadi	124.10	-	Central Chanda	Rajura	Vihirgaon	PF	R593
591	Sawalhira	405.00	-	Central Chanda	Wansadi	Korpana	RF	R008
593	Somthana	306.50	-	Central Chanda	Rajura	Rajura	RF	R154
594	Chunala	0.40	-	Central Chanda	Rajura	Rajura	PF	R592A
595	Chunala	0.40	-	Central Chanda	Rajura	Rajura	PF	R592B
596	Chunala	3.50	-	Central Chanda	Rajura	Rajura	PF	R591A
597	Chunala	3.50	-	Central Chanda	Rajura	Rajura	PF	R591B

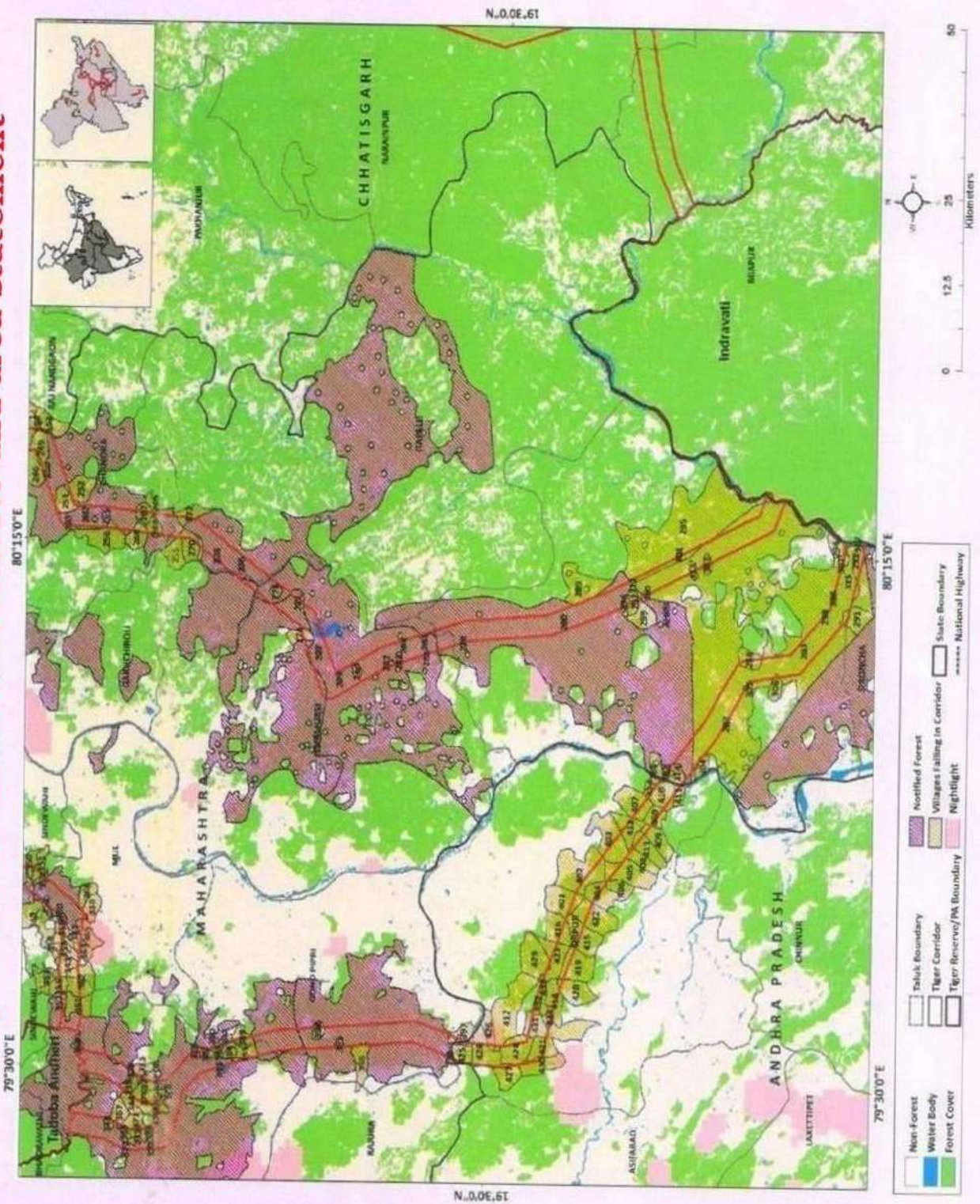
Pandharkawada

20	Kinhi	182.92	Yavatmal	Pandharkawada	Parwa	Parwa	RF	95
21	Kinhi	373.93	Yavatmal	Pandharkawada	Parwa	Parwa	RF	88
22	Kinhi	252.93	Yavatmal	Pandharkawada	Parwa	Parwa	RF	97
88	Mangurda	433.82	Yavatmal	Pandharkawada	Pandharkawada	Pandharkawada	RF	45
89	Mangurda	458.81	Yavatmal	Pandharkawada	Pandharkawada	Pandharkawada	RF	645
92	Botoni	292.18	Yavatmal	Pandharkawada	Pandharkawada	Pandharkawada	RF	46
94	Pandharkawada	484.41	Yavatmal	Pandharkawada	Pandharkawada	Pandharkawada	RF	644
97	Mangurda	288.14	Yavatmal	Pandharkawada	Pandharkawada	Pandharkawada	RF	646
99	Botoni	357.34	Yavatmal	Pandharkawada	Pandharkawada	Pandharkawada	RF	68
100	Durgada	403.07	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	41
101	Khandani	293.39	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	42
102	Durgada	255.77	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	43
103	Durgada	357.74	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	44
104	Khandani	343.58	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	40
105	Khandani	183.32	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	625
106	Aambevari	223.39	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	624
107	Aambevari	244.02	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	623
114	Nimani	343.58	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	38
115	Pachpor	358.96	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	620
116	Pachpor	369.07	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	621
117	Pachpor	258.19	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	619
118	Pachpor	121.00	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	622
119	Nimani	352.89	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	34
139	Wadhona	355.72	Yavatmal	Pandharkawada	Parwa	Parwa	RF	641
140	Wadhona	140.85	Yavatmal	Pandharkawada	Parwa	Parwa	RF	810
143	Pahapal	345.20	Yavatmal	Pandharkawada	Parwa	Pahapal	P.F.	647
153	Mandavi	397.00	Yavatmal	Pandharkawada	Patanbori	Patanbori	RF	59

154	Karegaon	375.14	Yavatmal	Pandharkawada	Patanbori	Patanbori	RF	60
155	Karegaon	416.02	Yavatmal	Pandharkawada	Patanbori	Patanbori	RF	61
156	Mandavi	308.37	Yavatmal	Pandharkawada	Patanbori	Patanbori	RF	58
157	Mandavi	350.86	Yavatmal	Pandharkawada	Patanbori	Patanbori	RF	57
158	Khairi	222.74	Yavatmal	Pandharkawada	Patanbori	Patanbori	RF	C101
159	Khairi	125.96	Yavatmal	Pandharkawada	Patanbori	Patanbori	RF	637
162	Bori	189.61	Yavatmal	Pandharkawada	Patanbori	Patanbori	RF	C100
163	Bori	190.36	Yavatmal	Pandharkawada	Patanbori	Patanbori	RF	C98
164	Bori	74.29	Yavatmal	Pandharkawada	Patanbori	Patanbori	RF	C97
172	Jamb	316.87	Yavatmal	Pandharkawada	Parwa	Pahapal	RF	85
173	Wadhona	315.25	Yavatmal	Pandharkawada	Parwa	Parwa	RF	86
174	Jamb	154.36	Yavatmal	Pandharkawada	Parwa	Pahapal	RF	649a
175	Jamb	374.16	Yavatmal	Pandharkawada	Parwa	Pahapal	RF	828
176	Wadhona	44.87	Yavatmal	Pandharkawada	Parwa	Parwa	RF	ca111
177	Wadhona	156.83	Yavatmal	Pandharkawada	Parwa	Parwa	RF	ca110
180	Jamb	103.39	Yavatmal	Pandharkawada	Parwa	Pahapal	RF	829
181	Jamb	239.80	Yavatmal	Pandharkawada	Parwa	Pahapal	PF	649b
182	Pawnar	314.44	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	24
183	Pawnar	199.91	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	26
185	Shiroli	309.58	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	27
211	Akoli	197.08	Yavatmal	Pandharkawada	Pandharkawada	Pandharkawada	RF	62
212	Akoli	234.72	Yavatmal	Pandharkawada	Pandharkawada	Pandharkawada	RF	63
213	Mahadoli	318.08	Yavatmal	Pandharkawada	Pandharkawada	Pandharkawada	RF	66
214	Mahadoli	161.88	Yavatmal	Pandharkawada	Pandharkawada	Pandharkawada	RF	65
215	Mahadoli	407.92	Yavatmal	Pandharkawada	Pandharkawada	Pandharkawada	RF	64
216	Akoli	209.22	Yavatmal	Pandharkawada	Pandharkawada	Pandharkawada	RF	67
242	Kegaon	131.51	Yavatmal	Pandharkawada	Parwa	Pahapal	RF	82
243	Tejapur	44.69	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	C24b
244	Tejapur	124.91	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	C24a
245	Tejapur	193.21	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	C25
286	Kosara	0.00	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	22a
287	Kosara	0.00	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	22b
288	Kosara	471.46	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	23
289	Pawnar	178.80	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	25
299	Mudhati	265.88	Yavatmal	Pandharkawada	Mukutban	Matharjun	RF	52
300	Jamni	377.97	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	49
313	Mangurla	369.07	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	30
314	Shiroli	339.94	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	29
315	Shiroli	293.80	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	28
317	Dabhadi	509.10	Yavatmal	Pandharkawada	Pandharkawada	Ghonsa	RF	32
318	Mudhati	219.75	Yavatmal	Pandharkawada	Mukutban	Matharjun	RF	55
319	Mudhati	240.38	Yavatmal	Pandharkawada	Mukutban	Matharjun	RF	56
320	Matharjun	216.91	Yavatmal	Pandharkawada	Mukutban	Matharjun	RF	634
321	Matharjun	116.55	Yavatmal	Pandharkawada	Mukutban	Matharjun	RF	631
322	Matharjun	84.23	Yavatmal	Pandharkawada	Mukutban	Matharjun	RF	633a
323	Mangurla	309.19	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	31
324	Matharjun	138.35	Yavatmal	Pandharkawada	Mukutban	Matharjun	RF	633b
326	Sibala	104.52	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	632b
328	Sibala	280.85	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	629
329	Bhendala	74.70	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	C28c
330	Bhendala	152.76	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	C30
333	Jamni	301.90	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	47
334	Jamni	292.99	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	48
335	Hirapur	386.78	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	C26
336	Hirapur	238.76	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	C27
337	Hirapur	254.15	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	c33a
338	Bhendala	57.25	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	C28a
340	Bhendala	254.55	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	19
341	Bhendala	288.71	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	21

342	Mukutban	273.56	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	18
343	Mukutban	256.17	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	C17a
344	Bhendala	0.00	Yavatmal	Pandharkawada	Mukutban	Jamni	RF	20a
347	Mukutban	121.81	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	17b
348	Mukutban	17.95	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	C34a
349	Mukutban	52.29	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	C33b
350	Mukutban	6.00	Yavatmal	Pandharkawada	Mukutban	Mukutban	RF	C34b
351	Matharjun	242.81	Yavatmal	Pandharkawada	Mukutban	Matharjun	RF	51
352	Patan	251.71	Yavatmal	Pandharkawada	Mukutban	Matharjun	RF	50
361	Sibala	271.14	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	628
362	Sibala	282.88	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	627
363	Sibala	122.21	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	630
364	Nimani	313.23	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	37
365	Nimani	303.51	Yavatmal	Pandharkawada	Pandharkawada	Pachpor	RF	36
376	Dabhadi	241.80	Yavatmal	Pandharkawada	Pandharkawada	Ghonsa	RF	33
377	Wadhona	503.83	Yavatmal	Pandharkawada	Pandharkawada	Ghonsa	RF	35
379	Wadhona	415.61	Yavatmal	Pandharkawada	Parwa	Parwa	RF	87
380	Kegaon	422.49	Yavatmal	Pandharkawada	Parwa	Pahapal	RF	83
381	Pahapal	427.75	Yavatmal	Pandharkawada	Parwa	Pahapal	P.F,	648
383	Jamb	402.66	Yavatmal	Pandharkawada	Parwa	Parwa	RF	84

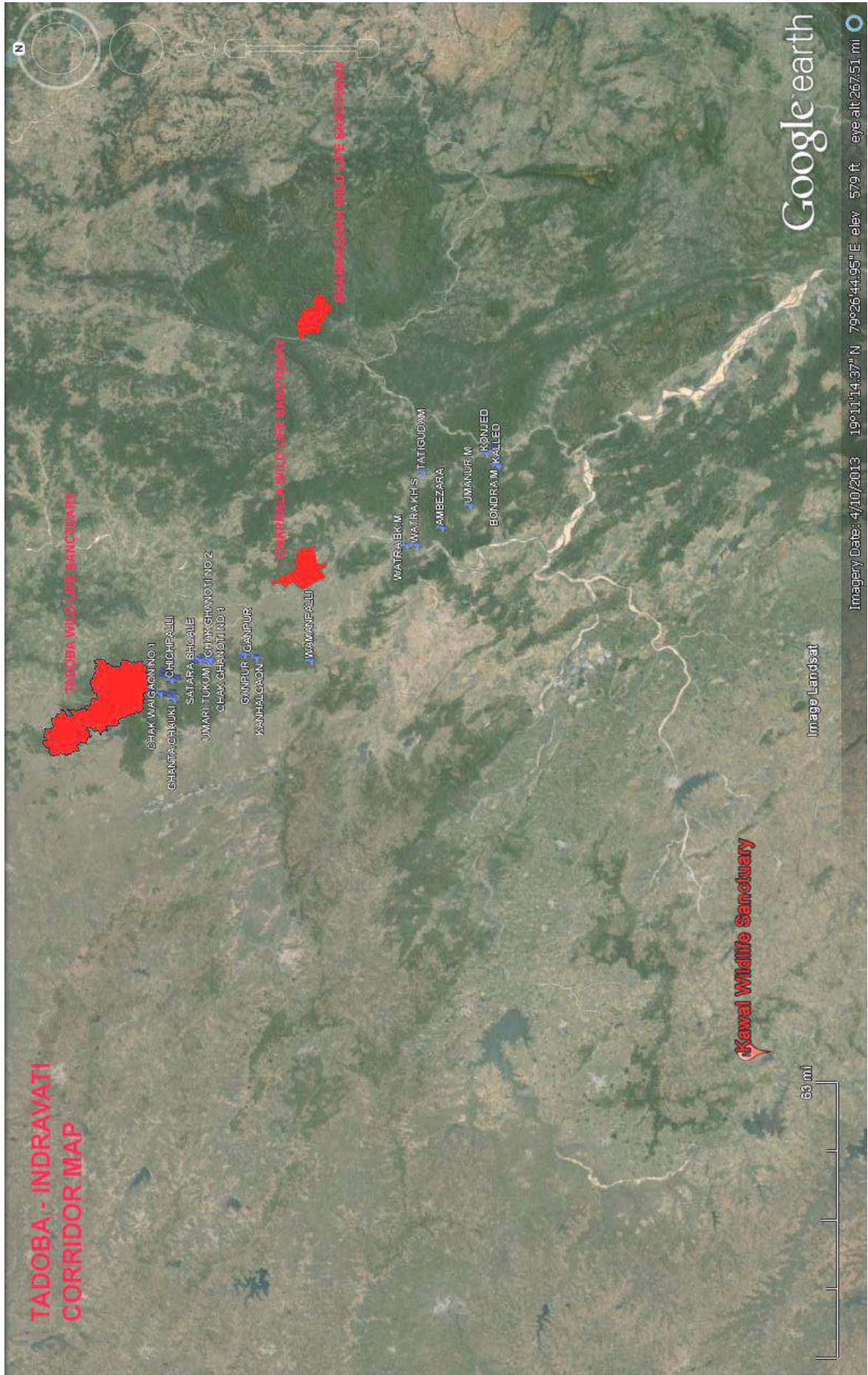
APPENDIX-VI Map of Tadoba-Indravati Corridor and area statement



Tadoba – Indrawati Corridor

Sr. No.	Code No.	Name of Villages	G.P.S. Reading	Forest Cover	% area of the village falling in corridor
1	2	3	4	5	6
1	348	Nimbala	N 20° 03' 48.9" E 79° 26' 29.8"	Mix deciduous forest surrounding the village	90
2	385	Chak Waigaon No.1	N 20° 02' 16.0" E 79° 25' 56.7"	Mix deciduous forest specially teak forest	100
3	372	Chak Waigaon No.2	N 20° 02' 21.0" E 79° 25' 56.7"	One side mix deciduous forest and one side scrub forest	90
4	336	Chak Pimpal Khut	N 20° 01' 41.8" E 79° 29' 50"	One side of village Mixed deciduous forest other side scrub forest	75
5	370	Nandgur	N 20° 01' 20.5" E 79° 30' 47.0"	Mix deciduous forest surrounding agricultural land of village	60
6	375	Boarda (Indarpawar)	N 20° 00' 55.7" E 79° 25' 54.7"	Dry deciduous mix forest	75
7	376	Chichaplli	N 20° 00' 07.7" E 79° 28' 46.5"	Dry deciduous mix forest	85
8	374	Ajaypur Raiyyatwari	N 20° 00' 17.02" E 79° 29' 44.4"	Open land (No forest area surrounding village)	40
9	386	Walani Chak	N 19° 59' 51.5" E 79° 26' 19.6"	Mix Deciduous forest	50
10	377	Ghanta Chouki	N 19° 59' 43.2" E 79° 24' 46.7"	Dry deciduous mix forest	75
11	378	Jamrala	N 19° 59' 02.6" E 79° 29' 23.0"	Dry deciduous mix forest	100
12	379	Satara Tukum	N 19° 55' 37.2" E 79° 32' 48.4"	Agricultural land is surrounding the village which is surrounded by forest	50
13	387	Satara Bhosala	N 19° 54' 45.3" E 79° 33' 05.2"	Agricultural land surrounded by scrub forest on one side and the bamboo forest from the other	75
14	383	Umari Potdar	N 19° 53' 12.2" E 79° 32' 32.1"	Open agricultural land surrounding the village No forest cover	75
15	391	Chak Ambe Dhanora	N 19° 53' 51.6" E 79° 33' 28.7"	Agriculture land surrounding village. No immediate forest often Agril. Land. Dry deciduous forest seen for away from village	50
16	384	Umari Tukum	N 19° 53' 06.8" E 79° 32' 25.6"	Open agricultural land surrounding the village which is surrounded by forest from one side	80

17	389	Chak Ghanoti No.1	N 19° 52' 32.1" E 79° 33' 36.3"	Agriculture land surrounding village. No immediate forest often Agril. Land. Dry deciduous forest seen for away from village	50
18	393	Chak Ghanoti No.2	N 19° 52' 47.5" E 79° 33' 00.5"	Agriculture land surrounding village. No immediate forest often Agril. Land. Dry deciduous forest seen for away from village	100
19	394	Ganpur	N 19° 46' 17.2" E 79° 34' 01.3"	Mixed dry deciduous forest surrounding the village	75
20	395	Kanhalgaon	N 19° 44' 08.8" E 79° 33' 25"	Mixed dry deciduous forest (Dense forest)	100
21	398	Wamanpalli	N 19° 44' 28.2" E 79° 31' 58.7"	Southern Tropical mix dry deciduous forest	90
22	302	Watra Kh S	N 19° 13' 30.9"E 79° 56' 06.8"	Southern Tropical mix dry deciduous forest	95
23	314	Watra Kh M	N 19° 15' 17.0" E 79° 56' 14.8"	Southern Tropical mix dry deciduous forest	95
24	287	Ambezara	N 19° 08' 38" E 79° 59' 46"	Southern Tropical mix dry deciduous forest	90
25	288	Kanhalgaon	N 19° 44' 07.7" E 79° 33' 27.3"	Southern Tropical mix dry deciduous forest	98
26	293	Umanur M	N 19° 03' 15.9" E 80° 04' 23.9"	Southern Tropical mix dry deciduous forest	98
27	298	Tatigudam	N 19° 12' 04.3" E 79° 11' 17.5"	Southern Tropical mix dry deciduous forest	25
28	308	Kallad	N 18° 57' 42" E 80° 12' 28"	Southern Tropical mix dry deciduous forest	100
29	315	Bondra M	N 18° 58' 18" E 80° 12' 50"	Southern Tropical mix dry deciduous forest	90
30	307	Konjed	N 18° 59' 57" E 80° 15' 05"	Southern Tropical mix dry deciduous forest	99
31	292	Birhadght	N 18° 58' 40" E 80° 16' 04"	Southern Tropical mix dry deciduous forest	95
32	317	Water Body	N 18° 58' 33" E 80° 16' 25"	Southern Tropical mix dry deciduous forest	100



Tadoba –Indravati

ID	Beat_Name	Compt. Area	District	Division	Range	Round	Status	Compt. No
Chandrapur								
307	Madnapur	330.21	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	244
308	Karwa 2	454.07	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	240
309	Karwa 1	347.90	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	247
310	Karwa 1	397.40	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	246
311	Vihirgaon 1	333.06	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	243
312	Karwa 1	237.40	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	244
313	Gondmohadi	313.20	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	241
314	Palasgaon 1	255.75	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	239
315	Palasgaon 1	152.16	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	238
316	Karwa 3	820.31	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	237
317	Piparheti 2	197.50	Chandrapur	Chandrapur	Shioni	Shioni	RF	262
318	Palasgaon 2	387.69	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	225
319	Karwa 3	301.48	Chandrapur	Chandrapur	Palasgaon	Karwa	RF	226
320	Piparheti 2	442.70	Chandrapur	Chandrapur	Shioni	Shioni	RF	236
321	Sirkada	337.30	Chandrapur	Chandrapur	Shioni	Shioni	RF	235
322	Sirkada	264.26	Chandrapur	Chandrapur	Shioni	Shioni	RF	227
323	Sirkada	241.70	Chandrapur	Chandrapur	Shioni	Shioni	RF	228
324	Karbada	206.79	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	102
325	Madnapur	369.89	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	105
326	Vihirgaon 1	297.86	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	221
327	Karbada	322.53	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	103
328	Madnapur	275.18	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	104
329	Vihirgaon 2	204.87	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	220 A
330	Vihirgaon 1	311.21	Chandrapur	Chandrapur	Palasgaon	Madnapur	RF	222
331	Gondmohadi	354.00	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	223
332	Palasgaon 2	222.56	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	224
333	Piparda	264.10	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	229
339	Jamsara	204.70	Chandrapur	Chandrapur	Shioni	Naleshwar	PF	268
341	Naleshwar	37.03	Chandrapur	Chandrapur	Shioni	Naleshwar	PF	804
342	Naleshwar	12.42	Chandrapur	Chandrapur	Shioni	Naleshwar	PF	805
343	Piparheti 1	246.10	Chandrapur	Chandrapur	Shioni	Shioni	RF	261
344	Piparheti 1	262.90	Chandrapur	Chandrapur	Shioni	Shioni	RF	263
349	Piparheti 1	18.50	Chandrapur	Chandrapur	Shioni	Shioni	PF	967
350	Piparheti 1	32.60	Chandrapur	Chandrapur	Shioni	Shioni	PF	971
351	Wasera	220.70	Chandrapur	Chandrapur	Shioni	Shioni	RF	264
352	Shioni	379.60	Chandrapur	Chandrapur	Shioni	Shioni	RF	234
353	Sirkada	26.00	Chandrapur	Chandrapur	Shioni	Shioni	PF	841
354	Sirkada	36.20	Chandrapur	Chandrapur	Shioni	Shioni	PF	567
355	Sirkada	414.80	Chandrapur	Chandrapur	Shioni	Shioni	PF	838
357	Shioni	263.86	Chandrapur	Chandrapur	Shioni	Shioni	RF	233
358	Sirkada	0.73	Chandrapur	Chandrapur	Shioni	Shioni	PF	839
359	Shioni	20.70	Chandrapur	Chandrapur	Shioni	Shioni	PF	847
360	Shioni	6.00	Chandrapur	Chandrapur	Shioni	Shioni	PF	846
361	Sirkada	41.30	Chandrapur	Chandrapur	Shioni	Shioni	PF	840
362	Sirkada	30.10	Chandrapur	Chandrapur	Shioni	Shioni	PF	837
363	Shioni	64.40	Chandrapur	Chandrapur	Shioni	Shioni	PF	842
364	Wasera	19.50	Chandrapur	Chandrapur	Shioni	Shioni	PF	836
365	Wasera	7.90	Chandrapur	Chandrapur	Shioni	Shioni	PF	831
366	Wasera	3.90	Chandrapur	Chandrapur	Shioni	Shioni	PF	829
367	Wasera	17.00	Chandrapur	Chandrapur	Shioni	Shioni	PF	570
369	Wasera	462.60	Chandrapur	Chandrapur	Shioni	Shioni	RF	265
370	Wasera	3.69	Chandrapur	Chandrapur	Shioni	Shioni	RF	835
371	Wasera	4.30	Chandrapur	Chandrapur	Shioni	Shioni	PF	830

372	Wasera	158.20	Chandrapur	Chandrapur	Shioni	Shioni	PF	828
373	Jamsara	573.20	Chandrapur	Chandrapur	Shioni	Naleshwar	PF	269
374	Shioni	45.40	Chandrapur	Chandrapur	Shioni	Shioni	PF	845
394	Parna	270.20	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	231
395	Parna	405.49	Chandrapur	Chandrapur	Palasgaon	Palasgaon	RF	230
396	Sirkada	66.10	Chandrapur	Chandrapur	Shioni	Shioni	PF	568
Bramhapuri								
60	Pendhari	112.89	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	233
61	Pendhari	83.81	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	230
63	Navargaon 2	26.35	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	236
64	Navargaon 2	15.17	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	237
142	Kajalsar	21.07	Chandrapur	Bramhpuri	Talodhi	Neri	PF	453
148	Nawatala	58.76	Chandrapur	Bramhpuri	Chimur	Shankarpur	PF	463
152	Gondeda	318.19	Chandrapur	Bramhpuri	Talodhi	Neri	P.F.	431
169	Bodadha	70.92	Chandrapur	Bramhpuri	Talodhi	Neri	PF	455
171	Saranggad	108.72	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	61
172	Saranggad	44.86	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	503
187	Shankarpur	68.91	Chandrapur	Bramhpuri	Chimur	Shankarpur	PF	488
206	Mangli	116.55	Chandrapur	Bramhpuri	Nagbhhd	Mindala	RF	86
207	Dongargaon	308.78	Chandrapur	Bramhpuri	Nagbhhd	Dongargaon	RF	43
208	Dongargaon	411.17	Chandrapur	Bramhpuri	Nagbhhd	Dongargaon	RF	44
209	Rengatur	528.92	Chandrapur	Bramhpuri	Nagbhhd	Dongargaon	RF	42
210	Rengatur	624.44	Chandrapur	Bramhpuri	Nagbhhd	Dongargaon	RF	41
215	Navargaon 2	218.52	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	228
222	Gondeda	490.68	Chandrapur	Bramhpuri	Talodhi	Neri	RF	33
223	Kajalsar	33.63	Chandrapur	Bramhpuri	Talodhi	Neri	RF	36
228	Shankarpur	212.46	Chandrapur	Bramhpuri	Chimur	Shankarpur	RF	47
229	Kachepar	17.09	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	515
230	Kachepar	21.84	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	516
231	Kachepar	2.36	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	517
232	Kachepar	0.82	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	518
256	Kachepar	6.26	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	511
281	Korambi(North)	18.53	Chandrapur	Bramhpuri	Nagbhhd	Dongargaon	PF	500
374	Navargaon 1	294.21	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	238
375	Navargaon 2	355.32	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	239
376	Ratnapur	261.83	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	240
378	Ratnapur	284.09	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	242
379	Nachanbhatti	220.15	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	243
390	Mangrool	1042.87	Chandrapur	Bramhpuri	Nagbhhd	Nagbhhd	RF	55
422	Shankarpur	106.43	Chandrapur	Bramhpuri	Chimur	Shankarpur	RF	46
423	Dongargaon	248.08	Chandrapur	Bramhpuri	Nagbhhd	Dongargaon	RF	45
424	Shankarpur	151.76	Chandrapur	Bramhpuri	Chimur	Shankarpur	RF	48
425	Korambi(North)	682.31	Chandrapur	Bramhpuri	Nagbhhd	Dongargaon	RF	50
426	Korambi(North)	628.87	Chandrapur	Bramhpuri	Nagbhhd	Dongargaon	RF	49
427	Korambi(South)	554.01	Chandrapur	Bramhpuri	Nagbhhd	Dongargaon	RF	52
428	Korambi(South)	466.61	Chandrapur	Bramhpuri	Nagbhhd	Dongargaon	RF	51
429	Korambi(South)	417.23	Chandrapur	Bramhpuri	Nagbhhd	Dongargaon	RF	53
431	Navkhala	1138.37	Chandrapur	Bramhpuri	Nagbhhd	Dongargaon	RF	54
433	Ghodejhari	571.82	Chandrapur	Bramhpuri	Nagbhhd	Nagbhhd	RF	58
434	Ghodejhari	736.53	Chandrapur	Bramhpuri	Nagbhhd	Nagbhhd	RF	57
435	Ghodejhari	366.63	Chandrapur	Bramhpuri	Nagbhhd	Nagbhhd	RF	56
436	Nagbhhd	787.53	Chandrapur	Bramhpuri	Nagbhhd	Nagbhhd	RF	82
438	Huma	450.42	Chandrapur	Bramhpuri	Nagbhhd	Nagbhhd	RF	81
439	Govindpur	435.03	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	63
440	Saranggad	308.77	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	62
455	Yenoli	559.27	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	65
456	Yenoli	499.79	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	66
457	Kachepar	477.13	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	70
458	Kajalsar	814.22	Chandrapur	Bramhpuri	Talodhi	Neri	RF	38

459	Govindpur	436.26	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	64
460	Girgaon	154.18	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	72
461	Girgaon	312.01	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	73
462	Navargaon 1	334.68	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	234
463	Pendhari	373.93	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	229
558	Saranggad	486.03	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	59
579	Kachepar	10.20	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	69
580	Kachepar	29.27	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	68
583	Nagbhaid	248.99	Chandrapur	Bramhpuri	Nagbhaid	Nagbhaid	RF	84
584	Dongargaon	88.44	Chandrapur	Bramhpuri	Nagbhaid	Dongargaon	RF	85
599	Pendhari	37.75	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1198
621	Nagbhaid	177.38	Chandrapur	Bramhpuri	Nagbhaid	Nagbhaid	PF	634
662	Mangrool	5.83	Chandrapur	Bramhpuri	Nagbhaid	Nagbhaid	PF	599
663	Nagbhaid	384.01	Chandrapur	Bramhpuri	Nagbhaid	Nagbhaid	PF	604
667	Navkhala	28.45	Chandrapur	Bramhpuri	Nagbhaid	Dongargaon	PF	608
668	Dongargaon	73.20	Chandrapur	Bramhpuri	Nagbhaid	Dongargaon	PF	609
669	Dongargaon	56.67	Chandrapur	Bramhpuri	Nagbhaid	Dongargaon	PF	610
670	Dongargaon	287.81	Chandrapur	Bramhpuri	Nagbhaid	Dongargaon	PF	612
672	Navkhala	69.32	Chandrapur	Bramhpuri	Nagbhaid	Dongargaon	PF	614
674	Rengatur	20.46	Chandrapur	Bramhpuri	Nagbhaid	Dongargaon	PF	617
675	Rengatur	7.27	Chandrapur	Bramhpuri	Nagbhaid	Dongargaon	PF	618
759	Navargaon 2	6.07	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1206
1232	Huma	15.33	Chandrapur	Bramhpuri	Nagbhaid	Nagbhaid	PF	603
1243	Mangli	28.52	Chandrapur	Bramhpuri	Nagbhaid	Mindala	PF	623
1254	Pendhari	0.51	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	232
1352	Ratnapur	18.87	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1191
1353	Ratnapur	8.89	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1196
1364	Nachanbhatti	46.22	Chandrapur	Bramhpuri	Sindewahi	Navargaon	PF	1223
1556	Mangli	54.05	Chandrapur	Bramhpuri	Nagbhaid	Mindala	UN	1817
1581	Ratnapur	43.34	Chandrapur	Bramhpuri	Sindewahi	Navargaon	RF	227
1600	Gondeda	151.35	Chandrapur	Bramhpuri	Talodhi	Neri	RF	34
1606	Kajalsar	61.97	Chandrapur	Bramhpuri	Talodhi	Neri	RF	35
1635	Gondeda	123.10	Chandrapur	Bramhpuri	Talodhi	Neri	P.F.	433
1636	Kajalsar	44.99	Chandrapur	Bramhpuri	Talodhi	Neri	P.F.	439
1643	Bodadha	214.34	Chandrapur	Bramhpuri	Talodhi	Neri	PF	456
1646	Doma	412.56	Chandrapur	Bramhpuri	Chimur	Shankarpur	PF	470
1651	Shankarpur	19.06	Chandrapur	Bramhpuri	Chimur	Shankarpur	PF	492
1652	Rengatur	507.82	Chandrapur	Bramhpuri	Nagbhaid	Dongargaon	PF	494
1654	Mangli	77.41	Chandrapur	Bramhpuri	Nagbhaid	Mindala	PF	496
1655	Mangli	166.79	Chandrapur	Bramhpuri	Nagbhaid	Mindala	PF	498
1657	Govindpur	44.03	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	504
1662	Kachepar	4.91	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	508
1663	Kachepar	5.66	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	510
1664	Kachepar	10.74	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	520
1665	Yenoli	101.97	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	521
1669	Kachepar	373.45	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	532
1671	Girgaon	175.72	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	534
1672	Girgaon	261.06	Chandrapur	Bramhpuri	Talodhi	Govindpur	PF	535
1695	Mangrool	30.06	Chandrapur	Bramhpuri	Nagbhaid	Nagbhaid	PF	594
1723	Kachepar	93.65	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	67
1733	Kotalpar	9.38	Chandrapur	Bramhpuri	Talodhi	Talodhi	PF	706
1751	Kachepar	109.03	Chandrapur	Bramhpuri	Talodhi	Govindpur	RF	74
1771	Mangrool	114.05	Chandrapur	Bramhpuri	Nagbhaid	Nagbhaid	RF	79
1775	Mangrool	5.84	Chandrapur	Bramhpuri	Nagbhaid	Nagbhaid	RF	80
4	Kargatta	16.16	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	PF	1342
11	Gewara	67.07	Chandrapur	Bramhpuri	Sawali	Pathari	P.F.	1433
12	Gewara	13.93	Chandrapur	Bramhpuri	Sawali	Pathari	P.F.	1434
18	Gewara	91.51	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1441
20	Paharni	307.56	Chandrapur	Bramhpuri	Nagbhaid	Mindala	RF	114

21	Paharni	164.24	Chandrapur	Bramhpuri	Nagbhid	Mindala	RF	115
22	Torgaon	9.83	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	117
23	Saigatta	140.49	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	118
25	Brahampuri	45.62	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	121
26	Dhamangaon	30.35	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	128
28	Thalodhi Kh.	131.56	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	137
30	Thalodhi Kh.	93.36	Chandrapur	Bramhpuri	Brahampuri	Mendki	R.F	139
34	Parsodi	77.62	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	145
35	Rampuri	103.06	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	148
37	Rampuri	27.45	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	150
38	Chichkheda	77.70	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	152
39	Kalamgaon	208.57	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	162
40	Murpar	43.60	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	167
41	Murpar	11.13	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	169
43	Kosambi	39.28	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	172
44	Kosambi	42.39	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	173
45	Kosambi	85.93	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	174
46	Murpar	51.70	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	176
47	Murpar	26.07	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	177
48	Kitadi	17.57	Chandrapur	Bramhpuri	Ekara	Ekara	RF	183
58	Bhuj	263.53	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	211
67	Kargatta	163.96	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	251
69	Maregaon	93.79	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	262
71	Tambegadi Mendha	28.59	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	270
73	Chikmara	219.53	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	275
75	Pawanpar 2	80.80	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	277
77	Kanhargaon	66.63	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	287
79	Gewara	189.54	Chandrapur	Bramhpuri	Sawali	Pathari	RF	290
80	Gewara	36.69	Chandrapur	Bramhpuri	Sawali	Pathari	RF	291
81	Meha	21.30	Chandrapur	Bramhpuri	Sawali	Pathari	RF	292
83	Mundala	47.15	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	299
84	Mundala	330.58	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	300
85	Pendhari	114.49	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	301
246	Paharni	24.30	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	787
248	Paharni	256.46	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	792
250	Paharni	64.23	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	796
260	Maregaon	19.34	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1411
261	Maregaon	60.57	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1412
262	Pawanpar 2	93.91	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1413
266	Kanhargaon	47.11	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1422
282	Murpar	20.80	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1075
284	Arjuni	6.81	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1077
285	Arjuni	1.13	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1078
286	Arjuni	1.06	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1079
287	Arjuni	4.56	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1080
288	Arjuni	6.33	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1081
289	Arjuni	3.68	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1082
290	Arjuni	3.13	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1083
291	Kitadi	2.17	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1086
292	Kitadi	1.02	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1087
293	Kitadi	9.38	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1088
295	Kitadi	1.52	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1091
317	Thalodhi Kh.	154.80	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	938
320	Mendki	10.47	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	947
332	Mindhala	42.50	Chandrapur	Bramhpuri	Nagbhid	Mindhala	RF	109
371	Bodegaon	411.98	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	215
372	Kanhargaon	500.61	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	288
373	Bodegaon	243.21	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	217
380	Kargatta	449.61	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	257

