



**FOREST DEVELOPMENT CORPORATION OF  
MAHARASHTRA LIMITED**

**(Government of Maharashtra Enterprise)**

C.I.N.U45200MH1974SGC017206

**MANAGEMENT PLAN  
EXECUTIVE SUMMARY**

**THANE FOREST PROJECT  
DIVISION,  
(Nashik Region)  
For the Period  
2016-17 to 2025-26**

**By  
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## EXECUTIVE SUMMERY

### 1. FOREST TYPE:

- 3B/C1 - Moist Teak bearing forest.
- 3B/C2 - Southern moist mixed deciduous forest.

Most of the forest of Thane project Division belongs to 3B/C2 type i.e., Southern Moist Mixed Deciduous Forest as per revised classification of Forest Types of India" by Champion and Seth.

### 2. GEOLOGY, ROCK AND SOIL:

The Geological formation is Upper Cretaceous Eocene. The Deccan Trap almost covers the entire area. The soil derived from the Deccan Trap is 'Black Cotton Soil' which is usually found in the flat areas. In the hilly areas, the soil is loamy and varies greatly in color. On the lower slopes it is darkish brown, fairly deep and rich in humus. The difference in the soil on the upper and lower slopes is reflected in the quality and the composition of the crop. On upper slopes crop is of poorer quality and in flat areas water logging is observed in patches.

### 3. CLIMATE

The climate is generally hot and humid. The maximum and minimum temperature varies between 15 °C. to 40 °C.

### 4. RAINFALL

The rains are brought by the South west monsoon, which generally breaks by the second week of the June and lasts till middle of October. Average annual rainfall in this tract is 2500 mm.

### 5. WILD ANIMALS

Wild boar, Leopards, Barking deer, Jackals, Hyenas, Wild cats, Common Hare, Squirrel etc.

**REPTILES** : Among the reptiles venomous and non-venomous snakes are found in this area prominently Vipers, Cobras, Banded Craits Indian Rock Python, Rat Snakes etc.

**BIRDS**: Indian Koel, Crow Pheasant, Peacock, Herons, Grey Partridge etc.

**FISHES:** Common fishes like Rohu, Catla, Maral, Wam etc.

## 6. PAST SYSTEMS OF MANAGEMENT

### Areas worked as per Management Plan since 2006-2007:

In the previous Management Plan written by Shri .S.M Gujar, Thane Forest Project Division for the period 2006-07 to 2015-16, following Working Circles were prescribed

Sr.No.	Name of working Circle.	Area. (ha)
1	Protection Working Circle.	7830.053
2	Improvement Working Circle.	1570.081
3	Plantation Management Working Circle -Teak -Mix plantation	8084.818
		740.000
4	Rehabilitation of degraded Forests Working Circle.	1505.921
5	Miscellaneous Working circle	285.499
6	Wildlife Protection Overlapping Circle. (overlapping)	-
	Total	<b>20016.372</b>

## 7. FUTURE MANAGEMENT SYSTEM

### Constitution of working circles:

The important considerations for the constitution of the Working Circle are

- The condition of growing stocks, its quantity and productivity.
- Site quality,
- Crop composition,
- Objectives of management
- Suitability of areas for the particular type of treatment and
- Optimum utilization of the area to meet the objectives.

### 8. THE PLAN PRESCRIPTIONS OF THIS DIVISION ARE AS UNDER:

In accordance with the postulates of National Forest Policy of 1988, Forest Policy of Maharashtra 2008 and National Working Plan Code - 2014 ,

The area of this division has been classified into the following working circles

Sr.No.	Name of working Circle.	Area. (ha)
1	Plantation Management Working Circle -	7226.828
2	Selection cum Improvement Working Circle.	950.00
3	Rehabilitation of degraded Forests Working Circle.	2583.60
4	Protection Working Circle.	8299.398
5	Encroached Area Management Working Circle	749.964
6	Miscellaneous Working circle	182.563
7	Wildlife Conservation (Overlapping) Working Circle	-
8	Non – Timber Forest Produce (overlapping) Working Circle	-
9	Soil and Water Resource Management Working Circle (Overlapping)	-
10	Bio-Diversity Importance And Conservation (Overlapping) Working Circle	-
	Total	19992.353

### **Work Prescribed During the Plan Period**

Detailed information of work prescribed during 2016-17 to 2025-26 and annual target is given in Vol- II.

