

INTRODUCTION

This Management Plan of Nagpur Forest Project Division envisages scientific management to the entire forest area, which has been transferred to Nagpur Forest Project Division vide Government Resolution No. FDC/1074/64746/F-5 dated 27th June 1978, FLD/1087/2462 G.R. 347/F2 dated 6.9.90 and GR No. FDC2006/Pra.Kra. 32/F-5, dated 17.10.2007. The Management Plan has been prepared for a period of ten years w.e.f. 2016-17 to 2025-26. It replaces the previous plan prepared by Shri A.M.Rathod, Divisional Manager, Forest Project Division, Nagpur for the period 2005-2006 to 2015-2016. The total area of the division considered for present Management Plan is 22143.13 ha. which is distributed in 87 compartments of Reserved Forests and Protected Forests and lying between latitude of 20^o 35' to 21^o 44' North and longitude of 78^o 15' to 79^o 40' East.

This Management plan shares the National vision of sustainable Management of Forest to meet the needs of present and future generation. The concept of sustainability in forest management implies not only sustainability of productive functions but also environmental functions (soil and water conservation, carbon sequestration etc.) and socio-economic benefits (meeting livelihood and basic needs) to forest dwellers and other forest dependant communities. Environment of forest fringe communities in the protection and management of forest resources through micro plans and eco-development plans has become imperative and must find linkages to management plan.

In the light of the above, the revised code is called "National Working Plan Code 2014" for sustainable management of forest and biodiversity was in forced from 1.4.2014. This Management Plan for Nagpur Forest Project Division has been prepared as per the guidelines of the Government of India contained in the National Working Plan Code 2014 and broadly follows the National Forest Policy of 1998 and Maharashtra State Forest Policy 2008 with emphasis of on conservation, preservation and protection of forest, wildlife and environment.

VISION STATEMENT :

Production forestry with biodiversity conservation and sustainable management of forests to meet the needs of present and future generation.

GOAL AND OBJECTIVES OF MANAGEMENT :

The following are the goal and objectives of management.

1. To enhance the productivity of the area by converting low value forests into a valuable teak stand.
2. To maintained perpetual growth in the teak plantation throughout their growing phase by carrying out silvicultural operations.
3. To improve the quality and productivity of the existing crop by improvement felling, tending operations in favour of valuable species and supplemental plantations wherever necessary.
4. To restore the vegetation cover of the degraded and open area by site protection and tending of National Regeneration, supplementing it with plantations of desire species wherever necessary.
5. To enhance the productivity of bamboo areas.
6. To protect, conserve and enhance the wildlife and its habitat in the managed forests.
7. To promote Non-Timber uses of forests such as Ecotourism, Non-Timber Forest Product, Medicinal Plants and Biodiversity.
8. To conserve Soil and Water Resources for ecological and environmental stability by effective monitoring.

SWOT ANALYSIS FOR ACHIEVING THE GOAL AND OBJECTIVES OF MANGEMENT.

The Strengths:-

1. Land bank of scientifically managed forests.
2. Assured rainfall area.
3. Scope for wasteland development.
4. Annually about 150 ha. is available for production forestry.
5. Series of successful teak plantation for intermediate revenue.
6. Huge employment generation in rural areas through forestry operations.
7. Balanced wildlife habitat management resulted in abandon population of wildlife in the forests.
8. Efficient and young dynamic trained staff.
9. Awareness of modern tools and technology.

The Weakness are :-

1. Predominantly the forest is of site quality IV.
2. Heavy biotic pressure on regeneration of forest and natural resources.
3. Out of total, area about 20% area is degraded where Natural Regeneration is very poor.
4. Labour shortage due to industrialization.
5. Increasing withdrawals from forest for livelihoods.
6. A break in recruitment of front line staff for a long time.

The Opportunities are :-

1. Fresh recruitments in front line staff during past plan period.
2. Streamlined forest management practices.
3. Providing livelihood opportunities through forestry activities.
4. Developing ecotourism destinations to involve local communities.
5. Sufficient rainfall in division. (1200 mm)
6. Marginal forests area under production systems.
7. Financial monitoring making administration stronger and transparent.
8. Scope for ecotourism.

The Threats are :-

1. Lack of trained staff to handle modern technologies.
2. Increasing population pressure on forest.
3. Forest and wildlife may be harmed by organized gangs.
4. Lack of funds to nourish opportunities.
5. Forest protection from fire, grazing, encroachment, illicit felling etc.
6. Soil erosion and Damage by Insects, Parasites and climbers.
7. Migration of labour to urban area.

STRATEGIES

1. Production forestry with biodiversity conservation.
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3. Expansion and development of tree cover outside forest area through turnkey plantations.

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4. Conservation of environment and the ecological stability through soil and moisture conservation works.
5. Facilitate sustainable harvesting collection, processing, marketing and generation of NTFP's and MAP's.
6. Wildlife and its habitat conservation, protection and development works.
7. Consolidation of boundaries.
8. Village development activities through FDCM CSR fund.

Proposed Management : The following territorial/Overlapping working circles/treatments are prescribed to achieve the goal and objectives.

1. **Teak Plantation Management Working Circle :** All successful teak plantations are included in this working circle.
2. **Teak Plantation & Reboisement Working Circle :** The untackled areas of Natural standing crop suitable for raising teak plantations and failed patches in the teak plantations raised under various schemes since 1970 onwards are included in this working circle.
3. **Improvement Working Circle :** Forest areas capable of producing medium to large sized timber, poles and firewood but not considered fit for harvesting due to preponderance of young crop has been included in this working circle.
4. **Afforestation Working Circle :** The open forest areas having density less than 0.4 and with rootstock and shrubby growth as well as open forests without rootstocks where artificial regeneration appears necessary to restore productivity are included in this working circle.
5. **Protection Working Circle :** This includes unworkable areas on account of steep and precipitous slopes, strips along nallas, catchment areas of small and big water bodies unworkable patches, rocky portions and encroachment are included in this working circle.
6. **Planting Stock Improvement Working Circle :** This includes Seed Stands and Seed Production Areas of successful teak plantations and Seed Orchards raised from identified teak clones.
7. **Miscellaneous Working Circle :** The areas reserved for timber and firewood depot, nurseries, staff colonies and areas under water bodies, roads etc are included in this working circle.

