

SUMMARY OF THE WORKING PLAN FOR GADCHIROLI FOREST DIVISION

FOR THE PERIOD FROM 2007 -2008 TO 2016 -2017
PART-I

SITUATION :

This Working Plan covers Reserved and Protected Forest areas admeasuring 218529.27 Ha. in charge of the Gadchiroli Forest Division which is situated in the middle of Gadchiroli District and within the civil territories of Gadchiroli, Dhanora, part of Chamorshi, Korchi, Kurkheda and Armori Tahsils. The above area is exclusive of 882.22 Ha. Zupdi Jungle. The forest areas are more or less in compact blocks.

CONFIGURATION:

The area is undulating and hilly, the hills being low in height. The forest areas situated on the triangle of high lands forming a table land, which runs the entire length of the western portion of the tract. Numerous hills rise on this table land mainly on the north-eastern, eastern and south-eastern sides of the district. But there is no regular range. Main Blocks of hills are Palasgarh, Gewardha, Satinala and Tipagarh. Wainganga is the main river and Khobragadi, Garvi, Kathani are its tributaries. Other rivers are Tipagharhi and Sati and also there are many seasonal nalas join these tributaries.

GEOLOGY :

The geological formation throughout the division is mainly of Archaean series.

CLIMATE :

The weather remains hot and dry for the major part of the year. The mean maximum temperature is 45.46°C and the mean minimum temperature is about 13.1°C. The highest and lowest temperatures recorded are 46.5°C. in summer and 7°C. during winter. The total average rainfall over the area is 1976 mm.

WATER SUPPLY :

Though the area receives maximum rainfall, water shortage is generally felt during summer season.

BOUNDARIES :

The state of maintenance of boundary lines and pillars is very poor. In case of 'B' class Reserved Forests and Protected Forests, the boundaries do not exist at most of the places, thus leading to encroachment. Even village boundaries of surveyed villages are also not maintained. Unsurveyed villages are still left without proper demarcation. There are 115 unsurveyed villages existing in Gadchiroli Forest Division.

RIGHTS AND CONCESSIONS :

Reserved Forests are not burdened with any kind of rights and concessions; however, some concessions have been granted to small and marginal agriculturists for their bonafied needs. In the Protected Forest areas, which were previously covered in the ex-jamindari forests, nistar rights are recorded in the "Nistar Patrakas" of the concerned village.

DESCRIPTION OF THE FORESTS :

The tract dealt with belong to the group "Tropical Dry Deciduous Forests" and sub-group "5A/C3- Southern Tropical Dry Deciduous Forests."

The local sub-types found are as follows :

A. TEAK FORESTS WITH DENSE BAMBOOS :

- (i) Plain sub-type
- (ii) Hill sub-type

B. TEAK FORESTS WITH SCANTY OR NO BAMBOOS :

- (i) Plain sub-type
- (ii) Hill sub-type

C. MIXED FORESTS WITH SCANTY OR NO BAMBOO :

The forest cover of this division is mainly consist of dry deciduous miscellaneous forests, with only 2.00 % of the area under teak. In teak area the percentage of teak varies from 20 to 30%. The major factors responsible for low percentage of teak are mainly due to edaphic and biotic factors. In mixed miscellaneous forests commonly found major species are *Ain*, *Bija*, *Harra*, *Beheda*, *Semal*, *Haldu*, *Dhaora*, *Bhirra*, *Tendu*, *Salai*, *Mowai*, *Khair*, *Sehna*, *Hirda*, *Behada*, *Aola*, *Char*, *Moha*, *Garadi* etc. Bamboo is found commonly in almost all the ranges of the division except in Kunghada range. The main species of bamboo found is *Dendrocalamus strictus*.

INJURIES TO WHICH THE CROP IS LIABLE :

FIRE:

Fire is one of the important causes of injuries to the forests result in burning of all leaf litter, preventing the formation of humus and thus causing hindrance to the soil building process. The fire also leads to heavy erosion of existing top soil in moderate to gentle slop areas. Fire affects the population of wild flora and fauna and also causing serious damage to the young regeneration. The fire affected saplings and pole crops develop hollowness.

ILLICIT CUTTING :

Illicit cutting is common, especially in the vicinity of human habitations to meet the requirement of small timber and firewood. However, organized illicit felling is not reported.

