EXECUTIVE SUMMARY ALONG WITH A BRIEF OUTLINE OF MANAGEMENT PRESCRIPTIONS

1.0 Introduction

This Management Plan of Kinwat Forest Project Division deals with the notified forest areas which has been earmarked to the FDCM Ltd. for management purpose vide Principal Chief Conservator of forest Maharashtra State Nagpur's letter No. D-14/PLNIKA-AA/BN/88 Nagpur Dated 16/06/1995. Forest area of Kinwat Forest Division has been proposed in the Management Plan for a period of ten year from 2026-27 to 2035-36, for its scientific and sustainable management. The total area of this division considered for present Management Plan is 15785.581 ha (4 Range, 09 Round, 18 Beats) which is distributed in 68 compartments (67 FDCM Comptt. + 1 MFD Comptt) of Reserved Forests and and 5 Gut numbers lying between latitude 19.266 &19.766 latitudes North and in between longitudes 78.016 & 78.316 East.

Kinwat Forest Project Division was constituted in the year 1976 with it headquarter at Kinwat, Dist.Nanded. This Management Plan replaces the Management Plan written by Shri U. M. Dhopeshwarkar, the then Divisional Manager, Forest Division, Kinwat which was written for the year for the period from 2016-17 to 2025-26. The total area of this Division at that time was 15789.721 ha which was spread over in 68 compartments. The unproductive and scattered area which is un-manageable, such area of Mahoor & Kinwat Tahsil 6403.39 ha divided in 25 compartments was handed over back to forest Department i.e. to Nanded Division in the year 2006-07. The 4.140 ha forest area of Ambadi range has been diverted under FCA 1980 for non-forestry for widening of Ambadi-Jawarla Road, MDR-94 with letter no-F. No. FC-II/MH 100/2019- NGP/5004 Dt.19.02.2019

The total area covered in this plan is 15785.581 Ha of Reserve Forest spread over 68 compartments. This is the Fourth management Plan of the Division constitutes a forest area in Kinwat Tahshil of Nanded district. The scientific management of the above mentioned forest areas of Forest Project Division, Kinwat have been proposed in the Management Plan for the period of 10 years, 2026-27 to 2035-36. For revision of the previous management plan and to write up the plan for all these areas, the field works (Enumeration & stock mapping) were started during the year 2025-26 & completed in the same year. This management plan for Kinwat Forest Project Division broadly follows the National Forest Policy of 1988 and Forest Policy of Maharashtra State 2008 with emphasis on conservation, preservation and protection

of forests, wildlife and environment. Besides this, in order to enhance the productivity of the area by converting less valuable forest into a valuable Teak stand, the Silvicultural system of "Conversion to uniform system with supplemental artificial regeneration of Genetically superior stock" as per the recommendations of the committee appointed by Government of India, has been adopted in this management plan for Conservation and Uniform System with supplemental Artifical Regeneration working circle (CWC). The idea is to convert suitable existing uneven aged forests to even aged teak forests to enhance the quality and productivity of the forest.

The area is hilly with undulating topography. Geological formations pertain to Deccan trap and Basalt rock in varying formation is predominant. The climate is generally dry except during the South-west monsoon seasons. The rainfall per annum is around 982.4 mm. Water supply is inadequate except in rainy seasons. Boundary demarcation of R.F. is properly done. Rights and concessions do not exist in R.F.

The Forest: - Group 5 Tropical Dry Deciduous Forests
5A Southern Tropical Dry Deciduous forests
5A/cIb Dry Teak Forest

Predominant Species- Teak, Ain, Bija, Dhawada, Lendia, Tendu, Salai, Mowai, Moha, Kalam, Khair, Bamboo etc.

Wildlife:-Wildlife such as Panther, Hyaena, Wild dog, Jackal, Fox, Jungle Cat, Cheetal, Nilgai, Barking deer, Wild Boar, Sloth bear, Rat snake, King Cobra, Russell's viper, Porcupine, Hare, Pea fowl, Pigeon etc are seen in this tract.

Plan Period: - This Management Plan has been prepared for a period of 10 year from year i.e. 2026- 2027 to 2035–2036.

2.0 Past system of Management

The Forest Development Corporation of Maharashtra Ltd has been established in 1974 by the Government of Maharashtra for the purpose of development of potentially productive forests of the state through intensive management. The Kinwat Sub-division of F.D.C.M. Ltd was started in December 1975 in Kinwat Taluka of Nanded District. Later on it was upgraded to Division in the year 1976.