## **9. MANAGEMENT PLAN FOR PLANTATION MANAGEMENT WORKING CIRCLE**

### **Basis for Proposal of Working Circle**

The successful Teak Plantations raised by FDCM Ltd , during 1985 to 1986 and under MFP scheme(1992-1997) and OWR scheme during 2002 to 2006 are included in this working circle in order to carry out required silvicultural operations in such plantations for further improvement of these plantations and to get intermittent yield

### **General Constitution:**

This Working Circle includes all Teak and successful mixed plantations raised by FDCM from time to time in the earmarked areas. The total area allotted to this Working Circle is **7226.828 ha**

### **Objects of Management:-**

- To improve the growing stock by thinning and carrying out silvicultural operations.
- To augment intermittent yield and revenue.
- To meet the requirement of market for small timber, poles and firewood.
- To tend the hacked plantations with appropriate silvicultural technique for optimum growth.

### **METHOD OF TREATMENT**

#### **Teak Plantation**

- In Successful Teak Plantation thinning were carried out in past as per guidelines issued by Managing Director, FDCM from time to time.
- The instructions were modified in the year 1999-2000 and since then 1<sup>st</sup> thinning at 10<sup>th</sup> year and subsequent thinnings were prescribed at every 5<sup>th</sup> year cycle. Cleaning works will be carried out prior to every thinning.

#### **Mixed Plantations**

- The successful plantations under EGS, Compensatory afforestation, Maharashtra Forestry Projects (MFP) under World Bank fund and Improvement Working Circle will be treated as mixed plantations. They also bear Teak poles of coppice origin.
- These plantations will be cleaned at the 4<sup>th</sup> and 7<sup>th</sup> year. Congestion will be removed to facilitate the growth of Teak and superior species. The first thinning will be carried out at 6<sup>th</sup> year for Nilgiri (*Eucalyptus*) and 10<sup>th</sup> year for mix plantation.

## **10. MANAGEMENT PLAN FOR SELECTION CUM**

### **IMPROVEMENT WORKING CIRCLE**

#### **Basis Of Proposal For Selection Cum Improvement Working Circle**

Certain high forest areas which are having canopy more than 0.4 ha and rich in natural regeneration. Which are on gentle to moderate slopes are considered to be treated under this working circle ,so as to improve the hygiene of forest and boost the Natural regeneration and thus increasing

carbon sequestration though promoting young crop and removing dead, diseased and certain over matured trees.

**General constitution:**

The working Circle includes natural forests other than those included in Protection Working Circle where the density of crop is more than 0.4 and having good quality of miscellaneous forest with considerable natural regeneration .Area allotted to this working Circle is **950 ha**

The Range wise distribution of IWC area is as under.

<b>Sr.No.</b>	<b>Range</b>	<b>Area (ha)</b>
1	Shirsad	210.00
2	Mandvi	175.00
3	Ganeshpuri	475.00
4	Wada	90.00
	<b>Total</b>	<b>950.00</b>

**Objects of Management**

- To improve and maintain the vegetal cover and protect the soil mantle.
- To remove over matured, dead, diseased trees and opening the canopy to promote natural regeneration.
- Open patches above 2.0 ha area will be planted with suitable species.
- To maintain the biodiversity.
- To maintain the productivity of the high forests and also to meet local demand for small timber and firewood.
- To enhance carbon sequestration

**Method of Treatment Proposed**

- 100% enumeration of trees above 105 cm in case of Teak and 90 cm g.b.h. for all other species will be carried out in the entire coupe. All dead and diseased trees will be marked for felling irrespective of species and girth upto 33% of the trees above the harvestable girth will be marked for felling.
- Entire area to be worked will be divided in 1ha grids for monitoring. Felling will be monitored gridwise. Care will be taken that no species is eradicated from the area.