381	Dongargaon	196.28	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	258
387	Ghot	487.23	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	264
388	Murpar	643.04	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	265
391	Lonkhairi	116.55	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	248
392	Lonkhairi	522.04	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	267
393	Chikmara	494.53	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	273
394	Chikmara	378.38	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	266
395	Tambegadi mendha	305.54	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	268
396	Tambegadi Mendha	383.64	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	269
397	Mundala	392.55	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	311
398	Golabhuj	373.53	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	312
399	Rajoli	515.58	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	314
405	Mundala	358.96	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	309
406	Mundala	374.74	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	308
407	Pendhari	453.26	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	303
408	Chargaon	229.44	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	302
409	Chargaon	530.13	Chandrapur	Bramhpuri	Sawali	Pendhari	RF	304
410	Kacchepar 2	186.97	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	256
413	Dhamangaon	604.60	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	129
420	Deopayalli	81.75	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	131
421	Tulan	477.53	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	133
437	Huma	271.95	Chandrapur	Bramhpuri	Nagbhid	Nagbhid	RF	83
446	Parsodi	450.42	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	134
447	Mendki	346.00	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	136
448	Parsodi	441.11	Chandrapur	Bramhpuri	Brahampuri	Mendki	RF	135
450	Rampuri	401.45	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	154
451	Koregaon	252.11	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	157
452	Rampuri	202.34	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	153
465	Koregaon	231.07	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	158
466	Kotalpar	513.15	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	100
467	Sadagad	602.58	Chandrapur	Bramhpuri	Sawali	Sawali	RF	305
468	Rajoli	592.05	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	315
469	Murmadi	203.15	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	310
470	Murmadi	584.76	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	307
471	Tekadi	713.86	Chandrapur	Bramhpuri	Sawali	Sawali	RF	306
472	Chitegaon	350.87	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	317
475	Lonkhairi	148.93	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	247
477	Chitegaon	481.99	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	318
487	Navegaon	456.89	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	161
488	Navegaon	431.80	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	178
489	Kalamgaon	184.94	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	163
490	Murpar	165.64	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	207
491	Ekara	377.98	Chandrapur	Bramhpuri	Ekara	Ekara	RF	206
492	Khatgaon	229.05	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	208
493	Murpar	439.91	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	164
494	Kosambi	417.64	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	175
495	Kosambi	193.44	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	219
496	Kosambi	444.34	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	220
497	Awalgaon	540.25	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	224
498	Halda	455.67	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	222
499	Awalgaon	254.95	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	221
500	Kacchepar 2	429.37	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	254
501	Kacchepar 2	492.11	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	255
502	Bodra	362.60	Chandrapur	Bramhpuri	Ekara	Ekara	RF	197
503	Seldha	413.59	Chandrapur	Bramhpuri	Ekara	Ekara	RF	198
504	Seldha	330.63	Chandrapur	Bramhpuri	Ekara	Ekara	RF	200
505	Allewahi	226.62	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	93
506	Kitadi	188.58	Chandrapur	Bramhpuri	Ekara	Ekara	RF	194
507	Kitadi	474.69	Chandrapur	Bramhpuri	Ekara	Ekara	RF	195

508	Bodra	416.43	Chandrapur	Bramhpuri	Ekara	Ekara	RF	199
509	Khatgaon	248.07	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	204
510	Khatgaon	408.34	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	203
511	Bhuj	398.21	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	212
512	Padmapur	434.64	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	213
516	Arjuni	312.82	Chandrapur	Bramhpuri	Ekara	Ekara	RF	179
519	Ekara	281.20	Chandrapur	Bramhpuri	Ekara	Ekara	RF	205
520	Arjuni	548.76	Chandrapur	Bramhpuri	Ekara	Ekara	RF	156
521	Kotalpar	292.59	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	99
522	Arjuni	415.21	Chandrapur	Bramhpuri	Ekara	Ekara	RF	155
523	Gangasagar Hetti	206.79	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	97
524	Gangasagar Hetti	265.48	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	98
525	Gangasagar Hetti	203.15	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	96
526	Allewahi	263.05	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	95
527	Allewahi	252.52	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	94
531	Pawanpar 1	807.76	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	282
532	Pawanpar 2	251.71	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	283
534	Kacchepar 1	220.96	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	285
537	Kacchepar 1	261.83	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	284
539	Halda	254.14	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	223
540	Bodegaon	233.10	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	216
541	Mudza	469.04	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	214
542	Padmapur	305.53	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	218
545	Maregaon	519.72	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	RF	261
577	Golabhuj	367.46	Chandrapur	Bramhpuri	Sawali	Rajoli	RF	313
585	Kotalpar	22.38	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	102
586	Kotalpar	14.01	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	103
593	Dhamangaon	43.33	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	877
606	Rampuri	4.15	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	979
607	Rampuri	5.15	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	980
737	Saigatta	35.25	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	882
752	Chichkheda	137.25	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	1008
753	Chichkheda	17.06	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	1011
754	Wandra	41.12	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1013
776	Dhamangaon	67.10	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	913
777	Dhamangaon	53.21	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	915
778	Dhamangaon	3.75	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	916
779	Dhamangaon	0.96	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	917
807	Kitadi	4.87	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1101
810	Rampuri	0.96	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1022
811	Rampuri	1.44	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1023
812	Rampuri	4.10	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1024
813	Rampuri	2.55	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1025
814	Rampuri	4.74	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1026
819	Navegaon	19.23	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1036
826	Wandra	296.94	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1049
835	Seldha	19.54	Chandrapur	Bramhpuri	Ekara	Ekara	RF	201
837	Seldha	15.76	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1122
862	Halda	225.16	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1168
867	Mudza	69.41	Chandrapur	Bramhpuri	Ekara	Bhuj	PF	1182
875	Awalgaon	55.38	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1142
921	Sindewahi	58.00	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	PF	1288
973	Maregaon	67.31	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1375
1002	Chikmara	4.63	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1399
1003	Chikmara	4.67	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1400
1019	Maregaon	27.11	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1408
1031	Navegaon	99.05	Chandrapur	Bramhpuri	Sawali	Vihayad	PF	1559
1037	Navegaon	104.94	Chandrapur	Bramhpuri	Sawali	Vihayad	PF	1565
1073	Meha	23.83	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1626

1078	Mundala	31.16	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1636
1101	Pendhari	36.74	Chandrapur	Bramhpuri	Sawali	Pendhari	P.F.	1664
1102	Pendhari	32.03	Chandrapur	Bramhpuri	Sawali	Pendhari	P.F.	1665
1104	Pendhari	52.33	Chandrapur	Bramhpuri	Sawali	Pendhari	P.F.	1668
1109	Pendhari	53.09	Chandrapur	Bramhpuri	Sawali	Pendhari	P.F.	1673
1133	Sadagad	94.70	Chandrapur	Bramhpuri	Sawali	Sawali	PF	1714
1142	Chitegaon	83.47	Chandrapur	Bramhpuri	Sawali	Rajoli	PF	1786
1144	Chargaon	92.57	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1724
1146	Chargaon	24.48	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1726
1149	Chargaon	23.63	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1729
1184	Sadagad	35.00	Chandrapur	Bramhpuri	Sawali	Sawali	PF	1717
1185	Sadagad	205.30	Chandrapur	Bramhpuri	Sawali	Sawali	PF	1718
1186	Sadagad	108.46	Chandrapur	Bramhpuri	Sawali	Sawali	PF	1719
1192	Chargaon	7.88	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1733
1194	Chargaon	52.97	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1735
1195	Chargaon	13.31	Chandrapur	Bramhpuri	Sawali	Pendhari	PF	1736
1201	Chitegaon	9.50	Chandrapur	Bramhpuri	Sawali	Rajoli	PF	1781
1234	Wandra	51.80	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	166
1265	Dhamangaon	200.01	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	122
1291	Chichkheda	124.61	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	1012
1292	Wandra	81.21	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1015
1296	Kalamgaon	39.88	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1037
1298	Kalamgaon	59.55	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1041
1304	Wandra	129.85	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1052
1305	Murpar	48.70	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1056
1309	Kosambi	5.21	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1067
1311	Mindhala	108.26	Chandrapur	Bramhpuri	Nagbhid	Mindhala	RF	106
1314	Murpar	43.46	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1074
1315	Kitadi	5.28	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1085
1317	Kitadi	39.17	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1098
1319	Ekara	112.02	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1103
1329	Seldha	9.04	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1123
1334	Awalgaon	661.60	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1138
1335	Paharni	269.73	Chandrapur	Bramhpuri	Nagbhid	Mindala	RF	113
1337	Halda	330.03	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1145
1338	Halda	116.39	Chandrapur	Bramhpuri	Ekara	Awalgaon	PF	1146
1340	Padmapur	62.30	Chandrapur	Bramhpuri	Ekara	Bhuj	PF	1150
1342	Padmapur	279.79	Chandrapur	Bramhpuri	Ekara	Bhuj	PF	1156
1344	Torgaon	18.79	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	116
1348	Mudza	337.32	Chandrapur	Bramhpuri	Ekara	Bhuj	PF	1179
1356	Saigatta	170.21	Chandrapur	Bramhpuri	Bramhpuri	Bramhpuri	RF	119
1370	Dhamangaon	129.12	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	123
1378	Kargatta	23.25	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	PF	1340
1385	Kargatta	40.69	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	PF	1372
1388	Chikmara	21.28	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1401
1389	Chikmara	222.41	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1402
1392	Maregaon	127.48	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1407
1394	Maregaon	23.51	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1410
1395	Pawanpar 2	40.85	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1416
1396	Pawanpar 2	50.23	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1417
1398	Gewara	89.94	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1428
1399	Gewara	20.73	Chandrapur	Bramhpuri	Sawali	Pathari	P.F.	1430
1400	Gewara	94.47	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1435
1405	Gewara	31.31	Chandrapur	Bramhpuri	Sawali	Pathari	P.F.	1451
1411	Rampuri	20.17	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	146
1412	Meha	90.88	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1473
1415	Rampuri	44.30	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	147
1427	Saigatta	105.73	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	124
1430	Bhagwanpur	184.67	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	RF	125

1449	Lonkhairi	73.15	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	PF	1312
1459	Chikmara	76.23	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	PF	1398
1474	Gaidongri	116.84	Chandrapur	Bramhpuri	Sawali	Vihayad	PF	1572
1477	Meha	57.33	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1581
1484	Koregaon	51.29	Chandrapur	Bramhpuri	Brahampuri	Navegaon	RF	159
1493	Meha	75.20	Chandrapur	Bramhpuri	Sawali	Pathari	PF	1623
1500	Mundala	59.95	Chandrapur	Bramhpuri	Sawali	Pendhari	P.F.	1644
1507	Piranj chek	131.42	Chandrapur	Bramhpuri	Sawali	Sawali	PF	1687
1523	Rajoli	198.50	Chandrapur	Bramhpuri	Sawali	Rajoli	PF	1744
1537	Chitegaon	47.32	Chandrapur	Bramhpuri	Sawali	Rajoli	PF	1776
1539	Chitegaon	47.12	Chandrapur	Bramhpuri	Sawali	Rajoli	PF	1778
1551	Arjuni	40.19	Chandrapur	Bramhpuri	Ekara	Ekara	RF	180
1553	Mindhala	142.99	Chandrapur	Bramhpuri	Nagbhhd	Mindhala	UN	1813
1562	Kitadi	59.34	Chandrapur	Bramhpuri	Ekara	Ekara	RF	182
1564	Chikmara	42.54	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	UN	1836
1575	Kitadi	115.34	Chandrapur	Bramhpuri	Ekara	Ekara	RF	185
1576	Ekara	192.15	Chandrapur	Bramhpuri	Ekara	Ekara	RF	190
1577	Seldha	334.06	Chandrapur	Bramhpuri	Ekara	Ekara	RF	202
1578	Bhuj	109.19	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	210
1580	Mudza	440.21	Chandrapur	Bramhpuri	Ekara	Bhuj	RF	226
1584	Kargatta	204.25	Chandrapur	Bramhpuri	Sindewahi	Sindewahi	RF	250
1587	Chikmara	49.02	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	RF	274
1588	Gewara	48.37	Chandrapur	Bramhpuri	Sawali	Pathari	RF	289
1589	Navegaon	84.17	Chandrapur	Bramhpuri	Sawali	Vihayad	RF	295
1590	Gaidongri	63.66	Chandrapur	Bramhpuri	Sawali	Vihayad	RF	296
1707	Mindhala	111.98	Chandrapur	Bramhpuri	Nagbhhd	Mindhala	PF	635
1710	Mangrool	156.38	Chandrapur	Bramhpuri	Nagbhhd	Nagbhhd	PF	643
1716	Mindhala	172.29	Chandrapur	Bramhpuri	Nagbhhd	Mindhala	PF	659
1737	Deopayalli	168.40	Chandrapur	Bramhpuri	Talodhi	Talodhi	PF	718
1738	Deopayalli	137.92	Chandrapur	Bramhpuri	Talodhi	Talodhi	PF	721
1740	Deopayalli	139.73	Chandrapur	Bramhpuri	Talodhi	Talodhi	PF	725
1741	Deopayalli	30.78	Chandrapur	Bramhpuri	Talodhi	Talodhi	PF	726
1748	Kosmbi Gawali	140.28	Chandrapur	Bramhpuri	Nagbhhd	Mindala	PF	742
1764	Masli	49.88	Chandrapur	Bramhpuri	Nagbhhd	Mindala	PF	776
1765	Masli	91.15	Chandrapur	Bramhpuri	Nagbhhd	Mindala	PF	777
1767	Paharni	84.38	Chandrapur	Bramhpuri	Nagbhhd	Mindala	PF	783
1768	Paharni	158.38	Chandrapur	Bramhpuri	Nagbhhd	Mindala	PF	791
1769	Paharni	174.87	Chandrapur	Bramhpuri	Nagbhhd	Mindala	PF	793
1770	Paharni	246.38	Chandrapur	Bramhpuri	Nagbhhd	Mindala	PF	794
1772	Torgaon	342.16	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	801
1773	Torgaon	38.21	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	807
1777	Torgaon	51.86	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	814
1779	Torgaon	58.30	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	816
1784	Saigatta	76.81	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	832
1799	Dhamangaon	16.91	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	872
1802	Mindhala	135.64	Chandrapur	Bramhpuri	Nagbhhd	Mindhala	RF	87
1805	Bhagwanpur	156.94	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	890
1809	Bhagwanpur	161.69	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	905
1813	Bhagwanpur	120.93	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	918
1821	Thalodhi Kh.	92.90	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	939
1824	Thalodhi Kh.	183.23	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	943
1827	Mendki	463.32	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	950
1829	Thalodhi Kh.	327.92	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	952
1839	Rampuri	18.91	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	977
1840	Rampuri	27.62	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	978
1843	Rampuri	67.23	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	987
1844	Rampuri	52.50	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	988
1851	Wandra	217.31	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	165
1852	Arjuni	15.26	Chandrapur	Bramhpuri	Ekara	Ekara	RF	181

1857	Mindhala	203.62	Chandrapur	Bramhpuri	Nagbhid	Mindhala	PF	636
1862	Dhamangaon	34.70	Chandrapur	Bramhpuri	Brahampuri	Brahampuri	PF	871
1867	Chichkheda	597.97	Chandrapur	Bramhpuri	Brahampuri	Mendki	PF	1004
1870	Rampuri	16.37	Chandrapur	Bramhpuri	Brahampuri	Navegaon	PF	1027
1872	Kitadi	32.46	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1084
1873	Kitadi	6.66	Chandrapur	Bramhpuri	Ekara	Ekara	PF	1090
1881	Chikmara	85.76	Chandrapur	Bramhpuri	Sindewahi	Tambegadi M	UN	1835
1882	Pathari	235.12	Chandrapur	Bramhpuri	Sawali	Pathari	RF	298
1887	Masli	91.70	Chandrapur	Bramhpuri	Nagbhid	Mindala	PF	771
1894	Pawanpar 2	40.70	Chandrapur	Bramhpuri	Sindewahi	Gunjewahi	PF	1415
1906	Deopayalli	718.31	Chandrapur	Bramhpuri	Talodhi	Talodhi	RF	132
1909	Kosambi	66.98	Chandrapur	Bramhpuri	Ekara	Awalgaon	RF	171
Wadsa								
178	Churchura	325.80	Gadchiroli	Wadsa	Porla	Churchura	PF	566
180	Churchura	115.06	Gadchiroli	Wadsa	Porla	Churchura	PF	573
248	Injewari	53.18	Gadchiroli	Wadsa	Armori	Armori	pf	786
254	Injewari	132.07	Gadchiroli	Wadsa	Armori	Armori	PF	791
255	Injewari	125.25	Gadchiroli	Wadsa	Armori	Armori	RF	53
256	Injewari	57.67	Gadchiroli	Wadsa	Armori	Armori	PF	798
1010	Kitadi	74.08	Gadchiroli	Wadsa	Porla	Porla	PF	792
1042	Dibhana	417.79	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	1
1043	Dibhana	476.42	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	2
1044	Churchura	1027.27	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	3
1045	Sakhara	427.81	Gadchiroli	Wadsa	Porla	Porla	A Class RF	5
1046	Porla	277.30	Gadchiroli	Wadsa	Porla	Porla	A Class RF	6
1047	Nawargaon(N)	630.12	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	7
1048	Nawargaon(S)	519.64	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	8
1049	Nawargaon(S)	420.73	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	9
1050	Deloda	736.56	Gadchiroli	Wadsa	Porla	Maregaon	A Class RF	10
1051	Nawargaon(S)	763.22	Gadchiroli	Wadsa	Porla	Churchura	A Class RF	11
1052	Porla	370.84	Gadchiroli	Wadsa	Porla	Porla	A Class RF	12
1053	Porla	407.10	Gadchiroli	Wadsa	Porla	Porla	A Class RF	13
1054	Kitadi	237.03	Gadchiroli	Wadsa	Porla	Porla	A Class RF	14
1055	Kitadi	386.55	Gadchiroli	Wadsa	Porla	Porla	A Class RF	15
1056	Naroti	689.73	Gadchiroli	Wadsa	Porla	Sirsi	A Class RF	17
1058	Maregaon	269.51	Gadchiroli	Wadsa	Porla	Maregaon	A Class RF	19
1059	Mausikhamb	213.70	Gadchiroli	Wadsa	Porla	Maregaon	A Class RF	20
1063	Sirsi	721.15	Gadchiroli	Wadsa	Porla	Sirsi	PF	48
1064	Kitadi	325.93	Gadchiroli	Wadsa	Porla	Porla	A Class RF	51
1065	Sirsi	539.52	Gadchiroli	Wadsa	Porla	Sirsi	A Class RF	62
1066	Darli	1281.64	Gadchiroli	Wadsa	Porla	Sirsi	A Class RF	63
1067	Bori	336.79	Gadchiroli	Wadsa	Porla	Sirsi	B Class RF	52
1166	Vihirgaon	346.84	Gadchiroli	Wadsa	Armori	Wairagad	RF	25
1167	Vihirgaon	173.10	Gadchiroli	Wadsa	Armori	Wairagad	RF	24
1175	Vihirgaon	160.70	Gadchiroli	Wadsa	Armori	Wairagad	PF	657
1392	Churchura	429.95	Gadchiroli	Wadsa	Porla	Churchura	B Class RF	54
1394	Sakhara	121.24	Gadchiroli	Wadsa	Porla	Porla	PF	580
1461	Khapri	359.81	Gadchiroli	Wadsa	Porla	Maregaon	A Class RF	16
1507	Bori	72.06	Gadchiroli	Wadsa	Porla	Sirshi	ZJ	1579
1559	Pisewadha	147.43	Gadchiroli	Wadsa	Armori	Wairagad	RF	23
1572	Injewari	396.50	Gadchiroli	Wadsa	Armori	Armori	RF	49
1573	Bori	574.06	Gadchiroli	Wadsa	Porla	Sirsi	RF	50
1596	Porla	264.69	Gadchiroli	Wadsa	Porla	Porla	RF	4A
1597	Nawargaon(S)	265.54	Gadchiroli	Wadsa	Porla	Churchura	RF	4B
Gadchiroli								
4	Yedanur	251.38	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	8
5	Yedanur	285.96	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	9
6	Paimuranda(E)	330.30	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	29
9	Gurwala W	133.91	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF+PF	184

10	Potegaon	160.41	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF	81
11	Benoli	439.75	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF+PF	45
12	Suimara	431.02	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF+PF	124
13	Maroda	332.35	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF+PF	146
14	Maroda	381.26	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF+PF	136
15	Maroda	265.95	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF	135
16	Maroda	361.88	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF+PF	145
17	Maroda	349.83	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF+PF	137
18	Chawela	272.68	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF+PF	181
19	Gurwala W	158.09	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF+PF	183
20	Gurwala W	332.49	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF+PF	182
21	N Pekinkasa	330.99	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF+PF	102
22	Sawela	231.47	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF+PF	123
23	Kosamghat	271.24	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF+PF	133
24	Kosamghat	216.55	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF+PF	132
25	N Mardha	326.82	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF+PF	89
26	Murmuri	193.32	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	5
27	Murmuri	314.92	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	6
32	Yedanur	147.14	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	34
33	Chandala	134.54	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF+PF	186
34	Chandala	141.75	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF+PF	185
35	Jadegaon	400.04	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF	70
36	Jadegaon	419.75	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF	77
37	Potegaon	278.63	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF+PF	82
38	Benoli	162.54	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF+PF	47
39	N Mardha	269.29	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF+PF	91
40	N Mardha	237.76	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF+PF	90
41	Potegaon	176.82	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF+PF	80
42	S Mardha	291.02	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF	78
43	S Mardha	296.90	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF+PF	79
44	Potegaon	265.48	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF	49
47	Gilgaon	224.07	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF+PF	418 P
48	Gilgaon	19.17	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF+PF	418 P
49	Gilgaon		Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF+PF	418 P
55	Chatgaon	271.04	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF+PF	409
56	W Mahawada	322.55	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	383
57	W Mahawada	313.59	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	375
58	Bhapda	147.07	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF+PF	210
60	W Haranda	308.97	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF+PF	214
61	W Haranda	346.57	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF	215
62	Murgaon	189.89	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF+PF	223
64	Murgaon	307.17	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF+PF	219
65	Murgaon	306.38	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF+PF	218
66	E Haranda	356.20	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF	217
67	E Haranda	284.88	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF+PF	226
68	W Haranda	275.08	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF	228
69	E Haranda	207.86	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF+PF	227
70	Chatgaon	263.21	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF+PF	396
71	Karwafa	97.92	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF+PF	199
72	Karwafa	67.13	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	PF	200
73	Makepaili	267.58	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF+PF	388
75	W Mahawada	237.25	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	382
76	Mendhatola	253.58	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	381
79	E Fulbodi	274.51	Gadchiroli	Gadchiroli	Chatgaon	Zari	RF+PF	356
80	E Fulbodi	467.72	Gadchiroli	Gadchiroli	Chatgaon	Zari	RF+PF	355
82	Makepaili	241.27	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF+PF	366
83	E Zari	258.07	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF+PF	362
84	Makepaili	161.06	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF+PF	367
85	Mendhatola	197.69	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	385

86	W Zari	365.54	Gadchiroli	Gadchiroli	Chatgaon	Zari	RF+PF	203
87	W Zari	306.09	Gadchiroli	Gadchiroli	Chatgaon	Zari	RF+PF	204
88	W Zari	308.32	Gadchiroli	Gadchiroli	Chatgaon	Zari	RF+PF	205
89	Karwafa	381.77	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF+PF	387
90	Karwafa	250.53	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF+PF	390
91	Khutgaon	393.19	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	391
93	Murgaon	178.49	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF+PF	220
94	Murgaon	180.75	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF+PF	221
95	N Jambhali	135.60	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF	191
96	N Jambhali	204.68	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF+PF	192
97	N Jambhali	90.41	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF+PF	193
98	N Jambhali	226.68	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF+PF	194
99	SJambhali	425.11	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	195
100	SJambhali	231.01	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF	401
101	SJambhali	332.95	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	196
102	N Jambhali	210.53	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF+PF	403
103	N Jambhali	313.98	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF+PF	190
104	Khutgaon	190.10	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF	398
105	Khutgaon	365.42	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	393
106	Khutgaon	285.28	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF	399
107	Khutgaon	268.53	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	PF	392
108	E Haranda	407.81	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF+PF	225
109	Gilgaon	311.59	Gadchiroli	Gadchiroli	Kunghada	Kunghada	RF+PF	109
110	Gilgaon	259.55	Gadchiroli	Gadchiroli	Kunghada	Kunghada	RF	108
111	Paidi		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	269
112	Pendhari		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	268
116	Zadapapada		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	251
118	Somalpur		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	264
119	Botehur		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	PF	275
120	Kanheli		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	276
121	Kanheli		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	277
122	Botehur		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	274
123	Somalpur		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	272
125	Paidi		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	286
127	Botehur		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	261
128	Pendhari		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	248
129	Pendhari		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	267
130	Pendhari		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	249
131	Sawanga		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	288
132	Sawanga		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	287
133	Hadapeth		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	297
134	Hadapeth		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	292
135	Ghodezari		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF	325
137	Gatta		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	341
138	Rondawahi		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	241
140	Rondawahi		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	238
141	Rondawahi		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	239
142	Gatta		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	236
143	Rondawahi		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	237
144	Godelwahi		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF+PF	335
146	Godelwahi		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF+PF	332
148	Gumadi		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	345
149	Ghodezari		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	324
150	Ghodezari		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF	328
151	Rupingatta		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF	255
152	Zadapapada		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF	254
153	Rupingatta		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF	257
154	Rupingatta		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF	256
155	Rupingatta		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF	259

156	Zadapapada		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	253
158	Jambhali	111.92	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	609
160	Narchuli	173.01	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	440
161	Narchuli	317.77	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	439
162	Narchuli	245.99	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	608
164	SJaptalai	264.97	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	538
165	Toyagondi	227.84	Gadchiroli	Gadchiroli	N Dhanora	Muska	RF+PF	581
168	Jambhali	215.70	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	611
169	Jambhali	299.83	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	616
170	Tukum	396.93	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF+PF	491
172	Tode	280.62	Gadchiroli	Gadchiroli	S Dhanora	Tode	RF+PF	506
173	Chawela	215.02	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF+PF	505
175	Chawela	242.07	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF+PF	504
176	Darachi	309.11	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF	502
177	Chawela	264.75	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF+PF	503
178	Chawela	411.33	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF+PF	494
180	Dhanora	151.93	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	PF	543
182	Dabba	341.98	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	523
184	Sode	301.51	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	547
185	Girola	245.92	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	RF+PF	459
186	Girola	294.78	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	RF+PF	458
188	Navergaon	304.89	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	453
189	Navergaon	296.00	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	454
190	Girola	232.35	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	PF	455
192	Navergaon	182.34	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF	515
193	Rajoli	224.72	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF	516
194	Rajoli	196.89	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	548
195	Rajoli	119.17	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	549
196	Navergaon	160.10	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	451
197	Michgaon	178.26	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF+PF	429
198	Dudmala	246.05	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	RF	461
201	Dudmala	237.96	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	RF+PF	464
202	Girola	335.82	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	RF+PF	460
203	Khambada	210.37	Gadchiroli	Gadchiroli	N Dhanora	Muska	RF+PF	600
204	Toyagondi	171.77	Gadchiroli	Gadchiroli	N Dhanora	Muska	RF+PF	599
205	Khambada	412.50	Gadchiroli	Gadchiroli	N Dhanora	Muska	RF+PF	598
206	Toyagondi	229.15	Gadchiroli	Gadchiroli	N Dhanora	Muska	RF+PF	583
207	Toyagondi	302.39	Gadchiroli	Gadchiroli	N Dhanora	Muska	RF+PF	582
208	N Japtalai	154.76	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	573
211	Sode	150.22	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	553
212	Sode	211.52	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	558
213	Puswandi	339.00	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	571
214	SJaptalai	160.51	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	556
216	Sode	151.76	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	552
217	Munganer	340.33	Gadchiroli	Gadchiroli	S Dhanora	Tode	RF+PF	478
218	Munganer	153.68	Gadchiroli	Gadchiroli	S Dhanora	Tode	RF+PF	479
219	Navergaon	196.93	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	514
221	Metejangada	167.84	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	569
222	Metejangada	270.09	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	568
223	Mohali	144.97	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	588
224	Toyagondi	197.83	Gadchiroli	Gadchiroli	N Dhanora	Muska	RF	592
225	Metejangada	277.83	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	585
226	Toyagondi	235.40	Gadchiroli	Gadchiroli	N Dhanora	Muska	RF+PF	584
227	Sode	129.63	Gadchiroli	Gadchiroli	N Dhanora	Sode	PF	551
228	Puswandi	249.22	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	559
229	Sode	237.24	Gadchiroli	Gadchiroli	N Dhanora	Sode	PF	550
230	Puswandi	125.77	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	562
231	Puswandi	152.43	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	560
232	Metejangada	168.70	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	570

233	Metejangada	258.03	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF	586
234	Nimgaon	223.53	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	591
236	Nimgaon	383.55	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	601
237	Nimgaon	114.35	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	590
238	Mohali	254.87	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	589
241	N Rang	164.92	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	442
244	N Rang	382.13	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	606
245	N Rang	99.79	Gadchiroli	Gadchiroli	N Dhanora	Rangi	PF	445
246	Nimalwada	101.13	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	447
247	N Rang	124.78	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	444
248	S Rang	162.51	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	434
249	Nimalwada	217.74	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	446
250	Mohali	44.07	Gadchiroli	Gadchiroli	N Dhanora	Mohali	PF	565
251	S Rang	144.00	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	435
252	S Rang	237.64	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	432
254	Nimalwada	279.37	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	448
255	Nimalwada	297.14	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	449
256	Mohali	56.24	Gadchiroli	Gadchiroli	N Dhanora	Mohali	PF	604
257	Mohali	118.00	Gadchiroli	Gadchiroli	N Dhanora	Mohali	PF	603
258	Nimalwada	233.72	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	564
259	Nimalwada	219.23	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	563
262	N Japtalai	186.42	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	536
263	N Japtalai	193.84	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	537
264	Kawadikasa	412.38	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF	633
265	Yerkad	352.88	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF	579
266	Ampaili	249.23	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	635
269	Sursundi	255	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF+PF	641
271	Yerkad	256.49	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	580
272	Kawadikasa	355.80	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF	634
275	Mangewada	158.77	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF+PF	644
277	Yermagad	138.49	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	648
278	Yermagad	178.53	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	647
279	Yermagad	190.83	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	646
280	Yermagad	105.69	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	645
281	Khedegaon	175.66	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	661
282	Sawargaon	197.65	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF+PF	692
285	Sawargaon	292.13	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF	695
286	Sawargaon	182.56	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF+PF	696
288	Murumgaon	179.67	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	682
289	Hirange	317.74	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	713
291	Gyarapatti	302.04	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	738
292	Gyarapatti	323.83	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	737
293	Kosmi	285.32	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF+PF	735
294	Kosmi	152.26	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF+PF	734
295	Charwahi	460.38	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	719
296	S Charwahi	356.1	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	728
297	Katezari	400.56	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF+PF	718
298	Katezari	307.07	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF+PF	729
299	Kehakawahi	249.31	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	674
300	Kehakawahi	249.31	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	675
301	Kehakawahi	352.36	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	676
302	Markagaon	403.69	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF+PF	708
303	Markagaon	183.18	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF+PF	705
304	Markagaon	117.12	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF+PF	706
305	Markagaon	291.03	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF+PF	707
309	Rajoli	214.08	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF	517
310	Rajoli	277.44	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF	518
311	Yewali	184.40	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF+PF	157 P
312	Bothali	167.31	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	PF	177 P

313	Gadchiroli	372.09	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF+PF	167 P
314	Bothali	119.94	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	PF	178
315	Gurwala E	291.94	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF+PF	162
316	Gurwala E	225.89	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF+PF	162 P
318	Sawargaon	445.97	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF	405
319	Sawargaon	293.40	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF	189
320	Sawargaon	458.10	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF	187
321	Sawargaon	302.70	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF	188
322	Bamni	210.04	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF	414
323	Bamni	330.22	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF	410
324	Bamni	246.05	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF	411
325	Amirza	913.38	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF	417
326	Ambeshivani	454.47	Gadchiroli	Gadchiroli	Chatgaon	Amirza	Bclass RF	412
327	S Rangi	277.22	Gadchiroli	Gadchiroli	N Dhanora	Rangi	PF	436
329	Nimgaon	393.32	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	621
330	Mohali	294.07	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	620
331	Mohali	379.82	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	602
332	Michgaon	203.56	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF	431
333	Navergaon	218.13	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF+PF	450
334	Michgaon	417.88	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF+PF	426
335	Gilgaon	312.80	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF+PF	425
336	Michgaon	214.66	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF+PF	427
338	Gilgaon	139.36	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF+PF	424
339	Gilgaon	176.89	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF+PF	420
340	Gilgaon	104.90	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF+PF	422
341	Gilgaon	224.72	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF+PF	421
342	Gilgaon	552.81	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF	419
343	Dudmala	231.16	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	RF+PF	463
344	Dudmala	343.31	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	RF+PF	462
345	Mendha	421.50	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	RF+PF	468
346	Mendha	268.46	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	PF	470
347	Tode	336.71	Gadchiroli	Gadchiroli	S Dhanora	Tode	PF	492
348	Mendha	438.97	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	RF+PF	467
349	N Yerpundi	371.92	Gadchiroli	Gadchiroli	S Dhanora	Tode	RF+PF	490
350	Chawela	361.55	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF+PF	493
351	Yengaon	294.86	Gadchiroli	Gadchiroli	S Dhanora	Tode	RF+PF	484
352	Munganer	313.70	Gadchiroli	Gadchiroli	S Dhanora	Tode	RF+PF	480
353	S Yerpundi	290.62	Gadchiroli	Gadchiroli	S Dhanora	Tode	PF	475
354	S Yerpundi	318.56	Gadchiroli	Gadchiroli	S Dhanora	Tode	PF	474
355	S Yerpundi	307.68	Gadchiroli	Gadchiroli	S Dhanora	Tode	RF+PF	477
356	Yengaon	461.00	Gadchiroli	Gadchiroli	S Dhanora	Tode	PF	486
357	S Yerpundi	274.10	Gadchiroli	Gadchiroli	S Dhanora	Tode	PF	476
358	Tode	331.67	Gadchiroli	Gadchiroli	S Dhanora	Tode	PF	487
359	Munganer	398.68	Gadchiroli	Gadchiroli	S Dhanora	Tode	PF	485
360	Darachi	356.61	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF+PF	500
361	Darachi	263.36	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF+PF	496
362	Darachi	335.62	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF+PF	497
363	Darachi	289.20	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF+PF	495
364	Dabba	252.30	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	501
365	Gadanleli	270.80	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	499
366	Dabba	199.81	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	540
367	Dabba	322.16	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	PF	525
368	Dabba	212.85	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	524
369	SJaptalai	386.62	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF	535
370	Girola	307.75	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	RF+PF	457
371	Dhanora	208.19	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF+PF	542
372	SJaptalai	284.62	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	555
373	SJaptalai	237.45	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	541
374	SJaptalai	268.35	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	PF	539

375	Gadanleli	487.62	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	498
376	Gadanleli	317.19	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF	534
377	Yerkad	489.85	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	533
378	Ampaili	269.69	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	528
379	Gadanleli	301.08	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF	527
380	Ampaili	234	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	532
381	Ampaili	308.92	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	530
382	Ampaili	246.82	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	531
383	Kawadikasa	398.68	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF	632
384	Kawadikasa	504.90	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF	637
385	Khedegaon	411.81	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF	636
386	Khedegaon	310.16	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF	659
387	Khedegaon	249.78	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	660
388	Khedegaon	506.63	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	658
389	Fulkodo	496.87	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF	656
390	Fulkodo	446.84	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	657
391	Ambezari	359.11	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF	638
392	Ambezari	470.6	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF+PF	655
393	Charwahi	290.75	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	716
394	Charwahi	259.83	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	720
395	Ambezari	382.87	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF+PF	653
396	Mangewada	235.67	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF+PF	652
397	Mangewada	351.02	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF+PF	651
398	Ambezari	403.77	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF+PF	654
399	Mangewada	304.35	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF+PF	650
400	Marma	473.98	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	649
401	Marma	489.1	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	723
402	Yermagad	333.68	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF	724
403	Marma	324.68	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	721
404	Marma	336.53	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	722
405	S Charwahi	443.82	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF	725
406	S Charwahi	337.54	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF	727
407	S Charwahi	425.7	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF	726
408	Katezari	203.01	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF	745
409	Katezari	244.54	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF	744
410	Kosmi	312.79	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF	743
411	Kosmi	388.23	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF	733
412	Gyarapatti	287.62	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	741
413	Kosmi	279.56	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF+PF	736
414	Sawargaon	258.82	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF+PF	697
415	Gajamendhi	290.04	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF	691
416	Gajamendhi	407.45	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF+PF	698
417	Kulbhatti	329.21	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	690
418	Kulbhatti	400.85	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF	689
419	Fulkodo	266.55	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF	715
420	Charwahi	407.89	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	717
421	Fulkodo	239.7	Gadchiroli	Gadchiroli	W Murumgaon	Charwahi	RF+PF	714
422	Gurekasa	571.36	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF+PF	731
423	Gurekasa	248.37	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF+PF	732
424	Gurekasa	297.82	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF+PF	709
425	Gurekasa	407.19	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF	710
427	Markagaon	197.45	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF	703
428	Gajamendhi	226.28	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF+PF	702
429	Markagaon	404.84	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF+PF	704
430	Kehakawahi	406.38	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	677
432	Ridwahi	265.87	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	679
433	Ridwahi	246.27	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	678
434	Ridwahi	275.23	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	671
435	Kehakawahi	277.16	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	672

436	Kehakawahi	166.39	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	673
437	Gadanleli	256.42	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	PF	526
438	Pannemara	386.14	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF	663
439	Pannemara	413.89	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	665
440	Pannemara	423.76	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF	664
441	Sindesur	257.72	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	668
442	Sindesur	503.01	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF	666
443	Ampaili	206.99	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	529
444	Pannemara	299.75	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	662
446	Sindesur	427.07	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF+PF	669
447	Murumgaon	373.80	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	687
448	Kulbhatti	350.76	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF	688
450	Kulbhatti	409.72	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	700
451	Gajamendhi	376.43	Gadchiroli	Gadchiroli	E Murumgaon	Sawargaon	RF+PF	699
453	Hirange	264.90	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	684
454	Murumgaon	491.37	Gadchiroli	Gadchiroli	E Murumgaon	E Murumgaon	RF+PF	683
455	Deosur	307.4	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF+PF	746
457	Mangewada	279.38	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF	642
458	Sawanga		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF	291
459	Sawanga		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	299
460	Sawanga		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	298
461	Sawanga		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	300
462	Bodin		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	301
463	Bodin		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	318
464	Bodin		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	302
465	Bodin		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	317
467	Mangewada		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	282
468	Mangewada		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	284
469	Mangewada		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	283
470	Mangewada		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	281
471	Kanheli		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF	280
472	Kanheli		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	279
473	Somalpur		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	273
474	Bodin		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	303
476	Somalpur		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	263
477	Botehur		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	262
478	Gurwala E	341.15	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF	147
479	Yewali	405.09	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF	143
480	Bothali	411.96	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF	179
481	Chandala	372.72	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF	174
482	Chandala	480.76	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF	175
483	Gurwala W	181.70	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF	164
484	Bothali	358.55	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF	173
485	Gadchiroli	375.39	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF	169
486	Yewali	524.07	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF	165
487	Gadchiroli	308.78	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF	171
488	Deosur	307.13	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF+PF	747
489	Deosur	275.19	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF	748
490	Deosur	257.57	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF+PF	749
491	Deosur	236.68	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF	752
492	Deosur	272.48	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF	751
493	Nihakal	219.03	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF	754
494	Nihakal	372.07	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	756
495	Nihakal	247.03	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	757
496	Nimankhoji	217.34	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	763
497	Nimankhoji	316.1	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	758
498	Nimankhoji	417.62	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF	753
499	Gyarapatti	459.07	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	740
500	Nimankhoji	170.3	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	764