2.1 Management of Forests by F.D.C.M. Ltd from 1975 to 1995: -

The Forest Development Corporation of Maharashtra Ltd has been established by the Government of Maharashtra for the purpose of development of the potentially productive forest of the state through intensive management. For successful implementation of the proposed programme about 270.7121 sq. km forest areas from Kinwat Taluka was earmarked for transfer

to Forest Project Division, Kinwat for 30 years vide- Government Resolution No. FDC/1074/64746/G.5/dated, 27/06/1978.

In the beginning Shri V. G. Takalkar, the Divisional Manager, Kinwat had prepared a management scheme for first 10 years for 10033.29 ha area. Accordingly, from 1975-76 to 1980-81 and 1985-86 to 1987-88 about 1502.80 ha forest area was clear felled followed by planting of Teak stumps in about 1608.003 ha (with underplanting).

2.2 First Management Plan (1995-96 to 2005-06)

The First Management Plan of Forest Project Division, Kinwat for the period of 10 years from the year 1995-96 to 2005-06 was prepared by Shri D.V. Ramteke and Shri T.M. Salunke. The plan was approved by state Govt. vide letter No. FDC/1097/CR-191/F5, dated 07/03/1998 covering an area of 22169.756 ha.

In order to achieve objectives of this management plan, the area of Kinwat Forest Project Division was allotted to various working circles which are as under-

S.N.	Name of the Working Circle	Number of Compartments	Gross Area (ha)
1	Teak Plantation Management W.C	24	668.233
2	Bamboo Plantation W.C.	91	9391.910
3	Afforastation W.C.	80	5370.539
4	Rehabilitation of Degraded Forest W.C.	23	1200.000
5	Mixed Plantation W.C	50	2646.900
6	Protection W.C	34	2892.174
Total		**92**	**22169.756**

2.3 Second Management plan (2006-07 to 2015-16)

The second Management Plan of Kinwat Division was prepared by Shri V.B. Thakre, the then Divisional Manager, Kinwat for the period of 10 years from the year 2006-07 to 2015-16. The plan approved by State Govt vides letter No.12-26/ 97(FOR)/1860 dated.13.10.2006, covering and area of 22169.756 Ha.

In order to achieve objectives of this management plan, the area of Forest Project Division, Kinwat was allotted to various working circles. The distribution of area into various working circles is given below:

S.N.	Name of the Working Circle.	Area (in ha)	Area Handover in 2006-07 (ha)	Balance Area (in ha)
1	Teak Plantation Management Working Circle	979.973	-	979.973
2	Teak Plantation and Reboisement Working Circle	2819.277	1032.428	1786.849
3	Improvement Working Circle.	8698.916	2661.543	6037.373
4	Afforestation Working Circle.	1840.975	605.324	1235.651
5	Protection Working Circle.	6478.615	1874.100	4604.515
6	Bamboo Working Circle	1352.000	230.000	1122.000
	Grand Total	**22169.756**	**6403.395**	**15766.361**
7	Wildlife (Overlapping) Working Circle.	22169.756	6403.395	15766.361

2.4 Third Management Plan (2016-17 to 2025-26)

The third Management Plan of Kinwat Division was prepared by Shri U. M. Dhopeshwarkar, the Divisional Manager, Kinwat for the period of 10 years from the year 2016-17 to 2025-26. The plan approved by Regional Office (WCZ), Nagpur vides letter No.12-26/ 97(FOR)/2593 dated.25.09.2017, covering and area of 15789.721 Ha.

In order to achieve objectives of this management plan, the area of Forest Project Division, Kinwat was allotted to various working circles. The distribution of area into various working circles.

Sr. No.	Working Circle.	Area (Ha.)	Area in %
1	Teak Plantation Management Working Circle	1108.473	**7.03**
2	Teak Plantation Reboisement Working Circle	1696.249	**10.76**
3	Improvement Working Circle	6950.373	**44.05**
4	Afforestation Working Circle	1439.651	**9.11**
5	Protection Working Circle	4566.615	**28.96**
6	Miscellaneous Working Circle	28.360	**0.09**
	Total	**15789.721**	**100.00**
7	Bamboo (Overlapping)Working Circle	1187.000	**7.51**

8	Non-Timber Forest Produce (Overlapping) Working Circle	15789.721	**100.00**
9	Soil & Water Resource Management (Overlapping) Working Circle	15789.721	**100.00**
10	Wildlife Management (Overlapping)Working Circle	15789.721	**100.00**
11	Encroachment Management (Overlapping) Working Circle	364.859	**2.31**

3.0 Basis of Proposals and Brief outline of Management Prescriptions

3.1 Basis of Proposals:

The National Forest Policy of 1988, Forest Policy of Maharashtra State-2008, National Working Plan Code 2023 Annexure II Indian Forest Management Standard and Memoradum of Association, FDCM Ltd Nagpur will be the guiding principle to decide the general objects of management.