Besides above, five Overlapping Working Circles also proposed.

1. **Bamboo Production (Overlapping) Working Circle :** This includes all the areas where bamboo, natural or planted, silviculturally mature is available for harvesting.
2. **Wildlife Management (Overlapping) Working Circle :** It overlaps the whole area of the division and aims at ensuring the wildlife conservation and development activities.
3. **Medicinal and Aromatic Plants (Overlapping) Working Circle :** It overlaps the entire area of the division and aims at ensuring conservation and sustainable harvesting of MAP.
4. **Non-Timber Forest Produce (Overlapping) Working Circle :** It overlaps the entire area of the division and aims at ensuring conservation and sustainable harvesting of NTFP.
5. **Soil and Water Resource Management (Overlapping) Working Circle :** It overlaps the entire area of the division and aims at soil and moisture conservation works.

The main features of the present plan are :

1. The preliminary Management Plan was prepared by undersigned and presented before the State Level Committee on 24.11.2015. In the meeting it was emphasized that the Plan of Nagpur Division need to be reoriented in some aspects of National Working Plan Code, 2014. Accordingly the plan was reconstructed and presented before the State Level Committee on 15.3.2017. With the incorporation of suggestions of committee members, the draft Management Plan was approved by the committee.
2. The plan has been prepared as per the guidelines of the Government of India contained in the National Working Plan Code, 2014.
3. For revision of this plan and to write up the plan for all these areas, the field works (Enumeration & stock mapping) were started during the year 2015-16 & completed in the same year. Enumeration of the forest crop has been done by field staff. Growing stock has been assessed compartment wise based on the standard technique of resource survey assessment laying out quadrant of 0.1 ha. The analysis of the tree enumeration data was done with the help of computer

software in the division office. Stock mapping was done by field staff and wherever need ground truth verification was done by AM & DM.

4. Biomass of the growing stock has been assessed and the carbon sequestration value of the entire forest has been evaluated with GPG default value for carbon content of living biomass.
5. Biodiversity of the forest has been documented.
6. The teak plantation area has been drastically reduced because some good plantations were handed over to wildlife division for creation of new protected areas and buffer zone.
7. Area of Afforestation Working Circle of previous Management plan having density more than 0.4 has been included in newly constituted Improvement Working Circle in the present plan.
8. The Management plan has been completed in time inspite of constraints faced during writing of plan are as under.
 - FDCM does not have separate wing for preparation of management plan, hence, the undersigned him selves have been written the plans while performing his day to day duties.
 - Writing of Management Plan as per New Working Plan Code 2014 was challenging task, as existing field staff of this division is not well conversant to New Working Plan Code.
 - Lack of expertise to deal with caring out various types of survey, laying of sample plot. There is no facility of GIS mapping software and trained IT staff for creating interface between field data and plotting digital data.
 - Acute shortage of staff.

EXPECTED OUTCOME :

1. Productivity of the forest will be enhanced by supplemental artificial regeneration of genetically superior stock.
2. Improvement felling will improve the quality and productivity of the existing crop.
3. Series of Teak plantation will be created.
4. Sustained supply of medium to large sized timber will be achieved.

5. Vegetative cover on the degraded and open areas will be restored.
6. Best possible habitat to the wild animals will be provided which may minimize the man-animal conflict.
7. Tree cover outside forest area will be increased through turnkey plantations.
8. Forestry works will generate huge employment in the rural areas.

ABSTRACT OF PLAN PRESCRIPTIONS

Chapter No.	Para No./ Sub para No.	Prescribed activity	Remarks
II	TEAK PLANTATION MANAGEMENT WORKING CIRCLE		
2.2	GENERAL CONSTITUTION OF WORKING CIRCLE.	All successful teak plantations	
2.3	GENERAL CHARACTERISTICS OF VEGETATION	Crop is not very pure	
2.4	FELLING SERIES, CUTTING SECTIONS AND JFM AREAS.	No. Felling series 18. No JFM areas.	
2.5	BLOCK, COMPARTMENTS AND JFM AREAS.	No. of compartments 53 No JFM areas.	
2.6	SPECIAL OBJECTIVES OF MANAGEMENT.	Described in the Para.	
2.6.01	ANALYSIS OF THE CROPS	No. of trees per ha. and Natural Regeneration assessment has been estimated on the basis of partial enumeration.	
2.6.02	SILVICULTURAL SYSTEM	The silvicultural operations are the regular thinning.	
2.6.03	ROTATION PERIOD	80 years	
2.6.04	HARVESTABLE GIRTH	Thinning will be carried out as per yield and stand table of that site quality, plantation age and basal area per unit.	
2.6.05	REDUCING FACTORS AND REDUCED AREAS	Computed on the basis of yield table.	
2.6.06	FELLING CYCLE	First thinning will be carried out at the end of 10 th year of planting. Second and subsequent thinning after 5 years interval.	
2.6.07	DIVISION INTO PERIODS AND ALLOTMENT TO PERIODIC BLOCKS	Periodic blocks are not constituted.	
2.6.08	CALCULATION OF YIELD	Yield will be calculated on the basis of actual growing stock and Yield and stand table of that site quality and age.	
2.6.09	TABLE OF FELLING	Given in the Appendix No.III-A to III-F Volume-II.	
2.6.10	METHOD OF EXECUTING THE FELLING	Described in the para.	