ENCROACHMENT :

Encroachment and girdling of trees is very common in and around the cultivated areas adjoining to the reserved and protected forests, especially in the areas where the boundaries are not properly demarcated.

GRAZING :

Grazing is another major cause of injury to the existing as well as young crops. The increasing cattle population causes serious biotic pressure leading to fast degradation of forests in and around the human habitation.

DROUGHT:

Drought is common in recent past leading to shortage of drinking water to the human and cattle during the peak summer months.

FROST:

Frost is not common in this area.

WIND:

Strong winds especially during early monsoon causes heavy damage to the mature trees resulting uprooting of trees thus causing huge loss of timber, if not removed and timely disposed off.

LOCAL CUSTOMS AND NEEDS :

The population of the Gadchiroli District as per 2001 census is 7.87 lakh. with a density of 51 per sq.km. The rate of increase in population is

17.26%. As per the cattle census of 1997, the total cattle in the district is 8.80 lakh. The density of the cattle is 57 per sq. km. Agriculturists are mainly dominant in the population but majority of them are small to marginal farmers. Malgujari tanks are the main and potential source of water for irrigation, however due to heavy siltation of tanks such irrigation facility is available only for a limited period. People mainly depend upon forests for timber, firewood, bamboo, grass and other NTFPs such as moha flowers & seeds, myrobalans, gum, honey and broom-grass.

MARKETS :

Forests of this division are mainly worked commercially for timber, firewood, bamboo and certain notified Non-timber Forest Produces. Timber, poles, and firewood are brought to the sale depots, where they are sold in open auction. Fuel beats are sometimes sold at jungle depots itself. Tendu leaves are sold by state wide auction through sealed tenders. Other Non-timber Forest Produces are collected by Maharashtra State Co-operative Tribal Development Corporation through its local collection centers run by the sub agents namely the Adivasi Vividh Karyakari Sahkari Sanstha. Gadchiroli is well connected by a good network of all weather roads connecting the neighbouring districts such as Chandrapur, Gondia, Bhandara and Rajnandgaon of Chhattisgarh State and thus providing good market facility.

METHODS OF HARVESTING AND TRANSPORT :

The annual coupes are mainly worked by FLCS and to some extent through department. Felling and logging of forest produce is mostly done by saw and improved implements. Timber and bamboo are transported to main sale depots situated at range/division headquarters and the firewood is transported to local sale depots as per the convenience. The major transportation work is carried out through private transporters by tender system. Departmental trucks and tractors are also used for transportation of timber and fire wood.

STAFF AND LABOUR :

Supervision of all the forestry works is done by the Dy. Conservator of Forests through A.C.F's & R.F.O's. There are 4 A.C.Fs, 14 R.F.Os, 57 Foresters, 181 Forest Guards, 5 Drivers, 1 Cleaner and 1 Surveyor, to cover the field works of the division. The ministerial staff consists of 1 Chief Accountant, 10 Accountants, 20 Clerks, 1 Daftari, 3 Watchman, 4 Peons, 1 Dak-runner in addition there are about 125 forest labourers in the division.

The major population of the area depends on agriculture and most of them are small and marginal farmers. After completion of their rain-fed kharif crops they are mainly dependant on forestry works. The labour potential of the division is high and F.L.C.S. has well trained labourers who do felling and logging operations. In addition to the local labourer, large number of labourers are also migrating from adjoining Chhattisgarh, Madhya Pradesh and Andrapradesh states, during the bamboo harvesting and tendu season. However during the rainy season availability of labourer becomes difficult for carrying out plantation works because of agricultural operations.

PAST HISTORY

A. RESERVED FORESTS :

The old reserved forest accounts for 7.85% where as the new reserved forests account for 77.66% of the total area of the division. The old reserved forests were constituted in 1879 under IFA, 1878. These are distributed in all 9 ranges of Gadchiroli Forest Division. Prior to reorganization, Gadchiroli, Chatgaon, Murumgaon, Dhanora ranges were the part of erstwhile East Chanda Division. After re-organization in the year 1983, the Gadchiroli Forest Division was carved out from the East Chanda Division with its headquarter at Gadchiroli. In the newly formed Gadchiroli Division, Gadchiroli, Chatgaon, Dhanora, Murumgaon were initially the main ranges till further re-organization took place. During the period of further reorganization Gadchiroli was divided in to two ranges namely Gadchiroli and Kundhada and Chatgaon was divided into Chatgaon and Pendhari. Hence the Gadchiroli Division was having 6 ranges namely Gadchiroli, Kundhada, Chatgaon, Pendhari, Dhanora and Murumgaon. Again as per GR FDM-2003/File No. 168/F-2, Mantralaya, Mumbai-400 032, dated 10th November, 2005- Gadchiroli Division was further reorganized into 9 territorial ranges, 33 rounds and 150 beats.