The following Working circles have been constituted in Present management Plan-

1) Teak plantation Management working circle (TPMWC)
2) Conservation and Uniform System with supplemental Artifical Regeneration working circle (CWC)
3) Improvement working Circle (IWC)
4) Afforestation working circle (AWC)
5) Protection working circle (PWC)
6) Miscellaneous working circle
7) Bamboo (overlapping) working circle
8) Non-Timber Forest Produce (overlapping) working circle
9) Soil and water resource management (overlapping) working circle
10) Wildlife Management (overlapping) working circle
11) Encroachment Management (overlapping) working circle

3.2 Brief outline of management prescriptions

Sr. No.	Name of Working Circle	Details of prescription
1	Teak Plantation Management Working Circle (TPMWC) **(Thinning of Teak Plantation)**	• 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 MD, F.D.C.M. Ltd. • 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.

		• Second and subsequent thinning in teak plantation will be carried out as per the revised instructions for thinning of Teak Plantation vide Managing Director letter No. PLN/2874, Nagpur dated 02/09/1999. • In the teak plantations which have completed its rotation of 80 years, final felling will be carried out. It will be followed by teak plantation. Prescriptions of Teak Plantation Working Circle will be followed for felling in these areas. • Climber cutting work will be done prior to every thinning. • Damaged or badly shaped trees of coppice origin shall be cut back. • To carry out tending operations to produce good quality teak timber. • To carry out thinning as per the yield table on the basis of age and site quality of plantation. • To improve the crop by carrying out required silvicultural operations so as to achieve growth parameters comparable to those in the yield table. • To obtain maximum sustained yield of teak timber of commercial value. • To meet the market demand of poles, small timber and firewood. • Tolerant species like Garadi shall be felled wherever found also other inferior species including bamboo interfering or likely to interfere shall be cut.
2	Conservation and Uniform System with supplemental Artificial Regeneration Working Circle (CWC)	• The Silvicultural system of "Conversion to uniform system with supplemental artificial regeneration of genetically superior stock" as suggested by Government of India shall be adopted. • The broad prescriptions for over wood removal for raising Teak plantation are as under and are in consonance with the guidelines of Government of India. • All young to middle aged fruit bearing Trees up to 20 Trees per ha will be retained. • Young to middle aged trees of Semal, Khair, Rosewood and other superior miscellaneous species having medicinal values up to 20 trees per ha uniformly spread over the areas will be retained. • No felling will be done on either side of Nalas, Streams, and River banks up to a distance of twice the width of Nala. • The section size at a place should not be less than 10 Ha and should not exceed 20 ha. • 10-meter-wide common strip of natural forest will be retained around a section called section line. • Improvement felling including removal of dead and hollow trees, and those which are likely to fall shall be done. Crooked and unsound advance growth of teak shall be cut back. • Effective measures will be adopted to protect the plantation from fires for all times to come. • Improved Planting stock will be used in order to increase the productivity of area. • Removal of dead and diseased trees shall be done as part of improvement felling in the coupe area unfit due to CCG.
3	Improvement Working Circle (IWC)	**Type A Area: -Protection Areas** • No marking will be done in such areas. SMC works be supplemented by seed dibbling and bush sowing of seed of suitable species like Neem, Khair, Babul, Maharukh, Sandalwood and semal etc. will be carried out. **Type B Area: -Under stocked areas.**