2.6.11	SUBSIDIARY SILVICULTURAL OPERATIONS CLEANING AND THINNING	As per instructions issued by the Managing Director, FDCM Ltd., Nagpur.	
2.6.12	REGENERATION	Already regenerated area	
2.6.13	ASSOCIATED REGULATIONS AND MEASURES	Area will be protected from fire, grazing and illicit felling	
2.6.14	POST HARVESTING OPERATIONS	Harvested area will be protected from fire, grazing and illicit felling.	
III	TEAK PLANTATION AND REBOISEMENT WORKING CIRCLE		
3.2	GENERAL CONSTITUTION OF WORKING CIRCLE	Untackled natural stands and failed patches in teak plantations	
3.3	GENERAL CHARACTERISTICS OF VEGETATION.	Mixed forest contain trees of all age classes.	
3.4	FELLING SERIES, CUTTING SECTIONS AND JFM AREAS.	No. Felling series 11 No JFM areas.	
3.5	BLOCK, COMPARTMENTS AND JFM AREAS.	No. of compartments 36 No JFM areas.	
3.6	SPECIAL OBJECTIVES OF MANAGEMENT.	Described in the Para.	
3.6.01	ANALYSIS OF THE CROPS	No. of trees per ha. and Natural Regeneration assessment has been estimated on the basis of partial enumeration.	
3.6.02	SILVICULTURAL SYSTEM	“Conversion to uniform system with supplemental artificial regeneration of genetically superior Stock” by overwood removal.	
3.6.03	ROTATION PERIOD	No rotation period is prescribed.	
3.6.04	HARVESTABLE GIRTH	Forests of crop girths equal to or more than the value of Critical Crop Girth for that site quality and composition of species shall be considered to be mature and would qualify for the operation of removal of overwood for artificial regeneration by teak.	
3.6.05	REDUCING FACTORS AND REDUCED AREAS	The crop is uneven/irregular for which yield table is not prepared. Hence, when enumeration has been done for removal of trees the basal area is not used for density reduction.	
3.6.06	FELLING CYCLE	Felling cycle is not constituted as the areas in due course, will be converted into teak plantations by artificial regeneration of genetically superior stock.	
3.6.07	DIVISION INTO PERIODS AND ALLOTMENT TO PERIODIC BLOCKS	Periodic blocks are not constituted.	

3.6.08	CALCULATION OF YIELD	Yield will be regulated on area basis.	
3.6.09	TABLE OF FELLING	Given in Appendix No.IV and IV-A of Volume-II.	
3.6.10	METHOD OF EXCUTING THE FELLING	Described in the para.	
3.6.11	SUBSIDIARY SILVICULTURAL OPERATIONS CLEANING AND THINNING	As per instructions issued by the Managing Director, FDCM Ltd., Nagpur.	
3.6.12	REGENERATION	Area will be regenerated by genetically superior stock of teak.	
3.6.13	ASSOCIATED REGULATIONS AND MEASURES	Area will be protected from fire, grazing and illicit felling.	
3.6.14	POST HARVESTING OPERATIONS	Harvested area will be regenerated artificially and protected from fire, grazing and illicit felling.	
IV IMPROVEMENT WORKING CIRCLE			
4.2	GENERAL CONSTITUTION OF WORKING CIRCLE	Areas capable of producing medium to large sized timber.	
4.3	GENERAL CHARACTERISTICS OF VEGETATION	Miscellaneous crop	
4.4	FELLING SERIES, CUTTING SECTIONS AND JFM AREAS	No. Felling series 25 No JFM areas.	
4.5	BLOCK, COMPARTMENTS AND JFM AREAS	No. of compartments 74 No JFM areas.	
4.6	SPECIAL OBJECTIVES OF MANAGEMENT	Described in the Para.	
4.6.01	ANALYSIS OF THE CROPS	No. of trees per ha. and Natural Regeneration assessment has been estimated on the basis of partial enumeration.	
4.6.02	SILVICULTURAL SYSTEM	Prescribed removal of matured trees above the harvestable girth to create opening in the tree canopy, thereby, facilitates tree growth in the lower girth classes. It supports establishment of natural regeneration of Teak and other valuable light demander species.	
4.6.03	ROTATION PERIOD	No rotation is fixed as the basic object of management is to improve the growing stock.	
4.6.04	HARVESTABLE GIRTH	Harvestable girth for various important species, in SCI Working Circle, has been determined at maximum volume production as per the CAI & MAI curves in stem analysis exercises, carried out by the then CCF Working Plan Nagpur	

4.6.05	REDUCING FACTORS AND REDUCED AREAS	The crop is uneven/irregular for which yield table is not prepared. Hence, when enumeration has been done for removal of trees if silviculturally available, the basal area is not used for density reduction.	
4.6.06	FELLING CYCLE	The treatment cycle is fixed at ten years.	
4.6.07	DIVISION INTO PERIODS AND ALLOTMENT TO PERIODIC BLOCKS	Periodic blocks are not constituted.	
4.6.08	CALCULATION OF YIELD	The felling is not adopted for yield. Only Silvicultural tending operations will be done.	
4.6.09	TABLE OF FELLING	Given in Appendix V of Volume-II.	
4.6.10	METHOD OF EXECUTING THE FELLING	Described in the Para.	
4.6.11	SUBSIDIARY SILVICULTURAL OPERATIONS CLEANING AND THINNING	Described in the Para.	
4.6.12	REGENERATION	Gap planting. Preference will be given to the local valuable species.	
4.6.13	ASSOCIATED REGULATIONS AND MEASURES	Protection from fire, grazing and illicit felling is essential for success of natural and artificial regeneration.	
4.6.14	POST HARVESTING OPERATIONS	Gaps created due to harvesting will be regenerated artificially and protected from fire, grazing and illicit felling.	
V	AFFORESTATION WORKING CIRCLE		
5.2	GENERAL CONSTITUTION OF WORKING CIRCLE	Open forest areas having density less than 0.4.	
5.3	GENERAL CHARACTERISTICS OF VEGETATION	Degraded open forest areas interspersed with forest blanks or brushwood.	
5.4	FELLING SERIES, CUTTING SECTIONS AND JFM AREAS	No. Felling series 21 No JFM areas.	
5.5	BLOCK, COMPARTMENTS AND JFM AREAS	No. of compartments 44 No JFM areas.	
5.6	SPECIAL OBJECTIVES OF MANAGEMENT	Described in the Para.	
5.6.01	ANALYSIS OF THE CROPS	No. of trees per ha. and Natural Regeneration assessment has been estimated on the basis of partial enumeration.	