- All climbers should be cut at the time of marking.
- All fruit trees should be reserved.
- Felling will be done in a manner that minimum damage will occur to the neighboring trees.
- No marking for felling will be done on steep slopes and near nala banks

## 11. MANAGEMENT PLAN FOR REHABILITATION OF DEGRADED FORESTS WORKING CIRCLE

### Basis for Proposal of Rehabilitation of Degraded Forests Working Circle

Degraded areas which have sparse plant population and hacked areas having canopy density less than 0.4 is allotted to this working circle in order to rejuvenate these areas by taking up plantations of suitable species.

#### General Constitution:

This Working Circle includes two types of area:

- Area having good rootstock of Teak and valuable miscellaneous species.
- Area without sufficient rootstock or natural regeneration

The Range wise distribution of RDF area is as under.

**Parameters for root stock-** 1) Good Root stock- 625 root stock/ha or more.

2) Insufficient Root Stock- < 625 root stock/ha

Sr.No.	Range	Total Area (RDF) in ha
1	Shirsad	0
2	Mandvi	360
3	Ganeshpuri	85
4	Wada	2138.6
	<b>Total</b>	<b>2583.60</b>

## **METHOD OF TREATMENT**

1. Out of 2583.60 ha area of the Working Circle, it is proposed to treat an area of 1590 ha in this Management Plan period i.e. an area of 150 to 200 ha annually taking into consideration past experience, protection aspects, location of the areas and availability of the staff and infrastructure. The area to be treated will be thoroughly surveyed by laying grid of 100 x 100 m to decide appropriate treatment to restock the area.
2. Planting such areas with suitable species in order to restock these areas.
3. Maintenance & protection of these plantations. Carrying SMC work in such areas.

## **12. MANAGEMENT PLAN FOR PROTECTION WORKING CIRCLE**

### **Basis of Proposal for Protection Working Circle**

Areas which are on steep slopes and inaccessible areas which are difficult to work are allotted to this working circle, certain areas which are rich in medicinal plant population and biodiversity have also been allotted to this working circle

### **General Constitution:**

The encroachments in the form of Plots and old encroachments prior to 13<sup>th</sup> Dec. 2005 are also included in this Circle. The total area allotted to this Working Circle is **8299.398 ha.**

### **Objects of management**

- Soil and moisture conservation
- Conservation of Bio-diversity with special emphasis on conservation of medicinal and aromatic plants and RET species.
- Wildlife management work like desilting of existing water holes.

### **Method of treatment**

- As these forests are situated on steep slopes and most of these being ecologically fragile, no felling is to be done in these areas.



- ❑ Even removal of dead and wind fallen trees on slopes may be uneconomical. Dead and wind fallen trees may be removed if feasible. The area will be protected from fire.
- ❑ The encroachment in the area need to be surveyed and demarcated. All unauthorized and new encroachment is to be removed
- ❑ Soil and moisture conservation works like Nala bunding, Gully plugging, etc. will be undertaken in these area under E.G.S./D.P.A.P scheme wherever possible.
- ❑ The works of management for wild life like desilting of existing water holes are being carried out in these areas.
- ❑ Works under NMPB schemes like in-situ conservation of medicinal aromatic and RET species are being undertaken in these areas.

### **13. MANAGEMENT PLAN FOR ENCROAHD AREA MANAGEMENT WORKING CIRCLE**

#### **General constitution:**

S R No	Range	Total area diverted up till Sept 2015	
		No	Area ha
1	Shirsad	101	29.845
2	Ganeshpuri	141	45.319
3	Mandvi	165	90.826
4	Wada	955	583.974
	<b>Total</b>	<b>1362</b>	<b>749.964</b>

#### **METHOD OF TREATMENT**

- Boundary establishment and demarcation.
- Follow the claim settlement as per FRA 2006.
- Regular patrolling and monitoring.
- Creating bonding between local tribes in order to avoid illegal encroachment.
- Harmony between forest officer and localities.