		• Removal of dead, dying, malformed, diseased and crooked trees, except 2 dead and malformed trees. • All high live stumps shall be cut back. • Removal of congestion in established regeneration of valuable species. • Undesirable undergrowth which is interfering with the development of the seedlings of seed origin will be removed. **Type C Area: - Old Plantations and Group of Young Plants** • The patches of not less than 2 ha shall be identified having advance growth of any species and it shall be spaced out to one third of the average top height, while retaining the vigorous and straight poles. • Old miscellaneous plantations will be thinned to a distance of 1/3 of top height. • Removal of dead, dying, malformed, diseased and crooked trees. • Subsidiary cultural operations such as cut back operations, cleaning etc. **Type D Area: - Well Stocked Areas** • All dead, dying, diseased, malformed trees shall be removed. • 50% of trees with girth at breast height more than 135 cm shall be removed provided their removal do not cause a permanent gap in the canopy. • All pollarded trees will be cut flush to the ground, but before flushing to the ground, an inventory of such stumps shall be made. The stools will be singled into two straight shoots. • Well stocked D areas of this working circle may be included in Conversion to Uniform System with Supplemental Artificial Regeneration of Genetically Superior Stock.
4	Afforestation Working Circle	**Type A Area: -Protection Areas** • No marking will be done in such areas. This area includes- • Areas on slopes above 25 degrees • Area eroded or liable for erosion • 20 meters wide strip on either side of Nalla banks & river courses **Type B Area: -Under stocked areas**. • Area with rooted stock capable of giving coppice shoots keep on protection and for tending operations. • Areas having less rooted stock and open patches which will be classified into zone based on soil depth **Type C Area: - Successful Area of Miscellaneous Plantation.** • Multiple coppice shoots shall be reduced to two vigorously growing best shoots should be retained. • Plantation of misc. species and thinning shall be carried out by spacing out of the best and promising stems of valuable species like Teak, Sisam, Bija, Ain, Haldu, Rohan, Lendi etc. • Old miscellaneous plantations will be thinned to a distance of 1/3 of top height. • Plantation of suitable species in open patches and waterlogged areas • SMC works and plantation works shall be undertaken as per the need.
5	Protection Working Circle	• This working circle includes unworkable areas on account of various reasons such as steep slope, exposed rocks, refractory areas, water logged areas and nalla bank etc. • It consists of degraded blanks of rocky patches as well as under stocked areas with low density and having stunted growth. • This area prone to erosion and under heavy biotic pressure.

		• These precipitous slopes (>25 degree) are the origin of the many water courses later on they become nalla. • To preserve and improve the existing growing stock in this vulnerable area. • To preserve the habitat in its undisturbed form. • • To implement soil moisture conservation works for protection of area from erosion and denudation.
6	Miscellaneous working circle	• To maintain existing buildings, roads, sale and Jungle depots. • The existing depots are maintained and will be expanded as per requirement and demand. • Roads will be maintained for extraction of forest produce as well as for intensive patrolling of forest areas for effective protection. • Culverts and small bridges will be maintained for effective communication.
7	Bamboo (Overlapping) Working Circle	• Bamboo will be harvested on a three years cycle basis so as to remove congestion in 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 years culms are fit for harvesting. • This working circle includes all the areas were bamboo naturally and planted is available.
8	Non-Timber Forest Produce (Overlapping) Working Circle	• Out of the listed non wood forest produces like Behada (*Termenalia bellerica*), Mahua (*Madhuca indica*) etc. shall give reasonable revenue annually. The important NTFP available are Moha flower, Tendu leaves, Gum. Broom grass, medicinal forest produces etc. Hence for the systematic harvesting of this non timber forest produce following recommendations are made. • All climbers except medicinal valuable species interfering with trees and advance growth would be cut. • Mature and fruit bearing trees should be freed from overhead and lateral shade. • These species will be planted in regular plantation program as well as well as gap filling operations. • Wherever possible plantation of these species be done to the extent of 5%.
9	Soil and Water Resource Management (Overlapping) Working Circle	The problem of soil erosion is caused by variety of factors and hence diversified approach is necessary for its control. Following are the two types of measures which can be taken up for reducing soil erosion: - **A) Preventive measures-** • 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. • Grazing should be controlled in such areas & they must be protected from repeated fire. • Control human activities which lead to soil erosion in and around forest area by effective enforcement of rules, regulations and relevant laws. **B) Remedial measures-** • Planting of grasses for stabilizing bunds: Grasses prevent soil erosion and improves soil structure. The entire soil mass is penetrated by