Prior to reservation of this forest in 1879, the tract was very much under developed state. There was no proper regulation or control over felling in this forests. After reservation of this forests, some protection measures were undertaken. The regular management of forests started from 1899 under different working plans, which are briefly discussed in subsequent paras.

The reserved forest areas of the tract being dealt with originally belonged to the Wairagarh Range of Chanda Forest Division. First Working Plan for this range, which covered Reserved Forests of Wadsa, Kurkheda, Armori, Chatgaon and Gadchiroli Ranges, was prepared between 1897 to 1900 by A.F.Lawrie.

This plan was quite simple and prescribed only Improvement Fellings. Valuable trees were felled and valueless trees were not felled. The working was not as per the silvicultural requirements.

In 1910 the improvement fellings were replaced by Coppice with standards, but the felling of inferior trees was not enforced except in coupes where the demand was keen.

WORKING PLAN OF VAHID (1927-1935):

This was the first plan prepared after carrying out detailed inspection of the forest. In this plan there were four working circles namely (1) High Forest Working Circle, (2) Coppice with Standard Working Circle (3) Low Forest Working Circle; (4) Low Forest Unworked Working Circle.

The best quality forests were placed under High Forest Working Circle. Under this working circle, conversion to uniform system was prescribed with rotation period of 60 years.

Medium quality forests were worked under Coppice with Standard Working Circle with rotation of 30 years. *Teak* and *Bija* are prescribed as most suitable standards.

Teak and Mixed Forest considered unfit for producing large size timber were allotted to Low Forest Working Circle with rotation of 30 to 40 years.

Remaining poor areas and forests were allotted to the Low Forest Unworked Working Circle in which no regular working was prescribed.

There was no Bamboo Working Circle during this plan period. The Silvicultural System prescribed was clear felling. Thinning works were not carried out because there was no sufficient demand for poles and small timbers.

HEWETSON'S WORKING PLAN (1936-1946):

This Plan replaced the working plan of Vahid. This working plan prescribes the following working circles viz. (1) Coppice with Standard Working Circle (2) Misc. Working Circle (3) Bamboo Working Circle (Overlapping).

COPPICE WITH STANDARD WORKING CIRCLE:

Hewetson brought all the forests allotted to High Forest and Low Forest Working Circles 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 was fixed for standards, due to non availability of growth statistics for different species.

MISC. WORKING CIRCLE:

This Working Circle mainly comprises of the areas having inferior and open forests and those areas which are far away from the markets.

BAMBOO WORKING CIRCLE (OVERLAPPING):

The areas which were not considered for bamboo working circle during Vahid's plan were brought under this Working Circle. The felling cycle of years was prescribed.

SINGH & MAJUMDAR'S PLAN 1949-64:

This Plan replaced the working plan of Hewetson. Under this plan forest areas were mainly divided into *Teak* & Miscellaneous forests depending upon the proportionate percentage of *teak* in the forest cover. The forest having *teak* with 15% & above were classified as *teak* forest and the remaining areas were brought under miscellaneous forests. The forests were classified for the first time on the functional basis into tree forests, minor forests, pasture forests and

miscellaneous forests. Based on the above classifications the following working circles were formed. (1) Coppice with Reserved Working Circle (2) Miscellaneous Working Circle.

KARTAR SINGH'S PLAN (1979-1992):

This plan replaced the working plan of Singh & Majumdar. In this plan the main objects were set as per the guidelines of National Forest Policy and the methods of treatment adopted were on the basis of functional classification of the Forests. This plan prescribed five Working Circles viz.-(1) Conversion Working Circle (2) C.W.R. Working Circle (3) Improvement Working Circle (4) Kuran Working Circle (5) Miscellaneous Working Circle.

CONVERSION WORKING CIRCLE:

The areas allotted to this Working Circle were the better quality forests of site quality mostly of III to IV. All these areas were considered to be suitable for clear felling & raising teak plantations.