5.6.02	SILVICULTURAL SYSTEM	Area will be regenerated with suitable tree species depending on the site condition.
5.6.03	ROTATION PERIOD	No rotation period is fixed as the basic objectives of the management is to enhance the productivity of the forest.
5.6.04	HARVESTABLE GIRTH	Harvestable girth is not fixed.
5.6.05	REDUCING FACTORS AND REDUCED AREAS	Only windfallen, dead and extremely malformed trees will be marked for removal. Basal area is not used for density reduction.
5.6.06	TREATMENT CYCLE	The treatment cycle has been fixed at ten years.
5.6.07	DIVISION INTO PERIODS AND ALLOTMENT TO PERIODIC BLOCKS	Periodic blocks are not constituted.
5.6.08	CALCULATION OF YIELD	Only windfallen, dead and extremely malformed trees will be Enumerated for removal. Regular yield is not expected.
5.6.09	TABLE OF FELLING	Given in Appendix No.VI of Volume-II.
5.6.10	METHOD OF EXCUTING THE FELLING	Given in the Para.
5.6.11	SUBSIDIARY SILVICULTURAL OPERATIONS CLEANING AND THINNING	Cutback and soil and moisture conservation works.
5.6.12	REGENERATION	Area will be planted by suitable local species of timber and medicinal value as well as non-timber forest produces as per site requirement.
5.6.13	ASSOCIATED REGULATIONS AND MEASURES	Protection from fire and grazing is essential for success of natural and artificial regeneration.
5.6.14	POST HARVESTING OPERATIONS	Gaps created due to harvesting will be regenerated artificially and protected from fire, grazing and illicit felling.
VI	PROTECTION WORKING CIRCLE	
6.2	GENERAL CONSTITUTION OF THE WORKING CIRCLE	Left out area after assigning to respective working circle.
6.3	GENERAL CHARACTERISTICS OF VEGETATION	Unworkable areas on account of steep and precipitous slopes, rocky and refractory sites, catchment areas of water bodies.

6.4	FELLING SERIES, TREATMENT SECTIONS AND JFM AREAS	No. Felling series 20 No JFM areas.	
6.5	BLOCK, COMPARTMENTS AND JFM AREAS	No. of compartments 57 No JFM areas.	
6.6	SPECIAL OBJECTIVES OF MANAGEMENT	Described in Para.	
6.6.01	ANALYSIS OF THE CROPS	No. of trees per ha. and Natural Regeneration assessment has been estimated on the basis of partial enumeration.	
6.6.02	SILVICULTURAL SYSTEM	Soil conservation works, No harvesting, strict protection from fire and grazing.	
6.6.03	ROTATION PERIOD	No rotation period is fixed.	
6.6.04	HARVESTABLE GIRTH	Not fixed.	
6.6.05	REDUCING FACTORS AND REDUCED AREAS	Sustainable yield is not expected. Only wind fallen material will be removed.	
6.6.06	TREATMENT CYCLE	10 years.	
6.6.07	DIVISION INTO PERIODS AND ALLOTMENT TO PERIODIC BLOCKS	No need of periodic blocks.	
6.6.08	CALCULATION OF YIELD	Sustainable yield is not expected, hence yield is not calculated.	
6.6.09	TABLE OF FELLING	Given in Appendix No.VIII of Volume-II.	
6.6.10	METHOD OF EXCUTING THE TREATMENT	Described in the Para.	
6.6.11	SUBSIDIARY SILVICULTURAL OPERATIONS	Protection from fire, grazing and illicit felling. Soil conservation works.	
6.6.12	REGENERATION	Not recommended, except for reclamation of encroachment areas.	
6.6.13	ASSOCIATED REGULATIONS AND MEASURES	Regular maintenance of boundary pillars.	
VII	PLANTING STOCK IMPROVEMENT WORKING CIRCLE		
7.2	GENERAL CONSTITUTION OF WORKING CIRCLE	Seed Stands, Seed Production Areas and Seed Orchards mainly of teak.	
7.3	GENERAL CHARACTERISTICS OF VEGETATION	Predominantly teak crop of seed origin.	
7.4	FELLING SERIES, CUTTING SECTIONS AND JFM AREAS	No. Felling series 4 No JFM areas.	
7.5	BLOCK, COMPARTMENTS AND JFM AREAS	No. of compartments 7 No JFM areas.	
7.6	SPECIAL OBJECTIVES OF MANAGEMENT	Described in the Para.	
7.6.01	ANALYSIS OF THE CROPS	The crop is mainly of teak.	