501	Nimankhoji	305.31	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	762
502	Botezari	292.57	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	765
503	Botezari	238.66	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	766
504	Botezari	218.43	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	761
505	Nimankhoji	320.09	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	759
506	Botezari	205.88	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF+PF	760
507	Botezari	426.05	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF	739
508	N Kawadikasa	210.6	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF+PF	639
509	N Kawadikasa	343.74	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF+PF	631
510	Khambada	163.17	Gadchiroli	Gadchiroli	N Dhanora	Muska	RF+PF	596
511	Khambada	224.13	Gadchiroli	Gadchiroli	N Dhanora	Muska	PF	595
512	Toyagondi	243.12	Gadchiroli	Gadchiroli	N Dhanora	Muska	PF	594
513	Khambada	230.49	Gadchiroli	Gadchiroli	N Dhanora	Muska	PF	593
514	Khambada	358.04	Gadchiroli	Gadchiroli	N Dhanora	Muska	PF	597
515	N Kawadikasa	367.4	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF	630
516	N Kawadikasa	369.82	Gadchiroli	Gadchiroli	W Murumgaon	Sursundi	RF	629
518	Raipur	299.33	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF	126
519	W Fulbodi	392.08	Gadchiroli	Gadchiroli	Chatgaon	Zari	RF+PF	208
520	W Fulbodi	417.27	Gadchiroli	Gadchiroli	Chatgaon	Zari	RF+PF	207
522	E Fulbodi	334.02	Gadchiroli	Gadchiroli	Chatgaon	Zari	RF	360
523	Godelwahi		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF	333
524	E Padaboriya		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF	320
525	W Padaboriya		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF	319
526	E Padaboriya		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF	316
527	Godelwahi		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF	334
528	E Mahawada	361.71	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF	374
529	E Mahawada	352.77	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF	372
530	E Mahawada	255.79	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	371
531	Junanagar		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF	378
532	Hipaner		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF+PF	369
533	Hadapeth		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF	304
534	Hadapeth		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	296
535	Pulkhal		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF	295
536	Paidi		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	293
537	Pulkhal		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	294
538	Pulkhal		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	247
539	Pulkhal		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	246
540	Pulkhal		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF	245
541	Zadapapada		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF	258
542	Kanheli		Gadchiroli	Gadchiroli	Pendhari	Zadapapada	RF+PF	278
543	N Japtalai	231.92	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	574
544	N Japtalai	283.55	Gadchiroli	Gadchiroli	S Dhanora	Yerkad	RF+PF	572
545	Pulkhal		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	244
546	E Kumbi	1046.53	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF	152
547	E Maroda	413.65	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF+PF	134
548	Navegaon	348.25	Gadchiroli	Gadchiroli	Kunghada	Kunghada	RF	144
549	Navegaon	374.17	Gadchiroli	Gadchiroli	Kunghada	Kunghada	RF	140
550	Ganpur	554.74	Gadchiroli	Gadchiroli	Kunghada	Kunghada	RF	139
551	Gurwala E	288.14	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF	150
552	E Maroda	516.38	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF	160
553	E Maroda	497.77	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF	151
554	N Pekinkasa	373.86	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF+PF	105
555	Gilgaon	223.46	Gadchiroli	Gadchiroli	Kunghada	Kunghada	RF	106
556	SJambhali	153.80	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF	402
557	N Jambhali	429.79	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF	404
558	Karwafa	200.55	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF	198
559	SJambhali	265.18	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	400
560	Chandala	530.14	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF	180
561	N Pekinkasa	321.98	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF	103

562	Paimuranda (w)	325.42	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF	11
563	Paimuranda (w)	338.11	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	13
564	Paimuranda (w)	141.84	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	12
565	Paimuranda(E)	353.03	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	43
566	Kondawahi		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF	348
567	Kondawahi		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	349
568	Kondawahi		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	337
569	Hipaner		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF+PF	330
570	Hipaner		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF	331
571	W Padaboriya		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF+PF	322
572	E Padaboriya		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF+PF	315
573	W Padaboriya		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF	314
574	Michgaon		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF	305
575	Michgaon		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	313
576	W Padaboriya		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF	323
577	Ghodezari		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	338
580	Gumadi		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	351
581	Ghodezari		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	329
582	Ghodezari		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	327
583	Gumadi		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	339
584	Gatta		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF	340
585	Gatta		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	326
586	Jambhalizora	281.84	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF	342
587	Jambhalizora	379.95	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF	230
588	E Haranda	297.95	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF+PF	216
589	Michgaon		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	306
590	Michgaon		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	312
591	Murgaon	318.98	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF+PF	224
592	Pathargota		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	311
593	Pathargota		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF	309
594	Pathargota		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	242
595	Pathargota		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	243
596	Pathargota		Gadchiroli	Gadchiroli	Pendhari	Pendhari	RF+PF	308
597	Potegaon	205.27	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF+PF	83
598	Gurhul	325.45	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	56
599	Bargota	306.35	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	66
600	Bargota	347.50	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	65
601	Bargota	340.98	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	64
602	Bargota	325.17	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	63
603	Bargota	384.38	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	60
604	Gurhul	305.85	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	58
605	Gurhul	474.96	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	59
606	Gurhul	365.31	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	57
607	Jadegaon	381.62	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF	71
608	Junanagar		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF	377
609	E Mahawada	525.39	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF	376
610	Junanagar		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF	379
611	Ambeshivani	79.59	Gadchiroli	Gadchiroli	Chatgaon	Amirza	Bclass RF	412 P
612	Karwafa	189.59	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF+PF	389
613	Murmuri	336.68	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	4
614	S Rangi	334.36	Gadchiroli	Gadchiroli	N Dhanora	Rangi	PF	437
615	Yedanur	324.09	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	10
616	E Zari	348.25	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF+PF	201
617	E Zari	359.57	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF+PF	202
619	Kosamghat	197.08	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF	153
620	Jambhali	258.84	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	617
621	Mutnur	373.78	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF	15
622	Mutnur	315.38	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF	16
623	Pusner	465.92	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	19

624	Mutnur	470.79	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	17
625	Pusner	253.86	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	18
626	Pusner	312.00	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF+PF	20
627	Pusner	271.09	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF+PF	21
628	Dhekni	427.95	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	23
629	Dhekni	225.54	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	24
630	Bawanchuwa	457.60	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF+PF	22
631	Bawanchuwa	207.49	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF+PF	25
632	Dhekni	500.39	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	26
633	Dhekni	347.40	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	30
634	Paimuranda(E)	305.37	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	28
635	Paimuranda (w)	289.69	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	31
636	Paimuranda (w)	268.45	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	32
637	Paimuranda (W)	130.77	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	33
638	Kuthegaon	376.14	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	35
639	Kuthegaon	415.89	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	42
640	Murmuri	193.70	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	36
641	Murmuri	243.97	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	37
642	Kuthegaon	210.14	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF	44
643	Kuthegaon	210.14	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	41
644	Kuthegaon	386.69	Gadchiroli	Gadchiroli	Kunghada	Jogana	RF+PF	40
645	Paimuranda(E)	538.60	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF	27
646	Bawanchuwa	265.06	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF+PF	52
647	Bawanchuwa	394.30	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF+PF	51
648	Bawanchuwa	388.65	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	53
649	Gurhul	400.85	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	54
650	Pusner	427.54	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	55
651	Bargota	176.12	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	61
652	Gurhul	382.63	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF	62
653	Bawanchuwa	351.98	Gadchiroli	Gadchiroli	Kunghada	W Paimuranda	RF+PF	67
654	Gilgaon	482.98	Gadchiroli	Gadchiroli	Kunghada	Kunghada	RF+PF	107
656	Kunghada	192.60	Gadchiroli	Gadchiroli	Kunghada	Kunghada	RF+PF	116
657	Ganpur	246.46	Gadchiroli	Gadchiroli	Kunghada	Kunghada	RF+PF	117
658	Ganpur	167.04	Gadchiroli	Gadchiroli	Kunghada	Kunghada	RF+PF	118
659	Ganpur	276.97	Gadchiroli	Gadchiroli	Kunghada	Kunghada	RF+PF	119
660	Ganpur	399.69	Gadchiroli	Gadchiroli	Kunghada	Kunghada	RF	138
661	Benoli	156.05	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF+PF	46
662	Potegaon	272.48	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF	50
663	S Mardha	412.39	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF+PF	86
664	Kanhalgaon	201.96	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF+PF	92
665	Benoli	222.47	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF+PF	93
668	Benoli	261.92	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF+PF	95
669	Kanhalgaon	191.69	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF	96
670	Kanhalgaon	233.92	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF	97
671	Benoli	178.67	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF+PF	94
672	Kanhalgaon	450.02	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF+PF	98
673	Kanhalgaon	442.08	Gadchiroli	Gadchiroli	Potegaon	N Potegaon	RF	99
674	N Mardha	503.78	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF	88
675	Korkuti	373.53	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF+PF	72
676	Korkuti	268.54	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF	74
677	Korkuti	314.53	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF	75
678	S Mardha	369.81	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF	76
679	Korkuti	448.34	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF	87
680	Jadegaon	352.39	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF+PF	68
681	Jadegaon	215.68	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF+PF	69
682	W Haranda	322.15	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF	213
683	W Haranda	451.63	Gadchiroli	Gadchiroli	Potegaon	Haranda	RF	212
684	Bhapda	356.10	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF+PF	211
685	Bhapda	348.99	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF+PF	231

687	Bhapda	405.00	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF+PF	233
688	Pustola	172.65	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF+PF	353
689	Pustola	337.23	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF+PF	343
690	Pustola	392.07	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF	344
691	Pustola	266.62	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF	357
692	Pustola	298.72	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF	352
693	Suimara	430.30	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF	100
694	Suimara	487.71	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF+PF	101
695	Suimara	287.45	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF	125
696	Raipur	164.84	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF	130
697	Raipur	285.43	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF+PF	129
698	Raipur	236.65	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF	127
699	Kosamghat	252.92	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF	131
700	Kosamghat	282.01	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF	155
701	Kosamghat	192.94	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF	128
702	W Kumbhi	649.52	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF	154
703	Sawela	319.62	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF	122
704	Sawela	379.25	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF+PF	121
705	Sawela	229.90	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF+PF	120
706	N Pekinkasa	289.04	Gadchiroli	Gadchiroli	Gadchiroli	Sawela	RF	104
707	Gurwala E	276.8	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF	148
708	Gadchiroli	352.08	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF	172
709	Gadchiroli	191.23	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	PF	170
710	Bothali	398.21	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF	176
711	Yewali	79.24	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF	163
712	Bhapda	293.34	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF+PF	209
713	Chatgaon	99.24	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF+PF	397
714	Mendhatola	180.65	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	386
715	Mendhatola	459.33	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	380
716	W Mahawada	195.77	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF+PF	384
718	Chatgaon	57.83	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF+PF	406
719	Chatgaon	287.04	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF	407
720	Chatgaon	110.52	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF+PF	408
722	Michgaon	149.7	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF	430
723	Michgaon	349.39	Gadchiroli	Gadchiroli	Chatgaon	Amirza	RF+PF	428
724	Chatgaon	217.45	Gadchiroli	Gadchiroli	Chatgaon	Chatgaon	RF+PF	395
725	Makepaili	174.18	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF+PF	368
726	E Mahawada	264.94	Gadchiroli	Gadchiroli	Chatgaon	Khutgaon	RF	373
727	Makepaili	447.52	Gadchiroli	Gadchiroli	Chatgaon	Karwafa	RF	361
728	Gumadi		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF	350
729	Gatta		Gadchiroli	Gadchiroli	Pendhari	Gatta	RF+PF	310
730	E Padaboriya		Gadchiroli	Gadchiroli	Pendhari	Godelwahi	RF	321
732	Sawanga		Gadchiroli	Gadchiroli	Pendhari	Sawanga	RF+PF	290
733	Jambhali	146.48	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	615
734	Jambhali	169.39	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	619
736	Puswandi	125.77	Gadchiroli	Gadchiroli	N Dhanora	Sode	RF	562
738	Muska	1192.21	Gadchiroli	Gadchiroli	N Dhanora	Muska	RF	622
741	N Yerpundi	426.52	Gadchiroli	Gadchiroli	S Dhanora	Tode	PF	471
742	Mendha	474.37	Gadchiroli	Gadchiroli	S Dhanora	Dudhamala	PF	469
743	Tukum	218.76	Gadchiroli	Gadchiroli	S Dhanora	Dhanora	RF+PF	511
744	Tode	378.59	Gadchiroli	Gadchiroli	S Dhanora	Tode	RF+PF	489
745	N Yerpundi	384.03	Gadchiroli	Gadchiroli	S Dhanora	Tode	PF	472
746	N Yerpundi	416.83	Gadchiroli	Gadchiroli	S Dhanora	Tode	PF	473
747	S Yerpundi	253.97	Gadchiroli	Gadchiroli	S Dhanora	Tode	PF	488
748	Munganer	172.06	Gadchiroli	Gadchiroli	S Dhanora	Tode	RF+PF	481
749	Yengaon	185.91	Gadchiroli	Gadchiroli	S Dhanora	Tode	RF+PF	482
750	Yengaon	354.69	Gadchiroli	Gadchiroli	S Dhanora	Tode	RF+PF	483
751	Kosmi	165.33	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF+PF	742
752	Sindesur	325.56	Gadchiroli	Gadchiroli	W Murumgaon	Murumgaon	RF	667

754	Mutnur	390.34	Gadchiroli	Gadchiroli	Kunghada	E Paimuranda	RF+PF	14
756	E Fulbodi	238.68	Gadchiroli	Gadchiroli	Chatgaon	Zari	RF	358
757	Jambhalizora	483.91	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF	229
758	Jambhalizora	259.09	Gadchiroli	Gadchiroli	Potegaon	Pustola	RF	234
760	W Kumbhi	836.49	Gadchiroli	Gadchiroli	Gadchiroli	Maroda	RF	156
761	Gadchiroli	372.73	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	RF+PF	167 P
764	Bhapda		Gadchiroli	Gadchiroli	Potegaon	Pustola	RF+PF	233 a
765	Katezari	370.12	Gadchiroli	Gadchiroli	E Murumgaon	Katezari	RF	730
766	Korkuti	171.36	Gadchiroli	Gadchiroli	Potegaon	S Potegaon	RF	73
768	Navegaon	345.37	Gadchiroli	Gadchiroli	Kunghada	Kunghada	Bclass RF	141
769	Kumbhi E	535.81	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF	159
771	Gurwala W	163.08	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF	161
772	Ambeshivani	32.85	Gadchiroli	Gadchiroli	Chatgaon	Amirza	PF	413 P
773	Nihakal	369.38	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF	755
774	Nihakal	251.29	Gadchiroli	Gadchiroli	E Murumgaon	Gyarapatti	RF	750
775	Bhakarundi	93.07	Gadchiroli	Gadchiroli	N Dhanora	Mohali	RF+PF	614 P
777	N Rangi	270.37	Gadchiroli	Gadchiroli	N Dhanora	Rangi	RF+PF	605
778	Gurwala E	329.00	Gadchiroli	Gadchiroli	Gadchiroli	Guruwal	RF	149
779	Gadchiroli	325.09	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	PF	168
782	Bothali	180.77	Gadchiroli	Gadchiroli	Gadchiroli	Gadchiroli	PF	177P
Allapalli								
3	Singampeth	34.25	Gadchiroli	Allapalli	Aheri	Lagam	forest village	1796
21	Mukdi 1	141.50	Gadchiroli	Allapalli	Peddiguddam	Mukdi	Forest village	1801
30	Elchil	288.01	Gadchiroli	Allapalli	Peddiguddam	Elchil	Forest village	1871
33	Hetalkasa	83.30	Gadchiroli	Allapalli	Ghot	Bolepalli	Forest village	1877
34	Hetalkasa	63.80	Gadchiroli	Allapalli	Ghot	Bolepalli	Forest village	1878
35	Yella	137.05	Gadchiroli	Allapalli	Aheri	Lagam	Forest village	1806
37	Allapalli 2	2.70	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1898
38	Allapalli 2	11.33	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1899
39	Allapalli 2	1.34	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1900
40	Allapalli 2	0.24	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1901
41	Allapalli 2	9.39	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1902
42	Allapalli 2	0.26	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1903
43	Allapalli 2	0.25	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1904
44	Allapalli 2	4.46	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1905
45	Allapalli 2	0.47	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1906
46	Allapalli 2	19.77	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1907
47	Allapalli 2	5.28	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1908
48	Allapalli 2	1.26	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1909
49	Allapalli 2	96.50	Gadchiroli	Allapalli	Allapalli	Allapalli	Forest village	1910
50	Zamela 1	40.70	Gadchiroli	Allapalli	Allapalli	Zamela	Forest village	1919
51	Zamela 1	31.15	Gadchiroli	Allapalli	Allapalli	Zamela	Forest village	1920
52	Zamela 1	6.78	Gadchiroli	Allapalli	Allapalli	Zamela	Forest village	1921
61	Mulchera 1	289.28	Gadchiroli	Allapalli	Peddiguddam	Mulchra	Unclass	1462/1
79	Gomni	419.79	Gadchiroli	Allapalli	Peddiguddam	Gomni	Unclass	1480
82	Gomni	18.21	Gadchiroli	Allapalli	Peddiguddam	Gomni	Unclass	1483
83	Gomni	14.68	Gadchiroli	Allapalli	Peddiguddam	Gomni	Unclass	1484
84	Gomni	43.42	Gadchiroli	Allapalli	Peddiguddam	Gomni	Unclass	1485
87	Gomni	97.29	Gadchiroli	Allapalli	Peddiguddam	Gomni	Unclass	1488
88	Gomni	92.09	Gadchiroli	Allapalli	Peddiguddam	Gomni	Unclass	1489
132	Thakurnagar 2	604.30	Gadchiroli	Allapalli	Ghot	Ghot	Unclass	1531
134	Thakurnagar 2	254.20	Gadchiroli	Allapalli	Ghot	Ghot	Unclass	1533
142	Shamnagar	100.62	Gadchiroli	Allapalli	Chamorshi	Jamgiri	Unclass	1541
145	Vishnpur	150.00	Gadchiroli	Allapalli	Chamorshi	Jamgiri	Unclass	1544
160	Vikaspalli	187.70	Gadchiroli	Allapalli	Ghot	Vikaspalli	Unclass	1558
162	Madeamgaon 2	268.67	Gadchiroli	Allapalli	Ghot	Vikaspalli	Unclass	1560
202	Lohara	32.49	Gadchiroli	Allapalli	Markhanda	Rengewahi	PF	784
203	Lohara	106.75	Gadchiroli	Allapalli	Markhanda	Rengewahi	PF	785
241	Amgaon	118.10	Gadchiroli	Allapalli	Chmorshi	Bhadbidi	PF	826

258	Jamgiri	149.10	Gadchiroli	Allapalli	Chmorshi	Jamgiri	PF	843
286	Madeamgaon 2	61.01	Gadchiroli	Allapalli	Ghot	Vikaspalli	PF	876
292	Regdi	125.07	Gadchiroli	Allapalli	Ghot	Regdi	PF	881
293	Garanji 2	3.45	Gadchiroli	Allapalli	Ghot	Vikaspalli	PF	882
475	Velgur	989.57	Gadchiroli	Allapalli	Aheri	Velgur	PF	896;897
549	Tattigudam	482.57	Gadchiroli	Allapalli	Pirmili	Gurupalli	Unsurveyed	1580
558	Gattepalli 1	379.96	Gadchiroli	Allapalli	Pirmili	Pirmili	Unsurveyed	1589
559	Gattepalli 1	388.89	Gadchiroli	Allapalli	Pirmili	Pirmili	Unsurveyed	1590
561	Chandra	445.74	Gadchiroli	Allapalli	Pirmili	Pirmili	Unsurveyed	1591
562	Gattepalli 1	228.27	Gadchiroli	Allapalli	Pirmili	Pirmili	Unsurveyed	1593
590	Jaweli	394.84	Gadchiroli	Allapalli	Pirmili	Gurupalli	Unsurveyed	1627
591	Karem	624.17	Gadchiroli	Allapalli	Pirmili	Bidri	Unsurveyed	1629
592	Karem	1386.90	Gadchiroli	Allapalli	Pirmili	Bidri	Unsurveyed	1630
593	Karem	212.70	Gadchiroli	Allapalli	Pirmili	Bidri	Unsurveyed	1631
594	Kondawahi	544.06	Gadchiroli	Allapalli	Pirmili	Bidri	Unsurveyed	1632
596	Kondawahi	125.05	Gadchiroli	Allapalli	Pirmili	Bidri	Unsurveyed	1634
597	Pindigudam	155.18	Gadchiroli	Allapalli	Pirmili	Bidri	Unsurveyed	1635
600	Pindigudam	135.65	Gadchiroli	Allapalli	Pirmili	Bidri	Unsurveyed	1638
602	Pindigudam	0.28	Gadchiroli	Allapalli	Pirmili	Bidri	Unsurveyed	1640
604	Pindigudam	372.63	Gadchiroli	Allapalli	Pirmili	Bidri	Unsurveyed	1642
606	Pindigudam	147.74	Gadchiroli	Allapalli	Pirmili	Bidri	Unsurveyed	1644
607	Pindigudam	236.62	Gadchiroli	Allapalli	Pirmili	Bidri	Unsurveyed	1645
610	Paima	177.37	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1649
612	Paima	59.56	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1651
614	Paima	322.58	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1653
620	Paima	193.27	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1659
624	Sakingatta	70.50	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1663
625	Sakingatta	17.71	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1664
626	Sakingatta	0.26	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1665
627	Sakingatta	230.06	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1666
628	Sakingatta	0.26	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1668
629	Sakingatta	0.40	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1669
630	Sakingatta	529.52	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1670
631	Sakingatta	245.19	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1671
632	Wedampalli	120.39	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1672
633	Paima	68.04	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1673
634	Paima	102.13	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1674
637	Wedampalli	165.16	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1677
638	Kasampalli	465.57	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1678
639	Kasampalli	0.34	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1679
640	Kasampalli	146.02	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1680
641	Kasampalli	31.05	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1681
642	Kasampalli	0.15	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1682
643	Kasampalli	1.19	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1683
644	Kasampalli	25.70	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1684
645	Kasampalli	0.36	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1685
646	Kasampalli	16.28	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1686
650	Wedampalli	185.20	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1691
656	Mirkal	122.24	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1697
657	Mirkal	100.15	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1698
658	Mirkal	132.00	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1699
659	Mirkal	16.17	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1700
660	Mirkal	6.01	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1701
661	Mirkal	46.19	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1702
662	Mirkal	179.05	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1703
663	Mangutha	166.66	Gadchiroli	Allapalli	Pirmili	Pirmili	Unforest	1704
664	Mangutha	164.08	Gadchiroli	Allapalli	Pirmili	Pirmili	Unforest	1705
665	Mangutha	32.57	Gadchiroli	Allapalli	Pirmili	Pirmili	Unforest	1706
666	Mangutha	58.94	Gadchiroli	Allapalli	Pirmili	Pirmili	Unforest	1707

668	Mangutha	139.17	Gadchiroli	Allapalli	Pirmili	Pirmili	Unforest	1709
669	Mangutha	142.58	Gadchiroli	Allapalli	Pirmili	Pirmili	Unforest	1710
677	Lohara	291.39	Gadchiroli	Allapalli	Markhanda	Rengewahi	New RF	630
681	Talodi	155.10	Gadchiroli	Allapalli	Chamorshi	Chamorshi	New RF	634
682	Thakurnagar 1	125.41	Gadchiroli	Allapalli	Ghot	Ghot	New RF	635
683	Naryanpur 2	99.40	Gadchiroli	Allapalli	Chmorshi	Jamgiri	New RF	636
685	Jam giri	43.02	Gadchiroli	Allapalli	Chmorshi	Jam giri	New RF	638
687	Kothari 1	227.90	Gadchiroli	Allapalli	Ghot	Makepalli	New RF	640
689	Makepalli	133.10	Gadchiroli	Allapalli	Ghot	Makepalli	New RF	642
690	Velgur	989.57	Gadchiroli	Allapalli	Aheri	Velgur	New RF	643
692	Nagepalli	129.09	Gadchiroli	Allapalli	Aheri	Aheri	New RF	645
701	Bidri 2	236.68	Gadchiroli	Allapalli	Pirmili	Bidri	NEW RF	664
702	Bidri 2	316.52	Gadchiroli	Allapalli	Pirmili	Bidri	NEW RF	665
704	Bidri 2	199.08	Gadchiroli	Allapalli	Pirmili	Bidri	NEW RF	671
722	Kasampalli	0.80	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1680
723	Tadguda	252.38	Gadchiroli	Allapalli	Pirmili	Medpalli	NEW RF	720
724	Tadguda	237.76	Gadchiroli	Allapalli	Pirmili	Medpalli	NEW RF	721
725	Tadguda	246.54	Gadchiroli	Allapalli	Pirmili	Medpalli	NEW RF	722
730	Gurja Kh	141.34	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	733
731	Gurja Kh	204.16	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	736
732	Gurja Kh	281.96	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	737
733	Gurja Kh	334.86	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	734
740	Gurja Kh	149.44	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	711
742	Chaudampalli	281.07	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	709
743	Chaudampalli	168.90	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	708
755	Yeramnar	343.82	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	726
756	Yeramnar	467.59	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	725
757	Yeramnar	303.26	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	729
759	Yeramnar	269.03	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	728B
790	Palle	244.54	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	713
791	Palle	268.34	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	714
792	Palle	109.58	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	715
794	Rapalle	294.30	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	718
807	Arenda	170.97	Gadchiroli	Allapalli	Pirmili	Pirmili	NEW RF	705
809	Arenda	625.60	Gadchiroli	Allapalli	Pirmili	Pirmili	NEW RF	702
810	Arenda	94.25	Gadchiroli	Allapalli	Pirmili	Pirmili	PF	1362
814	Arenda	1.43	Gadchiroli	Allapalli	Pirmili	Pirmili	PF	1367
858	Koreli_Bu	750.11	Gadchiroli	Allapalli	Pirmili	Pirmili	NEW RF	738
859	Koreli_Bu	459.85	Gadchiroli	Allapalli	Pirmili	Pirmili	NEW RF	739
861	Koreli_Bu	269.47	Gadchiroli	Allapalli	Pirmili	Pirmili	NEW RF	740
871	Koreli_ku	111.08	Gadchiroli	Allapalli	Pirmili	Pirmili	NEW RF	688
872	Koreli_ku	316.00	Gadchiroli	Allapalli	Pirmili	Pirmili	NEW RF	690
873	Koreli_ku	301.83	Gadchiroli	Allapalli	Pirmili	Pirmili	NEW RF	689
874	Arenda	193.77	Gadchiroli	Allapalli	Pirmili	Pirmili	NEW RF	692
875	Arenda	314.87	Gadchiroli	Allapalli	Pirmili	Pirmili	NEW RF	691
879	Arenda	12.09	Gadchiroli	Allapalli	Pirmili	Pirmili	PF	1311
881	Kondawahi	127.80	Gadchiroli	Allapalli	Pirmili	Bidri	NEW RF	679
882	Kondawahi	168.34	Gadchiroli	Allapalli	Pirmili	Bidri	NEW RF	680
883	Kondawahi	128.52	Gadchiroli	Allapalli	Pirmili	Bidri	NEW RF	681
884	Kondawahi	89.91	Gadchiroli	Allapalli	Pirmili	Bidri	PF	1248
885	Kondawahi	63.74	Gadchiroli	Allapalli	Pirmili	Bidri	PF	1249
924	Gurupalli	688.37	Gadchiroli	Allapalli	Pirmili	Gurupalli	Unservd	1575
927	Bidri 2	527.49	Gadchiroli	Allapalli	Pirmili	Bidri	NEW RF	659
937	Yemalli	219.96	Gadchiroli	Allapalli	Pirmili	Kandoli	New_RF	675
954	Medpalli	355.84	Gadchiroli	Allapalli	Pirmili	Medpalli	NEW RF	701
955	Medpalli	127.68	Gadchiroli	Allapalli	Pirmili	Medpalli	NEW RF	699
956	Medpalli	90.04	Gadchiroli	Allapalli	Pirmili	Medpalli	PF	1358
957	Medpalli	105.39	Gadchiroli	Allapalli	Pirmili	Medpalli	PF	1359
958	Medpalli	48.19	Gadchiroli	Allapalli	Pirmili	Medpalli	PF	1360

959	Medpalli	0.70	Gadchiroli	Allapalli	Pirmili	Medpalli	PF	1361
960	Medpalli	172.26	Gadchiroli	Allapalli	Pirmili	Medpalli	NEW RF	700
961	Medpalli	94.55	Gadchiroli	Allapalli	Pirmili	Medpalli	New RF	698
1013	Rampur	179.93	Gadchiroli	Allapalli	Aheri	Aheri	pf	1730
1053	Velgur	8.10	Gadchiroli	Allapalli	Aheri	Velgur	PF	1727
1054	Velgur	2.08	Gadchiroli	Allapalli	Aheri	Velgur	PF	1726
1055	Velgur	0.12	Gadchiroli	Allapalli	Aheri	Velgur	PF	1725
1056	Velgur	365.90	Gadchiroli	Allapalli	AHERI	Velgur	unclass	1728
1057	Velgur	0.04	Gadchiroli	Allapalli	Aheri	Velgur	PF	1729
1063	Wadiapeth	522.20	Gadchiroli	Allapalli	Aheri	Khamancheru	PF	1739
1070	Botlacheru	508.20	Gadchiroli	Allapalli	Aheri	Velgur	PF	1741
1072	Palle	254.87	Gadchiroli	Allapalli	Pirmili	Yeramnar	NEW RF	716
1075	Sakingatta	678.09	Gadchiroli	Allapalli	Pirmili	Medpalli	Unforest	1667
1077	Haldi	234.20	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	347
1078	Haldi	324.30	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	348
1079	Haldi	263.70	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	349
1080	Adyal 2	267.90	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	350
1081	Bhikshi	155.70	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	351
1082	Bhikshi	314.30	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	352
1083	Wakadi	207.40	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	353
1085	Adyal 2	258.90	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	355
1086	Adyal 2	212.60	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	356
1087	Adyal 1	283.00	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	357
1088	Adyal 1	244.50	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	358
1089	Adyal 1	142.70	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	359
1090	Wakadi	368.10	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	360
1091	Wakadi	416.10	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	361
1092	Wakadi	316.20	Gadchiroli	Allapalli	Chamorshi	Chamorshi	RF	362
1093	Jamgiri	257.30	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	363
1094	Maroda	275.30	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	364
1095	Amrpalli	363.50	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	535
1096	Jamgiri	544.50	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	536
1097	Amrpalli	624.60	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	537
1098	Naryanpur 1	296.80	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	538
1099	Naryanpur 1	397.50	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	539
1100	Naryanpur 1	434.40	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	540
1101	Shamnagar	431.50	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	541
1102	Shamnagar	679.90	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	542
1103	Naryanpur 2	409.10	Gadchiroli	Allapalli	Chamorshi	Jamgiri	New RF	543
1104	Naryanpur 2	462.00	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	542
1105	Naryanpur 2	360.00	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	534
1106	Haldwahi	500.10	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	580
1107	Haldwahi	176.00	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	582
1108	Haldwahi	492.60	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	583
1109	Haldwahi	478.40	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	581
1110	Kothari 1	308.10	Gadchiroli	Allapalli	Ghot	Makepalli	RF	579
1111	Amgaon	160.60	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	365
1112	Karkapalli	333.00	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	366
1113	Karkapalli	182.10	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	367
1114	Karkapalli	282.40	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	368
1115	Vishnpur	291.30	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	369
1116	Vishnpur	188.40	Gadchiroli	Allapalli	Chamorshi	Jamgiri	RF	370
1117	Karkapalli	167.00	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	371
1118	Karkapalli	188.50	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	372
1119	Amgaon	204.50	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	373
1120	Amgaon	279.60	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	374
1121	Bhadbidi	184.20	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	375
1122	Bhadbidi	247.60	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	376
1123	Bhadbidi	282.30	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	377

1124	Rajur	341.40	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	378
1125	Rajur	303.90	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	379
1126	Rajur	186.40	Gadchiroli	Allapalli	Chamorshi	Bhadbidi	RF	380
1127	Konsari	277.40	Gadchiroli	Allapalli	Markhanda	Konsari	RF	200
1128	Konsari	149.20	Gadchiroli	Allapalli	Markhanda	Konsari	RF	207
1129	Rampur	278.50	Gadchiroli	Allapalli	Markhanda	Konsari	RF	187
1130	Chandankhedi	213.30	Gadchiroli	Allapalli	Markhanda	Konsari	RF	223
1131	Chandankhedi	194.50	Gadchiroli	Allapalli	Markhanda	Konsari	RF	224
1132	Chandankhedi	165.60	Gadchiroli	Allapalli	Markhanda	Konsari	RF	226
1133	Adpalli	146.80	Gadchiroli	Allapalli	Markhanda	Gundapalli	RF	230
1134	Adpalli	210.40	Gadchiroli	Allapalli	Markhanda	Gundapalli	RF	229
1137	Rengewahi	167.60	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	280
1138	Rengewahi	259.20	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	294
1139	Markhanda	196.90	Gadchiroli	Allapalli	Markhanda	Gundapalli	RF	251
1140	Rengewahi	180.80	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	297
1141	Rengewahi	170.20	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	293
1142	Rengewahi	208.10	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	291
1143	Lohara	302.70	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	341
1144	Lohara	316.30	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	342
1145	Lohara	236.90	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	343
1146	maller	192.60	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	344
1147	maller	206.20	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	345
1148	Korepalli	277.40	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	288
1149	Korepalli	245.70	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	287
1150	Korepalli	216.10	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	286
1151	maller	213.00	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	338
1152	maller	219.20	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	337
1153	maller	289.90	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	335
1154	maller	178.20	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	336
1155	Kothari	274.20	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	334
1156	Kothari	184.20	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	333
1157	Kothari	256.40	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	332
1159	Kothari	148.10	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	329
1160	Kothari	237.60	Gadchiroli	Allapalli	Markhanda	Rengewahi	RF	330
1161	Bahadurpur	135.80	Gadchiroli	Allapalli	Markhanda	Gundapalli	RF	212
1162	Mulchera 2	184.60	Gadchiroli	Allapalli	Pedigudam	Mulchera	RF	171
1163	Mulchera 2	96.30	Gadchiroli	Allapalli	Pedigudam	Mulchera	RF	167
1164	Mulchera 2	378.70	Gadchiroli	Allapalli	Pedigudam	Mulchera	RF	166
1165	Mulchera 2	251.90	Gadchiroli	Allapalli	Pedigudam	Mulchera	RF	165
1166	Mukdi 1	209.20	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	161
1167	Mukdi 1	164.70	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	160
1168	Mulchera 2	343.70	Gadchiroli	Allapalli	Pedigudam	Mulchera	RF	168
1169	Mulchera 2	222.60	Gadchiroli	Allapalli	Pedigudam	Mulchera	RF	169
1170	Mukdi 1	275.70	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	159
1171	Mukdi 1	430.20	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	158
1172	Barsewada	226.50	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	148
1173	Mukdi 2	252.20	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	157
1174	Mukdi 2	328.20	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	156
1175	Chandanwelli	254.30	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	155
1176	Chandanwelli	337.70	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	154
1177	Mukdi 2	290.80	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	149
1178	Mukdi 1	263.70	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	147
1179	Mukdi 1	306.40	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	143
1180	Mukditola 1	548.30	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	131
1181	Mukditola 1	332.70	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	130
1182	Mukditola 1	336.20	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	129
1183	Mukditola 2	385.60	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	135
1184	Wasamundi	236.40	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	136
1185	Elchil	292.70	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	93

1186	Elchil	274.90	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	94
1187	Elchil	299.60	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	97
1188	Elchil	267.00	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	98
1189	Elchil	217.40	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	99
1190	Welgurtola	213.10	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	103
1191	Welgurtola	180.90	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	102
1192	Welgurtola	268.20	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	105
1193	Welgurtola	160.30	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	106
1194	Welgurtola	174.20	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	107
1195	Welgurtola	187.00	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	115
1196	Welgurtola	154.30	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	114
1197	Welgurtola	160.60	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	120
1198	Welgurtola	154.30	Gadchiroli	Allapalli	Pedigudam	Elchil	RF	114
1199	Wasamundi	214.90	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	123
1200	Wasamundi	238.60	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	125
1201	Wasamundi	280.10	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	124
1202	Wasamundi	349.60	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	138
1203	Mukdi 1	226.90	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	142
1204	Mukdi 2	215.60	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	150
1205	Mukdi 2	236.90	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	151
1206	Chandanwelli	255.80	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	152
1207	Chandanwelli	389.30	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	153
1208	Wasamundi	372.00	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	139
1209	Mukditola 2	236.90	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	140
1210	Mukditola 2	271.90	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	141
1211	Mukditola 1	204.30	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	132
1212	Mukditola 2	191.00	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	133
1213	Mukditola 2	226.80	Gadchiroli	Allapalli	Pedigudam	Gomni	Rf	134
1214	Moharli	445.30	Gadchiroli	Allapalli	Pedigudam	Mulchera	RF	176
1215	Moharli	357.40	Gadchiroli	Allapalli	Pedigudam	Mulchera	RF	177
1216	Moharli	321.70	Gadchiroli	Allapalli	Pedigudam	Mulchera	RF	178
1217	Moharli	303.30	Gadchiroli	Allapalli	Pedigudam	Mulchera	RF	179
1218	Jamgaon	447.60	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	180
1219	Gomni	285.50	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	181
1220	Gomni	435.10	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	182
1221	Jamgaon	312.50	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	183
1222	Jamgaon	433.70	Gadchiroli	Allapalli	Pedigudam	Gomni	RF	184
1223	Venkatrapetha	156.90	Gadchiroli	Allapalli	Aheri	Indaram	RF	609
1224	Venkatrapetha	131.40	Gadchiroli	Allapalli	Aheri	Indaram	RF	610
1225	Venkatrapetha	143.40	Gadchiroli	Allapalli	Aheri	Indaram	RF	611
1226	Venkatrapetha	200.40	Gadchiroli	Allapalli	Aheri	Indaram	RF	612
1227	Mosam	140.70	Gadchiroli	Allapalli	Aheri	Indaram	RF	614
1228	Mosam	190.60	Gadchiroli	Allapalli	Aheri	Indaram	RF	615
1229	Sandra	143.20	Gadchiroli	Allapalli	Aheri	Indaram	RF	616
1230	Sandra	215.90	Gadchiroli	Allapalli	Aheri	Indaram	RF	617
1231	Modumtura	202.40	Gadchiroli	Allapalli	Aheri	Indaram	RF	618
1232	Modumtura	213.60	Gadchiroli	Allapalli	Aheri	Indaram	RF	619
1234	Modumtura	163.10	Gadchiroli	Allapalli	Aheri	Indaram	RF	621
1235	Sandra	131.30	Gadchiroli	Allapalli	Aheri	Indaram	RF	622
1236	Wedampalli	974.40	Gadchiroli	Allapalli	Pirmili	Medpalli	PF	1688
1237	Zamela 1	276.50	Gadchiroli	Allapalli	Allapalli	Zamela	RF	51
1238	Zamela 2	289.50	Gadchiroli	Allapalli	Allapalli	Zamela	RF	52
1239	Zamela 2	284.70	Gadchiroli	Allapalli	Allapalli	Zamela	RF	53
1240	Zamela 2	200.30	Gadchiroli	Allapalli	Allapalli	Zamela	RF	54
1241	Zamela 2	187.90	Gadchiroli	Allapalli	Allapalli	Zamela	RF	55
1242	Karampani	182.70	Gadchiroli	Allapalli	Allapalli	Zamela	RF	24
1243	Zamela 1	397.10	Gadchiroli	Allapalli	Allapalli	Zamela	RF	50
1244	Zamela 1	300.30	Gadchiroli	Allapalli	Allapalli	Zamela	RF	49
1245	Karampani	173.30	Gadchiroli	Allapalli	Allapalli	Zamela	RF	20