COPPICE WITH RESERVE WORKING CIRCLE:

This Working Circle included well stocked Forests of inferior quality capable of producing small to medium sized timbers, poles & firewood. Mostly the forests under this Working Circle were of site quality varying from IV a to IV b with a few small patches of site quality III.

IMPROVEMENT WORKING CIRCLE:

The improvement Working Circle of Kartar Singh's Plan comprised marginal areas which failed to regenerate due to adverse biotic factors. These areas were degraded and were liable to erosion.

B.P.SINGH & ASHOK SHARMA'S PLAN (1993-94 to 2003-04):

This plan replaced the Working plan of Kartarsingh. This Working Plan comprises of the old reserved forest, new reserved forest and remaining protected forest as well as un-notified forest areas. The main object of this plan was to create sustainable forests to meet the regular market demand of timber, poles, firewood and bamboos and also to meet the local needs of the people. The main working circles were formed as follows.

1. Selection cum Improvement Working Circle
2. Afforestation Working Circle
3. NTFP (Overlapping) Working Circle
4. Tussar Working Circle
5. Wildlife (Overlapping) Working Circle
6. Bamboo (Overlapping) Working Circle

During the period of working plan 1993-94 to 2003-04, only 15% area of Selection cum Improvement Working Circle, and 19.94% area of Afforestation Working Circle, were worked. However under Afforestation Working Circle out of 13905.91 ha., plantation works were carried out only in 1054 ha. area. NTFP, Tussar and Wildlife Working Circles were not given any importance during the implementation of the plan. Area under Bamboo (Overlapping) Working Circle was mainly worked by the BILT. The details of working is given in the following Table.

Table No.1
**DETAILS OF WORKING CIRCLEWISE AREA WORKED DURING
1993-94 TO 03-04**

Sr.No	Working Circle	Area allotted in Ha.	Area actually worked in Ha. during 93-94 to 03-04	Percentage of Area worked.
1	2	3	4	5
1	Selection cum Improvement Working Circle	148195.86	23661.79	15.97
2	Afforestation Working Circle	69761.22	13905.91	19.94
3	NTFP(Overlapping) Working Circle	218529.08	--	--
4	Tussar Working Circle	572.00	--	--
5	Wildlife(Overlapping) Working Circle	218529.08	--	--
6	Bamboo (Overlapping) Working Circle	120282.57	N.A.	--

During the last 10 years only 241 coupes were worked out of (SCI-490+AWC-200) which were due for treatment under selection cum improvement working circle and Afforestation Working Circle.

The overall working was not found satisfactory. This resulted in shortfall of revenue and employment generation in the area. The main reasons found for not implementing the works were due to non-availability of funds, time and Naxalite menace.

One year extension was granted by the Government of India for coupe no. XI. Even then the work was not taken up within the stipulated time before March / 2005).

In Afforestation working circle, felling operations were carried out in 13905.91 ha. area and plantations were carried only in 1054 ha. area out of which 25 ha. was Teak plantation, 574 ha. was bamboo plantations and the remainder 455 ha. was miscellaneous plantations during the last 10 years, under various schemes of plantation as per information given by the Dy. Conservator of Forests, Gadchiroli.

03-04, only 15.97%
19.94% area of
forestation Working
but only in 1050 ha
even any importance
bamboo (Overlapping
working is given

ED DURING

Percentag e of Area worked.
5
15.97
19.94
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e worked out of 68
under selection-cu

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availability of funds

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ha. area out of wh
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The Gadchiroli Forest Division, has 1836.34 ha. of old teak plantations raised during 1956 to 2001 and these plantations did not receive any silvicultural treatments such as cleaning and thinning. These plantations are heavily infested with climbers. Hence silvicultural operations should be carried out in these old plantations regularly.

More than 60% area of the division is under bamboo and are distributed over 25 felling series, which are worked in 3 year working cycle. The maximum bamboo areas falls under commercial bamboo felling series (CBFS) and the same are worked by the Ballarpur Industries Ltd., whereas nistar bamboo felling series (NBFS) are worked by department to meet the requirement of nistar and the surplus quantity of long bamboo and bundles (2 Meter) are sold in open auction at sale depots. In this plan all old successful bamboo plantations has been included, under the Bamboo overlapping working circle.