7.6.02	SILVICULTURAL SYSTEM	Thinning will be carried out along with the regular thinning of the project division. Dead, dying, diseased, malformed & species other than seed bearers shall be gradually removed.
7.6.03	ROTATION PERIOD	80 years.
7.6.04	HARVESTABLE DIAMETER	Harvestable girth is not fixed.
7.6.05	REDUCING FACTORS AND REDUCED AREAS	Yield is not expected; hence reducing factor for density reduction is not applicable.
7.6.06	FELLING (TREATMENT) CYCLE	Treatment cycle is five years.
7.6.07	DIVISION INTO PERIODS AND ALLOTMENT TO PERIODIC BLOCKS	No need of periodic blocks.
7.6.08	CALCULATION OF YIELD	Sustainable yield is not expected, hence yield is not calculated.
7.6.09	TABLE OF FELLING	Given in the Appendix No.III-A to III-F Volume-II.
7.6.10	METHOD OF EXECUTING THE FELLING	Only dead, dying, diseased trees will be marked for removal.
7.6.11	SUBSIDIARY SILVICULTURAL OPERATIONS CLEANING AND THINNING	As per instructions issued by the Managing Director, FDCM Ltd., Nagpur.
7.6.12	REGENERATION	Already regenerated area
7.6.13	ASSOCIATED REGULATIONS AND MEASURES	Protected from fire, grazing and illicit felling.
7.6.14	POST HARVESTING OPERATIONS	Area will be protected from fire, grazing and illicit felling.
7.6.15	COLLECTION OF SEED	In the month of February to May.
VIII	MISCELLANEOUS WORKING CIRCLE	
8.2	GENERAL CONSTITUTION OF WORKING CIRCLE	Areas reserved for timber and firewood depot, Nurseries, roads, buildings, water bodies etc.
8.3	GENERAL CHARACTERISTICS OF VEGETATION	Area is under sale depot, nurseries, roads, building and waterbodies.
8.4	FELLING SERIES, CUTTING SECTIONS AND JFM AREAS	No. Felling series 13 No JFM areas.
8.5	BLOCK, COMPARTMENTS AND JFM AREAS	No. of compartments 34 No JFM areas.
8.6	SPECIAL OBJECTIVES OF MANAGEMENT	Described in Para.
8.6.01	ANALYSIS OF THE CROP	Few scattered patches of forests. Site quality III/IV to IV. The crop is mostly matured to middle aged, Crown density is less than 0.2.

8.6.02	SILVICULTURAL SYSTEM	Dead and windfallen trees will be harvested after enumeration.	
8.6.03	ROTATION PERIOD	Not prescribed	
8.6.04	HARVESTABLE DIAMETER	Not prescribed	
8.6.05	REDUCING FACTORS AND REDUCED AREAS	Not prescribed	
8.6.06	FELLING CYCLE	Not prescribed	
8.6.07	DIVISION INTO PERIODS AND ALLOTMENT TO PERIODIC BLOCKS	Not prescribed	
8.6.08	CALCULATION OF THE YIELD	Not prescribed	
8.6.09	TABLE OF FELLING	Not prescribed	
8.6.10	METHOD OF EXECUTING THE FILLING (CUTTING)	Dead/Dying trees will be enumerated in the month of October every year and harvesting will be carried out after approval of DM.	
8.6.11	SUBSIDIARY SILVICULTURAL OPERATIONS CLEANING AND THINNING	Not prescribed	
8.6.12	REGENERATION	Not prescribed	
8.6.13	ASSOCIATED REGULATION AND MEASURES	Area will be protected from Fire, Grazing and Illicit. Waterbodies will be protected from poachers.	
8.7	DETAILS OF AREAS UNDER NURSERIES, TIMBER DEPOTS, STAFF COLONIES AND OTHER	Given in the para.	
8.7.01	AREA UNDER NURSERY	31.39 ha.	
8.7.02	AREAS UNDER TIMBER DEPOTS	43.50 ha.	
8.7.03	AREA UNDER ROAD AND TANKS	344.03 ha.	
IX	BAMBOO PRODUCTION (OVERLAPPING) WORKING CIRCLE		
9.2	GENERAL CONSTITUTION OF WORKING CIRCLE	All natural Bamboo bearing areas and established Bamboo plantations.	
9.3	GENERAL CHARACTERISTICS OF VEGETATION.	Bamboo forms a middle storey in better quality areas. General characteristics described in respective working circle.	
9.4	FELLING SERIES, CUTTING SECTIONS AND JFM AREAS	The total area is 2443.17 ha. which is allotted to 13 felling series. No JFM area.	
9.5	BLOCK, COMPARTMENTS AND JFM AREAS.	Total area allotted is 2443.17 ha. spread in 34 comptt. No JFM areas.	
9.6	SPECIAL OBJECTIVES OF MANAGEMENT.	Described in the Para.	
9.6.01	ANALYSIS OF THE CROP	Described in the Para.	
9.6.02	SILVICULTURAL SYSTEM	Described in the Para.	

9.6.03	ROTATION PERIOD	After sporadic/Gregarious flowering clumps will be cleared felled.	
9.6.04	HARVESTABLE DIAMETER	Described in the Para.	
9.6.05	REDUCING FACTORS AND REDUCED AREAS	Described in the Para.	
9.6.06	FELLING CYCLE	3 years	
9.6.07	DIVISION INTO PERIODS AND ALLOTMENT TO PERIODIC BLOCKS	Described in the respective main working circle.	
9.6.08	CALCULATION OF THE YIELD	Described in the Para.	
9.6.09	TABLE OF FELLING	Given in Appendix No.IX-A to IX-E of Volume-II.	
9.6.10	METHOD OF EXECUTING THE FILLING (CUTTING)	Described in the Para.	
9.6.11	SUBSIDIARY SILVICULTURAL OPERATIONS CLEANING AND THINNING	Clumps cleaning, Circular trenches etc. Details given in the para.	
9.6.12	REGENERATION	Already regenerated.	
9.6.13	ASSOCIATED REGULARION AND MEASURES	Protection from Fire and Grazing.	
9.6.14	POST HARVESTING OPERATIONS	Protection from Fire and Grazing.	
9.7	STATUS OF SUCCESSFUL BAMBOO PLANTATION RAISED DURING PAST PLAN PERIOD	Given in the Para.	
9.8	GREGARIOUS FLOWERING	Described in the Para.	
9.9	PANCHAYATS (EXTENTION TO SCHEDULED AREAS) ACT 1996.	Not applicable to Nagpur District.	
X	WILD LIFE MANAGEMENT (OVERLAPPING) WORKING CIRCLE		
10.2	GENERAL CONSTITUTION OF WORKING CIRCLE	Entire area of the division	
10.3	GENERAL CHARACTERISTICS OF VEGETATION.	Described in the respective main working circle.	
10.4	FELLING SERIES, CUTTING SECTIONS AND JFM AREAS	Details given in the respective main working circle.	
10.5	BLOCK, COMPARTMENTS AND JFM AREAS	The total area is 22098.74 ha. which is directly divided into 85 compartments. No JFM areas.	
10.6	SPECIAL OBJECTIVES OF MANAGEMENT	To ensure wildlife (animals & plants found in wild) protection and conservation in the managed forests.	
10.6.01	ANALYSIS OF THE CROP	Described in the respective main working circle.	
10.6.02	SILVICULTURAL SYSTEM	Described in the respective main working circle.	
10.6.03	ROTATION PERIOD	Described in the respective main working circle.	
10.6.04	HARVESTABLE DIAMETER	Described in the respective main working circle.	