1246	Karampani	217.00	Gadchiroli	Allapalli	Allapalli	Zamela	RF	23
1247	Bhimaram	179.50	Gadchiroli	Allapalli	Allapalli	Zamela	RF	19
1248	Bhimaram	237.80	Gadchiroli	Allapalli	Allapalli	Zamela	RF	48
1249	Karampani	196.90	Gadchiroli	Allapalli	Allapalli	Zamela	RF	56
1250	Karampani	209.30	Gadchiroli	Allapalli	Allapalli	Zamela	RF	57
1251	Karampani	266.40	Gadchiroli	Allapalli	Allapalli	Zamela	RF	58
1252	Bhimaram	253.60	Gadchiroli	Allapalli	Allapalli	Zamela	RF	18
1253	Sirepalli	193.10	Gadchiroli	Allapalli	Allapalli	Zamela	RF	22
1254	Bhimaram	254.80	Gadchiroli	Allapalli	Allapalli	Zamela	RF	47
1255	Bhimaram	150.80	Gadchiroli	Allapalli	Allapalli	Zamela	RF	17
1256	Sirepalli	181.90	Gadchiroli	Allapalli	Allapalli	Zamela	RF	16
1257	Sirepalli	185.50	Gadchiroli	Allapalli	Allapalli	Zamela	RF	15
1258	Sirepalli	183.30	Gadchiroli	Allapalli	Allapalli	Zamela	RF	21
1259	Sirepalli	210.60	Gadchiroli	Allapalli	Allapalli	Zamela	RF	60
1260	Sakingatta	272.50	Gadchiroli	Allapalli	Allapalli	Talwada	RF	59
1261	Sakingatta	134.70	Gadchiroli	Allapalli	Allapalli	Talwada	RF	80
1262	Sakingatta	315.40	Gadchiroli	Allapalli	Allapalli	Talwada	RF	79
1263	Sakingatta	213.10	Gadchiroli	Allapalli	Allapalli	Talwada	RF	39
1264	Sakingatta	221.50	Gadchiroli	Allapalli	Allapalli	Talwada	RF	40
1265	Sakingatta	250.80	Gadchiroli	Allapalli	Allapalli	Talwada	RF	78
1266	Talwada 2	326.30	Gadchiroli	Allapalli	Allapalli	Talwada	RF	61
1267	Talwada 2	249.00	Gadchiroli	Allapalli	Allapalli	Talwada	RF	63
1268	Mirkalnaka	245.90	Gadchiroli	Allapalli	Allapalli	Talwada	RF	38
1269	Talwada 2	264.40	Gadchiroli	Allapalli	Allapalli	Talwada	RF	64
1270	Talwada 2	312.80	Gadchiroli	Allapalli	Allapalli	Talwada	RF	62
1271	Patanil	257.20	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	46
1272	Patanil	207.20	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	14
1273	Sirepalli	220.30	Gadchiroli	Allapalli	Allapalli	Zamela	RF	13
1274	Patanil	230.90	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	45
1275	Patanil	232.50	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	44
1276	Patanil	201.60	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	6
1277	Nendar	198.70	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	5
1278	Nendar	281.90	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	12
1279	Nendar	210.50	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	11
1280	Allapalli 2	224.90	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	4
1281	Allapalli 2	224.10	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	3
1282	Allapalli 2	343.70	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	81
1283	Allapalli 2	382.30	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	43
1284	Allapalli 1	212.50	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	42
1285	Allapalli 1	225.10	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	41
1286	Allapalli 2	203.70	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	2
1287	Allapalli 1	182.00	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	1
1288	Nendar	222.80	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	10
1289	Nendar	215.70	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	9
1290	Allapalli 1	188.90	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	8
1291	Allapalli 1	164.80	Gadchiroli	Allapalli	Allapalli	Allapalli	RF	7
1292	Mirkalnaka	253.70	Gadchiroli	Allapalli	Allapalli	Talwada	RF	77
1293	Mirkalnaka	209.60	Gadchiroli	Allapalli	Allapalli	Talwada	RF	37
1294	Talwada 1	560.50	Gadchiroli	Allapalli	Allapalli	Talwada	RF	65
1295	Talwada 1	270.40	Gadchiroli	Allapalli	Allapalli	Talwada	RF	66
1296	Terado 2	199.50	Gadchiroli	Allapalli	Allapalli	Terado	RF	67
1297	Mirkalnaka	223.70	Gadchiroli	Allapalli	Allapalli	Talwada	RF	36
1298	Mirkalnaka	255.80	Gadchiroli	Allapalli	Allapalli	Talwada	RF	76
1299	Talwada 1	191.80	Gadchiroli	Allapalli	Allapalli	Talwada	RF	35
1300	Talwada 1	225.90	Gadchiroli	Allapalli	Allapalli	Talwada	RF	33
1301	Talwada 1	241.30	Gadchiroli	Allapalli	Allapalli	Talwada	RF	34
1302	Terado 3	211.80	Gadchiroli	Allapalli	Allapalli	Terado	RF	32
1303	Terado 3	213.20	Gadchiroli	Allapalli	Allapalli	Terado	RF	31
1304	Terado 3	221.20	Gadchiroli	Allapalli	Allapalli	Terado	RF	30

1305	Manger	238.80	Gadchiroli	Allapalli	Allapalli	Terado	RF	75
1306	Terado 3	188.30	Gadchiroli	Allapalli	Allapalli	Terado	RF	29
1307	Manger	203.70	Gadchiroli	Allapalli	Allapalli	Terado	RF	27
1308	Manger	189.80	Gadchiroli	Allapalli	Allapalli	Terado	RF	26
1309	Terado 2	229.80	Gadchiroli	Allapalli	Allapalli	Terado	RF	69
1310	Terado 3	197.70	Gadchiroli	Allapalli	Allapalli	Terado	RF	28
1311	Manger	235.20	Gadchiroli	Allapalli	Allapalli	Terado	RF	25
1312	Terado 2	236.80	Gadchiroli	Allapalli	Allapalli	Terado	RF	68
1313	Terado 2	239.80	Gadchiroli	Allapalli	Allapalli	Terado	RF	70
1314	Terado 1	219.30	Gadchiroli	Allapalli	Allapalli	Terado	RF	71
1315	Terado 1	252.90	Gadchiroli	Allapalli	Allapalli	Terado	RF	72
1316	Terado 1	259.50	Gadchiroli	Allapalli	Allapalli	Terado	RF	73
1317	Terado 1	210.00	Gadchiroli	Allapalli	Allapalli	Terado	RF	74
1319	Gatta 1	335.70	Gadchiroli	Allapalli	Ghot	Deoda	RF	513
1320	Ambela2	209.90	Gadchiroli	Allapalli	Ghot	Ghot	RF	514
1321	Gatta 1	168.60	Gadchiroli	Allapalli	Ghot	Deoda	RF	512
1323	Ambela2	209.30	Gadchiroli	Allapalli	Ghot	Ghot	RF	515
1324	Ambela2	205.20	Gadchiroli	Allapalli	Ghot	Ghot	RF	511
1325	Ambela1	247.40	Gadchiroli	Allapalli	Ghot	Ghot	RF	517
1326	Ambela1	216.20	Gadchiroli	Allapalli	Ghot	Ghot	RF	518
1327	Ambela1	221.00	Gadchiroli	Allapalli	Ghot	Ghot	RF	519
1328	Ambela1	283.80	Gadchiroli	Allapalli	Ghot	Ghot	RF	520
1329	Gatta 1	280.60	Gadchiroli	Allapalli	Ghot	Deoda	RF	503
1330	Gatta 1	182.70	Gadchiroli	Allapalli	Ghot	Deoda	RF	502
1331	Gatta 2	223.70	Gadchiroli	Allapalli	Ghot	Deoda	RF	489
1332	Gatta 2	159.90	Gadchiroli	Allapalli	Ghot	Deoda	RF	490
1333	Gatta 2	182.10	Gadchiroli	Allapalli	Ghot	Deoda	RF	488
1334	Deoda 2	174.80	Gadchiroli	Allapalli	Ghot	Deoda	RF	484
1335	Deoda 2	165.20	Gadchiroli	Allapalli	Ghot	Deoda	RF	483
1336	Bolepalli	134.90	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	472
1337	Bolepalli	188.70	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	471
1338	Bolepalli	221.40	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	473
1339	Bolepalli	157.50	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	474
1341	Hetalkasa	207.40	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	476
1342	Hetalkasa	170.80	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	477
1343	Regdi	219.50	Gadchiroli	Allapalli	Ghot	Regdi	RF	478
1344	Hetalkasa	102.80	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	469
1345	Regdi	149.10	Gadchiroli	Allapalli	Ghot	Regdi	RF	479
1347	Pulligudam	207.60	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	462
1348	Pulligudam	246.40	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	461
1350	Pulligudam	199.90	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	460
1351	Pulligudam	181.10	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	455
1352	Putiami tola	233.70	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	458
1353	Surgaon 1	266.60	Gadchiroli	Allapalli	Ghot	Regdi	RF	456
1354	Surgaon 1	252.90	Gadchiroli	Allapalli	Ghot	Regdi	RF	454
1355	Surgaon 1	268.10	Gadchiroli	Allapalli	Ghot	Regdi	RF	453
1356	Surgaon 1	130.60	Gadchiroli	Allapalli	Ghot	Regdi	RF	439
1357	Surgaon 1	251.90	Gadchiroli	Allapalli	Ghot	Regdi	RF	440
1358	Surgaon 1	231.20	Gadchiroli	Allapalli	Ghot	Regdi	RF	452
1359	Surgaon 2	198.30	Gadchiroli	Allapalli	Ghot	Regdi	RF	451
1360	Surgaon 2	169.40	Gadchiroli	Allapalli	Ghot	Regdi	RF	457
1361	Surgaon 2	249.20	Gadchiroli	Allapalli	Ghot	Regdi	RF	450
1362	Surgaon 2	325.90	Gadchiroli	Allapalli	Ghot	Regdi	RF	441
1363	Putiami tola	201.90	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	463
1364	Hetalkasa	247.00	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	468
1365	Putiami tola	177.90	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	465
1366	Adengpalli	243.10	Gadchiroli	Allapalli	Ghot	Regdi	RF	466
1367	Putiami tola	287.70	Gadchiroli	Allapalli	Ghot	Bolepalli	RF	464
1368	Adengpalli	266.80	Gadchiroli	Allapalli	Ghot	Regdi	RF	448

1369	Surgaon 2	197.40	Gadchiroli	Allapalli	Ghot	Regdi	RF	449
1370	Regdi	267.40	Gadchiroli	Allapalli	Ghot	Regdi	RF	467
1371	Adengpalli	168.40	Gadchiroli	Allapalli	Ghot	Regdi	RF	446
1372	Adengpalli	283.30	Gadchiroli	Allapalli	Ghot	Regdi	RF	447
1373	Regdi	275.80	Gadchiroli	Allapalli	Ghot	Regdi	RF	444
1374	Adengpalli	316.10	Gadchiroli	Allapalli	Ghot	Regdi	RF	443
1375	Surgaon 2	225.90	Gadchiroli	Allapalli	Ghot	Regdi	RF	442
1377	Regdi	187.90	Gadchiroli	Allapalli	Ghot	Regdi	RF	431
1378	Vengnur 2	197.00	Gadchiroli	Allapalli	Ghot	Regdi	RF	432
1380	Vengnur 3	199.00	Gadchiroli	Allapalli	Ghot	Regdi	RF	438
1381	Vengnur 3	167.20	Gadchiroli	Allapalli	Ghot	Regdi	RF	437
1382	Vengnur 3	232.50	Gadchiroli	Allapalli	Ghot	Regdi	RF	436
1383	Vengnur 2	177.20	Gadchiroli	Allapalli	Ghot	Regdi	RF	434
1384	Vengnur 3	234.70	Gadchiroli	Allapalli	Ghot	Regdi	RF	435
1385	Vengnur 3	205.50	Gadchiroli	Allapalli	Ghot	Regdi	RF	422
1386	Vengnur 3	208.70	Gadchiroli	Allapalli	Ghot	Regdi	RF	423
1387	Vengnur 2	240.60	Gadchiroli	Allapalli	Ghot	Regdi	RF	426
1388	Vengnur 1	253.20	Gadchiroli	Allapalli	Ghot	Regdi	RF	425
1389	Vengnur 1	160.30	Gadchiroli	Allapalli	Ghot	Regdi	RF	424
1390	Vengnur 1	216.10	Gadchiroli	Allapalli	Ghot	Regdi	RF	421
1391	Vengnur 1	181.40	Gadchiroli	Allapalli	Ghot	Regdi	RF	420
1392	Vengnur 1	175.00	Gadchiroli	Allapalli	Ghot	Regdi	RF	419
1393	Vengnur 1	204.80	Gadchiroli	Allapalli	Ghot	Regdi	RF	418
1394	Vikaspalli	229.10	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	429
1395	Vikaspalli	233.10	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	428
1396	Vikaspalli	283.10	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	427
1397	Garanji 3	247.20	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	416
1398	Garanji 3	170.60	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	417
1399	Garanji 3	215.80	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	394
1400	Garanji 3	200.70	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	393
1401	Garanji 3	175.80	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	392
1402	Garanji 2	173.70	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	391
1403	Garanji 2	153.30	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	390
1404	Garanji 2	184.20	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	388
1405	Garanji 2	138.90	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	389
1406	Garanji 2	155.10	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	395
1407	Garanji 2	168.40	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	415
1408	Vikaspalli	182.90	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	414
1409	Vikaspalli	244.00	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	413
1410	Vikaspalli	244.00	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	412
1411	Madeamgaon 1	164.50	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	398
1412	Garanji 1	162.00	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	397
1413	Garanji 1	176.80	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	396
1414	Garanji 1	173.10	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	387
1415	Garanji 1	387.90	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	386
1416	Garanji 1	206.30	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	400
1417	Madeamgaon 1	117.60	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	399
1418	Madeamgaon 1	187.10	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	411
1419	Mudoli 2	215.60	Gadchiroli	Allapalli	Ghot	Makepalli	RF	408
1420	Madeamgaon 1	187.90	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	410
1421	Madeamgaon 2	155.40	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	407
1422	Mudoli 2	197.60	Gadchiroli	Allapalli	Ghot	Makepalli	RF	406
1423	Mudoli 2	138.90	Gadchiroli	Allapalli	Ghot	Makepalli	RF	409
1424	Madeamgaon 1	274.90	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	401
1425	Garanji 1	183.70	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	402
1426	Garanji 1	210.60	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	385
1427	Kothari 2	177.80	Gadchiroli	Allapalli	Ghot	Makepalli	RF	384
1428	Kothari 2	254.30	Gadchiroli	Allapalli	Ghot	Makepalli	RF	382
1429	Kothari 2	261.50	Gadchiroli	Allapalli	Ghot	Makepalli	RF	381

1430	Kothari 2	171.30	Gadchiroli	Allapalli	Ghot	Makepalli	RF	403
1431	Mudoli 2	164.80	Gadchiroli	Allapalli	Ghot	Makepalli	RF	404
1432	Mudoli 2	254.00	Gadchiroli	Allapalli	Ghot	Makepalli	RF	405
1433	Kothari 1	238.80	Gadchiroli	Allapalli	Ghot	Makepalli	New RF	578
1434	Kothari 1	274.20	Gadchiroli	Allapalli	Ghot	Makepalli	New RF	577
1435	Kothari 1	443.60	Gadchiroli	Allapalli	Ghot	Makepalli	RF	576
1436	Mudoli 1	361.90	Gadchiroli	Allapalli	Ghot	Makepalli	RF	569
1437	Mudoli 1	352.80	Gadchiroli	Allapalli	Ghot	Makepalli	RF	572
1438	Kothari 1	176.70	Gadchiroli	Allapalli	Ghot	Makepalli	New RF	575
1439	Makepalli	84.10	Gadchiroli	Allapalli	Ghot	Makepalli	RF	570
1441	Makepalli	186.00	Gadchiroli	Allapalli	Ghot	Makepalli	RF	573
1442	Mudoli 1	220.40	Gadchiroli	Allapalli	Ghot	Makepalli	RF	574
1444	Kothari 2	220.60	Gadchiroli	Allapalli	Ghot	Makepalli	RF	383
1448	Madeamgaon 2	349.40	Gadchiroli	Allapalli	Ghot	Vikaspalli	RF	562
1449	Ghot 1	137.80	Gadchiroli	Allapalli	Ghot	Ghot	RF	549
1452	Potepalli	333.60	Gadchiroli	Allapalli	Ghot	Makepalli	RF	552
1453	Potepalli	133.70	Gadchiroli	Allapalli	Ghot	Makepalli	RF	566
1454	Potepalli	169.60	Gadchiroli	Allapalli	Ghot	Makepalli	RF	565
1455	Potepalli	213.80	Gadchiroli	Allapalli	Ghot	Makepalli	RF	563
1456	Fhushguda 2	314.70	Gadchiroli	Allapalli	Ghot	Deoda	RF	557
1457	Fhushguda 2	136.90	Gadchiroli	Allapalli	Ghot	Deoda	RF	560
1458	Fhushguda 2	282.00	Gadchiroli	Allapalli	Ghot	Deoda	RF	558
1459	Fhushguda 2	413.50	Gadchiroli	Allapalli	Ghot	Deoda	RF	559
1460	Deoda 1	212.40	Gadchiroli	Allapalli	Ghot	Deoda	RF	482
1462	Deoda 1	247.50	Gadchiroli	Allapalli	Ghot	Deoda	RF	480
1463	Deoda 2	136.50	Gadchiroli	Allapalli	Ghot	Deoda	RF	485
1464	Deoda 2	175.00	Gadchiroli	Allapalli	Ghot	Deoda	RF	487
1465	Deoda 2	171.90	Gadchiroli	Allapalli	Ghot	Deoda	RF	486
1466	Morkhandi	272.70	Gadchiroli	Allapalli	Ghot	Deoda	RF	491
1467	Morkhandi	241.10	Gadchiroli	Allapalli	Ghot	Deoda	RF	492
1468	Morkhandi	207.30	Gadchiroli	Allapalli	Ghot	Deoda	RF	493
1469	Morkhandi	170.20	Gadchiroli	Allapalli	Ghot	Deoda	RF	494
1470	Fhushguda 1	255.90	Gadchiroli	Allapalli	Ghot	Deoda	RF	555
1471	Fhushguda 1	204.00	Gadchiroli	Allapalli	Ghot	Deoda	RF	556
1472	Fhushguda 1	316.20	Gadchiroli	Allapalli	Ghot	Deoda	RF	554
1473	Fhushguda 1	347.70	Gadchiroli	Allapalli	Ghot	Deoda	RF	553
1474	Gatta 2	245.70	Gadchiroli	Allapalli	Ghot	Deoda	RF	501
1475	Gatta 1	185.30	Gadchiroli	Allapalli	Ghot	Deoda	RF	500
1476	Ghot 2	235.60	Gadchiroli	Allapalli	Ghot	Ghot	RF	499
1477	Ghot 2	194.80	Gadchiroli	Allapalli	Ghot	Ghot	RF	498
1478	Ghot 2	145.70	Gadchiroli	Allapalli	Ghot	Ghot	RF	495
1479	Ambela2	153.20	Gadchiroli	Allapalli	Ghot	Ghot	RF	504
1480	Ambela2	161.50	Gadchiroli	Allapalli	Ghot	Ghot	RF	505
1481	Ambela2	269.90	Gadchiroli	Allapalli	Ghot	Ghot	RF	510
1482	Ambela2	184.60	Gadchiroli	Allapalli	Ghot	Ghot	RF	509
1483	Ghot 2	221.90	Gadchiroli	Allapalli	Ghot	Ghot	RF	506
1484	Ghot 2	180.00	Gadchiroli	Allapalli	Ghot	Ghot	RF	507
1485	Ghot 2	138.40	Gadchiroli	Allapalli	Ghot	Ghot	RF	508
1486	Ambela1	212.80	Gadchiroli	Allapalli	Ghot	Ghot	RF	521
1487	Narendapur 1	201.90	Gadchiroli	Allapalli	Ghot	Ghot	RF	522
1488	Ambela1	153.30	Gadchiroli	Allapalli	Ghot	Ghot	RF	523
1489	Narendapur 2	195.90	Gadchiroli	Allapalli	Ghot	Ghot	RF	524
1490	Narendapur 1	204.00	Gadchiroli	Allapalli	Ghot	Ghot	RF	528
1491	Narendapur 2	241.50	Gadchiroli	Allapalli	Ghot	Ghot	RF	527
1492	Narendapur 2	365.50	Gadchiroli	Allapalli	Ghot	Ghot	RF	526
1493	Narendapur 2	222.20	Gadchiroli	Allapalli	Ghot	Ghot	RF	525
1494	Ghot 2	234.00	Gadchiroli	Allapalli	Ghot	Ghot	RF	497
1495	Ghot 2	180.00	Gadchiroli	Allapalli	Ghot	Ghot	RF	496
1496	Thakurnagar 1	239.10	Gadchiroli	Allapalli	Ghot	Ghot	RF	545

1497	Ghot 1	204.40	Gadchiroli	Allapalli	Ghot	Ghot	RF	548
1498	Ghot 1	151.40	Gadchiroli	Allapalli	Ghot	Ghot	RF	547
1499	Thakurnagar 1	92.80	Gadchiroli	Allapalli	Ghot	Ghot	RF	546
1500	Thakurnagar 1	390.00	Gadchiroli	Allapalli	Ghot	Ghot	RF	532
1501	Thakurnagar 1	228.00	Gadchiroli	Allapalli	Ghot	Ghot	RF	533
1502	Thakurnagar 2	236.00	Gadchiroli	Allapalli	Ghot	Ghot	RF	531
1503	Thakurnagar 2	260.90	Gadchiroli	Allapalli	Ghot	Ghot	RF	530
1504	Thakurnagar 2	305.30	Gadchiroli	Allapalli	Ghot	Ghot	RF	529
1505	Lagam	290.30	Gadchiroli	Allapalli	Aheri	Lagam	RF	596
1506	Tumargunda	189.70	Gadchiroli	Allapalli	Aheri	Lagam	RF	595
1507	Singampeth	191.60	Gadchiroli	Allapalli	Aheri	Lagam	RF	597
1508	Singampeth	165.50	Gadchiroli	Allapalli	Aheri	Lagam	RF	599
1509	Tumargunda	274.00	Gadchiroli	Allapalli	Aheri	Lagam	RF	594
1510	Singampeth	194.10	Gadchiroli	Allapalli	Aheri	Lagam	RF	598
1511	Jamgaon	298.70	Gadchiroli	Allapalli	Peddiguddam	Gomni	RF	185
1512	Tumargunda	284.80	Gadchiroli	Allapalli	Aheri	Lagam	RF	592
1513	Tumargunda	207.40	Gadchiroli	Allapalli	Aheri	Lagam	RF	593
1514	Bori	248.30	Gadchiroli	Allapalli	Aheri	Lagam	RF	591
1515	Bori	330.70	Gadchiroli	Allapalli	Aheri	Lagam	RF	590
1516	Yella	367.80	Gadchiroli	Allapalli	Aheri	Lagam	RF	588
1517	Yella	259.30	Gadchiroli	Allapalli	Aheri	Lagam	RF	589
1518	Yella	422.20	Gadchiroli	Allapalli	Aheri	Lagam	RF	587
1522	Modumadgu	343.60	Gadchiroli	Allapalli	Aheri	Velgur	RF	21
1523	Barsewada	197.50	Gadchiroli	Allapalli	Pedigudam	Mukdi	RF	162
1525	Talwada 1	123.80	Gadchiroli	Allapalli	Allapalli	Talwada	Forest village	1809
1529	Tadguda	40.90	Gadchiroli	Allapalli	Pirmili	Medpalli	PF	1393
1530	Tadguda	68.20	Gadchiroli	Allapalli	Pirmili	Medpalli	PF	1394

Bhamragarh

1	Nalwada	279.95	Gadchiroli	Bhamragarh	Bhamragarh	Gardewada	RF	BH860
2	Todgatta	352.53	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA404
3	Todgatta	302.48	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA405
4	Wangeturi	419.40	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF	GA391
5	Bhapda	535.39	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF/PF	NE034
6	Gardewada	316.73	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF/PF	GA433
7	Todgatta	333.81	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF	GA398
8	Todgatta	323.78	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF	GA403
9	Wangeturi	139.68	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF	GA399
10	Wangeturi	338.28	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF	GA401
11	Wangeturi	188.27	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA402
12	Gardewada	333.61	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF/PF	GA416
13	Todgatta	316.50	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF	GA415
14	Todgatta	131.94	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA414
15	Todgatta	295.32	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA406
16	Gardewada	277.82	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF	GA412
17	Gardewada	274.83	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF	GA413
18	Gardewada	228.21	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF/PF	GA419
19	Gardewada	125.96	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF/PF	GA418
20	Gardewada	143.37	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF	GA417
21	Gardewada	191.69	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF	GA434
22	Gardewada	206.50	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF	GA435
23	Jambia	389.50	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE335
24	Nainwadi	238.97	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF	SE336
25	Nainwadi	433.33	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE344
26	Nainwadi	440.05	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE342
27	Nainwadi	154.28	Gadchiroli	Bhamragarh	Etapalli	Wateli	PF	SE343
28	Gardewada	376.79	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF/PF	GA432
29	Kotmi	142.170	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE171
30	Kotmi	212.720	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE172
31	Kotmi	239.990	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE170

32	Paidy	333.55	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE169
33	Paidy	248.710	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE146
34	Kondawahi	236.750	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE184
35	Kondawahi	325.960	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE189
36	Kondawahi	251.660	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE187
37	Kondawahi	282.610	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF/PF	NE188
38	Kondawahi	271.220	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF/PF	NE190
39	Kondawahi	171.570	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE183
40	Kondawahi	212.550	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE185
41	Paidy	326.510	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE148
42	Paidy	240.480	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE145
43	Paidy	229.410	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF/PF	NE122
44	Paidy	228.360	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE147
45	Paidy	217.240	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF/PF	NE0124
46	Paidy	282.200	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE123
47	Andoli	319.220	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE125
48	Paidy	266.520	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE144
49	Andoli	281.060	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE149
50	Kotmi	350.710	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE166
51	Kotmi	401.560	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE167
52	Kotmi	232.94	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE168
53	Kotmi	401.33	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF/PF	NE173
54	Kondawahi	181.130	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE182
55	Kondawahi	330.02	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF/PF	NE181
56	Peta	435.67	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE253
57	Kondawahi	240.64	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE191
58	Gattepalli	329.28	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE249
59	Gattepalli	547.70	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE250
60	Gattepalli	432.48	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE248
61	Andoli	274.880	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE126
62	Andoli	279.790	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF/PF	NE143
63	Andoli	373.870	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE140
64	Reknar	240.470	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE127
65	Reknar	392.350	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF/PF	NE139
66	Reknar	173.670	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE128
67	Reknar	132.90	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE129
68	Reknar	266.36	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE130
69	Tekka	252.72	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE131
70	Tekka	177.09	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE136
71	Andoli	281.430	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE142
72	Andoli	171.570	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE141
73	Reknar	238.66	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF/PF	NE152
74	Reknar	249.60	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF/PF	NE138
75	Reknar	342.75	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF/PF	NE137
76	Reknar	135.70	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE155
77	Reknar	190.48	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE154
78	Reknar	246.27	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE153
79	Andoli	266.970	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE150
80	Kotmi	209.030	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF	NE165
81	Kotmi	363.88	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF/PF	NE174
82	Zuri	359.10	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF/PF	NE180
83	Gattepalli	373.31	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE247
84	Peta	327.70	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE246
85	Peta	375.93	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE251
86	Deoda	366.13	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE245
87	Tekka	226.58	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF/PF	NE133
88	Tekka	127.93	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF/PF	NE132
89	Tekka	332.96	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF/PF	NE134
90	Tekka	187.12	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF/PF	NE135

91	Tekka	257.200	Gadchiroli	Bhamragarh	Kasansur	Reknar	RF	NE156
92	Gardapalli	219.02	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF	NE151
93	Gardapalli	237.02	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF	NE163
94	Gardapalli	157.32	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF	NE164
95	Kotmi	267.50	Gadchiroli	Bhamragarh	Kasansur	Kotmi	RF/PF	NE175
96	Gardapalli	204.45	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE160
97	Zuri	359.10	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF/PF	NE192
98	Zuri	255.710	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF	NE193
99	Zuri	269.690	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF	NE179
100	Zuri	193.760	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF	NE195
101	Waghezari	267.59	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF/PF	NE083
102	Peta	575.77	Gadchiroli	Bhamragarh	Kasansur	Deoda	RF	SE092
103	Peta	398.00	Gadchiroli	Bhamragarh	Kasansur	Deoda	RF/PF	SE091
104	Waghezari	219.18	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF/PF	NE085
105	Waghezari	549.47	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF/PF	NE084
106	Sewari	475.06	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF/PF	NE086
107	Kamke	784.83	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE090
108	Kamke	549.14	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE089
109	Kasansur	259.69	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE080
110	Sewari	410.570	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF/PF	NE087
111	Kamke	389.36	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE096
112	Kukeli	300.31	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE097
113	Kukeli	736.180	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE098
114	Morawahi	372.900	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE041
115	Morawahi	446.67	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE042
116	Kasurwahi	294.600	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE043
117	Roopi	267.730	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE047
118	Gardapalli	430.770	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE159
119	Zuri	170.510	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF/PF	NE176
120	Gardapalli	305.200	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE177
121	Roopi	345.420	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE046
122	Roopi	626.09	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE049
123	Roopi	780.290	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE048
124	Roopi	708.150	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE063
125	Kasansur	624.53	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE064
126	Kasurwahi	349.030	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE040
127	Kasurwahi	363.240	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE044
128	Kasurwahi	500.17	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF	NE038
129	Kasurwahi	459.89	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE037
130	Jarawandi	433.36	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE035
131	Dolanda	447.09	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE022
132	Jarawandi	240.07	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE036
133	Jarawandi	428.64	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE019
134	Morawahi	418.03	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF	NE018
135	Gardapalli	225.24	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE162
136	Zuri	261.51	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF/PF	NE178
137	Kasansur	508.53	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE082
138	Kasansur	470.65	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF	NE081
139	Kasansur	1003.92	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE065
140	Bhumkam	305.55	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE055
141	Bhumkam	845.78	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE056
142	Manewara	435.21	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE071
143	Bhumkam	230.68	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE057
144	Bhumkam	382.38	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE058
145	Ghotsur	336.10	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE069
146	Manewara	363.79	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE072
147	Manewara	468.57	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE073
148	Manewara	535.48	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE074
149	Manewara	631.38	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE075

150	Sewari	478.17	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF/PF	NE088
151	Sewari	366.520	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF	NE078
152	Ghotsur	738.19	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE077
153	Ghotsur	455.91	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE076
154	Kasurwahi	645.30	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE045
155	Jaweli	378.26	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE050
156	Jaweli	508.720	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE062
157	Jaweli	259.21	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE061
158	Jaweli	435.29	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE060
159	Jaweli	292.26	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE051
160	Jaweli	540.310	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE052
161	Bhumkam	677.40	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF	NE053
162	Bhumkam	668.12	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE054
163	Jaweli	313.460	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE059
164	Ghotsur	288.06	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE068
165	Ghotsur	268.81	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE067
166	Ghotsur	605.660	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF	NE066
167	Kasansur	529.20	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE079
168	Kukeli	422.01	Gadchiroli	Bhamragarh	Kasansur	Halewara	RF	SE100
169	Jaweli	353.05	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE101
170	Jaweli	709.35	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE102
171	Sohagaon	398.95	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF/PF	NE023
172	Sohagaon	369.71	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF/PF	NE024
173	Bhapda	442.52	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF/PF	NE033
174	Bhapda	578.14	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF/PF	NE031
175	Bhapda	378.11	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF/PF	NE032
176	Sohagaon	337.04	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF/PF	NE027
177	Sohagaon	287.620	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF	NE028
178	Sohagaon	526.80	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF/PF	NE029
179	Sohagaon	224.40	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF/PF	NE030
180	Deoda	354.51	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF/PF	SE244
181	Deoda	398.36	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF/PF	SE240
182	Halewara	398.80	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE093
183	Halewara	375.09	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE094
184	Kamke	681.96	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE095
185	Kachler	569.820	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE109
186	Kachler	367.84	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE108
187	Kachler	543.47	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE107
188	Kukeli	673.06	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE099
189	Kachler	454.290	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE106
190	Kukeli	433.61	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF	SE105
191	Kukeli	214.640	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE104
192	Jaweli	431.68	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE103
193	Jaweli	511.51	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF	E210
194	Jaweli	210.51	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF	SE209
195	Jaweli	460.61	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF	SE208
196	Gattepalli	296.43	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF/PF	SE242
197	Ekansur	213.91	Gadchiroli	Bhamragarh	Etapalli	Geda	RF	SE254
198	Gattepalli	527.8	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF/PF	SE243
199	Gattepalli	393.50	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE241
200	Ekansur	257.55	Gadchiroli	Bhamragarh	Etapalli	Geda	RF	SE255
201	Chandanweli	303.47	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE356
202	Chandanweli	226.11	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE355
203	Chandanweli	435.43	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE357
204	Chandanweli	260.34	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE358
205	Chandanweli	272.47	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE354
206	Geda	218.23	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE359
207	Geda	316.45	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE353
208	Geda	270.22	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE360

209	Geda	307.71	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE362
210	Geda	511.29	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE352
211	Tambda	97.10	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE351
215	Ekansur	587.45	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE260
216	Ekansur	624.42	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE264
217	Tambda	86.27	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE364
218	Tambda	236.31	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE363
221	Tambda	270.92	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE365
223	Tambda	168.79	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE366
224	Tambda	139.220	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE369
225	Ekansur	395.8	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE262
226	Ekansur	186.74	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE263
227	Ekansur	300.51	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE261
228	Tambda	167.51	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE368
229	Tambda	193.39	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE367
230	Todsa	385.170	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE374
234	Deoda	542.22	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE239
235	Deoda	368.77	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE238
236	Halewara	401.32	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE111
237	Kamke	514.250	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE110
238	Lanji	120.56	Gadchiroli	Bhamragarh	Etapalli	Petha	RF	SE265
239	Lanji	391.40	Gadchiroli	Bhamragarh	Etapalli	Petha	RF/PF	SE266
240	Lanji	163.01	Gadchiroli	Bhamragarh	Etapalli	Petha	RF	SE256
241	Nagulwahi	414.91	Gadchiroli	Bhamragarh	Etapalli	Petha	RF	SE237
242	Deoda	252.03	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE236
243	Deoda	323.11	Gadchiroli	Bhamragarh	Etapalli	Deoda	RF	SE235
244	Halewara	508.850	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE112
245	Halewara	685.12	Gadchiroli	Bhamragarh	Etapalli	Halewara	RF/PF	SE113
246	Kudri	848.970	Gadchiroli	Bhamragarh	Etapalli	Moharli	RF/PF	SE114
247	Nagulwahi	263.74	Gadchiroli	Bhamragarh	Etapalli	Petha	RF/PF	SE233
248	Nagulwahi	367.58	Gadchiroli	Bhamragarh	Etapalli	Petha	RF/PF	SE234
249	Lanji	315.64	Gadchiroli	Bhamragarh	Etapalli	Petha	RF	SE267
250	Lanji	156.50	Gadchiroli	Bhamragarh	Etapalli	Petha	RF	SE257
251	Tambda	370.510	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE370
252	Todsa	352.13	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE372
253	Todsa	318.62	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE371
254	Todsa	323.600	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE376
255	Todsa	322.900	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE373
256	Nagulwahi	290.86	Gadchiroli	Bhamragarh	Etapalli	Petha	RF	SE232
257	Lanji	124.03	Gadchiroli	Bhamragarh	Etapalli	Petha	RF	SE258
258	Lanji	367.40	Gadchiroli	Bhamragarh	Etapalli	Petha	RF/PF	SE268
259	Kachler	543.500	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE115
260	Kudri	551.210	Gadchiroli	Bhamragarh	Etapalli	Moharli	RF/PF	SE117
261	Kachler	893.010	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE116
262	Burgi	446.44	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF	SE212
263	Burgi	296.37	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF	E211
264	Burgi	444.34	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF	SE215
265	Todsa	373.950	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE380
266	Todsa	337.470	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE379
267	Welmagarh	548.26	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF/PF	NE008
268	Welmagarh	402.47	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF/PF	NE009
269	Morawahi	344.69	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE016
270	Morawahi	363.60	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE017
271	Morawahi	373.09	Gadchiroli	Bhamragarh	Kasansur	Kasurwahi	RF/PF	NE015
272	Wadsakala	636.35	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE001
273	Wadsakala	509.96	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE014
274	Wadsakala	722.67	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE003
275	Jarawandi	505.920	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE013
276	Jarawandi	162.50	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	PF	NE020