- Use of Police force and other departments to control illegal encroachment.
- Demarcate the existing encroachments and to remove unauthorized encroachments as per rules and government directions

#### **14. MANAGEMENT PLAN FOR MISCELLANEOUS WORKING CIRCLE**

##### **Miscellaneous Working Circle Consists of Following Areas.**

- Area Under Wada Nursery - 131.817 ha
  - Area Of Shirsad Depot - 48.506 ha
  - Residential Area (Staff Quarters-P.F) – 2.24 ha
- Total - 182.563ha**

#### **15. MANAGEMENT PLAN FOR WILDLIFE CONSERVATION (OVERLAPPING) WORKING CIRCLE**

##### **Conservation measures to be adopted**

- Implementation of provisions under Wildlife (Protection) Act, 1972. Protection of wild fauna and it's habitat from hunting and destruction etc.
- Regularization of Grazing by implementing grazing policy
- Regular monitoring and desilting of waterholes is being carried out.
- Monitoring of areas with high tension over head electric wire lines running across the forest areas will be done regularly.
- Improving availability of water by constructing Vantale, Vanbandhara and check bunds.
- Two dead trees per ha are retained for shelter.
- Creating awareness among locals about Wildlife conservation

##### **Compensation for the Injuries and Loss of Human Life**

<b>Sr No.</b>	<b>Particulars</b>	<b>Amount of Compensation</b>
1	In case of Death	Rs. 8,00,000/-
2	Permanent Disability	Rs. 4,00,000/-
3	Serious Injury	Rs. 1,00,000/-
4	Minor Injury	Up to Rs. 15,000/- per person

## 16. MANAGEMENT PLAN FOR NON – TIMBER FOREST PRODUCE (OVERLAPPING) WORKING CIRCLE

### • OBJECTIVES OF MANAGEMENT

- Scientifically utilize the existing potential of the NTFP optimally by using sustainable harvesting technique.
- To ensure the protection, Improvement, regeneration of Non-timber forest produce by involving local population .
- To collect and compile information / indigenous knowledge about these NTFP & to use them for conservation & development

### • Minor Forest Produce

There are numerous minor forest produce available in this tract. The trees are found scattered in the entire division and mixed with other species. There is no noticeable collection of the minor forest produce in this division, some of the important minor forest produce are Apta, Tembhorni, Bel, Palas, (leaves)Ainbark, Teakseeds, Behada fruits, Awla fruits, Honey, Gum, khair (katha ), Moha flowers, Biba (seeds) ,Amaltas, Tarota seed, Karanj, Hirda, Neem(seed), kandol(gum karaya),karvand, Jatropha etc.

### • Medicinal plants

Tract of this Division 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 value in the socio-cultural, spiritual and medicinal area of local villagers/tribes, their sustainable management and harvesting can conserve bio-diversity, sustain human and environmental health.

## 17. MANAGEMENT PLAN FOR SOIL AND WATER RESOURCE MANAGEMENT (OVERLAPPING) WORKING CIRCLE

### Objectives of Management

- Conservation of soil and water sources
- Minimizing soil degradation and soil erosion.

- Implementing water conservation practices and techniques to conserve water sources.
- Improving vegetal cover to protect soil mantle.

### **Method of Treatment**

- Increase in vegetative cover-Steep slopes and the areas besides river, nallas and natural water sources should have permanent green cover and no felling should be done in such places.
- Eroded areas should be treated on priority to prevent channel and gully formation to widen and to spread in adjoining areas.
- Controlling Grazing and fire control.
- Checking soil and water erosion by implementing soil and moisture conservation work.

## **18. MANAGEMENT PLAN FOR BIO-DIVERSITY IMPORTANCE AND CONSERVATION (OVERLAPPING) WORKING CIRCLE**

Refers to the comprehensive umbrella term for the degree of nature's variety or variation within the natural system; both in number and frequency. In general, it refers to the variety of all forms of life on earth. The different plants, animals, micro-organisms, the genes they contain and the ecosystem they form.