10.6.05	REDUCING FACTORS AND REDUCED AREAS	Described in the respective main working circle.	
10.6.06	FELLING CYCLE	Described in the respective main working circle.	
10.6.07	DIVISION INTO PERIODS AND ALLOTMENT TO PERIODIC BLOCKS	Described in the respective main working circle.	
10.6.08	CALCULATION OF THE YIELD	Described in the respective main working circle.	
10.6.09	TABLE OF FELLING	Described in the schedule of respective main working circle.	
10.6.10	METHOD OF EXECUTING THE FILLING (CUTTING)	Described in the respective main working circle.	
10.6.11	SUBSIDIARY SILVICULTURAL OPERATIONS CLEANING AND THINNING	Described in the respective main working circle.	
10.6.12	REGENERATION	Described in the respective main working circle.	
10.6.13	ASSOCIATED REGULARION AND MEASURES	Standing order (Wildlife) No.001.	
10.7	INJURIES TO WILD ANIMALS	Poaching, degradation of habitat, diseases, fire. Description given in the para.	
10.8	DAMAGES TO PROPERTIES AND INJURIES TO HUMAN DUE TO WILDLIFE	Damage to crop and Injuries to cattle and human. Described in the para.	
10.9	FUTURE MANAGEMENT	Described in the Para.	
10.10	CREATION OF DATA BASE	Given in the Para.	
10.11	HABITAT DEVELOPMENT WORKS	Waterhole development, Improvement in prey base, Eradication of invasive weed.	
10.12	ECO-DEVELOPMENT, AWARENESS GENERATION AND ECO-TOURISM	Described in the Para.	
XI	THE MEDICINAL & AROMATIC PLANTS (Overlapping) WORKING CIRCLE		
11.2	GENERAL CONSTITUTION OF WORKING CIRCLE	Entire forests area of the division.	
11.3	GENERAL CHARACTERISTICS OF VEGETATION	Described in detail in the respective working circles.	
11.4	FELLING SERIES, CUTTING SECTIONS AND JFM AREAS	Details given in the respective main working circle.	
11.5	BLOCK, COMPARTMENTS AND JFM AREAS	The total area is 22098.74 ha. which is directly divided into compartments. No JFM areas.	
11.6	SPECIAL OBJECTIVES OF MANAGEMENT	To conserve and develop all MAP existing in the forest.	
11.6.01	ANALYSIS OF THE CROP	Details given in the respective main working circle.	
11.6.02	SILVICULTURAL SYSTEM	Selection system. Only Silviculturally available MAP's will be harvested.	

11.6.03	ROTATION PERIOD	Annually or biannually depending upon the life-span of the individual species.
11.6.04	HARVESTABLE DIAMETER	Not prescribed.
11.6.05	REDUCING FACTORS AND REDUCED AREAS	Described in detail in the respective working circles.
11.6.06	FELLING CYCLE	Described in detail in the respective working circles.
11.6.07	DIVISION INTO PERIODS AND ALLOTMENT TO PERIODIC BLOCKS	Described in detail in the respective working circles.
11.6.08	CALCULATION OF THE YIELD	Potential data is not available hence yield calculation is not possible.
11.6.09	TABLE OF FELLING	Felling schedule is not prescribed
11.6.10	METHOD OF EXECUTING THE FILLING (CUTTING)	Described in the Para.
11.6.11	SUBSIDIARY SILVICULTURAL OPERATIONS CLEANING AND THINNING	Described in the respective working circles.
11.6.12	REGENERATION	Medicinal plant species shall be given due weight age (10 to 15 percent) in various plantations schemes.
11.6.13	ASSOCIATED REGULARION AND MEASURES	Described in the Para.
11.6.14	POST HARVESTING OPERATIONS	Protection from fire, grazing and illicit cutting.
11.7	CONSERVATION AND PROPAGATION OF MEDICINAL PLANTS	Described in the Para.
11.8	MEDICINAL PLANT CONSERVATION AREA (MPCA)	Area will be selected based on their rich medicinal plants diversity.
11.9	NATIONAL MEDICINAL PLANT BOARD (NMPB)	The Government of India level, the Medicinal Plants Board was set up in the year 2000 to co-ordinate all matters relating to medicinal plants. Details described in the para.
11.10	ACHIEVEMENTS DURING LAST PLAN PERIOD	Described in the Para.
XII	NON-TIMBER FOREST PRODUCE (OVERLAPPING) WORKING CIRCLE	
12.2	GENERAL CONSTITUTION OF WORKING CIRCLE	Overlaps the entire area of the division.
12.3	GENERAL CHARACTERISTICS OF VEGETATION	Described in the respective working circle.
12.4	FELLING SERIES, CUTTING SECTIONS AND JFM AREAS	Details given in the respective working circle.
12.5	BLOCK, COMPARTMENTS AND JFM AREAS	The total is 22098.74 ha. which is directly divided into 85 compartments. No JFM areas.