277	Jarawandi	419.66	Gadchiroli	Bhamraragarh	Kasansur	Jarawandi	RF/PF	NE004
278	Welmagarh	412.27	Gadchiroli	Bhamraragarh	Kasansur	Bhapda	RF/PF	NE025
279	Sohagaon	466.30	Gadchiroli	Bhamraragarh	Kasansur	Bhapda	RF	NE026
280	Dolanda	324.9	Gadchiroli	Bhamraragarh	Kasansur	Jarawandi	RF/PF	NE021
281	Welmagarh	335.74	Gadchiroli	Bhamraragarh	Kasansur	Bhapda	RF/PF	NE011
282	Kudri	332.37	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF/PF	SE118
283	Petha	449.74	Gadchiroli	Bhamraragarh	Etapalli	Petha	RF/PF	SE271
284	Petha	557.11	Gadchiroli	Bhamraragarh	Etapalli	Petha	RF/PF	SE269
285	Petha	297.56	Gadchiroli	Bhamraragarh	Etapalli	Petha	RF	SE259
286	Nagulwahi	240.44	Gadchiroli	Bhamraragarh	Etapalli	Petha	RF	SE231
287	Nagulwahi	291.25	Gadchiroli	Bhamraragarh	Etapalli	Petha	RF/PF	SE230
288	Nagulwahi	360.95	Gadchiroli	Bhamraragarh	Etapalli	Petha	RF	SE229
289	Kudri	291.43	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF/PF	SE121
290	Petha	489.70	Gadchiroli	Bhamraragarh	Etapalli	Petha	RF/PF	SE272
291	Parsalgondr	361.24	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondr	RF/PF	SE278
292	Parsalgondr	304.89	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondr	RF/PF	SE277
293	Kudri	707.430	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF	SE119
294	Moharli	395.61	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF	SE120
295	Moharli	489.45	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF/PF	SE226
296	Moharli	402.30	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF	SE228
297	Moharli	406.41	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF	E227
298	Moharli	531.73	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF	SE225
299	Moharli	861.60	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF	SE224
300	Hetalkasa	481.04	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF	SE223
301	Hetalkasa	571.80	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF/PF	SE220
302	Petha	315.01	Gadchiroli	Bhamraragarh	Etapalli	Petha	RF/PF	SE270
303	Bande	977.15	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondr	RF/PF	SE273
304	Bande	198.80	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondr	RF	SE196
305	Bande	367.74	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondr	RF	SE197
306	Bande	214.72	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondr	RF	SE198
307	Bande	285.81	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondr	RF	SE199
308	Surajgarh	262.67	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF	SE200
309	Parsalgondr	258.49	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondr	RF/PF	SE279
310	Parsalgondr	597.63	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondr	RF/PF	SE280
311	Parsalgondr	270.04	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondr	RF/PF	SE276
312	Nainwadi	433.33	Gadchiroli	Bhamraragarh	Etapalli	Wateli	RF	SE207
313	Nainwadi	279.01	Gadchiroli	Bhamraragarh	Etapalli	Wateli	RF	SE206
314	Burgi	283.11	Gadchiroli	Bhamraragarh	Etapalli	Burgi	RF	SE214
315	Burgi	326.10	Gadchiroli	Bhamraragarh	Etapalli	Burgi	RF	SE216
316	Wateli	198.96	Gadchiroli	Bhamraragarh	Etapalli	Wateli	RF	SE205
317	Hetalkasa	402.67	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF	SE222
318	Hetalkasa	361.81	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF	SE221
319	Surajgarh	116.08	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF	SE201
320	Parsalgondi	179.80	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF	SE202
321	Parsalgondi	354.19	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF	SE203
322	Titoda	428.06	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF	SE204
323	Hetalkasa	299.27	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF/PF	SE218
324	Hetalkasa	236.18	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF	SE217
325	Hetalkasa	243.76	Gadchiroli	Bhamraragarh	Etapalli	Moharli	RF	SE219
326	Burgi	816.27	Gadchiroli	Bhamraragarh	Etapalli	Burgi	RF	SE213
327	Parsalgondi	423.70	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF/PF	SE283
328	Gundapuri	228.60	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF/PF	SE285
329	Gundapuri	184.36	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF	SE287
330	Gundapuri	161.94	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF	SE286
331	Parsalgondi	236.44	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF/PF	SE281
332	Parsalgondi	262.21	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF/PF	SE284
333	Parsalgondi	205.65	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF/PF	SE282
334	Gundapuri	469.08	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF	SE290
335	Bande	419.34	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF/PF	SE274

336	Bande	342.33	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE275
337	Surajgarh	630.51	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE297
338	Surajgarh	118.10	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE298
339	Surajgarh	174.09	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE299
340	Surajgarh	244.66	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE301
341	Surajgarh	312.74	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE302
342	Parsalgondi	143.50	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE303
343	Parsalgondi	229.67	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE307
344	Parsalgondi	304.28	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE308
345	Parsalgondi	211.11	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE304
346	Surajgarh	245.22	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE300
347	Surajgarh	178.44	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE295
348	Surajgarh	105.27	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE296
349	Parsalgondi	358.02	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE305
350	Parsalgondi	360.570	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE306
351	Gundapuri	297.35	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE294
352	Gundapuri	338.63	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE293
353	Gundapuri	234.13	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE292
354	Gundapuri	234.46	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE291
355	Alenga	265.98	Gadchiroli	Bhamragarh	Gatta	Alenga	RF/PF	GA500
356	Alenga	421.44	Gadchiroli	Bhamragarh	Gatta	Alenga	RF/PF	GA499
357	Visamundi	365.99	Gadchiroli	Bhamragarh	Gatta	Alenga	RF	GA521
358	Alenga	373.71	Gadchiroli	Bhamragarh	Gatta	Alenga	RF/PF	GA498
359	Alenga	270.29	Gadchiroli	Bhamragarh	Gatta	Alenga	RF/PF	GA497
360	Titoda	500.25	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE311
361	Titoda	156.42	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE312
362	Titoda	329.08	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE313
363	Titoda	186.64	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE314
364	Titoda	352.51	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE315
365	Parsalgondi	377.09	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE309
366	Alenga	382.66	Gadchiroli	Bhamragarh	Gatta	Alenga	RF	GA501
367	Alenga	302.53	Gadchiroli	Bhamragarh	Gatta	Alenga	RF	GA502
368	Alenga	293.96	Gadchiroli	Bhamragarh	Gatta	Alenga	RF	GA503
369	Wateli	602.40	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF	SE331
370	Jambia	353.17	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE325
371	Wateli	243.76	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE323
372	Wateli	238.63	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF	SE324
373	Jambia	353.04	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE321
374	Parsalgondi	300.13	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE310
375	Titoda	236.96	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF	SE316
376	Wateli	306.64	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE322
377	Titoda	122.18	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE317
378	Titoda	452.14	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE318
379	Zarewada	286.01	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA473
380	Zarewada	169.73	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA472
381	Zarewada	329.03	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA474
382	Alenga	279.86	Gadchiroli	Bhamragarh	Gatta	Alenga	RF/PF	GA496
383	Zarewada	251.32	Gadchiroli	Bhamragarh	Gatta	Gatta	PF	GA495
384	Zarewada	407.72	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA494
385	Visamundi	748.31	Gadchiroli	Bhamragarh	Gatta	Alenga	RF/PF	GA520
386	Nainwadi	507.89	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF	SE340
387	Nainwadi	405.57	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF	SE341
388	Nainwadi	353.86	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF	SE339
389	Wateli	374.66	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF	SE332
390	Wateli	105.19	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE330
391	Wateli	294.69	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE326
392	Jambia	343.40	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE327
393	Jambia	423.50	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE319
394	Zarewada	260.25	Gadchiroli	Bhamragarh	Gatta	Gatta	RF	GA471

395	Zarewada	376.28	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA475
396	Zarewada	260.44	Gadchiroli	Bhamragarh	Gatta	Gatta	RF	GA476
397	Kujemarka	254.93	Gadchiroli	Bhamragarh	Gatta	Gatta	RF	GA492
398	Kujemarka	248.71	Gadchiroli	Bhamragarh	Gatta	Gatta	RF	GA493
399	Kujemarka	340.39	Gadchiroli	Bhamragarh	Gatta	Gatta	RF	GA505
400	Nargunda	300.39	Gadchiroli	Bhamragarh	Gatta	Nargunda	RF	GA515
401	Kujemarka	309.52	Gadchiroli	Bhamragarh	Gatta	Gatta	RF	GA504
402	Nargunda	504.42	Gadchiroli	Bhamragarh	Gatta	Nargunda	RF	GA518
403	Nargunda	253.30	Gadchiroli	Bhamragarh	Gatta	Nargunda	RF/PF	GA517
404	Visamundi	918.67	Gadchiroli	Bhamragarh	Gatta	Alenga	RF/PF	GA519
405	Kujemarka	275.49	Gadchiroli	Bhamragarh	Gatta	Gatta	RF	GA491
406	Nargunda	345.39	Gadchiroli	Bhamragarh	Gatta	Nargunda	RF	GA516
407	Mendhari	306.95	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA383
408	Mendhari	354.60	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA384
409	Mendhari	402.89	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA389
410	Mendhari	251.34	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF	GA390
411	Mendhari	155.88	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA386
412	Mendhari	391.70	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA385
413	Mendhari	442.06	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA388
414	Mendhari	364.02	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA382
415	Mendhari	389.16	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF	GA387
416	Mendhari	458.09	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA381
417	Wangeturi	325.69	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF	GA392
418	Wangeturi	322.81	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF	GA393
419	Wangeturi	279.44	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF	GA394
420	Wangeturi	288.47	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF	GA395
421	Wangeturi	267.00	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA396
422	Wangeturi	176.26	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA397
423	Nainwadi	310.25	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE338
424	Wateli	381.54	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF	SE337
425	Wateli	446.40	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE333
426	Jambia	326.83	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE334
427	Jambia	368.44	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF	SE329
428	Jambia	200.69	Gadchiroli	Bhamragarh	Etapalli	Wateli	RF/PF	SE328
429	Gatta	179.14	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA452
430	Gatta	307.46	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA436
431	Besewada	321.72	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF/PF	GA437
432	Besewada	405.50	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF	GA439
433	Besewada	217.54	Gadchiroli	Bhamragarh	Gatta	Gardewada	RF/PF	GA438
434	Gatta	376.65	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA469
435	Gatta	214.93	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA453
436	Gatta	301.04	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA468
437	Kujemarka	283.44	Gadchiroli	Bhamragarh	Gatta	Gatta	RF	GA477
438	Kujemarka	166.24	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA470
439	Todgatta	222.36	Gadchiroli	Bhamragarh	Gatta	Todgatta	RF/PF	GA407
440	Gatta	318.13	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA454
441	Gatta	320.15	Gadchiroli	Bhamragarh	Gatta	Gatta	RF/PF	GA451
442	Besewada	445.69	Gadchiroli	Bhamragarh			RF/PF	GA450
443	Nargunda	226.42	Gadchiroli	Bhamragarh			RF/PF	GA523
444	Nargunda	350.34	Gadchiroli	Bhamragarh			RF	GA514
445	Nargunda	552.24	Gadchiroli	Bhamragarh			RF	GA513
446	Pidmilli	299.18	Gadchiroli	Bhamragarh			RF	GA512
447	Kujemarka	335.39	Gadchiroli	Bhamragarh			RF	GA506
448	Kujemarka	401.65	Gadchiroli	Bhamragarh			RF	GA490
449	Kujemarka	354.41	Gadchiroli	Bhamragarh			RF	GA478
450	Kujemarka	274.11	Gadchiroli	Bhamragarh			RF	GA479
451	Gatta	461.81	Gadchiroli	Bhamragarh			RF/PF	GA467
452	Gatta	162.15	Gadchiroli	Bhamragarh			RF	GA466
453	Pidmilli	476.01	Gadchiroli	Bhamragarh			RF	GA489

454	Besewada	528.83	Gadchiroli	Bhamragarh			RF/PF	GA465
455	Besewada	408.65	Gadchiroli	Bhamragarh			RF	GA455
456	Besewada	450.63	Gadchiroli	Bhamragarh			RF	GA449
457	Besewada	335.48	Gadchiroli	Bhamragarh			RF	GA448
458	Koindwarshi	549.59	Gadchiroli	Bhamragarh			RF	GA440
459	Koindwarshi	401.32	Gadchiroli	Bhamragarh			RF/PF	GA431
460	Koindwarshi	319.30	Gadchiroli	Bhamragarh			RF	GA430
461	Gardewada	193.12	Gadchiroli	Bhamragarh			RF/PF	GA420
462	Pidmilli	487.12	Gadchiroli	Bhamragarh			RF/PF	GA511
463	Pidmilli	496.04	Gadchiroli	Bhamragarh			RF/PF	GA507
464	Pidmilli	268.71	Gadchiroli	Bhamragarh			RF/PF	GA508
465	Kothi	445.09	Gadchiroli	Bhamragarh			RF	GA488
466	Kothi	457.54	Gadchiroli	Bhamragarh			RF	GA487
467	Kothi	371.35	Gadchiroli	Bhamragarh			RF	GA480
468	Besewada	210.63	Gadchiroli	Bhamragarh			RF	GA464
469	Markanar	359.72	Gadchiroli	Bhamragarh			RF	GA463
470	Koindwarshi	353.45	Gadchiroli	Bhamragarh			RF	GA421
471	Koindwarshi	416.18	Gadchiroli	Bhamragarh			RF/PF	GA423
472	Pidmilli	493.86	Gadchiroli	Bhamragarh			RF	GA509
473	Kothi	635.96	Gadchiroli	Bhamragarh			RF/PF	GA510
474	Kothi	457.68	Gadchiroli	Bhamragarh			RF/PF	GA486
475	Kothi	444.61	Gadchiroli	Bhamragarh			RF/PF	GA485
476	Todgatta	221.08	Gadchiroli	Bhamragarh			RF/PF	GA408
477	Hikker	389.53	Gadchiroli	Bhamragarh			RF	GA411
478	Todgatta	315.17	Gadchiroli	Bhamragarh			RF/PF	GA409
479	Tumarkodi	327.00	Gadchiroli	Bhamragarh			RF	GA447
480	Tumarkodi	213.99	Gadchiroli	Bhamragarh			RF	GA456
481	Hikker	180.53	Gadchiroli	Bhamragarh			RF	GA410
482	Hikker	256.61	Gadchiroli	Bhamragarh			RF	GA425
483	Hikker	265.16	Gadchiroli	Bhamragarh			RF	GA426
484	Hikker	379.82	Gadchiroli	Bhamragarh			RF	GA427
485	Hikker	278.11	Gadchiroli	Bhamragarh			RF	GA443
486	Tumarkodi	333.76	Gadchiroli	Bhamragarh			RF	GA444
487	Tumarkodi	447.96	Gadchiroli	Bhamragarh			RF	GA445
488	Hikker	353.04	Gadchiroli	Bhamragarh			RF	GA428
489	Hikker	480.31	Gadchiroli	Bhamragarh			RF	GA429
490	Tumarkodi	408.81	Gadchiroli	Bhamragarh			RF	GA442
491	Tumarkodi	178.69	Gadchiroli	Bhamragarh			RF	GA441
492	Tumarkodi	408.40	Gadchiroli	Bhamragarh			RF	GA446
493	Tumarkodi	623.11	Gadchiroli	Bhamragarh			RF/PF	GA458
494	Markanar	261.28	Gadchiroli	Bhamragarh			RF	GA461
495	Tumarkodi	313.12	Gadchiroli	Bhamragarh			RF/PF	GA457
496	Markanar	443.18	Gadchiroli	Bhamragarh			RF/PF	GA459
497	Markanar	314.14	Gadchiroli	Bhamragarh			RF/PF	GA460
498	Markanar	277.50	Gadchiroli	Bhamragarh			RF/PF	GA462
499	Markanar	337.46	Gadchiroli	Bhamragarh			RF/PF	GA484
500	Markanar	363.80	Gadchiroli	Bhamragarh			RF/PF	GA483
501	Markanar	277.41	Gadchiroli	Bhamragarh			RF	GA482
502	Poyerkoti	389.98	Gadchiroli	Bhamragarh			RF	BH639
503	Poyerkoti	288.18	Gadchiroli	Bhamragarh			RF	BH662
504	Poyerkoti	313.73	Gadchiroli	Bhamragarh			RF	BH663
505	Poyerkoti	321.47	Gadchiroli	Bhamragarh			RF	BH664
506	Poyerkoti	342.15	Gadchiroli	Bhamragarh			RF/PF	BH665
507	Poyerkoti	234.01	Gadchiroli	Bhamragarh			RF/PF	BH666
508	Mirgulwancha	267.46	Gadchiroli	Bhamragarh			RF/PF	BH676
509	Mirgulwancha	179.59	Gadchiroli	Bhamragarh			RF/PF	BH675
510	Poyerkoti	198.84	Gadchiroli	Bhamragarh			RF	BH667
511	Poyerkoti	329.42	Gadchiroli	Bhamragarh			RF	BH669
512	Mirgulwancha	107.24	Gadchiroli	Bhamragarh			RF	BH674

513	Poyerkoti	182.29	Gadchiroli	Bhamragarh			RF	BH668
514	Poyerkoti	244.29	Gadchiroli	Bhamragarh			RF	BH661
515	Aldandi	378.02	Gadchiroli	Bhamragarh			RF	BH655
516	Poyerkoti	304.89	Gadchiroli	Bhamragarh			RF	BH660
517	Aldandi	304.730	Gadchiroli	Bhamragarh			RF	BH654
518	Aldandi	282.53	Gadchiroli	Bhamragarh			RF	BH670
519	Poyerkoti	216.98	Gadchiroli	Bhamragarh			RF	BH671
520	Aldandi	216.98	Gadchiroli	Bhamragarh			RF	BH672
521	Aldandi	279.05	Gadchiroli	Bhamragarh			RF	BH659
522	Hodri	367.70	Gadchiroli	Bhamragarh			RF	BH733
523	Gundanhud	278.72	Gadchiroli	Bhamragarh			RF	BH727
524	Fodewada	330.32	Gadchiroli	Bhamragarh			RF	BH725
525	Fodewada	240.97	Gadchiroli	Bhamragarh			RF	BH723
526	Fodewada	363.28	Gadchiroli	Bhamragarh			RF/PF	BH713
527	Fodewada	318.05	Gadchiroli	Bhamragarh			RF	BH712
528	Fodewada	243.47	Gadchiroli	Bhamragarh			RF	BH711
529	Fodewada	224.87	Gadchiroli	Bhamragarh			RF	BH724
530	Fodewada	294.41	Gadchiroli	Bhamragarh			RF	BH714
531	Fodewada	165.88	Gadchiroli	Bhamragarh			RF/PF	BH715
532	Fodewada	287.32	Gadchiroli	Bhamragarh			RF/PF	BH716
533	Tekala	417.57	Gadchiroli	Bhamragarh			RF	TA537
534	Kiyer	326.17	Gadchiroli	Bhamragarh			RF	GA524
535	Kiyer	596.82	Gadchiroli	Bhamragarh			RF/PF	GA525
536	Mirgulwancha	852.73	Gadchiroli	Bhamragarh			RF/PF	BH678
537	Mirgulwancha	356.48	Gadchiroli	Bhamragarh			RF	BH677
538	Mirgulwancha	598.90	Gadchiroli	Bhamragarh			RF/PF	BH679
539	Mirgulwancha	213.82	Gadchiroli	Bhamragarh			RF	BH680
540	Aldandi	230.45	Gadchiroli	Bhamragarh			RF/PF	BH673
541	Mirgulwancha	241.54	Gadchiroli	Bhamragarh			RF	BH682
542	Aldandi	287.20	Gadchiroli	Bhamragarh			RF	BH683
543	Aldandi	299.69	Gadchiroli	Bhamragarh			RF/PF	BH658
544	Aldandi	335.48	Gadchiroli	Bhamragarh			RF	BH657
545	Aldandi	301.94	Gadchiroli	Bhamragarh			RF	BH656
546	Hodri	725.90	Gadchiroli	Bhamragarh			RF/PF	BH771
547	Hodri	269.62	Gadchiroli	Bhamragarh			RF/PF	BH770
548	Tekala	469.17	Gadchiroli	Bhamragarh			RF	TA535
549	Tekala	338.39	Gadchiroli	Bhamragarh			RF	TA536
550	Kiyer	358.45	Gadchiroli	Bhamragarh			RF	GA526
551	Kiyer	332.94	Gadchiroli	Bhamragarh			RF	GA527
552	Kiyer	408.83	Gadchiroli	Bhamragarh			RF/PF	GA528
553	Hemalkasa	443.07	Gadchiroli	Bhamragarh			RF	TA533
554	Tekala	213.43	Gadchiroli	Bhamragarh			RF/PF	TA534
555	Hemalkasa	274.04	Gadchiroli	Bhamragarh			RF/PF	TA532
556	Kiyer	286.50	Gadchiroli	Bhamragarh			RF/PF	GA529
557	Krushnar	206.33	Gadchiroli	Bhamragarh			RF/PF	BH689
558	Krushnar	268.19	Gadchiroli	Bhamragarh			RF/PF	BH688
559	Kosfundi	430.29	Gadchiroli	Bhamragarh			RF	TA567
560	Hemalkasa	460.99	Gadchiroli	Bhamragarh			RF/PF	TA568
561	Bejur	496.06	Gadchiroli	Bhamragarh			RF/PF	TA572
562	Palli	1031.29	Gadchiroli	Bhamragarh			RF/PF	TA583
563	Bejur	636.72	Gadchiroli	Bhamragarh			RF	TA582
564	Bejur	512.08	Gadchiroli	Bhamragarh			RF/PF	TA571
565	Bejur	493.08	Gadchiroli	Bhamragarh			RF/PF	TA570
566	Hemalkasa	288.43	Gadchiroli	Bhamragarh			RF/PF	TA531
567	Hemalkasa	349.99	Gadchiroli	Bhamragarh			RF/PF	TA530
568	Hemalkasa	486.33	Gadchiroli	Bhamragarh			RF/PF	TA569
569	Bhamragarh	177.26	Gadchiroli	Bhamragarh			RF/PF	BH706
570	Bhamragarh	285.05	Gadchiroli	Bhamragarh			RF/PF	BH700
571	Bhamragarh	245.97	Gadchiroli	Bhamragarh			RF/PF	BH699

572	Bhatpar	534.64	Gadchiroli	Bhamragarh			RF/PF	BH820
573	Bhatpar	255.64	Gadchiroli	Bhamragarh			RF	BH819
574	Golanguda	770.58	Gadchiroli	Bhamragarh			RF	BH815
575	Golanguda	297.44	Gadchiroli	Bhamragarh			RF	BH816
576	Golanguda	663.10	Gadchiroli	Bhamragarh			RF/PF	BH813
577	Golanguda	285.49	Gadchiroli	Bhamragarh			RF/PF	BH814
578	Golanguda	643.35	Gadchiroli	Bhamragarh			RF/PF	BH812
579	Bhamragarh	241.34	Gadchiroli	Bhamragarh			RF	BH704
580	Bhamragarh	190.29	Gadchiroli	Bhamragarh			RF/PF	BH701
581	Bhamragarh	447.000	Gadchiroli	Bhamragarh			RF/PF	BH702
582	Bhamragarh	372.25	Gadchiroli	Bhamragarh			RF	BH697
583	Bhamragarh	225.24	Gadchiroli	Bhamragarh			RF/PF	BH698
584	Krushnar	227.28	Gadchiroli	Bhamragarh			RF/PF	BH691
585	Krushnar	148.28	Gadchiroli	Bhamragarh			RF/PF	BH693
586	Krushnar	204.53	Gadchiroli	Bhamragarh			RF/PF	BH692
587	Krushnar	450.34	Gadchiroli	Bhamragarh			RF/PF	BH687
588	Krushnar	232.78	Gadchiroli	Bhamragarh			RF	BH681
589	Krushnar	260.50	Gadchiroli	Bhamragarh			RF	BH686
590	Krushnar	384.29	Gadchiroli	Bhamragarh			RF/PF	BH694
591	Dodraj	192.77	Gadchiroli	Bhamragarh			RF/PF	BH790
592	Dodraj	270.92	Gadchiroli	Bhamragarh			RF/PF	BH791
593	Dodraj	116.15	Gadchiroli	Bhamragarh			RF/PF	BH801
594	Dodraj	261.60	Gadchiroli	Bhamragarh			RF/PF	BH802
595	Juvi	405.28	Gadchiroli	Bhamragarh			RF/PF	BH811
596	Juvi	380.53	Gadchiroli	Bhamragarh			RF/PF	BH810
597	Juvi	373.73	Gadchiroli	Bhamragarh			RF	BH817
598	Juvi	664.35	Gadchiroli	Bhamragarh			RF/PF	BH818
599	Bhatpar	457.41	Gadchiroli	Bhamragarh			RF/PF	BH822
600	Bhatpar	210.33	Gadchiroli	Bhamragarh			RF/PF	BH821
601	Bhatpar	469.68	Gadchiroli	Bhamragarh			RF/PF	BH823
602	Nelguda	74.92	Gadchiroli	Bhamragarh			RF/PF	BH826
603	Nelguda	243.44	Gadchiroli	Bhamragarh			RF/PF	BH824
604	Nelguda	237.06	Gadchiroli	Bhamragarh			RF	BH807
605	Juvi	526.37	Gadchiroli	Bhamragarh			RF/PF	BH809
606	Irpnar	391.93	Gadchiroli	Bhamragarh			RF	BH800
607	Dodraj	254.96	Gadchiroli	Bhamragarh			RF/PF	BH793
608	Dodraj	377.34	Gadchiroli	Bhamragarh			RF/PF	BH792
609	Dodraj	321.04	Gadchiroli	Bhamragarh			RF/PF	BH789
610	Dodraj	224.60	Gadchiroli	Bhamragarh			RF/PF	BH788
611	Hodri	238.64	Gadchiroli	Bhamragarh			RF	BH696
612	Krushnar	396.53	Gadchiroli	Bhamragarh			RF	BH695
613	Krushnar	329.17	Gadchiroli	Bhamragarh			RF	BH685
614	Mirgulwancha	367.42	Gadchiroli	Bhamragarh			RF	BH684
615	Hodri	374.12	Gadchiroli	Bhamragarh			RF/PF	BH772
616	Hodri	442.22	Gadchiroli	Bhamragarh			RF/PF	BH773
617	Hodri	179.14	Gadchiroli	Bhamragarh			RF/PF	BH774
618	Hodri	304.56	Gadchiroli	Bhamragarh			RF	BH780
619	Laheri	365.76	Gadchiroli	Bhamragarh			RF/PF	BH781
620	Dodraj	193.12	Gadchiroli	Bhamragarh			RF/PF	BH782
621	Laheri	138.59	Gadchiroli	Bhamragarh			RF/PF	BH787
622	Laheri	190.04	Gadchiroli	Bhamragarh			RF/PF	BH794
623	Kucher	525.22	Gadchiroli	Bhamragarh			RF/PF	BH799
624	Irpnar	577.96	Gadchiroli	Bhamragarh			RF	BH804
625	Irpnar	339.41	Gadchiroli	Bhamragarh			RF/PF	BH803
626	Irpnar	337.95	Gadchiroli	Bhamragarh			RF/PF	BH808
627	Irpnar	407.10	Gadchiroli	Bhamragarh			RF/PF	BH806
628	Irpnar	466.57	Gadchiroli	Bhamragarh			RF/PF	BH805
629	Nelguda	454.11	Gadchiroli	Bhamragarh			RF/PF	BH825
630	Nelguda	600.59	Gadchiroli	Bhamragarh			RF/PF	BH827

631	Hodri	402.67	Gadchiroli	Bhamragarh			RF/PF	BH775
632	Hodri	366.66	Gadchiroli	Bhamragarh			RF/PF	BH779
633	Laheri	292.16	Gadchiroli	Bhamragarh			RF/PF	BH786
634	Laheri	262.79	Gadchiroli	Bhamragarh			RF/PF	BH795
635	Kucher	330.14	Gadchiroli	Bhamragarh			RF/PF	BH798
636	Kucher	461.53	Gadchiroli	Bhamragarh			RF/PF	BH797
637	Gardewada	242.36	Gadchiroli	Bhamragarh			RF	BH851
638	Gardewada	225.62	Gadchiroli	Bhamragarh			RF	BH852
639	Mirdapalli	248.75	Gadchiroli	Bhamragarh			RF	BH870
640	Nulwada	234.15	Gadchiroli	Bhamragarh			RF	BH871
641	Nulwada	251.56	Gadchiroli	Bhamragarh			RF/PF	BH828
642	Nulwada	354.55	Gadchiroli	Bhamragarh			RF	BH877
643	Nulwada	131.93	Gadchiroli	Bhamragarh			RF/PF	BH830
644	Nulwada	467.06	Gadchiroli	Bhamragarh			RF/PF	BH831
645	Nulwada	439.93	Gadchiroli	Bhamragarh			RF/PF	BH829
646	Mirdapalli	318.67	Gadchiroli	Bhamragarh			RF	BH878
647	Hodri	305.71	Gadchiroli	Bhamragarh			RF	BH740
648	Hodri	247.03	Gadchiroli	Bhamragarh			RF	BH739
649	Hodri	276.10	Gadchiroli	Bhamragarh			RF	BH742
650	Gundanhud	244.17	Gadchiroli	Bhamragarh			RF	BH738
651	Gundanhud	346.41	Gadchiroli	Bhamragarh			RF	BH736
652	Fodewada	182.75	Gadchiroli	Bhamragarh			RF	BH737
653	Fodewada	233.76	Gadchiroli	Bhamragarh			RF	BH722
654	Fodewada	272.87	Gadchiroli	Bhamragarh			RF	BH721
655	Fodewada	334.70	Gadchiroli	Bhamragarh			RF/PF	BH720
656	Fodewada	342.03	Gadchiroli	Bhamragarh			RF	BH719
657	Fodewada	263.04	Gadchiroli	Bhamragarh			RF/PF	BH718
658	Fodewada	263.04	Gadchiroli	Bhamragarh			RF/PF	BH717
659	Hodri	194.05	Gadchiroli	Bhamragarh			RF	BH741
660	Hodri	263.98	Gadchiroli	Bhamragarh			RF	BH769
661	Gundanhud	191.26	Gadchiroli	Bhamragarh			RF	BH776
662	Gundanhud	225.81	Gadchiroli	Bhamragarh			RF	BH778
663	Gundanhud	285.03	Gadchiroli	Bhamragarh			RF	BH777
664	Laheri	362.16	Gadchiroli	Bhamragarh			RF/PF	BH783
665	Laheri	154.14	Gadchiroli	Bhamragarh			RF/PF	BH785
666	Bangadi	377.12	Gadchiroli	Bhamragarh			RF/PF	BH784
667	Bangadi	285.40	Gadchiroli	Bhamragarh			RF	BH832
668	Kucher	223.36	Gadchiroli	Bhamragarh			RF	BH796
669	Kucher	171.05	Gadchiroli	Bhamragarh			RF	BH841
670	Kucher	313.37	Gadchiroli	Bhamragarh			RF	BH842
671	Gardewada	274.75	Gadchiroli	Bhamragarh			RF	BH850
672	Gardewada	218.86	Gadchiroli	Bhamragarh			RF	BH849
673	Gardewada	181.19	Gadchiroli	Bhamragarh			RF	BH854
674	Gardewada	445.54	Gadchiroli	Bhamragarh			RF	BH853
675	Gardewada	621.59	Gadchiroli	Bhamragarh			RF	BH869
676	Gardewada	303.05	Gadchiroli	Bhamragarh			RF	BH868
677	Gardewada	352.76	Gadchiroli	Bhamragarh			RF	BH872
678	Gardewada	222.38	Gadchiroli	Bhamragarh			RF/PF	BH875
679	Gardewada	307.43	Gadchiroli	Bhamragarh			RF	BH876
680	Gundanhud	303.62	Gadchiroli	Bhamragarh			RF	BH768
681	Gundanhud	222.38	Gadchiroli	Bhamragarh			RF	BH766
682	Gundanhud	218.78	Gadchiroli	Bhamragarh			RF	BH767
683	Gundanhud	306.28	Gadchiroli	Bhamragarh			RF	BH743
684	Gundanhud	303.78	Gadchiroli	Bhamragarh			RF	BH744
685	Kuwakodi	254.93	Gadchiroli	Bhamragarh			RF	BH745
686	Gundanhud	266.57	Gadchiroli	Bhamragarh			RF/PF	BH765
687	Gundanhud	320.65	Gadchiroli	Bhamragarh			RF	BH764
688	Gardewada	215.17	Gadchiroli	Bhamragarh			RF	BH874
689	Gardewada	330.73	Gadchiroli	Bhamragarh			RF	BH873

690	Garedewada	250.31	Gadchiroli	Bhamragarh			RF	BH866
691	Garedewada	308.42	Gadchiroli	Bhamragarh			RF	BH867
692	Gardewada	260.79	Gadchiroli	Bhamragarh			RF	BH855
693	Gardewada	330.15	Gadchiroli	Bhamragarh			RF	BH848
694	Kucher	218.74	Gadchiroli	Bhamragarh			RF	BH843
695	Koyer	282.33	Gadchiroli	Bhamragarh			RF	BH844
696	Koyer	305.01	Gadchiroli	Bhamragarh			RF	BH840
697	Bangadi	174.27	Gadchiroli	Bhamragarh			RF	BH833
698	Bangadi	298.54	Gadchiroli	Bhamragarh			RF	BH834
699	Bangadi	311.81	Gadchiroli	Bhamragarh			RF	BH835
700	Bangadi	245.93	Gadchiroli	Bhamragarh			RF	BH836
701	Koyer	411.35	Gadchiroli	Bhamragarh			RF	BH837
702	Koyer	190.53	Gadchiroli	Bhamragarh			RF	BH839
703	Koyer	221.32	Gadchiroli	Bhamragarh			RF	BH838
704	Koyer	278.40	Gadchiroli	Bhamragarh			RF	BH845
705	Koyer	265.91	Gadchiroli	Bhamragarh			RF	BH846
706	Koyer	254.89	Gadchiroli	Bhamragarh			RF	BH847
707	Nulwada	267.26	Gadchiroli	Bhamragarh			RF	BH856
708	Nulwada	248.83	Gadchiroli	Bhamragarh			RF	BH857
709	Nulwada	362.46	Gadchiroli	Bhamragarh			RF	BH858
710	Nulwada	163.34	Gadchiroli	Bhamragarh			RF	BH859
711	Nulwada	279.95	Gadchiroli	Bhamragarh			RF	BH861
712	Nulwada	246.74	Gadchiroli	Bhamragarh			RF	BH862
713	Nulwada	260.05	Gadchiroli	Bhamragarh			RF	BH863
714	Garedewada	263.53	Gadchiroli	Bhamragarh			RF	BH865
715	Nulwada	235.76	Gadchiroli	Bhamragarh			RF	BH864
716	Gundanhud	307.88	Gadchiroli	Bhamragarh			RF	BH758
717	Gundanhud	283.15	Gadchiroli	Bhamragarh			RF	BH757
718	Gundanhud	311.48	Gadchiroli	Bhamragarh			RF	BH759
719	Kuwakodi	386.99	Gadchiroli	Bhamragarh			RF	BH763
720	Kuwakodi	349.36	Gadchiroli	Bhamragarh			RF	BH762
721	Kuwakodi	427.81	Gadchiroli	Bhamragarh			RF	BH746
722	Kuwakodi	233.93	Gadchiroli	Bhamragarh			RF	BH749
723	Kuwakodi	308.25	Gadchiroli	Bhamragarh			RF/PF	BH748
724	Kuwakodi	317.95	Gadchiroli	Bhamragarh			RF	BH750
725	Kuwakodi	249.45	Gadchiroli	Bhamragarh			RF	BH747
726	Kuwakodi	314.18	Gadchiroli	Bhamragarh			RF	BH752
727	Kuwakodi	267.05	Gadchiroli	Bhamragarh			RF	BH751
728	Kuwakodi	391.61	Gadchiroli	Bhamragarh			RF/PF	BH753
729	Kuwakodi	288.43	Gadchiroli	Bhamragarh			RF	BH754
730	Kuwakodi	248.08	Gadchiroli	Bhamragarh			RF	BH755
731	Kuwakodi	237.94	Gadchiroli	Bhamragarh			RF	BH756
732	Kuwakodi	215.18	Gadchiroli	Bhamragarh			RF	BH760
733	Kuwakodi	233.72	Gadchiroli	Bhamragarh			RF	BH761
734	Gundapuri	200.19	Gadchiroli	Bhamragarh			RF/PF	SE288
735	Gundapuri	226.89	Gadchiroli	Bhamragarh			RF/PF	SE289
736	Visamundi	733.55	Gadchiroli	Bhamragarh			RF/PF	GA522
737	Katrangatta	399.95	Gadchiroli	Bhamragarh			RF	TA544
738	Katrangatta	249.92	Gadchiroli	Bhamragarh			RF/PF	TA543
739	Katrangatta	265.72	Gadchiroli	Bhamragarh			RF/PF	TA542
740	Katrangatta	280.55	Gadchiroli	Bhamragarh			RF/PF	TA541
741	Katrangatta	479.62	Gadchiroli	Bhamragarh			RF	TA540
742	Tekala	512.86	Gadchiroli	Bhamragarh			RF	TA538
743	Katrangatta	380.64	Gadchiroli	Bhamragarh			RF	TA551
744	Tekala	415.16	Gadchiroli	Bhamragarh			RF	TA539
745	Kosfundi	192.03	Gadchiroli	Bhamragarh			RF/PF	TA554
746	Kosfundi	626.86	Gadchiroli	Bhamragarh			RF/PF	TA565
747	Bejur	565.76	Gadchiroli	Bhamragarh			RF	TA573
748	Kosfundi	311.28	Gadchiroli	Bhamragarh			RF	TA566

749	Tadgaon	542.95	Gadchiroli	Bhamragarh			RF	TA574
750	Palli	429.22	Gadchiroli	Bhamragarh			RF/PF	TA579
751	Palli	765.65	Gadchiroli	Bhamragarh			RF/PF	TA580
752	Kasansur	652.63	Gadchiroli	Bhamragarh			RF/PF	TA611
753	Botanfundi	408.63	Gadchiroli	Bhamragarh			RF	TA546
754	Botanfundi	223.53	Gadchiroli	Bhamragarh			RF/PF	TA545
755	Botanfundi	409.26	Gadchiroli	Bhamragarh			RF/PF	TA547
756	Katrangatta	317.21	Gadchiroli	Bhamragarh			RF	TA548
757	Katrangatta	247.83	Gadchiroli	Bhamragarh			RF	TA549
758	Katrangatta	400.26	Gadchiroli	Bhamragarh			RF	TA550
759	Botanfundi	361.75	Gadchiroli	Bhamragarh			RF/PF	TA559
760	Botanfundi	267.09	Gadchiroli	Bhamragarh			RF/PF	TA558
761	Kosfundi	419.32	Gadchiroli	Bhamragarh			RF	TA557
762	Kosfundi	385.38	Gadchiroli	Bhamragarh			RF/PF	TA556
763	Tadgaon	619.71	Gadchiroli	Bhamragarh			RF/PF	TA564
764	Tadgaon	254.78	Gadchiroli	Bhamragarh			RF	TA575
765	Botanfundi	414.50	Gadchiroli	Bhamragarh			RF	TA560
766	Botanfundi	292.97	Gadchiroli	Bhamragarh			RF	TA561
767	Botanfundi	256.04	Gadchiroli	Bhamragarh			RF	TA562
768	Tadgaon	397.57	Gadchiroli	Bhamragarh			RF/PF	TA563
769	Kudkelli	1416.87	Gadchiroli	Bhamragarh			PF	TA625
770	Kudkelli	406.77	Gadchiroli	Bhamragarh			PF	TA626
771	Tadgaon	496.41	Gadchiroli	Bhamragarh			RF/PF	TA576
772	Tadgaon	401.19	Gadchiroli	Bhamragarh			RF	TA577
773	Sipanpalli	564.37	Gadchiroli	Bhamragarh			RF/PF	TA619
774	Kudkelli	284.97	Gadchiroli	Bhamragarh			RF	TA624
775	Kudkelli	294.31	Gadchiroli	Bhamragarh			RF/PF	TA623
776	Kudkelli	303.25	Gadchiroli	Bhamragarh			RF	TA620
777	Kudkelli	349.84	Gadchiroli	Bhamragarh			RF/PF	TA621
778	Chichoda	777.98	Gadchiroli	Bhamragarh			RF/PF	TA622
779	Tadgaon	317.61	Gadchiroli	Bhamragarh			RF	TA578
780	Sipanpalli	525.22	Gadchiroli	Bhamragarh			RF/PF	TA618
781	Chichoda	647.98	Gadchiroli	Bhamragarh			RF	TA617
782	Chichoda	629.76	Gadchiroli	Bhamragarh			RF/PF	TA614
783	Kasansur	656.90	Gadchiroli	Bhamragarh			RF/PF	TA613
784	Kasansur	388.37	Gadchiroli	Bhamragarh			RF/PF	TA612
785	Chichoda	347.94	Gadchiroli	Bhamragarh			RF/PF	TA616
786	Chichoda	257.26	Gadchiroli	Bhamragarh			RF/PF	TA615
787	Sipanpalli	502.44	Gadchiroli	Bhamragarh			RF/PF	TA604
788	Sipanpalli	407.65	Gadchiroli	Bhamragarh			RF/PF	TA605
789	Chichoda	762.43	Gadchiroli	Bhamragarh			RF/PF	TA606
790	Chichoda	220.58	Gadchiroli	Bhamragarh			RF/PF	TA607
791	Chichoda	411.64	Gadchiroli	Bhamragarh			RF/PF	TA608
792	Kasansur	278.78	Gadchiroli	Bhamragarh			RF	TA609
793	Kasansur	401.23	Gadchiroli	Bhamragarh			RF/PF	TA610
794	Sipanpalli	78.99	Gadchiroli	Bhamragarh			RF/PF	TA603
795	Sipanpalli	391.30	Gadchiroli	Bhamragarh			RF	TA602
796	Manerajaram	453.42	Gadchiroli	Bhamragarh			RF/PF	TA601
797	Manerajaram	249.59	Gadchiroli	Bhamragarh			RF/PF	TA600
798	Echili	407.78	Gadchiroli	Bhamragarh			RF/PF	TA598
799	Echili	702.82	Gadchiroli	Bhamragarh			RF/PF	TA599
800	Bamanpalli	187.99	Gadchiroli	Bhamragarh			RF	TA594
801	Bamanpalli	487.59	Gadchiroli	Bhamragarh			RF	TA593
802	Manerajaram	231.05	Gadchiroli	Bhamragarh			RF/PF	TA595
804	Echili	482.28	Gadchiroli	Bhamragarh			RF/PF	TA597
805	Bamanpalli	278.68	Gadchiroli	Bhamragarh			RF/PF	TA592
806	Manerajaram	302.66	Gadchiroli	Bhamragarh			RF/PF	TA591
807	Echili	431.07	Gadchiroli	Bhamragarh			PF	TA590
808	Echili	571.93	Gadchiroli	Bhamragarh			RF/PF	TA589