Biodiversity is therefore considered at 3 major levels:

Genetic diversity.

Species diversity.

Ecosystem diversity.

### **Objectives:**

As per the Ministry of Environment and Forests, Government of India, the objectives of conservation of biodiversity are:

- (a) To increase public awareness through media, government agencies, NGOs, etc.
- (b) To implement strict restrictions on export of rare plants and animals.
- (c) To preserve all varieties of old and new flora, fauna and microbes.
- (d) To protect natural habitats.
- (e) To protect all critically endangered, endangered, and rare species.
- (f) To reduce pollution.

(g) To maintain ecological balance.

(h) To utilize the natural resources in a sustainable way.

## **19. CHAPTER ON FOREST PROTECTION**

### **Objectives of management:**

- To maintain environmental stability through preservation and restoration of ecological balance.
- To conserve natural flora and fauna.
- To maintain and improve natural forest structure and growth.
- To protect the forest from illicit felling ,encroachment, fire and grazing
- To sensitize local people about forest protection and involve them in preventing forest offences.
- To raise moral of staff and strengthen their capabilities to deal with illicit cutting and all forest related offences.

### **Strategy For Forest Protection**

- The above objects are achieved by way of strict protection, monitoring and proper plan and its execution .For effective protection there is need to seek the co-operation and involvement of local people. Strategy should be practical, field oriented, participatory and time bounded

- **Fire Protection**

A detailed scheme for fire protection for this Project Division is prepared annually. Provision for fire protection was made in plantation estimates up to 5 yrs, while in compensatory afforestation up to 10<sup>th</sup> year cleaning and burning of fire lines at compartment boundary, along the internal roads and keeping firewatchers in fire season was proposed in the Fire Protection Scheme

## **20. MISCELLANEOUS REGULATIONS**

### **Activities under Turnkey Project**

- Avenue Plantations
- Block Plantations
- Dumping ground plantations
- Landscaping and Gardening works
- Median plantation on highways
- Mangrove plantations

## **21. Highlights of The Plan**

- Regular patrolling by mobile squad and effective monitoring and time to time reporting by forest staff, Police staff.
- Joint patrolling with staff of adjoining forest department.
- Checking illegal felling, trade of NTFP, Wildlife offences and other forest offences.
- Surprise checks and monitoring activities of habitual offenders.
- Inspection and regular checking of water holes.
- Special patrolling of sensitive areas and creating information system.
- Provide training to field staff in order to operate gadgets like GPS, supply of Mobile sets for easy access of information to Beat Guards, Round Officers, and RFO's in sensitive area. Providing field staff with vehicle for effective patrolling ( jeeps, motor, cycle etc)

## **22. CONCLUSION**

- Biodiversity conservation through forest protection and silvicultural operations.
- Protection of flora and fauna of the region.
- Special emphasis will be given on preservation and augmentation of Medicinal and aromatic & RET species.
- Carbon sequestration through improving health of forest by artificial regeneration and providing boost to existing natural regeneration through proper silvicultural techniques.
- Meet the local demand for timber, fuel and poles by adhering scientific techniques of sustainable harvesting practices.
- To provide gainful employment to local populace, through various activities under taken according to prescriptions of this plan.
- To ensure that provisions of FRA and PESA are implemented in its true spirit.
- To create awareness for forest protection and Biodiversity conservation.

### **23. CONSTRAINS FACED DURING WRITING OF PLAN**

- 1) 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.
- 2) As compared to forest department there is no separate wing for preparation of management plan.
- 3) Lack of expertise to deal with carrying out various types of surveys, laying of sample plots, recording of data, preparation of digital grid map, GIS based mapping and handling of GPS device.
- 4) There is no facility of GIS mapping software and trained IT staff for creating interface between field data and plotting digital data. Due to this reasons every time help from working plan officials was required. Because of their busy schedule, timely digitization of data was not possible.
- 5) Newly recruited forest field and office staff are not trained to deal with the above problems.
- 6) The area is 45 km away from division head quarter, created difficulty in logistics.