Under the scheme of medicinal plants preservation and propagation of FRLHT, Bangalore, 200 ha. of area near Gadmauli in Compartment No. 426 in Chatgaon Range is demarcated and protected from grazing and other human biotic interference, so as to protect and preserve the existing medicinal plants which are identified in the M.P.C.A. list of Maharashtra in Gadchiroli Division.

The statistics of Tiger & Panther is given in the following table.

Table No.-2

CENSUS OF TIGER & PANTHER IN GADCHIROLI DIVISION

Name of the Animal	Year of Census				
	1989	1993	1997	2001	2005
Tiger	4	3	3	0	0
Panther	9	8	6	2	6

B. PROTECTED FORESTS:

Prior to the abolition of proprietary rights, the total rights and ownership of the Protected Forests were vested with Jamindars and Malgujaris. The local people were using the rights and concessions to meet their bonafied needs of timber, firewood, grasses, fencing material and grazing facilities at the pleasure of sole proprietors of the forests. However, some of the villages had the record of rights which were shown in the Wazib-ul-araz.

After abolition of the proprietary rights of Jamindars and Malgujars over this forest, all the rights were vested with the State Government. The first working scheme of these forests were prepared by V.K.Prabhu which was brought under implementation since 1965-66 prior to that, these forests were not

managed under any kind of silvicultural systems. This working scheme covered the areas of Kurkheda, Dhanora and Gadchiroli ranges of the East Chanda Division. After re-organization of East Chanda Division, Dhanora and Gadchiroli ranges were divided into four ranges namely 1. Gadchiroli 2. Chatgaon 3. Dhanora and 4. Murumgaon. The main objectives of this scheme were as follows.

1. To bring maximum area of ex-proprietary forests under scientific management.
2. To improve the health as well as economic value of the forest through plantations and preferential treatment.
3. To satisfy the local nistar demand of Forest Produce.
4. To arrest soil erosion and to improve the productivity of the soil.

Treatments were given based on the functional classification of the forests, accordingly four working circles were formed viz. SCI, CWR, Minor Forest Working circle, and Bamboo overlapping working circle. All good quality miscellaneous forests, forests with dense bamboo and forests situated on hills were kept under S.C.I. Forests near human settlements were allotted to C.W.R. system and forest areas around cultivation and occupied areas were allotted to Minor Forest Working Circle, and all forest areas having good quality bamboo were allotted to Bamboo overlapping Working Circle.

RESULTS OF PAST WORKING:

- (i) All good tree forests with economic value were brought under S.C.I. and C.W.R. Working Circles.
- (ii) The compartments formed included forest as well as non-forest areas. This give rise to serious protection problems. Protected Forests in the vicinity of villages as a consequence of this suffered from large scale encroachments.
- (iii) In C.W.R. Working Circle a number of species have diminished. These included *Ain*, *Bija*, *Moha*, *Beheda*, *Khair* and *Semal* as well as host of other species which are poor to no coppicers or which coppice only up to a certain age.
- (iv) Analysis of maps prepared at that time, reveals large scale pantographic errors.
- (v) No soil conservation measures were carried out though prescribed during the plan period, due to which soil erosion has accelerated.
- (vi) Enough importance was not given for the scientific management and improvement of NTFP
- (vii) Age old tussar cultivation practice was ignored.
- (viii) *Normalcy of forests could not be achieved.

STATISTICS OF GROWTH :

Growth study was done by Kartar Singh during the preparation of Working Plan for East Chanda Forest Division. As per stump analysis, teak can attain girth of 150 cm in 108 years whereas *Bija*, *Ain*, *Bhirra*, *Dhaora* and *Tendu* can attain girth of 135 cm in 112 years, 120 cm in 122 years, 135 cm in 108 years, 135 cm in 123 years and 135 cm in 120 years respectively. As per the enumeration data, the number of stems per ha in SCI Working Circle of V.K.Prabhu's scheme is 303.

WILDLIFE PRESERVATION :

Wildlife was managed under various rules and regulations, framed time to time till enactment of the wildlife (Protection) Act, 1972. This Act came into effect in Maharashtra with effect from 1st June, 1973. Subsequently, various rules were framed under this Act. No shooting blocks exists in Gadchiroli Forest Division. Compensation is paid to the cattle owners in case of death due to attack by tiger, panther and other wild animals. Compensation is also paid to the human life in case of death or injury caused by Tiger, Panther and other wild animals.

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