809	Echili	172.57	Gadchiroli	Bhamraragarh			RF/PF	TA588
810	Echili	727.50	Gadchiroli	Bhamraragarh			RF/PF	TA587
811	Manerajaram	466.77	Gadchiroli	Bhamraragarh			RF/PF	TA586
812	Bamanpalli	865.46	Gadchiroli	Bhamraragarh			RF/PF	TA584
813	Bamanpalli	440.37	Gadchiroli	Bhamraragarh			RF/PF	TA585
814	Bhamraragarh	135.04	Gadchiroli	Bhamraragarh			RF/PF	BH705
815	Bhamraragarh	250.63	Gadchiroli	Bhamraragarh			RF/PF	BH703
816	Krushnar	358.49	Gadchiroli	Bhamraragarh			RF/PF	BH690
817	Wangeturi	258.82	Gadchiroli	Bhamraragarh			RF	GA400
818	Koindwarshi	213.85	Gadchiroli	Bhamraragarh			RF	GA422
819	Hikker	227.34	Gadchiroli	Bhamraragarh			RF	GA424
820	Markanar	405.06	Gadchiroli	Bhamraragarh			RF/PF	GA481
821	Kasurwahi	424.48	Gadchiroli	Bhamraragarh			RF/PF	NE039
822	Manewara	485.24	Gadchiroli	Bhamraragarh			RF/PF	NE070
823	Tekka	141.430	Gadchiroli	Bhamraragarh			RF	NE157
824	Gardapalli	174.590	Gadchiroli	Bhamraragarh			RF	NE158
825	Gardapalli	245.11	Gadchiroli	Bhamraragarh			RF/PF	NE161
826	Zuri	314.98	Gadchiroli	Bhamraragarh			RF/PF	NE194
827	Peta	331.48	Gadchiroli	Bhamraragarh			RF/PF	SE252
828	Tekala	326.43	Gadchiroli	Bhamraragarh			RF/PF	TA552
829	Kosfundi	504.42	Gadchiroli	Bhamraragarh			RF	TA555
830	Palli	362.13	Gadchiroli	Bhamraragarh			RF	TA581
831	Jarawandi	292.84	Gadchiroli	Bhamraragarh			RF/PF	NE005
832	Dolanda	410.44	Gadchiroli	Bhamraragarh			RF/PF	NE012
833	Dolanda	474.81	Gadchiroli	Bhamraragarh			RF/PF	NE007
834	Dolanda	437.38	Gadchiroli	Bhamraragarh			RF/PF	NE006
835	Wadsakala	625.85	Gadchiroli	Bhamraragarh			RF/PF	NE002
836	Welmagarh	211.200	Gadchiroli	Bhamraragarh			RF	NE010
837	Kosfundi	425.21	Gadchiroli	Bhamraragarh			RF	TA553
838	Kondawahi	220.66	Gadchiroli	Bhamraragarh			RF	K186
839	Jambia	320.91	Gadchiroli	Bhamraragarh			RF/PF	E320

Compartments affected by fragmentation

5	Bhapda	535.39	Gadchiroli	Bhamraragarh	Kasansur	Bhapda	RF/PF	NE034
8	Todgatta	323.78	Gadchiroli	Bhamraragarh	Gatta	Todgatta	RF	GA403
11	Wangeturi	188.27	Gadchiroli	Bhamraragarh	Gatta	Todgatta	RF/PF	GA402
12	Gardewada	333.61	Gadchiroli	Bhamraragarh	Gatta	Gardewada	RF/PF	GA416
13	Todgatta	316.50	Gadchiroli	Bhamraragarh	Gatta	Todgatta	RF	GA415
20	Gardewada	143.37	Gadchiroli	Bhamraragarh	Gatta	Gardewada	RF	GA417
21	Gardewada	191.69	Gadchiroli	Bhamraragarh	Gatta	Gardewada	RF	GA434
25	Nainwadi	433.33	Gadchiroli	Bhamraragarh	Etapalli	Wateli	RF/PF	SE344
26	Nainwadi	440.05	Gadchiroli	Bhamraragarh	Etapalli	Wateli	RF/PF	SE342
35	Kondawahi	325.960	Gadchiroli	Bhamraragarh	Kasansur	Kotmi	RF	NE189
38	Kondawahi	271.220	Gadchiroli	Bhamraragarh	Kasansur	Kotmi	RF/PF	NE190
53	Kotmi	401.33	Gadchiroli	Bhamraragarh	Kasansur	Kotmi	RF/PF	NE173
55	Kondawahi	330.02	Gadchiroli	Bhamraragarh	Kasansur	Kotmi	RF/PF	NE181
74	Reknar	249.60	Gadchiroli	Bhamraragarh	Kasansur	Reknar	RF/PF	NE138
93	Gardapalli	237.02	Gadchiroli	Bhamraragarh	Kasansur	Kasansur	RF	NE163
94	Gardapalli	157.32	Gadchiroli	Bhamraragarh	Kasansur	Kasansur	RF	NE164
96	Gardapalli	204.45	Gadchiroli	Bhamraragarh	Kasansur	Kasansur	RF/PF	NE160
101	Waghezari	267.59	Gadchiroli	Bhamraragarh	Kasansur	Waghezari	RF/PF	NE083
105	Waghezari	549.47	Gadchiroli	Bhamraragarh	Kasansur	Waghezari	RF/PF	NE084
109	Kasansur	259.69	Gadchiroli	Bhamraragarh	Kasansur	Kasansur	RF/PF	NE080
112	Kukeli	300.31	Gadchiroli	Bhamraragarh	Etapalli	Halewara	RF/PF	SE097
113	Kukeli	736.180	Gadchiroli	Bhamraragarh	Etapalli	Halewara	RF/PF	SE098
118	Gardapalli	430.770	Gadchiroli	Bhamraragarh	Kasansur	Kasansur	RF/PF	NE159
119	Zuri	170.510	Gadchiroli	Bhamraragarh	Kasansur	Waghezari	RF/PF	NE176
120	Gardapalli	305.200	Gadchiroli	Bhamraragarh	Kasansur	Kasansur	RF/PF	NE177
130	Jarawandi	433.36	Gadchiroli	Bhamraragarh	Kasansur	Jarawandi	RF/PF	NE035
131	Dolanda	447.09	Gadchiroli	Bhamraragarh	Kasansur	Jarawandi	RF/PF	NE022

132	Jarawandi	240.07	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE036
135	Gardapalli	225.24	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE162
137	Kasansur	508.53	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE082
139	Kasansur	1003.92	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE065
144	Bhumkam	382.38	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE058
145	Ghotsur	336.10	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE069
147	Manewara	468.57	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE073
148	Manewara	535.48	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE074
149	Manewara	631.38	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE075
150	Sewari	478.17	Gadchiroli	Bhamragarh	Kasansur	Waghezari	RF/PF	NE088
153	Ghotsur	455.91	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE076
155	Jaweli	378.26	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE050
157	Jaweli	259.21	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE061
158	Jaweli	435.29	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE060
159	Jaweli	292.26	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE051
161	Bhumkam	677.40	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF	NE053
167	Kasansur	529.20	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE079
185	Kachler	569.820	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE109
186	Kachler	367.84	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE108
187	Kachler	543.47	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE107
189	Kachler	454.290	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE106
211	Tambda	97.10	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE351
216	Ekansur	624.42	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE264
218	Tambda	236.31	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE363
221	Tambda	270.92	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE365
222	Etapalli	407.67	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE350
223	Tambda	168.79	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE366
224	Tambda	139.220	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE369
225	Ekansur	395.8	Gadchiroli	Bhamragarh	Etapalli	Geda	RF/PF	SE262
228	Tambda	167.51	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE368
229	Tambda	193.39	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE367
230	Todsa	385.170	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE374
246	Kudri	848.970	Gadchiroli	Bhamragarh	Etapalli	Moharli	RF/PF	SE114
249	Lanji	315.64	Gadchiroli	Bhamragarh	Etapalli	Petha	RF	SE267
251	Tambda	370.510	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE370
252	Todsa	352.13	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE372
253	Todsa	318.62	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE371
254	Todsa	323.600	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE376
255	Todsa	322.900	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE373
258	Lanji	367.40	Gadchiroli	Bhamragarh	Etapalli	Petha	RF/PF	SE268
261	Kachler	893.010	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF/PF	SE116
264	Burgi	444.34	Gadchiroli	Bhamragarh	Etapalli	Burgi	RF	SE215
265	Todsa	373.950	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE380
266	Todsa	337.470	Gadchiroli	Bhamragarh	Etapalli	Etapalli	RF/PF	SE379
275	Jarawandi	505.920	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE013
276	Jarawandi	162.50	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	PF	NE020
281	Welmagarh	335.74	Gadchiroli	Bhamragarh	Kasansur	Bhapda	RF/PF	NE011
283	Petha	449.74	Gadchiroli	Bhamragarh	Etapalli	Petha	RF/PF	SE271
284	Petha	557.11	Gadchiroli	Bhamragarh	Etapalli	Petha	RF/PF	SE269
287	Nagulwahi	291.25	Gadchiroli	Bhamragarh	Etapalli	Petha	RF/PF	SE230
289	Kudri	291.43	Gadchiroli	Bhamragarh	Etapalli	Moharli	RF/PF	SE121
290	Petha	489.70	Gadchiroli	Bhamragarh	Etapalli	Petha	RF/PF	SE272
292	Parsalgondr	304.89	Gadchiroli	Bhamragarh	Etapalli	Parsalgondr	RF/PF	SE277
293	Kudri	707.430	Gadchiroli	Bhamragarh	Etapalli	Moharli	RF	SE119
295	Moharli	489.45	Gadchiroli	Bhamragarh	Etapalli	Moharli	RF/PF	SE226
302	Petha	315.01	Gadchiroli	Bhamragarh	Etapalli	Petha	RF/PF	SE270
303	Bande	977.15	Gadchiroli	Bhamragarh	Etapalli	Parsalgondr	RF/PF	SE273
311	Parsalgondr	270.04	Gadchiroli	Bhamragarh	Etapalli	Parsalgondr	RF/PF	SE276
335	Bande	419.34	Gadchiroli	Bhamragarh	Etapalli	Parsalgondi	RF/PF	SE274

349	Parsalgondi	358.02	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF/PF	SE305
350	Parsalgondi	360.570	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF/PF	SE306
358	Alenga	373.71	Gadchiroli	Bhamraragarh	Gatta	Alenga	RF/PF	GA498
359	Alenga	270.29	Gadchiroli	Bhamraragarh	Gatta	Alenga	RF/PF	GA497
365	Parsalgondi	377.09	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF/PF	SE309
370	Jambia	353.17	Gadchiroli	Bhamraragarh	Etapalli	Wateli	RF/PF	SE325
378	Titoda	452.14	Gadchiroli	Bhamraragarh	Etapalli	Parsalgondi	RF/PF	SE318
379	Zarewada	286.01	Gadchiroli	Bhamraragarh	Gatta	Gatta	RF/PF	GA473
380	Zarewada	169.73	Gadchiroli	Bhamraragarh	Gatta	Gatta	RF/PF	GA472
381	Zarewada	329.03	Gadchiroli	Bhamraragarh	Gatta	Gatta	RF/PF	GA474
388	Nainwadi	353.86	Gadchiroli	Bhamraragarh	Etapalli	Wateli	RF	SE339
392	Jambia	343.40	Gadchiroli	Bhamraragarh	Etapalli	Wateli	RF/PF	SE327
393	Jambia	423.50	Gadchiroli	Bhamraragarh	Etapalli	Wateli	RF/PF	SE319
394	Zarewada	260.25	Gadchiroli	Bhamraragarh	Gatta	Gatta	RF	GA471
395	Zarewada	376.28	Gadchiroli	Bhamraragarh	Gatta	Gatta	RF/PF	GA475
426	Jambia	326.83	Gadchiroli	Bhamraragarh	Etapalli	Wateli	RF/PF	SE334
427	Jambia	368.44	Gadchiroli	Bhamraragarh	Etapalli	Wateli	RF	SE329
428	Jambia	200.69	Gadchiroli	Bhamraragarh	Etapalli	Wateli	RF/PF	SE328
429	Gatta	179.14	Gadchiroli	Bhamraragarh	Gatta	Gatta	RF/PF	GA452
430	Gatta	307.46	Gadchiroli	Bhamraragarh	Gatta	Gatta	RF/PF	GA436
431	Besewada	321.72	Gadchiroli	Bhamraragarh	Gatta	Gardewada	RF/PF	GA437
434	Gatta	376.65	Gadchiroli	Bhamraragarh	Gatta	Gatta	RF/PF	GA469
435	Gatta	214.93	Gadchiroli	Bhamraragarh	Gatta	Gatta	RF/PF	GA453
440	Gatta	318.13	Gadchiroli	Bhamraragarh	Gatta	Gatta	RF/PF	GA454
441	Gatta	320.15	Gadchiroli	Bhamraragarh	Gatta	Gatta	RF/PF	GA451
473	Kothi	635.96	Gadchiroli	Bhamraragarh	Gatta	Kothi	RF/PF	GA510
475	Kothi	444.61	Gadchiroli	Bhamraragarh	Gatta	Kothi	RF/PF	GA485
499	Markanar	337.46	Gadchiroli	Bhamraragarh	Gatta	Kothi	RF/PF	GA484
500	Markanar	363.80	Gadchiroli	Bhamraragarh	Gatta	Kothi	RF/PF	GA483
506	Poyerkoti	342.15	Gadchiroli	Bhamraragarh	Bhamraragarh	Bhamraragarh	RF/PF	BH665
507	Poyerkoti	234.01	Gadchiroli	Bhamraragarh	Bhamraragarh	Bhamraragarh	RF/PF	BH666
536	Mirgulwancha	852.73	Gadchiroli	Bhamraragarh	Bhamraragarh	Bhamraragarh	RF/PF	BH678
537	Mirgulwancha	356.48	Gadchiroli	Bhamraragarh	Bhamraragarh	Bhamraragarh	RF	BH677
538	Mirgulwancha	598.90	Gadchiroli	Bhamraragarh	Bhamraragarh	Bhamraragarh	RF/PF	BH679
546	Hodri	725.90	Gadchiroli	Bhamraragarh	Bhamraragarh	Laheri	RF/PF	BH771
551	Kiyer	332.94	Gadchiroli	Bhamraragarh	Gatta	Nargunda	RF	GA527
552	Kiyer	408.83	Gadchiroli	Bhamraragarh	Gatta	Nargunda	RF/PF	GA528
553	Hemalkasa	443.07	Gadchiroli	Bhamraragarh	Tadgaon	Hemalkasa	RF	TA533
555	Hemalkasa	274.04	Gadchiroli	Bhamraragarh	Tadgaon	Hemalkasa	RF/PF	TA532
556	Kiyer	286.50	Gadchiroli	Bhamraragarh	Gatta	Nargunda	RF/PF	GA529
557	Krushnar	206.33	Gadchiroli	Bhamraragarh	Bhamraragarh	Bhamraragarh	RF/PF	BH689
560	Hemalkasa	460.99	Gadchiroli	Bhamraragarh	Tadgaon	Hemalkasa	RF/PF	TA568
561	Bejur	496.06	Gadchiroli	Bhamraragarh	Tadgaon	Hemalkasa	RF/PF	TA572
564	Bejur	512.08	Gadchiroli	Bhamraragarh	Tadgaon	Hemalkasa	RF/PF	TA571
565	Bejur	493.08	Gadchiroli	Bhamraragarh	Tadgaon	Hemalkasa	RF/PF	TA570
566	Hemalkasa	288.43	Gadchiroli	Bhamraragarh	Tadgaon	Hemalkasa	RF/PF	TA531
568	Hemalkasa	486.33	Gadchiroli	Bhamraragarh	Tadgaon	Hemalkasa	RF/PF	TA569
570	Bhamraragarh	285.05	Gadchiroli	Bhamraragarh	Bhamraragarh	Bhamraragarh	RF/PF	BH700
576	Golanguda	663.10	Gadchiroli	Bhamraragarh	Bhamraragarh	Irpnar	RF/PF	BH813
578	Golanguda	643.35	Gadchiroli	Bhamraragarh	Bhamraragarh	Irpnar	RF/PF	BH812
579	Bhamraragarh	241.34	Gadchiroli	Bhamraragarh	Bhamraragarh	Bhamraragarh	RF	BH704
581	Bhamraragarh	447.000	Gadchiroli	Bhamraragarh	Bhamraragarh	Bhamraragarh	RF/PF	BH702
584	Krushnar	227.28	Gadchiroli	Bhamraragarh	Bhamraragarh	Bhamraragarh	RF/PF	BH691
591	Dodraj	192.77	Gadchiroli	Bhamraragarh	Bhamraragarh	Irpnar	RF/PF	BH790
592	Dodraj	270.92	Gadchiroli	Bhamraragarh	Bhamraragarh	Irpnar	RF/PF	BH791
593	Dodraj	116.15	Gadchiroli	Bhamraragarh	Bhamraragarh	Irpnar	RF/PF	BH801
594	Dodraj	261.60	Gadchiroli	Bhamraragarh	Bhamraragarh	Irpnar	RF/PF	BH802
595	Juvi	405.28	Gadchiroli	Bhamraragarh	Bhamraragarh	Irpnar	RF/PF	BH811
596	Juvi	380.53	Gadchiroli	Bhamraragarh	Bhamraragarh	Irpnar	RF/PF	BH810

597	Juvi	373.73	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF	BH817
598	Juvi	664.35	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH818
599	Bhatpar	457.41	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH822
600	Bhatpar	210.33	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH821
601	Bhatpar	469.68	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH823
603	Nelguda	243.44	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH824
604	Nelguda	237.06	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF	BH807
605	Juvi	526.37	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH809
607	Dodraj	254.96	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH793
608	Dodraj	377.34	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH792
609	Dodraj	321.04	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH789
610	Dodraj	224.60	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH788
615	Hodri	374.12	Gadchiroli	Bhamragarh	Bhamragarh	Laheri	RF/PF	BH772
616	Hodri	442.22	Gadchiroli	Bhamragarh	Bhamragarh	Laheri	RF/PF	BH773
617	Hodri	179.14	Gadchiroli	Bhamragarh	Bhamragarh	Laheri	RF/PF	BH774
619	Laheri	365.76	Gadchiroli	Bhamragarh	Bhamragarh	Laheri	RF/PF	BH781
620	Dodraj	193.12	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH782
623	Kucher	525.22	Gadchiroli	Bhamragarh	Bhamragarh	Gardewada	RF/PF	BH799
625	Irpnar	339.41	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH803
626	Irpnar	337.95	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH808
630	Nelguda	600.59	Gadchiroli	Bhamragarh	Bhamragarh	Irpnar	RF/PF	BH827
631	Hodri	402.67	Gadchiroli	Bhamragarh	Bhamragarh	Laheri	RF/PF	BH775
632	Hodri	366.66	Gadchiroli	Bhamragarh	Bhamragarh	Laheri	RF/PF	BH779
633	Laheri	292.16	Gadchiroli	Bhamragarh	Bhamragarh	Laheri	RF/PF	BH786
643	Nulwada	131.93	Gadchiroli	Bhamragarh	Bhamragarh	Gardewada	RF/PF	BH830
644	Nulwada	467.06	Gadchiroli	Bhamragarh	Bhamragarh	Gardewada	RF/PF	BH831
645	Nulwada	439.93	Gadchiroli	Bhamragarh	Bhamragarh	Gardewada	RF/PF	BH829
664	Laheri	362.16	Gadchiroli	Bhamragarh	Bhamragarh	Laheri	RF/PF	BH783
790	Chichoda	220.58	Gadchiroli	Bhamragarh	Tadgaon	Chichoda	RF/PF	TA607
791	Chichoda	411.64	Gadchiroli	Bhamragarh	Tadgaon	Chichoda	RF/PF	TA608
797	Manerajaram	249.59	Gadchiroli	Bhamragarh	Tadgaon	Manerajaram	RF/PF	TA600
802	Manerajaram	231.05	Gadchiroli	Bhamragarh	Tadgaon	Manerajaram	RF/PF	TA595
804	Echili	482.28	Gadchiroli	Bhamragarh	Tadgaon	Manerajaram	RF/PF	TA597
806	Manerajaram	302.66	Gadchiroli	Bhamragarh	Tadgaon	Manerajaram	RF/PF	TA591
807	Echili	431.07	Gadchiroli	Bhamragarh	Tadgaon	Manerajaram	PF	TA590
808	Echili	571.93	Gadchiroli	Bhamragarh	Tadgaon	Manerajaram	RF/PF	TA589
810	Echili	727.50	Gadchiroli	Bhamragarh	Tadgaon	Manerajaram	RF/PF	TA587
815	Bhamragarh	250.63	Gadchiroli	Bhamragarh	Bhamragarh	Bhamragarh	RF/PF	BH703
816	Krushnar	358.49	Gadchiroli	Bhamragarh	Bhamragarh	Bhamragarh	RF/PF	BH690
822	Manewara	485.24	Gadchiroli	Bhamragarh	Kasansur	Ghotsur	RF/PF	NE070
825	Gardapalli	245.11	Gadchiroli	Bhamragarh	Kasansur	Kasansur	RF/PF	NE161
831	Jarawandi	292.84	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE005
832	Dolanda	410.44	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE012
834	Dolanda	437.38	Gadchiroli	Bhamragarh	Kasansur	Jarawandi	RF/PF	NE006

APPENDIX-VII
LIST OF PROPOSED CHECK NAKAS
(Para No. 5.5.1 (a))

Name of Division	Sr. No.	Range	Location
Bramhapuri (T)	1	Sindewahi	Kachapar to Sinbodi Road
	2	Talodhi	Allewhi-Wadhona-Jiwanapur Road Square
	3	Chimur	Petichuha-Murpar Survey No. 372
	4	North Bramhapuri	Mendhaki-Nawegaon-Ballarpur Road
Chandrapur (T)	1	Chandrapur	Compt. No. 409
	2	Bhadrawati	Compt. No. 210
	3	--do--	Chicholi Road
	4	--do--	Chandankheda-Waigaon Road Fata
	5	--do--	Near Chora depot
	6	Warora	Segaon-Chandankheda Road at Bijoni
	7	Chichpalli	Kelzar
Central Chanda (T)	1	Ballarshah	Compt. No. 521
	2	--do--	Compt. No. 440
	3	Dhaba	Compt. No. 559
	4	--do--	Compt. No. 557 B
	5	--do--	Compt. No. 557 B/2
	6	--do--	Compt. No. 561 C/1
	7	Wirur	Compt. No. 131
	8	--do--	Compt. No. 146
	9	Wansadi	Kodasi
	10	Jivti	Compt. No. 94

Name of Division	Sr. No.	Range	Location
	11	--do--	Compt. No. 56
	12	--do--	Compt. No. 600
Central Chanda (FDCM)	1	Zaran	Compt. No. 1
	2	--do--	Devai Compt. No. 102/103
	3	Tohgaon	Arvi
	4	Dhaba	Chivanda
West Chanda (FDCM)	1	Junona	Compt. No. 478
	2	Chichapalli	Nandgur
	3	--do--	Compt. No. 516

APPENDIX-VIII
LIST OF PROPOSED PROTECTION HUTS
(Para No. 5.5.1 (b))

Name of Division	Sr. No.	Range	Location
Chandrapur (T)	1	Chandrapur	Compt. No. 402/403 Mamla line
	2	--do--	Compt. No. 409
	3	--do--	Compt. No. 397 Mamla line
	4	Bradrawati	Boundary line Compt. No. 205/210
	5	--do--	Compt. No. 203
	6	--do--	Compt. No. 896
	7	Warora	Compt. No. 550
	8	--do--	Compt. No. 10
	9	--do--	Compt. No. 12
	10	--do--	Compt. No. 3/4
	11	--do--	Compt. No. 14A/14B
	12	--do--	Compt. No. 7B
	13	Chichapalli	Compt. No. 517
	14	--do--	Compt. No. 749
Central Chanda (T)	1	Ballarshah	Compt. No. 493
	2	--do--	Compt. No. 581
	3	--do--	Compt. No. 500
	4	--do--	Compt. No. 573
	5	--do--	Compt. No. 451
	6	--do--	Compt. No. 521
	7	--do--	Compt. No. 512
	8	--do--	Compt. No. 441

Name of Division	Sr. No.	Range	Location
	9	--do--	Compt. No. 446
	10	--do--	Compt. No. 440
	11	Kothari	Compt. No. 71
	12	--do--	Compt. No. 94
	13	--do--	Compt. No. 112
	14	--do--	Compt. No. 88
	15	--do--	Compt. No. 552
	16	Dhaba	Compt. No. 158
	17	--do--	Compt. No. 561
	18	--do--	Compt. No. 560
	19	--do--	Compt. No. 164
	20	--do--	Compt. No. 557
	21	--do--	Compt. No. 559
	22	Wansadi	Compt. No. 182
	23	--do--	Compt. No. 4
	24	--do--	Compt. No. 8
	25	Jivati	Compt. No. 106
	26	--do--	Compt. No. 92
	27	--do--	Compt. No. 74
	28	--do--	Compt. No. 599A
Central Chanda (FDCM)	1	Zaran	Bardi
	2	--do--	Compt. No. 84
	3	Kanargaon	Kudesaoli
	4	--do--	Compt. No. 152

Name of Division	Sr. No.	Range	Location
	5	Tohgaon	Camp No. 4
	6	--do--	Wamanpalli
	7	Dhaba	Podasa
	8	--do--	Kuda
West Chanda (FDCM)	1	Junona	Compt. No. 468
	2	Chichapalli	Compt. No. 435
	3	Khadsangi	Compt. No. 17
Bramhapuri (FDCM)	1	Sindewahi	Compt. No. 135
	2	--do--	Compt. No. 173
	3	Bramhapuri	Compt. No. 62
	4	Balapur	Compt. No. 70
	5	Palebarsa	Compt. No. 129
	6	Pathari	Compt. No. 162

APPENDIX-IX
LIST OF PROPOSED WATCH TOWER
(Para No. 5.5.1 (c))

Name of Division	Sr. No.	Range	Location
Central Chanda (T)	1	Ballarshah	Compt. No. 580
	2	--do--	Compt. No. 497
	3	--do--	Compt. No. 573
	4	--do--	Compt. No. 451
	5	--do--	Compt. No. 440
	6	--do--	Compt. No. 454
	7	Kothari	Compt. No. 110
	8	--do--	Compt. No. 86
	9	--do--	Compt. No. 127
	10	--do--	Compt. No. 538
	11	Dhaba	Compt. No. 158/a
	12	--do--	Compt. No. 153
	13	--do--	Compt. No. 559
	14	--do--	Compt. No. 560
	15	--do--	Compt. No. 144
	16	--do--	Compt. No. 164
	17	--do--	Compt. No. 557B
	18	--do--	Compt. No. 569
	19	--do--	Compt. No. 562A
	20	--do--	Compt. No. 163
	21	Wirur	Compt. No. 137/138/139 joint

Name of Division	Sr. No.	Range	Location
	22	--do--	Compt. No. 131
	23	--do--	Compt. No. 147
	24	Wansadi	Compt. No. 186
	25	--do--	Compt. No. 33
	26	--do--	Compt. No. 3
	27	--do--	Compt. No. 8
	28	--do--	Compt. No. 7
	29	Jiwati	Compt. No. 83
Central Chanda (FDCM)	1	Zaran	Compt. No. 3
	2	Kanhargaon	Compt. No. 70
	3	Tohgaon	Compt. No. 58
	4	Dhaba	Compt. No. 54
West Chanda (FDCM)	1	Chichapalli	Compt. No. 516
Bramhapuri (FDCM)	1	Balapur	Compt. No. 69
	2	Sindewahi	Compt. No. 135
	3	Pathari	Compt. No. 163
	4	Palebarsa	Compt. No. 129

APPENDIX-X**LIST OF EXISTING WATER RESOURCES IN ADJOINING AREA
(Para No. 5.5.2.1 (a))**

Division	Sr. No.	Range	Round	Beat	Name	Location
Bramhapuri	1	Saoli	Vehad	Samda	Sonapur Tank	Compt. No. 201
	2	--"--	--"--	Sirsi	Umri Tank	Compt. No. 198
	3	--"--	Pendhari	Mundala	Mundala Tank	Compt. No. 252
	4	--"--	--"--	--"--	Saymara River	Compt. No. 11
	5	--"--	--"--	Chargaon	Ringdeo River	Compt. No. 304/189
	6	--"--	Pathari	Pathari	Asola River	Compt. No. 153/163
	7	--"--	--"--	Meha	Nifandra River	Compt. No. 156
	8	--"--	--"--	--"--	Antargaon River	Compt. No. 160
	9	--"--	--"--	Gevra	Gevra River	Compt. No. 154
	10	--"--	--"--	--"--	Dongargaon River	Compt. No. 1461
	11	--"--	--"--	Khanabad	Karoli River	Compt. No. 152
	12	--"--	--"--	Palebarsa	Saykheda River	Compt. No. 8
	13	--"--	--"--	--"--	Saykheda River	Compt. No. 63
	14	--"--	--"--	--"--	Jankapur River	Compt. No. 27
	15	--"--	--"--	--"--	Bhuti River	Compt. No. 48
	16	--"--	Saoli	Chakpirangi	Adjoining River	Compt. No. 1687
	17	--"--	--"--	--"--	Bothli Nala	Compt. No. 1687
	18	--"--	--"--	--"--	Bothli Nala	Compt. No. 1687
	19	--"--	--"--	--"--	Bothli Nala	Compt. No. 1687
	20	--"--	--"--	Takadi	1783 River	Compt. No. 1783
	21	--"--	Rajoli	Rajoli	Bhsbolan River	Compt. No. 317/305
	22	--"--	--"--	Murmadi	Murmadi forest River	Compt. No. 310
	23	--"--	--"--	Golabhuj	Golabhuj River	Compt. No. 312
	24	Chimur	Chimur	Gadgaon	Pani Wahnara Pat	Compt. No. 372
	25	--"--	--"--	Alizanja	Pitichuwa	Compt. No. 22
	26	--"--	--"--	Talodhi	Jogamoga Vantalav	Compt. No. 52
	27	--"--	Bhisi	Gadpipri	Natural water hole	Compt. No. 180
	28	--"--	--"--	Bhisi	Navin Tank	Compt. No. 223

Division	Sr. No.	Range	Round	Beat	Name	Location
	29	--"--	Murpar	Bhansuli	Forest Tank	Compt. No. 33(5)
	30	--"--	--"--	Murpar	Murpar Nala	Compt. No. 348/104
	31	--"--	Khadsangi	Khadsangi	Khorda Nala	Compt. No. 28
	32	--"--	Bothali	Nimdhela	Ramdegi Cement Plug	Compt. No. 21/63
	33	--"--	--"--	Bothali	Kumbhai water hole	Compt. No. 58/16
	34	--"--	Shankarpur	Navtala	Madnagad Tank	Compt. No. 87
	35	--"--	--"--	Shankarpur	Zilbodi	Compt. No. 48
	36	--"--	--"--	Doma	Doma Forest Tank	Compt. No. 320
	37	Talodhi	Talodhi	Talodhi	Savangi Tank	Compt. No. 31
	38	--"--	--"--	Alewahi	Kashi Tank	Compt. No. 258
	39	--"--	--"--	Gangasagar	Heti Tank	Compt. No. 107
	40	--"--	--"--	--"--	Nim Tank	Compt. No. 50
	41	--"--	Govindpur	Govindpur	Govindpur Tank	Compt. No. 60
	42	--"--	--"--	--"--	Khabri Tank	Compt. No. 329
	43	--"--	--"--	Sarangad	Sarangad Tank	Compt. No. 181
	44	--"--	--"--	Kachepar	Dhobra Tank	Compt. No. 543
	45	--"--	--"--	--"--	Kharkada Tank	Compt. No. 375
	46	--"--	Neri	Bodadha	Lawari Tank	Compt. No. 319
	47	--"--	--"--	Kajalsar	Motegaon Tank	Compt. No. 153
	48	--"--	--"--	Gondoda	Wasanhira Tank	Compt. No. 81
	49	Sindewahi	Gunjewahi	Pavanpar-1	Pavanpar Tank	Compt. No. 132/232
	50	--"--	--"--	--"--	Aswala Tank	Compt. No. 170
	51	--"--	--"--	--"--	Gunjewahi Tank	Compt. No. 273
	52	--"--	--"--	Kanhalgaon	Kanhalgaon Tank	Compt. No. 145/288
	53	--"--	--"--	Pavanpar-2	Tekadi Tank	Compt. No. 20
	54	--"--	Tambegadi Mendha	Ghot	Ghot Tank	Compt. No. 264
	55	--"--	--"--	Chikmara	Chikmara Tank	Compt. No. 266
	56	--"--	--"--	Murpar	Kharkada Tank	Compt. No. 265
	57	--"--	--"--	Tambegadi Mendha	Tambegadi Tank	Compt. No. 268
	58	--"--	--"--	Maregaon	Maregaon Tank	Compt. No. 261

Division	Sr. No.	Range	Round	Beat	Name	Location
	59	--"--	Navargaon	Navargaon-2	Dug out pond	Compt. No. 41
	60	--"--	--"--	Ratnapur	Huma River Shirkala Ghat	Compt. No. 46/242
	61	--"--	--"--	--"--	Huma River Wagdoh	Compt. No. 43/44
	62	--"--	--"--	--"--	Purkepar Tank	Compt. No. 41/44
	63	--"--	--"--	Pendhri	Diwan Tank	PF Pendhri
	64	--"--	Sindewahi	Kargata	Thakabai Tank	Compt. No. 151
	65	--"--	--"--	Kachepar-2	Sindhbodi	Compt. No. 135
	66	--"--	--"--	Dongargaon	Chargaon Tank	Compt. No. 113
	67	--"--	--"--	--"--	Deul Tank	Compt. No. 113
	68	Nagbhid	Nagbhid	Mangrud	Ghodazari Tank	Compt. No. 26
	69	--"--	--"--	Nagbhid	Zaran nala	Compt. No. 23
	70	--"--	Dongargaon	Dongargaon	Kasarla Tank	Compt. No. 11
	71	--"--	--"--	--"--	Balaram Falang	Compt. No. 5
	72	--"--	--"--	Rengatur	Ghonghadi Tank	Compt. No. 262
	73	--"--	--"--	Korambi (N)	Korambi Tank	Compt. No. 2
	74	--"--	--"--	Korambi (S)	Pandharpani nala	Compt. No. 16
	75	--"--	Mindala	Kosambi	Kosambi Tank	Compt. No. 9
	76	--"--	--"--	Mindala	Kodepar Tank	Compt. No. 69
	77	South Bramhapuri	Bhuj	Bodhegaon	Mudza new Tank	Compt. No. 144/217
	78	--"--	Ekara	Kitadi	Kitadi Forest Tank	Compt. No. 106
	79	--"--	Awalgaon	Halda	Dug out pond-2	Compt. No. 79/22
	80	North Bramhapuri	Bramhapuri	Dhamangaon	Chandgaon Tank	Compt. No. 196
	81	--"--	--"--	Torgaon	Deolgaon Tank	Compt. No. 801
	82	--"--	Navegaon	Navegaon	Navegaon Tank	Compt. No. 16/17
	83	--"--	--"--	Rampuri	Rampuri Tank	Compt. No. 194
	84	--"--	--"--	--"--	Pandharbodi	Compt. No. 121
	85	--"--	Mendki	Mendki	Gaidongri Tank	Compt. No. 24
	86	Nagbhid	Mindala	Paharni	Khodada Tank	Compt. No. 26
	87	--"--	--"--	--"--	Khandala Tank	Compt. No. 487
Central Chanda (T)	1	Ballarshah	Ballarshah	Visapur	Bhivkund nala	Compt. No. 489
	2	--"--	--"--	Ballarshah	Upasi nala	Compt. No. 494
	3	--"--	--"--	Karwa	Hiramatar nala	Compt. No. 491

Division	Sr. No.	Range	Round	Beat	Name	Location
	4	--"--	--"--	Ballarshah	Bagrathi nala	Compt. No. 495
	5	--"--	--"--	Lawari	Khadikhada Forest Tank	Compt. No. 573
	6	--"--	Manora	Manora	Irrigation Tank	Compt. No. 573
	7	--"--	--"--	--"--	Irrigation Tank	Compt. No.448.
	8	--"--	--"--	--"--	Pandharimati Nala	Compt. No.446
	9	--"--	--"--	Satara Bhonsle	Forest Tank	Compt. No.441
	10	Kothari	Kothari	Kawadjai	Dug Out Pond	Compt. No.104
	11	--"--	Pombhurna	Kemara	Machhi Khadda	Compt. No.100
	12	--"--	--"--	Ghanoti	Dhoteghar Nala	Compt. No.88
	13	--"--	Kanhalgaon	Parsodi	Zaran Nala	Compt. No. 533
	14	--"--	--"--	Pachgaon	Nursery Nala	Compt. No. 534
	15	--"--	--"--	Karanji	Dhanapur Forest Tank	Compt. No. 143
	16	--"--	Ghosri	Ghosri	Pipri (D) Forest Tank	Compt. No. 544
	17	Dhaba	Gondpipri	Gondpipri	Nala	Compt. No. 143
	18	--"--	--"--	--"--	Nala	Compt. No. 145
	19	--"--	Tohogaon	Tohogaon	Forest Tank	Compt. No. 557
	20	--"--	Gondpipri	Vejgaon	Forest Tank	Compt. No. 557
	21	--"--	Dhaba	Vedgaon	Nala	Compt. No. 45
	22	--"--	--"--	--"--	Nala	Compt. No. 560
	23	Rajura	Vihirgaon	Khambada	Forest Tank	Compt. No. 178
	24	--"--	--"--	Temburwahi	Forest Tank	Compt. No. 169
	25	--"--	--"--	--"--	Forest Tank	Compt. No. 166/167
	26	--"--	--"--	Nalfadi	Forest Tank	Compt. No. 200
	27	--"--	Rajura	Rajura	Forest Tank	Compt. No. 155
	28	--"--	Vihirgaon	Vihirgaon	Forest Tank	Compt. No.172
	29	--"--	--"--	--"--	Forest Tank	Compt. No.173
	30	--"--	Rajura	Chanakha	Dug Out Pond	Compt. No.590
	31	Virur	Virur	Antargaon	Antargaon Forest Tank	Compt. No.133
	32	--"--	--"--	Chicholi	Chicholi Nala	Compt.No.138
	33	--"--	--"--	Bapunagar	Bapunagar Nala	Compt. No. 130
	34	--"--	--"--	Virur	Virur Forest Tank	Compt. No. 136