12.6	SPECIAL OBJECTIVES OF MANAGEMENT	To conserve and develop all the non-timber forest produce existing in the forest.	
12.6.01	ANALYSIS OF THE CROP	Described in the respective working circle.	
12.6.02	SILVICULTURAL SYSTEM	Selection system. Only silviculturally available NTFP's will be harvested.	
12.6.03	ROTATION PERIOD	Annually or biannually depending upon the life-span of the individual species.	
12.6.04	HARVESTABLE DIAMETER	Not prescribed.	
12.6.05	REDUCING FACTORS AND REDUCED AREAS	Not prescribed.	
12.6.06	FELLING CYCLE	Described in the respective working circle.	
12.6.07	DIVISION INTO PERIODS AND ALLOTMENT TO PERIODIC BLOCKS	Described in the respective working circle.	
12.6.08	CALCULATION OF THE YIELD	Potential data is not available hence not possible to calculate yield.	
12.6.09	TABLE OF FELLING	Felling not prescribed, hence table of felling not given.	
12.6.10	METHOD OF EXECUTING THE FILLING (CUTTING)	Described in the para.	
12.6.11	SUBSIDIARY SILVICULTURAL OPERATIONS CLEANING AND THINNING	Described in the para.	
12.6.12	REGENERATION	Described in the para.	
12.6.13	ASSOCIATED REGULARION AND MEASURES	Protection from Fire, Grazing and Illicit.	
12.6.14	POST HARVESTING OPERATIONS	Protection from Fire, Grazing and Illicit.	
12.7	DESCRIPTION OF SOME IMPORTANT NTFP SPECIES	Tendu leaves, Moha flower, Gum trees, Grasses, Hirada, Beheda, Aonla, Char and other NTFPS. Description in the Para.	
XIII	SOIL AND WATER RESOURCE MANAGEMENT (OVERLAPPING) WORKING CIRCLE		
13.2	GENERAL CONSTITUTION OF WORKING CIRCLE	With a view to provide desired soil conservation treatment to the affected areas of the division.	
13.3	GENERAL CHARACTERISTICS OF VEGETATION	Given in the respective Working Circle.	
13.4	FELLING SERIES, CUTTING SECTIONS AND JFM AREAS	Details given in the respective main working circle.	
13.5	BLOCK, COMPARTMENTS AND JFM AREAS	Total area 22098.74 ha. which is directly divided into compatements. No JFM area.	

13.6	SPECIAL OBJECTIVES OF MANAGEMENT	Conservation & development of valuable natural resources like soil and drying water sources.	
13.6.01	ANALYSIS OF THE CROP	Described in the respective main working circle.	
13.6.02	SILVICULTURAL SYSTEM	Described in the respective main working circle.	
13.6.03	ROTATION PERIOD	Described in the respective main working circle.	
13.6.04	HARVESTABLE DIAMETER	Described in the respective main working circle.	
13.6.05	REDUCING FACTORS AND REDUCED AREAS	Described in the respective main working circle.	
13.6.06	FELLING CYCLE	Described in the respective main working circle.	
13.6.07	DIVISION INTO PERIODS AND ALLOTMENT TO PERIODIC BLOCKS	Described in the respective main working circle.	
13.6.08	CALCULATION OF THE YIELD	Described in the respective main working circle.	
13.6.09	TABLE OF FELLING	Described in the schedule of main working circle.	
13.6.10	METHOD OF EXECUTING THE FILLING (CUTTING)	Described in the respective main working circle.	
13.6.11	SUBSIDIARY SILVICULTURAL OPERATIONS CLEANING AND THINNING	Described in the respective main working circle.	
13.6.12	REGENERATION	Described in the respective main working circle.	
13.6.13	ASSOCIATED REGULARION AND MEASURES	Protection from Fire, Garzing and Illicit. Soil conservation works.	
13.7	TYPES OF SOIL EROSION	Given in the Para.	
13.8	FACTORS AFFECTING SOIL EROSION	Given in the Para.	
13.9	IMPACT (NEGATIVE) OF SOIL EROSION	Described in the Para.	
XIV	BIO-DIVERSITY IMPROVEMENT AND CONSERVATION		
14.2	INTRODUCTION	Described in the Para.	
14.3	LEVELS OF BIODIVERSITY	There are three interrelated levels of biodiversity namely, genetic diversity, species diversity and community or ecosystem diversity i.e at the level of ecosystem.	
14.4	THE VALUE OF BIOLOGICAL DIVERSITY	Described in the Para.	
14.5	USES OF BIODIVERSITY	Described in the Para.	
14.6	THREATS TO BIODIVERSITY	Described in the Para.	
14.7	CONSERVATION OF BIODIVERSITY	Described in the Para.	
XV	FOREST PROTECTION PLAN		
15.2	INTRODUCTION	Described in the Para.	
15.3	SPECIAL OBJECTIVES OF MANAGEMENT	To develop a database to monitor various forest and	

		wildlife offence cases in a systematic manner.	
15.4	RANGE, ROUND AND BEAT	6 Ranges, 13 Round and 29 Beat.	
15.5	GENERAL PRINCIPLES OF EFFECTIVE FOREST PROTECTION	Described in the Para.	
15.6	FIRE PROTECTION	Described in the Para.	
15.7	ENCROACHMENT ON FOREST LAND	Punishable offence under the provisions of Indian Forest Act 1927 vide sections 26(h) & 33(c).	
15.8	METHOD OF TREATMENT	Described in the Para.	
15.9	MEASURES TO TREAT ENCROACHMENT	Described in the Para.	
15.10	REFORESTATION IN ENCROACHMENT EVICTED AREA	Area shall be planted by suitable local species	
15.11	REGULATIONS IN ENCROACHMENT EVICTED AREA	Described in the Para.	
XVI	THE SCHEDULED TRIBES AND OTHER TRADITIONAL FOREST DWELLERS (RECOGNITION OF FOREST RIGHTS) ACT, 2006		
16.2	INTRODUCTION	The said Act was notified in the Gazette of India on 2nd January, 2007.	
16.3	SALIENT PROVISIONS OF THE FOREST RIGHTS ACT, 2006.	Described in the Para.	
16.4	STATUS OF IMPLEMENTATION OF FRA 2006 IN NAGPUR FOREST PROJECT DIVISION.	No forest area is recognized under FRA 2006.	
16.5	PRESCRIPTIONS FOR MANAGEMENT OF FOREST AREAS ON WHICH THE FOREST RIGHTS ARE RECOGNISED.	Described in the Para.	
XVII	JOINT FOREST MANAGEMENT IN THE DIVISION		
17.2	GENERAL CONSTITUTION OF AREA	The forest areas adjoining to villages.	
17.3	SPECIAL OBJECTIVES OF MANAGEMENT.	To strengthen local institutions for protection and conservation of forest and wildlife resources through people's participation.	
17.4	BACKGROUND OF THE JOINT FOREST MANAGEMENT.	Forest Department and village committee jointly protect and manage the forest.	
17.5	POTENTIAL AREAS FOR JFM	Afforestation Working Circle	
17.6	PRESENT STATUS OF JFM IN THE DIVISION.	JFM concept is not introduced in the forest area of Nagpur Forest Project Division. Protection,	
17.7	REDUCING DEPENDENCE ON FORESTS.	Decided to distribute LPG connections to forest fringe villages.	
17.8	VILLAGE FORESTS.	Such part of reserved forests or protected forests in the village	

		as assigned to the Village Panchayat under the Indian Forest Act, 1927 and the Village Forest Rules 2014 and also under the Maharashtra Village Panchayats Act 1959 for management.	
17.9	MAHARASHTRA VILLAGE FOREST RULES 2014.	Described in the Para.	
17.10	PRESCRIPTIONS AND RECOMMENDATIONS.	Described in the Para.	
XVIII	MISCELLANEOUS REGULATIONS		
18.2	SPECIAL OBJECTIVE OF DEMARCATION	To maintain territorial integrity of forestlands in the division.	
18.3	BOUNDARY DEMARCATION	Priority areas are Reserve and Protected Forest.	
18.4	APPLICATION OF GPS	GPS instrument for demarcation and fixing the location of boundary pillars.	
18.5	1/5 th BOUNDARY DEMARCATION SCHEME	Forest boundaries should be annually maintained under the 1/5 th Boundary Demarcation Scheme.	
18.6	DEMARCATON OF COUPES	Described in the Para.	
18.7	DEMARCATON OF PLANTATION SEGMENTS / SECTION	Described in the Para.	
18.8	MARKING OF TREES FOR HARVESTING	Described in the Para.	
18.9	IRREGULAR HARVESTING	Described in the Para.	
18.10	PERMANENT NURSERY AND CENTRAL DEPOT	Described in the Para.	
XIX	CONTROL AND RECORDS		
19.2	DEVIATION PROPOSALS AND PROCEDURE FOR OBTAINING SANCTION	All the deviation proposals require sanction as per process and guidelines of Government of India	
19.3	CONTROL AND RECORDS	List of items for which control forms to be prepared is given.	
19.4	REGISTERS OF VARIOUS ACTIVITIES	To be maintained and kept up to date.	
19.5	MAPS	To be prepared and kept with Division and Range level.	
XX	FINANCIAL FORECAST		
20.2	COST OF THE PLAN	The cost of Management Plan per hectare worked out is about Rs.30,90 only.	
20.3	FUTURE YIELD, EXPEDITURE AND REVENUE	Given in tabular form.	

WORKS PRESCRIBED DURING THE PLAN PERIOD

Chapter No.	Para No./Sub Para No.	Prescribed activity	Year wise (Year 1-10) distribution of physical target in ha.				
			2016-17	2017-18	2018-19	2019-20	2020-21
II	Teak Plantation Management Working Circle	Silviculture thinning	835.04	1070.78	1794.80	1810.03	1303.26
III	Teak Plantation & Reboisement Working Circle	Removal of overwood followed by Teak plantation.	207.03	196.60	203.38	183.10	204.57
IV	Improvement Working Circle	Removal of 50% of selection trees if silviculturally available and all dead, dying, diseased trees and artificial regeneration in gaps.	547.82	543.03	522.93	523.96	525.02
V	Afforestation Working Circle	Hygienic felling and artificial regeneration to restock the area.	575.00	551.35	561.00	563.08	564.00
IX	Bamboo (OL) Working Circle	Bamboo Harvesting.	561.31	870.69	417.75	661.31	920.69

Chapter No.	Para No./Sub Para No.	Prescribed activity	Yearwise (Year 1-10) distribution of physical target				
			2021-22	2022-23	2023-24	2024-25	2025-26
II	Teak Plantation Management Working Circle	Silviculture thinning	885.04	1080.78	1814.80	1700.13	1303.26
III	Teak Plantation & Reboisement Working Circle	Removal of overwood followed by Teak plantation.	188.03	185.00	205.00	172.35	187.00
IV	Improvement Working Circle	Removal of 50% of selection trees if silviculturally available and all dead, dying, diseased trees and artificial regeneration in gaps.	536.19	524.18	500.91	510.92	496.06
V	Afforestation Working Circle	Hygienic felling and artificial regeneration to restock the area.	551.02	565.76	567.96	526.61	555.04
IX	Bamboo (OL) Working Circle	Bamboo Harvesting.	622.75	786.31	920.69	736.17	786.31

FDCM is committed for Protection, Development and Conservation of Biodiversity through intensive Management of the Forest area, leased out by the Forest Department, by giving proper treatment to the area of each compartment. Hence, there may be two or more Working Circles in a compartment to be managed by FDCM Ltd.