Division	Sr. No.	Range	Round	Beat	Name	Location
	35	--"--	Sidhleshwar	Lakkadkot	Lakkadkot Nala	Compt. No. 48
	36	--"--	--"--	Sidhleshwar	Sidhleshwar Nala	Compt. No. 149
	37	--"--	--"--	--"--	Aswalhira Nala	Compt. No. 150
	38	--"--	--"--	Bhendala	Dongargaon Irrigation Tank	Compt. No.146
	39	Wansali	Korpana	Savahlira	Ghatrai Nala	Compt. No. 8
	40	--"--	--"--	--"--	Jambhulbodi Nala	Compt. No. 8
	41	--"--	--"--	Mandwa	Wanarhira Nala	Compt. No. 6
	42	--"--	--"--	--"--	Bherapani Nala	Compt. No. 7
	43	--"--	--"--	Jambhuldhara	Pakadiguddam Irrigation Tank	Compt. No. 15
	44	--"--	Gadchandur	Naokhari	Temple Nala	Compt. No. 33
	45	--"--	--"--	Bombezari	Manikgad Mines	Compt. No. 35
	46	Jiwati	Jiwati	Jiwati	Jiwati Irrigation Tank	Compt. No. 82
Chandrapur (T)	1	Warora	Warora	Surla	Water hole	Compt. No. 14B
	2	--"--	Tembhurda	Rampur	Water hole	Compt. No. 7B
	3	--"--	--"--	Anjangaon	Water hole	Compt. No. 1
	4	--"--	--"--	Kem	Water hole	Compt. No. 5
	5	Bhadrawati	Bhadrawati	Kachrala	Water hole	Compt. No. 202
	6	Chichpalli	Mahadwadi	Mahadwadi-2	Water hole	Compt. No. 356
	7	--"--	--"--	--"--	Water hole	Compt. No. 538
	8	--"--	Kelzar	Dewada	Water hole	Compt. No. 649
	9	--"--	Chichpalli	Chichpalli	Water hole	Compt. No. 528
Bramhapuri (FDCM)	1	Bramhapuri	--	--	Tulan Mendha Tank	Compt. No.60
	2	--"--	--	--	Tulan Mal Tank	Compt. No.61
	3	--"--	--	--	Mendki Tank	Compt. No.62
	4	--"--	--	--	Budhewada	Compt. No.76
	5	--"--	--	--	Chichkheda	Compt. No.77
	6	--"--	--	--	Tumdi Mendha	Compt. No.54
	7	--"--	--	--	Chandgaon	Compt. No.58
	8	--"--	--	--	Maldongari	Compt. No.57
	9	Balapur	--	--	Mindala	Compt. No.69
	10	--"--	--	--	Balapur	Compt. No.72
	11	--"--	--	--	Balapur	Compt. No.74

Division	Sr. No.	Range	Round	Beat	Name	Location
	12	--"--	--	--	Ghodazari Tank	Compt. No.14
	13	Sindewahi	--	--	Kacchepar	Compt. No.135
	14	--"--	--	--	Khairi Tank	Compt. No.134
	15	--"--	--	--	Maregaon	Compt. No.139
	16	--"--	--	--	Jatalapur	Compt. No.168
	17	--"--	--	--	Chitki	Compt. No.172
	18	Pathri	--	--	Antargaon	Compt. No.161
	19	--"--	--	--	Pathari	Compt. No.162
	20	--"--	--	--	Asola Mendha	Compt. No.163
	21	--"--	--	--	Gaidongari	Compt. No.164
	22	--"--	--	--	Navegaon	Compt. No.166
	23	Palebarsa	--	--	Samda	Compt. No.129
	24	--"--	--	--	Kanhargaon	Compt. No. 146
	25	--"--	--	--	Jankapur	Compt. No. 147
Central Chanda (FDCM)	1	Zaran	--	--	Ambe Nala	Compt. No.79,105 Nala
	2	--"--	--	--	Zaran Nala	Compt. No.1,2,3 Nala
	3	--"--	--	--	Zaran Nala	Zaran to Comptt No.3 Nala
	4	--"--	--	--	Zaran Nala	Compt. No.4,5 Nala
	5	--"--	--	--	Berdi Tank	Compt. No.120
	6	--"--	--	--	Bhatari Tank	Compt. No.111
	7	--"--	--	--	Dewari Tank	Compt. No.107
	8	Kanhargaon	--	--	Ambe Nala	Compt. No.5 Nala (Three sites)
	9	--"--	--	--	Ambe Nala	Compt. No.9 Nala (2 sites)
	10	--"--	--	--	Kudesaoli	Compt. No.11 Nala
	11	--"--	--	--	Ambe Tank	Compt. No.70 Nala
	12	Tohogaon	--	--	Sadhuram Nala	Compt. No.31 Nala
	13	--"--	--	--	Rampur Nala	Compt. No.34 Nala
	14	--"--	--	--	Pandhari Pani	Compt. No.37,38 Nala
	15	--"--	--	--	Modica Nala	Compt. No.24 Nala

Division	Sr. No.	Range	Round	Beat	Name	Location
	16	--"--	--	--	Modicha Nala Sadhuram Nala	Compt. No.27,28 Nala
	17	Dhaba	--	--	Bibi Nala	Compt. No.44,46 Nala
	18	--"--	--	--	Utach Nala (Wamanpalli)	Compt. No.42 Nala
	19	--"--	--	--	Aswal Konda	Compt. No.52 Nala
	20	--"--	--	--	Bhiwkund Nala	Compt. No.51 Nala
	21	--"--	--	--	Dhaba Tank	Compt. No.53,134 Nala
	22	--"--	--	--	Pandhari Pani	Compt. No.54 Nala
	23	--"--	--	--	Tekabhatti Nala	Compt. No.133 Nala

APEENDIX–XI
ACTIVITY BUDGET
(Para No. 8.5)

Sr. No.	Name of the Activity	Plan para no.	Name of Division	Details of Expenditure	Year wise Break up															
					2014-15		2015-16		2016-17		2017-18		2018-19		2019-20					
					Qty	Amount	Qty	Amount	Qty	Qty	Amount	Amount	Qty	Amount	Qty	Amount				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16					
1	Establishment of Check naka at strategic point.	5.5.1(a)	Bramhapuri (T)	Construction of Chek Naka-200000 furniture etc. 50000 Total 250000/-	1	250000	0	0	0	0	0	0	0	0	1	250000				
			Central Chanda (T)		2	500000	2	500000	2	500000	2	500000	1	250000	1	250000	1	250000		
			Chandrapur (T)		0	0	0	0	1	250000	1	250000	1	250000	1	250000	1	250000	0	0
			Bramhapuri (FDCM)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			Central Chanda (FDCM)		0	0	1	250000	0	0	1	250000	0	0	0	0	1	250000	0	0
			West Chanda (FDCM)		1	250000	0	0	1	250000	1	250000	1	250000	0	0	0	0	0	0
	Total				4	1000000	3	750000	4	1000000	5	1250000	2	500000	4	1000000				
2	Construction of protection huts at strategic location	5.5.1(b)	Bramhapuri (T)	Cost of construction of 1 protection hut is estimated to be Rs. 300000/-	0	0	0	0	0	0	0	0	0	0	0	0				
			Central Chanda (T)		1	300000	1	300000	3	900000	3	900000	3	900000	3	900000	3	900000		
			Chandrapur (T)		1	300000	1	300000	2	600000	2	600000	1	300000	1	300000	1	300000		
			Bramhapuri (FDCM)		1	300000	1	300000	1	300000	1	300000	1	300000	1	300000	1	300000		
			Central Chanda (FDCM)		1	300000	1	300000	1	300000	1	300000	1	300000	1	300000	1	300000		
			West Chanda (FDCM)		1	300000	0	0	0	0	1	300000	1	300000	1	300000	0	0		
	Total				5	1500000	4	1200000	7	2100000	8	2400000	7	2100000	6	1800000				
3	Construction of watch towers at strategic location for protection from fire/illicit feeling/poaching	5.5.1(c)	Bramhapuri (T)	Cost of construction of 1 watch tower is estimated to be Rs. 350000/-	0	0	0	0	0	0	0	0	0	0	0	0				
			Central Chanda (T)		2	700000	2	700000	3	1050000	3	1050000	3	1050000	3	1050000	3	1050000		
			Chandrapur (T)		0	0	0	0	0	0	0	0	0	0	0	0	0	0		
			Bramhapuri (FDCM)		0	0	1	350000	1	350000	1	350000	1	350000	1	350000	0	0		
			Central Chanda (FDCM)		0	0	1	350000	1	350000	1	350000	1	350000	1	350000	0	0		
			West Chanda (FDCM)		0	0	0	0	0	0	1	350000	0	0	0	0	0	0		
	Total			0	2	700000	4	1400000	5	1750000	6	2100000	5	1750000	3	1050000				
4	provision for strengthening of wireless network	5.5.1(d)	Bramhapuri (T)	Wirless Handset each party one is cost Rs.13500/-	6	81000	0	0	0	0	0	0	0	0	0	0				
			Central Chanda (T)		7	94500	0	0	0	0	0	0	0	0	0	0	0	0		
			Chandrapur (T)		5	77500	0	0	0	0	0	0	0	0	0	0	0	0		
			Bramhapuri (FDCM)		5	77500	0	0	0	0	0	0	0	0	0	0	0	0		
			Central Chanda (FDCM)		4	64500	0	0	0	0	0	0	0	0	0	0	0	0		
			West Chanda (FDCM)		4	64500	0	0	0	0	0	0	0	0	0	0	0	0		
	Total			0	31	459500	0	0	0	0	0	0	0	0	0	0				
5	Vehicle for protection purpose including fuel and maintenance of vehical	5.5.1(e)	Bramhapuri (T)	1 vehicle per Range for 6 month@ Rs 50000 per month=300000Rs per Range	6	1800000	6	1800000	6	1800000	6	1800000	6	1800000	6	1800000				
			Central Chanda (T)		7	2100000	7	2100000	7	2100000	7	2100000	7	2100000	7	2100000	7	2100000		
			Chandrapur (T)		5	1500000	5	1500000	5	1500000	5	1500000	5	1500000	5	1500000	5	1500000		
			Bramhapuri (FDCM)		5	1500000	5	1500000	5	1500000	5	1500000	5	1500000	5	1500000	5	1500000		
			Central Chanda (FDCM)		4	1200000	4	1200000	4	1200000	4	1200000	4	1200000	4	1200000	4	1200000		
			West Chanda (FDCM)		4	1200000	4	1200000	4	1200000	4	1200000	4	1200000	4	1200000	4	1200000		
	Total				31	9300000	31	9300000	31	9300000	31	9300000	31	9300000	31	9300000				

Sr. No.	Name of the Activity	Plan para no.	Name of Division	Details of Expenditure	Year wise Break up											
					2020-21		2021-22		2022-23		2023-24		Total			
					Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount		
1	2	3	4	5	17	18	19	20	21	22	23	24	27	28		
1	Establishment of Check naka at strategic point.	5.5.1(a)	Bramhapuri (T)	Construction of Chek Naka-200000 furniture etc. 50000 Total 250000/-	0	0	1	250000	0	0	1	250000	4	1000000		
			Central Chanda (T)		1	250000	1	250000	1	250000	1	250000	14	3500000		
			Chandrapur (T)		1	250000	0	0	1	250000	1	250000	7	1750000		
			Bramhapuri (FDCM)		0	0	0	0	0	0	0	0	0	0	0	0
			Central Chanda (FDCM)		0	0	1	250000	0	0	1	250000	5	1250000		
			West Chanda (FDCM)		1	250000	0	0	1	250000	0	0	5	1250000		
	Total				3	750000	3	750000	3	750000	4	1000000	35	8750000		
2	Construction of protection huts at strategic location	5.5.1(b)	Bramhapuri (T)	Cost of construction of 1 protection is estimated to be Rs. 300000/-	0	0	0	0	0	0	0	0	0	0		
			Central Chanda (T)		3	900000	3	900000	3	900000	3	900000	26	7800000		
			Chandrapur (T)		1	300000	1	300000	1	300000	1	300000	12	3600000		
			Bramhapuri (FDCM)		0	0	0	0	0	0	0	0	6	1800000		
			Central Chanda (FDCM)		1	300000	1	300000	0	0	0	0	8	2400000		
			West Chanda (FDCM)		0	0	0	0	0	0	0	0	3	900000		
	Total				5	1500000	5	1500000	4	1200000	4	1200000	55	16500000		
3	Construction of watch towers at strategic location for protection from fire/illegal feeling/poaching	5.5.1(c)	Bramhapuri (T)	Cost of construction of 1 watch tower is estimated to be Rs. 350000/-	0	0	0	0	0	0	0	0	0	0		
			Central Chanda (T)		3	1050000	3	1050000	3	1050000	3	1050000	28	9800000		
			Chandrapur (T)		0	0	0	0	0	0	0	0	0	0	0	
			Bramhapuri (FDCM)		0	0	0	0	0	0	0	0	4	1400000		
			Central Chanda (FDCM)		0	0	0	0	0	0	0	0	4	1400000		
			West Chanda (FDCM)		0	0	0	0	0	0	0	0	1	350000		
	Total			0	3	1050000	3	1050000	3	1050000	3	1050000	37	12950000		
4	provision for strengthening of wireless network	5.5.1(d)	Bramhapuri (T)	Wireless Handset each party one is cost Rs.13500/-	0	0	0	0	0	0	0	0	6	81000		
			Central Chanda (T)		0	0	0	0	0	0	0	0	7	94500		
			Chandrapur (T)		0	0	0	0	0	0	0	0	5	77500		
			Bramhapuri (FDCM)		0	0	0	0	0	0	0	0	5	77500		
			Central Chanda (FDCM)		0	0	0	0	0	0	0	0	4	64500		
			West Chanda (FDCM)		0	0	0	0	0	0	0	0	4	64500		
	Total			0	0	0	0	0	0	0	0	0	31	459500		
5	Vehicle for protection purpose including fuel and maintenance of vehical	5.5.1(e)	Bramhapuri (T)	1 vehicle per Range for 6 month@ Rs 50000 per month=300000Rs per Range	6	1800000	6	1800000	6	1800000	6	1800000	60	18000000		
			Central Chanda (T)		7	2100000	7	2100000	7	2100000	7	2100000	70	21000000		
			Chandrapur (T)		5	1500000	5	1500000	5	1500000	5	1500000	50	15000000		
			Bramhapuri (FDCM)		5	1500000	5	1500000	5	1500000	5	1500000	50	15000000		
			Central Chanda (FDCM)		4	1200000	4	1200000	4	1200000	4	1200000	40	12000000		
			West Chanda (FDCM)		4	1200000	4	1200000	4	1200000	4	1200000	40	12000000		
	Total				31	9300000	31	9300000	31	9300000	31	9300000	310	93000000		

Sr. No.	Name of the Activity	Plan para no.	Name of Division	Details of Expenditure	Year wise Break up											
					2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
					Qty	Amount	Qty	Amount	Qty	Qty	Amount	Amount	Qty	Amount	Qty	Amount
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
6	Provision for deployment of temporary labour patrolling force for hyper sensitive areas	5.5.1(f)	Bramhapuri (T)	1 group of 20 labour for 6 months for each range (these labourers will be deployed on check naka, protection hut, monitoring water holes and tracking tiger)	6	810000	6	810000	6	810000	6	810000	6	810000	6	810000
			Central Chanda (T)		7	945000	7	945000	7	945000	7	945000	7	945000		
			Chandrapur (T)		5	675000	5	675000	5	675000	5	675000	5	675000		
			Bramhapuri (FDCM)		5	675000	5	675000	5	675000	5	675000	5	675000		
			Central Chanda (FDCM)		4	540000	4	540000	4	540000	4	540000	4	540000		
			West Chanda (FDCM)		4	540000	4	540000	4	540000	4	540000	4	540000		
Total					31	4185000	31	4185000	31	4185000	31	4185000	31	4185000	31	4185000
7	Deepening/desilting of existing water holes for wild animals.	5.5.2.1 (a)	Bramhapuri (T)	Rs. 50000/- per water hole (deepening/desilting should be done once in 5 year)	0	0	0	0	0	0	0	0	0	0	0	0
			Central Chanda (T)		2	100000	2	100000	2	100000	2	100000	2	100000		
			Chandrapur (T)		0	0	0	0	0	0	0	0	0	0		
			Bramhapuri (FDCM)		2	100000	2	100000	0	0	0	0	0	0		
			Central Chanda (FDCM)		3	150000	3	150000	3	150000	2	100000	2	100000		
			West Chanda (FDCM)		2	100000	2	100000	2	100000	2	100000	2	100000		
Total					9	450000	9	450000	7	350000	6	300000	6	300000	6	300000
8	Creation of new natural water holes for wild animals (dug out ponds/ forest tanks/ plugs)	5.5.2.1 (b)	Bramhapuri (T)	Rs. 100000/- per structure	6	600000	6	600000	6	600000	6	600000	6	600000	6	600000
			Central Chanda (T)		7	700000	7	700000	7	700000	7	700000	7	700000		
			Chandrapur (T)		5	500000	5	500000	5	500000	5	500000	5	500000		
			Bramhapuri (FDCM)		5	500000	5	500000	5	500000	5	500000	5	500000		
			Central Chanda (FDCM)		4	400000	4	400000	4	400000	4	400000	4	400000		
			West Chanda (FDCM)		4	400000	4	400000	4	400000	4	400000	4	400000		
Total					31	3100000	31	3100000	31	3100000	31	3100000	31	3100000	31	3100000
9	Creation of earthen bunds on nala at Suitable fixed places every year to increase water regime of seasonal nalas.	5.5.2.1 (c)	Bramhapuri (T)	Rs. 10000/- per earthen bund	120	1200000	120	1200000	120	1200000	120	1200000	120	1200000	120	1200000
			Central Chanda (T)		140	1400000	140	1400000	140	1400000	140	1400000	140	1400000		
			Chandrapur (T)		100	1000000	100	1000000	100	1000000	100	1000000	100	1000000		
			Bramhapuri (FDCM)		100	1000000	100	1000000	100	1000000	100	1000000	100	1000000		
			Central Chanda (FDCM)		80	800000	80	800000	80	800000	80	800000	80	800000		
			West Chanda (FDCM)		80	800000	80	800000	80	800000	80	800000	80	800000		
Total					620	6200000	620	6200000	620	6200000	620	6200000	620	6200000	620	6200000
10	Creation of meadows in each suitable compartments up to an area 5 ha.	5.5.2.2	Bramhapuri (T)	Rs. 25000/- per hactor	30	750000	30	750000	30	750000	30	750000	30	750000	30	750000
			Central Chanda (T)		35	875000	35	875000	35	875000	35	875000	35	875000		
			Chandrapur (T)		25	625000	25	625000	25	625000	25	625000	25	625000		
			Bramhapuri (FDCM)		25	625000	25	625000	25	625000	25	625000	25	625000		
			Central Chanda (FDCM)		20	500000	20	500000	20	500000	20	500000	20	500000		
			West Chanda (FDCM)		20	500000	20	500000	20	500000	20	500000	20	500000		
Total					155	3875000	155	3875000	155	3875000	155	3875000	155	3875000	155	3875000

Sr. No.	Name of the Activity	Plan para no.	Name of Division	Details of Expenditure	Year wise Break up									
					2020-21		2021-22		2022-23		2023-24		Total	
					Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
1	2	3	4	5	17	18	19	20	21	22	23	24	27	28
6	Provision for deployment of temporary labour patrolling force for hyper sensitive areas	5.5.1(f)	Bramhapuri (T)	1 group of 20 labour for 6 months for each range (these labourers will be deployed on check naka, protection hut, monitoring water holes and tracking tiger)	6	810000	6	810000	6	810000	6	810000	60	8100000
			Central Chanda (T)		7	945000	7	945000	7	945000	7	945000	70	9450000
			Chandrapur (T)		5	675000	5	675000	5	675000	5	675000	50	6750000
			Bramhapuri (FDCM)		5	675000	5	675000	5	675000	5	675000	50	6750000
			Central Chanda (FDCM)		4	540000	4	540000	4	540000	4	540000	40	5400000
			West Chanda (FDCM)		4	540000	4	540000	4	540000	4	540000	40	5400000
	Total			0	31	4185000	31	4185000	31	4185000	31	4185000	310	41850000
7	Deepening/desilting of existing water holes for wild animals.	5.5.2.1 (a)	Bramhapuri (T)	Rs. 50000/- per water hole (deepening/desilting should be done once in 5 year)	0	0	0	0	0	0	0	0	0	0
			Central Chanda (T)		2	100000	1	50000	1	50000	1	50000	17	850000
			Chandrapur (T)		0	0	0	0	0	0	0	0	0	0
			Bramhapuri (FDCM)		0	0	0	0	0	0	0	0	4	200000
			Central Chanda (FDCM)		2	100000	2	100000	2	100000	2	100000	23	1150000
			West Chanda (FDCM)		2	100000	2	100000	2	100000	1	50000	19	950000
	Total				6	300000	5	250000	5	250000	4	200000	63	3150000
8	Creation of new natural water holes for wild animals (dug out ponds/ forest tanks/ plugs)	5.5.2.1 (b)	Bramhapuri (T)	Rs. 100000/- per structure	6	600000	6	600000	6	600000	6	600000	60	6000000
			Central Chanda (T)		7	700000	7	700000	7	700000	7	700000	70	7000000
			Chandrapur (T)		5	500000	5	500000	5	500000	5	500000	50	5000000
			Bramhapuri (FDCM)		5	500000	5	500000	5	500000	5	500000	50	5000000
			Central Chanda (FDCM)		4	400000	4	400000	4	400000	4	400000	40	4000000
			West Chanda (FDCM)		4	400000	4	400000	4	400000	4	400000	40	4000000
	Total				31	3100000	31	3100000	31	3100000	31	3100000	310	31000000
9	Creation of earthen bunds on nala at Suitable fixed places every year to increase water regime of seasonal nalas.	5.5.2.1 (c)	Bramhapuri (T)	Rs. 10000/- per earthen bund	120	1200000	120	1200000	120	1200000	120	1200000	1200	12000000
			Central Chanda (T)		140	1400000	140	1400000	140	1400000	140	1400000	1400	14000000
			Chandrapur (T)		100	1000000	100	1000000	100	1000000	100	1000000	1000	10000000
			Bramhapuri (FDCM)		100	1000000	100	1000000	100	1000000	100	1000000	1000	10000000
			Central Chanda (FDCM)		80	800000	80	800000	80	800000	80	800000	800	8000000
			West Chanda (FDCM)		80	800000	80	800000	80	800000	80	800000	800	8000000
	Total				620	6200000	620	6200000	620	6200000	620	6200000	6200	62000000
10	Creation of meadows in each suitable compartments up to an area 5 ha.	5.5.2.2	Bramhapuri (T)	Rs. 25000/- per hactor	30	750000	30	750000	30	750000	30	750000	300	7500000
			Central Chanda (T)		35	875000	35	875000	35	875000	35	875000	350	8750000
			Chandrapur (T)		25	625000	25	625000	25	625000	25	625000	250	6250000
			Bramhapuri (FDCM)		25	625000	25	625000	25	625000	25	625000	250	6250000
			Central Chanda (FDCM)		20	500000	20	500000	20	500000	20	500000	200	5000000
			West Chanda (FDCM)		20	500000	20	500000	20	500000	20	500000	200	5000000
	Total				155	3875000	155	3875000	155	3875000	155	3875000	1550	38750000

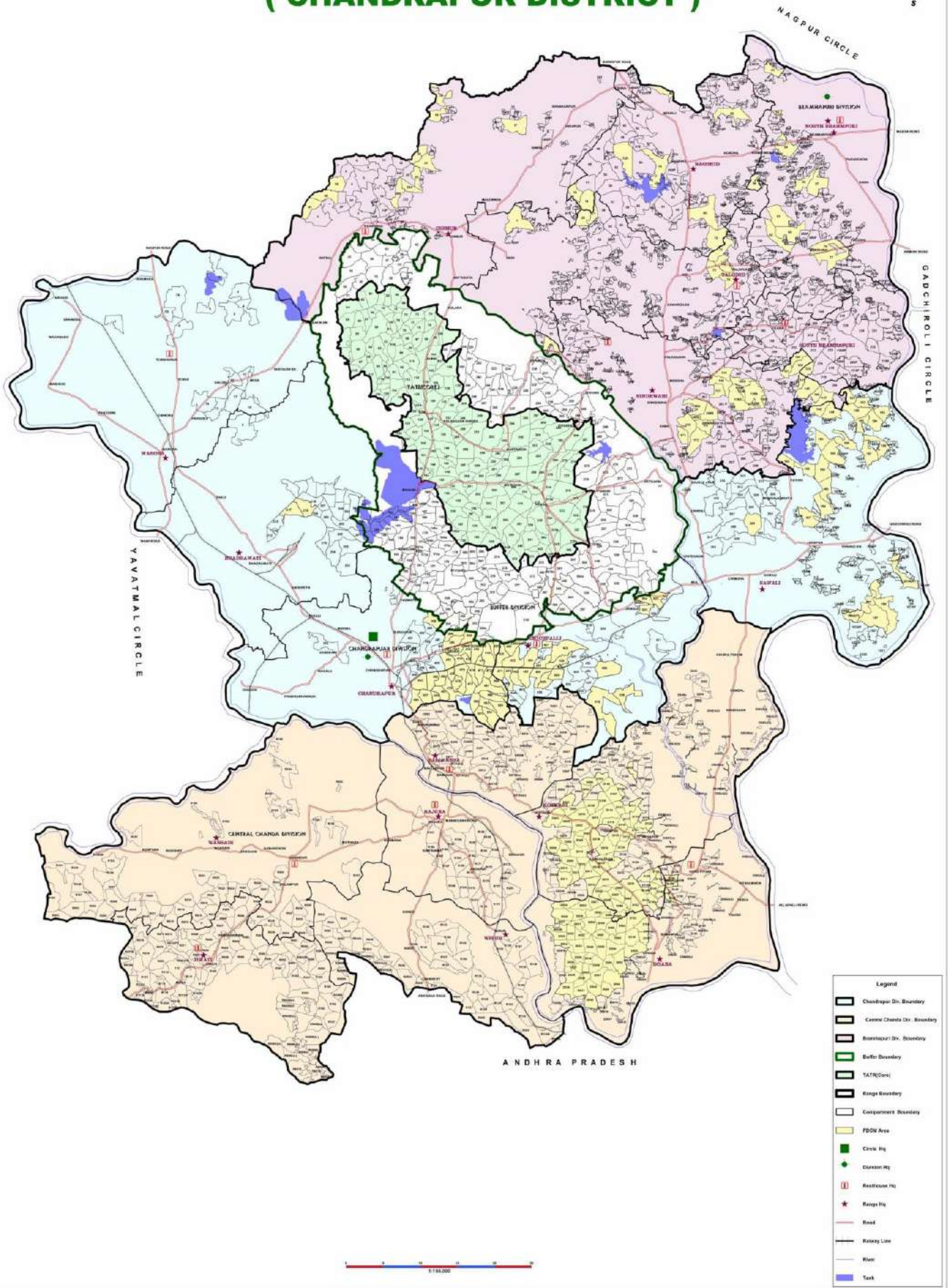
Sr. No.	Name of the Activity	Plan para no.	Name of Division	Details of Expenditure	Year wise Break up														
					2014-15		2015-16		2016-17		2017-18		2018-19		2019-20				
					Qty	Amount	Qty	Amount	Qty	Qty	Amount	Amount	Qty	Amount	Qty	Amount			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
11	Purchase of Tranquilising equipment for division	5.5.4 (a)	Bramhapuri (T)	Rs. 200000/- per Tranquilizing gun	0	0	0	0	0	0	0	0	0	0	0	0			
			Central Chanda (T)		0	0	1	200000	0	0	0	0	0	0	0	0	0	0	
			Chandrapur (T)		0	0	0	0	0	0	0	0	0	0	1	200000	0	0	
			Bramhapuri (FDCM)		0	0	0	0	1	200000	0	0	0	0	0	0	0	0	0
			Central Chanda (FDCM)		0	0	0	0	0	0	0	1	200000	0	0	0	0	0	0
			West Chanda (FDCM)		1	200000	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total				1	200000	1	200000	1	200000	1	200000	1	200000	0	0			
12	Purchase of Tranquilising drugs and accessory for division	5.5.4 (a)	Bramhapuri (T)	Rs. 25000/- per year per division	1	25000	1	25000	1	25000	1	25000	1	25000	1	25000			
			Central Chanda (T)		1	25000	1	25000	1	25000	1	25000	1	25000	1	25000	1	25000	
			Chandrapur (T)		1	25000	1	25000	1	25000	1	25000	1	25000	1	25000	1	25000	
			Bramhapuri (FDCM)		1	25000	1	25000	1	25000	1	25000	1	25000	1	25000	1	25000	
			Central Chanda (FDCM)		1	25000	1	25000	1	25000	1	25000	1	25000	1	25000	1	25000	
			West Chanda (FDCM)		1	25000	1	25000	1	25000	1	25000	1	25000	1	25000	1	25000	
	Total				6	150000	6	150000	6	150000	6	150000	6	150000	6	150000			
13	Purchase of G.P.S. atleast one for each range.	5.5.4 (b)	Bramhapuri (T)	Each instrument approx. cost Rs. 15000/-	2	30000	2	30000	2	30000	0	0	0	0	0	0			
			Central Chanda (T)		3	45000	2	30000	2	30000	0	0	0	0	0	0	0		
			Chandrapur (T)		2	30000	2	30000	1	15000	0	0	0	0	0	0	0		
			Bramhapuri (FDCM)		2	30000	2	30000	1	15000	0	0	0	0	0	0	0		
			Central Chanda (FDCM)		2	30000	2	30000	0	0	0	0	0	0	0	0	0		
			West Chanda (FDCM)		2	30000	2	30000	0	0	0	0	0	0	0	0	0		
	Total				13	195000	12	180000	6	90000	0	0	0	0	0	0			
14	Provision for suitable trap cage, treatment cage and transport cage atleast one for each range	5.5.4 (e)	Bramhapuri (T)	Set of 3 cages costs Rs. 300000/- each	1	300000	0	0	0	0	0	0	0	0	0	0			
			Central Chanda (T)		1	300000	0	0	0	0	0	0	0	0	0	0	0		
			Chandrapur (T)		0	0	0	0	1	300000	0	0	0	0	0	0	0		
			Bramhapuri (FDCM)		0	0	0	0	0	0	1	300000	0	0	0	0	0		
			Central Chanda (FDCM)		0	0	0	0	0	0	0	0	1	300000	0	0	0		
			West Chanda (FDCM)		0	0	1	300000	0	0	0	0	0	0	0	0	0		
	Total				2	600000	1	300000	1	300000	1	300000	1	300000	0	0			
15	Training of front line staff in wildlife management.	5.5.5	Bramhapuri (T)	Per training camp costs approx. Rs. 5000/- (1 training camp per range per year)	6	30000	6	30000	6	30000	6	30000	6	30000	6	30000			
			Central Chanda (T)		7	35000	7	35000	7	35000	7	35000	7	35000	7	35000	7	35000	
			Chandrapur (T)		5	25000	5	25000	5	25000	5	25000	5	25000	5	25000	5	25000	
			Bramhapuri (FDCM)		5	25000	5	25000	5	25000	5	25000	5	25000	5	25000	5	25000	
			Central Chanda (FDCM)		4	20000	4	20000	4	20000	4	20000	4	20000	4	20000	4	20000	
			West Chanda (FDCM)		4	20000	4	20000	4	20000	4	20000	4	20000	4	20000	4	20000	
	Total				31	155000	31	155000	31	155000	31	155000	31	155000	31	155000			

Sr. No.	Name of the Activity	Plan para no.	Name of Division	Details of Expenditure	Year wise Break up											
					2020-21		2021-22		2022-23		2023-24		Total			
					Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount		
1	2	3	4	5	17	18	19	20	21	22	23	24	27	28		
11	Purchase of Tranquilising equipment for division	5.5.4 (a)	Bramhapuri (T)	Rs. 200000/- per Tranquilizing gun	0	0	0	0	0	0	0	0	0	0		
			Central Chanda (T)		0	0	0	0	0	0	0	0	0	1	200000	
			Chandrapur (T)		0	0	0	0	0	0	0	0	0	0	1	200000
			Bramhapuri (FDCM)		0	0	0	0	0	0	0	0	0	0	1	200000
			Central Chanda (FDCM)		0	0	0	0	0	0	0	0	0	0	1	200000
			West Chanda (FDCM)		0	0	0	0	0	0	0	0	0	0	1	200000
	Total				0	0	0	0	0	0	0	0	5	1000000		
12	Purchase of Tranquilising drugs and accessory for division	5.5.4 (a)	Bramhapuri (T)	Rs. 25000/- per year per division	1	25000	1	25000	1	25000	1	25000	10	250000		
			Central Chanda (T)		1	25000	1	25000	1	25000	1	25000	10	250000		
			Chandrapur (T)		1	25000	1	25000	1	25000	1	25000	10	250000		
			Bramhapuri (FDCM)		1	25000	1	25000	1	25000	1	25000	10	250000		
			Central Chanda (FDCM)		1	25000	1	25000	1	25000	1	25000	10	250000		
			West Chanda (FDCM)		1	25000	1	25000	1	25000	1	25000	10	250000		
	Total				6	150000	6	150000	6	150000	6	150000	60	1500000		
13	Purchase of G.P.S. atleast one for each range.	5.5.4 (b)	Bramhapuri (T)	Each instrument approx. cost Rs. 15000/-	0	0	0	0	0	0	0	0	6	90000		
			Central Chanda (T)		0	0	0	0	0	0	0	0	0	7	105000	
			Chandrapur (T)		0	0	0	0	0	0	0	0	0	5	75000	
			Bramhapuri (FDCM)		0	0	0	0	0	0	0	0	0	5	75000	
			Central Chanda (FDCM)		0	0	0	0	0	0	0	0	0	4	60000	
			West Chanda (FDCM)		0	0	0	0	0	0	0	0	0	4	60000	
	Total				0	0	0	0	0	0	0	0	31	465000		
14	Provision for suitable trap cage, treatment cage and transport cage atleast one for each range	5.5.4 (e)	Bramhapuri (T)	Set of 3 cages costs Rs. 300000/- each	0	0	0	0	0	0	0	0	1	300000		
			Central Chanda (T)		0	0	0	0	0	0	0	0	0	1	300000	
			Chandrapur (T)		0	0	0	0	0	0	0	0	0	1	300000	
			Bramhapuri (FDCM)		0	0	0	0	0	0	0	0	0	1	300000	
			Central Chanda (FDCM)		0	0	0	0	0	0	0	0	0	1	300000	
			West Chanda (FDCM)		0	0	0	0	0	0	0	0	0	1	300000	
	Total				0	0	0	0	0	0	0	0	6	1800000		
15	Training of front line staff in wildlife management.	5.5.5	Bramhapuri (T)	Per training camp costs approx. Rs. 5000/- (1 training camp per range per year)	6	30000	6	30000	6	30000	6	30000	60	300000		
			Central Chanda (T)		7	35000	7	35000	7	35000	7	35000	7	35000	70	350000
			Chandrapur (T)		5	25000	5	25000	5	25000	5	25000	5	25000	50	250000
			Bramhapuri (FDCM)		5	25000	5	25000	5	25000	5	25000	5	25000	50	250000
			Central Chanda (FDCM)		4	20000	4	20000	4	20000	4	20000	4	20000	40	200000
			West Chanda (FDCM)		4	20000	4	20000	4	20000	4	20000	4	20000	40	200000
	Total				31	155000	31	155000	31	155000	31	155000	310	1550000		

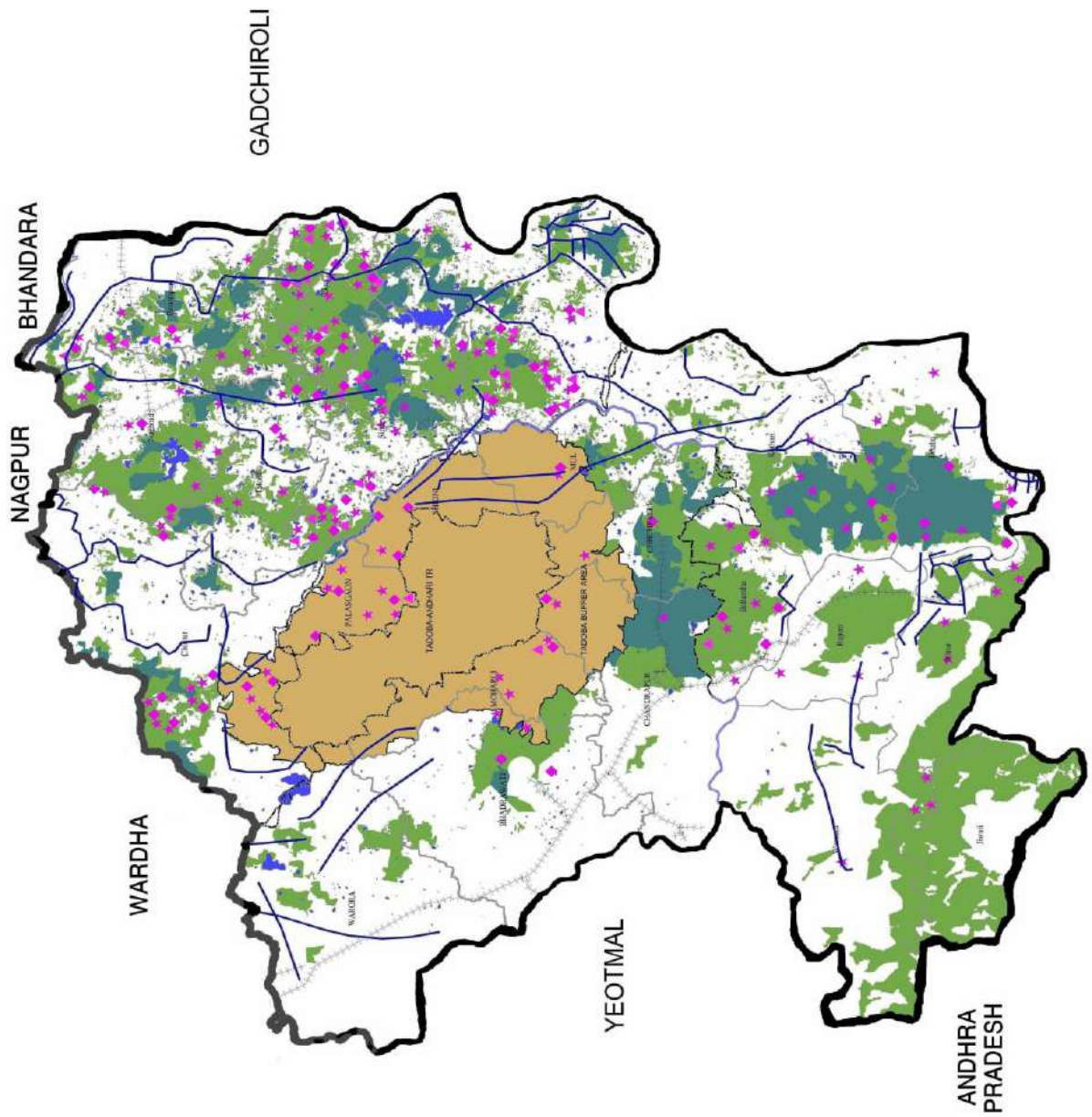
Sr. No.	Name of the Activity	Plan para no.	Name of Division	Details of Expenditure	Year wise Break up													
					2014-15		2015-16		2016-17		2017-18		2018-19		2019-20			
					Qty	Amount	Qty	Amount	Qty	Qty	Amount	Amount	Qty	Amount	Qty	Amount		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
16	Provision for compensation to be paid in case of cattle kill,human injury or death or crop damage by wild animals	6.3	Bramhapuri (T)	As per Govt. of Maharashtra GR dated 2.7.2010	0	5000000	0	5000000	0	5000000	0	5000000	0	5000000	0	5000000		
			Central Chanda (T)		0	5000000	0	5000000	0	5000000	0	5000000	0	5000000	0	5000000	0	5000000
			Chandrapur (T)		0	3000000	0	3000000	0	3000000	0	3000000	0	3000000	0	3000000	0	3000000
			Bramhapuri (FDCM)		0	1000000	0	1000000	0	1000000	0	1000000	0	1000000	0	1000000	0	1000000
			Central Chanda (FDCM)		0	1000000	0	1000000	0	1000000	0	1000000	0	1000000	0	1000000	0	1000000
			West Chanda (FDCM)		0	1000000	0	1000000	0	1000000	0	1000000	0	1000000	0	1000000	0	1000000
			Total					0	16000000	0	16000000	0	16000000	0	16000000	0	16000000	0
17	Provision for yealy census of wild animal (wages for labour,material etc)	7.2	Bramhapuri (T)	2 leabour for 6 days = 12 MD x 250 per day = 3000/- Material cost per beat 500/- Total Amount = 3500 per year	92	322000	92	322000	92	322000	92	322000	92	322000	92	322000		
			Central Chanda (T)		95	332500	95	332500	95	332500	95	332500	95	332500	95	332500	95	332500
			Chandrapur (T)		65	227500	65	227500	65	227500	65	227500	65	227500	65	227500	65	227500
			Bramhapuri (FDCM)		18	63000	18	63000	18	63000	18	63000	18	63000	18	63000	18	63000
			Central Chanda (FDCM)		33	115500	33	115500	33	115500	33	115500	33	115500	33	115500	33	115500
			West Chanda (FDCM)		23	80500	23	80500	23	80500	23	80500	23	80500	23	80500	23	80500
	Total				326	1141000	326	1141000	326	1141000	326	1141000	326	1141000	326	1141000		
18	Purchase of Camera trap for Phase-IV monitoring once in a year	7.2	Bramhapuri (T)	Each instrument approx. cost Rs. 7000/- (two pair of camera each beat) purchase all camera in first year and batteries every year	368	2576000	0	170000	0	170000	0	170000	0	170000	0	170000		
			Central Chanda (T)		380	2660000	0	180000	0	180000	0	180000	0	180000	0	180000	0	180000
			Chandrapur (T)		260	1820000	0	120000	0	120000	0	120000	0	120000	0	120000	0	120000
			Bramhapuri (FDCM)		72	504000	0	35000	0	35000	0	35000	0	35000	0	35000	0	35000
			Central Chanda (FDCM)		132	924000	0	60000	0	60000	0	60000	0	60000	0	60000	0	60000
			West Chanda (FDCM)		92	644000	0	42000	0	42000	0	42000	0	42000	0	42000	0	42000
	Total				1304	9128000	0	607000	0	607000	0	607000	0	607000	0	607000		
	Grand Total				2602	58338500	1265	49193000	1262	50503000	1258	51263000	1253	49863000	1250	48863000		

Sr. No.	Name of the Activity	Plan para no.	Name of Division	Details of Expenditure	Year wise Break up											
					2020-21		2021-22		2022-23		2023-24		Total			
					Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount		
1	2	3	4	5	17	18	19	20	21	22	23	24	25	26		
16	Provision for compensation to be paid in case of cattle kill,human injury or death or crop damage by wild animals	6.3	Bramhapuri (T)	As per Govt. of Maharashtra GR dated 2.7.2010	0	5000000	0	5000000	0	5000000	0	5000000	0	5000000		
			Central Chanda (T)		0	5000000	0	5000000	0	5000000	0	5000000	0	5000000	0	5000000
			Chandrapur (T)		0	3000000	0	3000000	0	3000000	0	3000000	0	3000000	0	3000000
			Bramhapuri (FDCM)		0	1000000	0	1000000	0	1000000	0	1000000	0	1000000	0	1000000
			Central Chanda (FDCM)		0	1000000	0	1000000	0	1000000	0	1000000	0	1000000	0	1000000
			West Chanda (FDCM)		0	1000000	0	1000000	0	1000000	0	1000000	0	1000000	0	1000000
	Total				0	16000000	0	16000000	0	16000000	0	16000000	0	16000000		
17	Provision for yealy census of wild animal (wages for labour,material etc)	7.2	Bramhapuri (T)	2 leabour for 6 days = 12 MD x 250 per day = 3000/- Material cost per beat 500/- Total Amount = 3500 per year	92	322000	92	322000	92	322000	92	322000	920	3220000		
			Central Chanda (T)		95	332500	95	332500	95	332500	95	332500	95	332500	950	3325000
			Chandrapur (T)		65	227500	65	227500	65	227500	65	227500	65	227500	650	2275000
			Bramhapuri (FDCM)		18	63000	18	63000	18	63000	18	63000	18	63000	180	630000
			Central Chanda (FDCM)		33	115500	33	115500	33	115500	33	115500	33	115500	330	1155000
			West Chanda (FDCM)		23	80500	23	80500	23	80500	23	80500	23	80500	230	805000
	Total				326	1141000	326	1141000	326	1141000	326	1141000	3260	11410000		
18	Purchase of Camera trap for Phase-IV monitoring once in a year	7.2	Bramhapuri (T)	Each instrument approx. cost Rs. 7000/- (two pair of camera each beat) purchase all camera in first year and batteries every year	0	170000	0	170000	0	170000	0	170000	368	4106000		
			Central Chanda (T)		0	180000	0	180000	0	180000	0	180000	0	180000	380	4280000
			Chandrapur (T)		0	120000	0	120000	0	120000	0	120000	0	120000	260	2900000
			Bramhapuri (FDCM)		0	35000	0	35000	0	35000	0	35000	0	35000	72	8190000
			Central Chanda (FDCM)		0	60000	0	60000	0	60000	0	60000	0	60000	132	14640000
			West Chanda (FDCM)		0	42000	0	42000	0	42000	0	42000	0	42000	92	10220000
	Total				0	607000	0	607000	0	607000	0	607000	1304	14591000		
	Grand Total				1248	48313000	1247	48263000	1246	47963000	1246	48163000	13877	500725500		

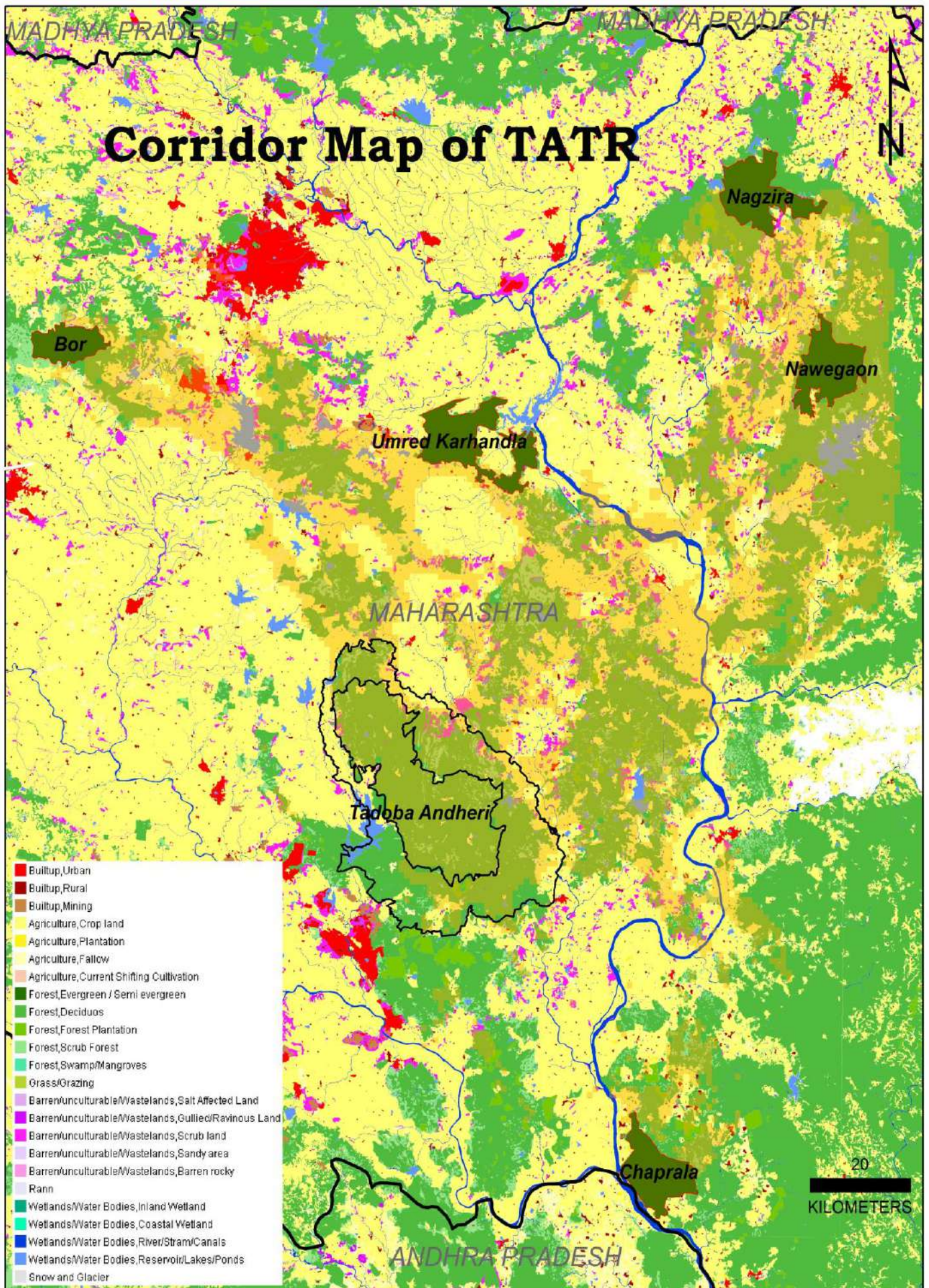
MAP OF TADOBA ANDHARI LANDSCAPE (CHANDRAPUR DISTRICT)



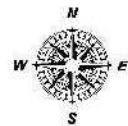
MAP SHOWING PRESENCE OF TIGER IN CHANDRAPUR DISTRICT



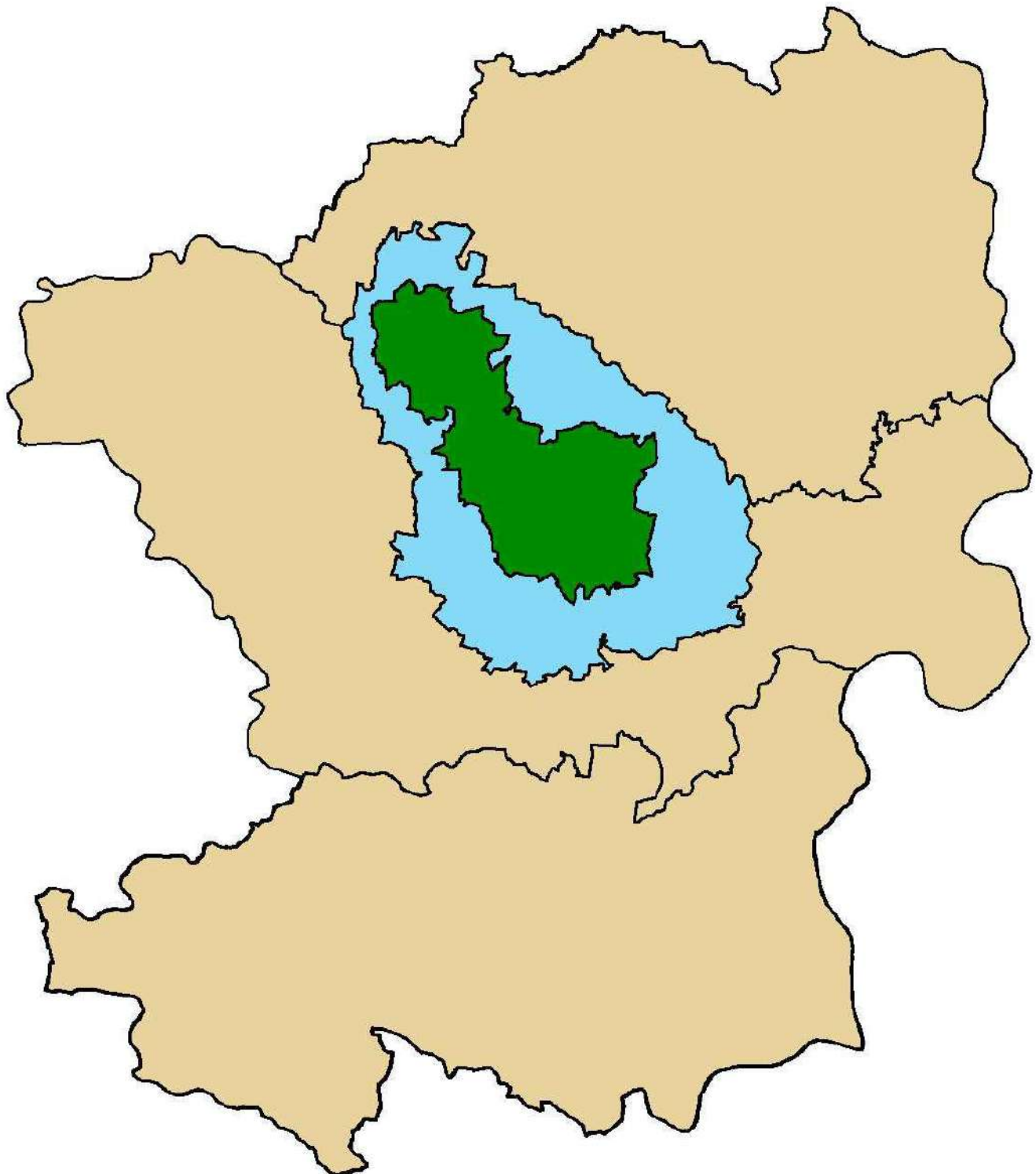
Legend	
	CIRCLE BOUNDARY
	DIVISION BOUNDARY
	RANGE BOUNDARY
	PROTECTED AREA
	RFPF AREA
	FDCM AREA
	FEMALE TIGER
	MALE TIGER
	CUBS
	RIVER
	CANAL
	RAILWAY
	HIGHWAY
	RANGE NAME
	TANK






Zone Map of Tadoba Andhari Tiger Reserve



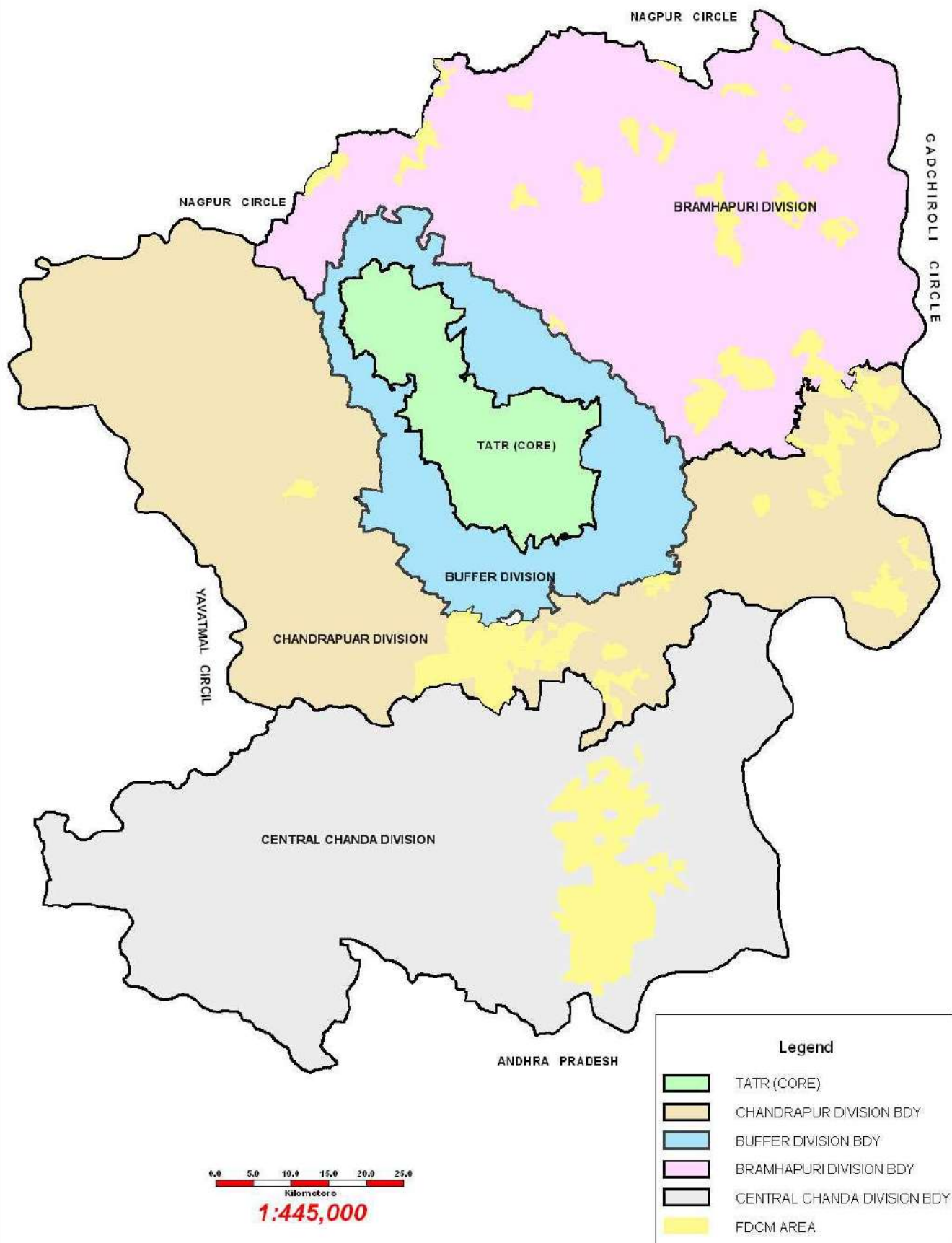
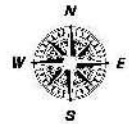
0.0 5.0 10.0 15.0 20.0 25.0
Kilometers
1:442,000



Legend

	CORE BDY
	BUFFER BDY
	DIVISION BDY

MAP OF TADOBA ANDHARI LANDSCAPE (CHANDRAPUR DISTRICT)



EXECUTIVE SUMMARY

CHANDRAPUR (NON-BUFFER) FOREST DIVISION WORKING PLAN 2014-15 TO 2023-24

AUTHOR : Dr.Pravin D.Chavan, Conservator of Forests, Working Plan Division, Yavatmal.

1. Introduction: Working Plan of erstwhile Chandrapur Forest Division authored by Dr.S.S.Srivastava expired during 2012-13. Revision of this working plan was initiated in the year 2008. The PWPR-I prepared by Shri B.S.K.Reddy, Chief Conservator of Forests (T), Chandrapur was placed before the State Level Working Plan Committee and was accorded approval vide PCCF's letter dated 16th June, 2011. Based on the approved PWPR-I the current PWPR-II has been prepared.

The part forest area of erstwhile Chandrapur Forest division and some part of forest area in charge of FDCM has been notified as Buffer area of Tadoba Andhari Tiger Reserve (TATR) vide Notification No.WLP 1009/CR 229/F-1, Mumbai, dated 5th May, 2010. Later vide Govt.of Maharashtra Resolution No.WLP-2012/C.No.256/F-1, dated 22nd August, 2012 the original Chandrapur division was bifurcated into two new divisions, namely, the Buffer (TATR) Forest Division, under the administrative control of Field Director, TATR and the Chandrapur (Non-Buffer) Forest Division under the control of Chief Conservator of Forests, Chandrapur Circle.

The tract dealt with in this Working Plan comprises of the Chandrapur (Non-Buffer) Forest Division. However, The brief information of the Chandrapur (Non-Buffer) the division is as follows.

Chandrapur (Non-Buffer) Forest Division : This working plan deals with 62035.72 ha. forest area of the division. There are 5 ranges, 17 rounds and 65 beats in the division. The division is headed by Divisional Forest Officer, assisted by 2 Assistant Conservator of Forests, 6 Range Forest Officers, 34 Foresters and 102 Forest Guards and also 37 ministerial staff.

The forest area of Chandrapur (Non-Buffer) are more or less in compact block and situated in the northern part of the Chandrapur district. These areas are situated within the civil territories of Chandrapur, Mul, Warora, Bhadrawati, Chimur, Sindewahi and Pombhurna tehsils. The total human population of the Chandrapur district is 21.94 lakhs spread over an area of 11443 sq.km. in fifteen talukas. The Scheduled Caste population is 14.34% and Scheduled Tribes population is 18.12%. 44.94% of the population is labour, out of which 22.30 are agriculturist, 20.48% are agricultural labourers, 1.59% are small artisans and 29.06% are engaged in other activities. The average annual rainfall is 1382.44 mm, and temperature ranges from 12° C to 48° C.

The boundary of tract dealt in the North is bounded by Wardha district and in the East by Brahmapuri Forest Division, in the West by Yavatmal district & Wardha district and in the South by Central Chanda Forest Division.

According to Champion and Seth, the forest of the division corresponds mostly to Tropical dry deciduous forests and sub group 5A/C3 Southern Tropical dry mixed deciduous forests. The forest type is having a great variety of species. The composition, distribution and stocking of the forest are mostly influenced by edaphic and biotic factors. The quality of the forests varies from II to IVb and the density of crop varies from 0.4 to 0.7.

2. Forest Fauna : The area dealt in this working plan is rich in wildlife with resident tiger population and has a recurring human tiger interface problems. The wild animals found in area are tiger, leopard, sloth bear, wild dogs, jackal, Hyaena, Sambar, Chital, Nilgai, Indian Bison, wild boar, barking deer, etc. Number of birds and reptile species also occur in the area. Increasing human population, expanding coal industry, heavy grazing, fire, fragmentation of habitat and encroachment is adversely affecting wildlife population.

3. Forest Produce : Timber is utilized for construction, furniture and agricultural implements. Demand of timber and poles is increasing day by day. Firewood is still main source for domestic cooking in villages and small town. On an average annual timber production is 1550 m³ and revenue realized is Rs. 158 lacs. The average rate of timber comes to Rs. 10,204/m³ and the average rate of firewood comes to Rs.863/m³ .

4. Non Wood Forest Produce : Bamboo and Tendu leaves are the major MFP. Bamboo is extracted both through department and BILT. There are 20 tendu units in Non-Buffer division, which are sold by auction. Labourers get considerable amount from tendu leaves collection and the incentive bonus which is distributed to tendu leaves collectors, after deducting the administrative expenses from the royalty amount. Gum, moha flowers and seeds, hirda, behada, awala are some of the other major NWFP.

5. Past System of Management : Prior to reservation of these forests in 1879, there was no regulation or control over the felling of the forests. The reservation and commutation system was in force until 1888 thereafter it was replaced by the licence system. Upto 1893 purchasers were permitted to visit any parts of the forest and to select and cut their own material. From 1893 onwards these indiscriminate felling was put a stop and fellings were permitted only from the restricted areas. The first working plan was

prepared by Shri F.J.Langhorne (1897) for Moharli Range, Shri Poona Swami (1898) for Warora range & was introduced between 1897 to 1900. The first regular working plan was introduced in 1927. Details of previous working plans implemented in the past are given below.

- (i) S.A.Vahid's working plan (1927 to 1937)
- (ii) C.E.Hewatson's working plan (1936-37 to 1945-46)
- (iii) Singh's and Majumdar working plan (1949-50 to 1963-64)
- (iv) Kartar Singh's working plan (1977-78 to 1991-92)
- (v) Srivastava's working plan (2003-04 to 2012-13)

Kartar Singh's working plan was revised by Dr.S.S.Srivastava. The prescriptions and result of Srivastava plan is given below.

Forests were managed under following working circles.

1. Selection-Cum-Improvement Working Circle.
2. Improvement Working Circle.
3. Teak Plantation Working Circle.
4. Bamboo (Overlapping) Working Circle.
5. Non Wood Forest Produce (Overlapping) Working Circle.
6. Wildlife (Overlapping) Working Circle.

1. Selection-Cum-Improvement Working Circle :- The area included in this working circle was previously assigned to Improvement Working Circle. The total area allotted to this working circle was 21747.902 ha. divided into 18 felling series and 10 coupes in each felling series. The forests included are mostly of miscellaneous species with site quality in general being III and crop density varying from 0.5 to 0.7. The chief object of management was to improve and increase the proportion of valuable species by giving preferential treatment to natural regeneration and

planting of timber species. Selection and Improvement felling was prescribed. The selection girth was fixed at 135 cm girth at breast height for Teak, bija, ain, Shisham and Haldu, 120 cm for other timber species and 45 cm for garari and Lendia. The felling cycle was fixed 10 years and average area of each coupe was 100 – 125 ha.

Results: Objectives of this working circle could not be achieved because harvesting and other silvicultural works could not be carried out in the coupes falling within 10 km radius of TATR. Some of the areas included in this W.C. were devoid of trees of harvestable girth. In unworked coupes the crop has become congested and prevalence of climbers like Kukadranji resulted in suppression of natural regeneration.

2. Improvement Working Circle :- The area previously managed under coppice with Reserve, Kuran and Improvement W.C. were included in this working circle. The total area allotted was 60914.062 ha., site quality Iva, IVb with rare patches of III and density varies from 0.4 to 0.6. The crop was generally young to middle aged. The prime object of management was to give silvicultural rest to improve the crop and bring normalcy. The area was divided into 56 working series having 10 coupes in each series. The average area of coupe was 100 – 150 ha. The fellings were limited to improvement of crop only and no yield regulation was prescribed.

Results:- The objective of this working circle could not be achieved since harvesting and other silvicultural works could not be carried out in the coupes falling within 10 km radius of TATR. Large blank areas were also included in this W.C. Areas in the immediate vicinity of human habitations were reduced to scrubby growth due to heavy biotic pressure for grazing and illicit cutting. Implementation of SMC works led to control of soil erosion to some extent.

3. Teak Plantation Working Circle :- It includes the PBI areas of Teak Conversion W.C., uncovered PBI areas, Improvement Working Circle and all the teak plantations from 1975 to 2000. The total area allotted is 5986.770 ha., site quality II to IVa and crop density varies from 0.5 to 0.7. The crop was generally young to middle aged. The teak plantations included were mostly successful with site quality IV to II. The chief objective of management was to increase the percentage of teak in the forest and to convert existing uneven crop of inferior species into an even aged teak forest. The area was divided into 4 felling series having 10 coupes in each series. The silvicultural system prescribed was clear felling followed by artificial regeneration of genetically superior stock of teak.

Results :- The objective of this working circle have been partly achieved because harvesting and regeneration works could not be carried out in the coupes falling within buffer of TATR. Mixed forest have been successfully converted into the high quality teak forests. Soil erosion was controlled to some extent due to SMC measures undertaken.

4. Bamboo (Overlapping) Working Circle :- The working circle extends over the entire Chandrapur Forest division. The total area was 51546.38 ha., with 13 cutting series of which 3 were commercial and 10 were nistar felling series. The common variety of bamboo occurring is *Dendro calamus strictus*, forming the understorey all over the division. The special object of management was to attain optimum increment in the growth of bamboo and to meet nistar and commercial demand on sustained basis. A cutting cycle of 3 years was followed.

Results :- During the plan period in most of the due coupes bamboo working was done through BILT, contractors and department. Silvicultural operations are needed to reduce the density of bamboo clumps in the

forest and also special effort on cleaning in congested clumps are required to be undertaken.

5. Non Timber Forest produce (Overlapping) Working Circle :- It extends over the entire division with an area of 88648.734 ha. The object of management was to manage scientifically and utilize existing potential optimally to enhance productivity and provide employment to the local people. The objective could be partly achieved because other non timber forest produce available could not be fully tapped.

6. Wildlife (Overlapping) Working Circle :- It covered the entire forest division area. The objective was to sensitize local people about wildlife conservation and promote development and propagation of wildlife. Measures like sensitization of people and forest staff, regular monitoring of wild animals, increasing density of waterholes inside forest areas, meadow development and timely payment of compensation in conflict cases have been taken to mitigate the man-animal conflict situations.

PART II : FUTURE MANAGEMENT :

Based on the objectives of management and method of treatment, the working circles are prescribed. While assigning areas to various working circles the enumeration data, stock mapping and wildlife management issues have been taken into consideration. The following working circles are prescribed.

- (i) Selection-Cum-Improvement Working Circle.
- (ii) Improvement Working Circle.
- (iii) Afforestation Working Circle.
- (iv) Fodder Improvement Working Circle.
- (v) GIB Working Circle.

- (vi) Miscellaneous Working Circle.
- (vii) Bamboo (Overlapping) Working Circle.
- (viii) Wildlife Management (Overlapping) Working Circle.
- (ix) Joint Forest Management (Overlapping) Working Circle.
- (x) Non Wood Forest Produce (Overlapping) Working Circle.
- (xi) Forest Protection (Overlapping) Working Circle.

The area assigned to each working circle in the Chandrapur (Non-Buffer) Forest Division is given in the following table.

Sr. No.	Working Circle	Non-Buffer Division	
		Area in ha.	Percentage of area of Division
1.	Selection-Cum-Improvement	2424.10	3.91
2.	Improvement	30749.80	49.57
3.	Afforestation	18606.93	29.99
4.	Fodder Improvement	8470.43	13.65
5.	Miscellaneous	1784.46	2.88
	Total :-	62035.72	100

Demarcation and Preparation of Treatment Map :

Due coupes of all the working circles shall be demarcated one year in advance and treatment map shall be prepared by RFO after laying grids of 100 m x 100 m under guidance of ACF. The treatment map shall indicate :

- (i) **Type A** - Protection Area (Area with steep slopes $>25^\circ$, eroded area and area liable for erosion & 20 m wide strip on both sides of water courses).
- (ii) **Type B** - Blank area, area with less than 0.4 crown density.
- (iii) **Type C** - Pole crop and old plantation area with minimum 30% survival and minimum 1 ha. area.

(iv) **Type D** – Well stocked area, area with more than 0.4 crown density.

1. Selection-Cum-Improvement Working Circle :

Sr.No.	Particulars	NON-BUFFER
(i)	Total Area	2424.10 ha.
(ii)	No.of compartments	18
(iii)	No.of working series	02
(iv)	No.of coupes per w.s.	20
(v)	Av.area of coupe	60-70 ha.
(vi)	Working cycle	20 years
(vii)	Harvestable girth:	
	(a) Teak, Ain, Bija, Shisham & Haldu	120 cm
	(b) Other timber species	105 cm
	(c) Garadi & Lendia	45 cm
(viii)	Trees available per hectare annually for selection felling :	
	(a) Teak, Ain, Bija, Shisham & Haldu	2.00
	(b) Other timber species	7.00
	(c) Garadi & Lendia	10.00
(ix)	Estimated Annual Yield	526.88 m ³

Marking Techniques & Marking Rules :

- Before marking enumerate all trees above 15 cm girth in whole area of the coupe.
- In D type area origin of teak tree (coppice/seed) shall be noted.
- Marking shall be carried out by RFO under supervision of ACF.
- Trees above 45 cm gbh marked for felling shall bear digital no. and below 45 cm gbh coal tar number, hammer mark, geru band. Trees showing boundary demarcation shall not be marked for felling.
- **A Type** – No marking for felling.

- **B Type** – Marking of all dead trees, retaining 2 per ha. All live high stumps excluding NTFP & fruit species. Multiple coppice shoots & poles retaining the most vigorous one.
- **C Type** – Marking of poles to remove congestion maintaining spacing 1/3rd height of the pole.
 - Dead, diseased & malformed trees of timber species.
 - Multiple coppice shoots retaining the most vigorous one.
- **D Type** – Marking of all dead trees retaining 2 per ha.
 - All live high stumps excluding NTFP & fruit species.
 - Multiple coppice shoots & poles retaining the most vigorous one.
 - All malformed trees.
 - 50% of silviculturally available trees of selection girth.
 - Retain healthy good seed bearers trees.
 - Trees of coppice origin shall be marked retaining seed origin.
 - Retain trees within the radius of 300 m of sites of historical importance & eco-tourism sites.
 - Subsidiary silvicultural operations and plantation activity (NR & AR) shall be carried out in worked coupe.
 - Plantation under AR consists of restorative phase (SMC, PPO) & productive phase (Planting & maintenance).

Treatment Prescribed :-

- **A Type** : appropriate SMC works.
- **B Type** : improvement felling & plantation activities.
- **C Type** : thinning.
- **D Type** : selection & improvement felling.

2. Improvement Working Circle :

Sr.No.	Particulars	Non-Buffer
(i)	Total Area	30749.80 ha.
(ii)	No.of compartments	192
(iii)	No.of working series	22
(iv)	No.of coupes per w.s.	20
(v)	Av.area of coupes	60-70 ha.
(vi)	Working cycle	20 years

Treatments :- As under SCI WC in Non-Buffer division. In D type area over matured trees shall be reserved against felling.

3. Afforestation Working Circle :

Total area is 18606.93 ha. of 265 compartments, 13 working series and 20 coupes in each working series. Average area of coupe is 60-70 ha. 20 years working cycle.

Treatments :- As under SCI WC except selection felling subsidiary silvicultural operations and plantation activity (NR & AR) shall be carried out in due coupe. Plantation under AR consists of 2 years restoration phase and 5 years productive phase.

4. Fodder Improvement Working Circle :

Total area is 6233.32 ha. of 177 compartments in Non-Buffer Division. The area is divided in 3 working series with 20 coupes each.

Treatments :- Extensive soil moisture conservation works, uproot and burn obnoxious weeds, thorny shrubs & bushes, eradication of unpalatable grass in pre-flowering stage. Sowing of seeds of superior species of fodder grass like shedy, paunya, marvel, etc., after ploughing. Seed sowing or tussocks planting of grasses on excavated & heaped soil bund. Rotation is fixed for 3 years.

5. Great Indian Bustard Working Circle :

This total area is 2237.11ha. of 5 compartments in Non Buffer Division. The area is divided in one working series with 20 coupes.

6. Bamboo (Overlapping) Working Circle :

Total area in Non-Buffer Division is 19470.20 ha. A cutting cycle of 3 years is prescribed in 2 cutting series viz., Commercial and Nistar cutting series.

Treatment in Non-Buffer area :

- No culms below age of 2 years will be felled.
- No clumps considered fit for harvesting unless it contains more than 12 mature culms.
- All dead, decayed & dry bamboos to be removed.

7. Wildlife Management (Overlapping) Working Circle :

It includes the total forest area of Non-Buffer Forest Division. Protection and conservation of wildlife, its habitat, habitat improvement, educate & motivate local people for protection & conservation of wild animals, promoting eco-tourism & other eco-development activities, and reduce biotic interference affecting growth of wildlife, are main objectives.

8. Non-Wood Forest Produce (Overlapping) Working Circle :

It includes the entire forest area of the Non-Buffer Forest Division. Tendu is major MFP followed by moha, hirda, behada, awala, gum & other medicinal species. Plantations in various working circles are recommended. Involvement of local people through JFMC is proposed is production & management.

9. Joint Forest Management (Overlapping) Working Circle :

In Non-Buffer Forest division 216 JFM committees constituted, 32 villages brought under FDA. 140 JFMC's are registered and 26335 ha. forest area is allotted for protection.

JFMC may be enrolled as PIA in various forestry operations. The microplan for each village shall be prepared in consultation with the local people.

10. Forest Protection (Overlapping) Working Circle :

It includes entire forest area of Non-Buffer Forest Division. Protection of the forest from illicit felling, encroachment, fire, grazing & poaching with co-operation of local people & through JFMC is one of the main objective. Improving communication and mobility of staff with reward & informer system are the tools for forest protection.

11. Miscellaneous Working Circle :

Total area of Non-Buffer division total area included is 1784.46 ha. of 120 compartments. These areas are under encroachment or submerged under water. Demarcation & eviction of encroachment is recommended.

12. Biodiversity :

Forest area of the tract dealt is very rich in floral & faunal diversity. As per the provision of the Biodiversity Act, 2002 and rules 2004, district level, taluka level & village level biodiversity management committees have to be formed. In Non-Buffer Division 36 village level committees have been constituted so far. Documentation of available biological resources by preparing People's Biodiversity Registers is needed to be done on priority.

13. Forest Rights : Under the Scheduled Tribe & Other Traditional Forest Dwellers Act 2006, the status is as given below.

Particulars	Non-Buffer
A. Individual Rights :	
(i) Claims received at village level	10820
(ii) Claims forwarded to SDO	357
(iii) Claims sent to District Level Committee	357
(iv) Claims accepted by District Level Committee	357
B. Community Rights :	
(i) Claims received & accepted by District Level Committee.	12
C. Claims for common facilities :	
(i) Claims received & settled.	03

14. Miscellaneous Regulations :

The following aspects are given to be used as regulatory tools in implementation of this plan. Demarcation & marking techniques, Harvesting and disposal of forest produce, Irregular harvesting, Demarcation and maintenance of boundaries, Nursery and plantation techniques, Techniques of subsidiary silvicultural operations such as CBO, cleaning, thinning, Guidelines for soil and moisture conservation measures, Guidelines for forest protection from fire, Proper implementation of working plan to avoid deviation, Tribal welfare & Maintenance of land records.