		countless roots and soil aggregate and particles are enmeshed by root system. Grasses should be grown on bunds for checking erosion and providing pasture to wild animals. • In the areas where soil erosion intensity is too high to allow vegetative measures to establish to be effective, mechanical measures need to adopted various mechanical works like loose stone check dams, brushwood check denies, gabion structure division channels, spurs are constructed as per suitability of the area.
10	Wildlife Management (Overlapping) working circle	The main aim of this Working Circle is to provide directions and guidelines to the field staff in Scientific Management of Wildlife and its habitat along with Traditional Forest Management. The specific objective of this working circle is to ensure wildlife protection and conservation in the managed forests of the division. Following prescriptions are being made for the protection of wildlife, Creation of environment of security to wild animals, increasing infrastructure for wildlife management and trying to restore the status of wildlife animals in this tract. a) Marking of dead trees in any felling coupes will be done only if their number is more than 2 trees/ha. These trees will act as snags and den trees for nesting and resting of the wild animals. Trees of commercially low utility may be used for this purpose. b) During harvesting some unsound and hollow logs of commercially low utility, not exceeding two per ha. Will be left in the forest to serve as shelter for wildlife. c) The existing waterholes will be maintained and new water holes will be created as per requirement. d) Hoardings on the importance of wildlife and its protection will be exhibited at strategic locations. e) The labour camps and transit depots will be established away from the areas having high density of wild animals. f) A vigilant watch shall be kept on poachers also at the checking gates erected to check/prevent the illicitly transport of forest produce. g) To ensure scientific management of wildlife in the managed forests by undertaking measures like habitat management and water holes development and monitoring populations of the wild animals.
11	Encroachment Management (overlapping) Working Circle	This working circle comprises the encroachment area in which either offence is booked and proceedings are pending/complete under Forest right act, 2006. The specific objective of this working circle is to identify the cases under Forest Right act 2006 or handing over of area to them after survey and demarcation and to evict the ineligible encroachments and demarcate the area permanently on ground. For this the encroachment evictions measures will be used as- • Special care shall be taken to ensure protection of small patches from encroachment. • All external boundaries shall be demarcated with concrete pillars. • In summer, keep watch on all sites meant for debris cleaning, ploughing etc. Reforestation in encroachment evicted area will be used- • Forest boundary will be demarcated permanently. • SMC works like TCM will be taken at forest boundary. • Plantation by suitable local species & fruit trees at evicted sites. • The soil working and weeding to planted species will be as per the standard practice of 3, 2 &1 in first, second & third year.

a) Vision Statement: -

The vision of this plan is stated below-

1) To preserve forest cover on steep hill slopes, along the nala banks and water courses and to prevent soil erosion and to preserve site and environment.
2) Arrest further degradation of the areas and promote existing vegetative cover by proper soil conservation measures and enrichment planting.
3) To conserve and maintain wildlife.

b) Goals and objectives of management: -

The National Forest Policy of 1988, Forest Policy of Maharashtra State-2008, National Working Plan Code 2023 Annexure II Indian Forest Management Standard and Memoradum of Association, FDCM Ltd Nagpur will be the guiding principle to decide the general objects of management. The new policy has emphasized to need for environment stability as the prime objective. Keeping in view the above factor and the other principals laid down in the National Forest Policy, the functions the forests have to perform as per State Government's Orders, 8 the objects of scientific management, the rapid depletion of growing stock due to over harvesting, heavy grazing and illicit cutting, the general objects of management will be as under.

1) To enrich the growing stock in other natural forests and to restock all the under stocked and degraded forests, to achieve normality of growing stock in shortest possible time.
2) To meet the requirement of small timber, fuelwood, fodder and minor forest produce of the rural and tribal population on top priority.
3) To increase the production of minor forest produce and to manage the same scientifically to utilize the potential to the maximum possible extent on sustained basis.
4) Consistent with the above objectives to ensure maximum sustained yield.
5) Artificial regeneration of the areas with appropriate plantation technology, and after due consideration of edaphic and ecological factors.

SWOT Analysis: -

STRENGTH:

1. A total of 15785.581 ha areas under forest.
2. Well managed Sale depot.
3. Availability of infrastructure including forest roads, vehicles, equipment and working tools.
4. Availability of trained professional field staff.

5. Management plan for systematic management of forest.
6. Production of high value timber (Teak) for filling the gap between demand and supply of market.
7. Employment to local people.

WEAKNESS:

1. Poor site quality crop (site quality III and IV).
2. Scattered area.
3. Low involvement of local people in forest protection.
4. Fragmentation of habitat.
5. Lack of Infrastructure.
6. Inadequate ministerial staff.
7. High costs particularly on harvesting specially transport.
8. Labour supply limited especially in remote areas.
9. No market place for non-timber harvesting rights.

OPPORTUNITY:

1. Development of ecotourism areas for generating additional revenue.
2. Conversion of low-quality forest into high quality forest.
3. Potential to increase flora and fauna.
4. Availability of blank area for Afforestation to increase the forest cover.
5. Eroded area converts into productive area by adopting soil and moisture conservation measures.

THREATS:

1. Increasing population pressure on forest.
2. Natural calamities cause failure of plantation and damage to forest area and also wildlife.
3. Pressure of encroachment on forest area.
4. Rising trends of illegal logging.
5. Negative impact of climate change.
6. Heavy grazing and Fires.

c) Expected outcome: - The year wise expected outcome in various working circle in this Division in given in **Appendix No XXXVII of Vol-II.**

A. GLOSSARY OF TERMS

Adjat species	Miscellaneous species
Bhatti	Local distillery for liquor production
Bidi	Handmade cigarette wrapped in tendu leaf
Bir	An area reserved to grow grass
Burad	A caste whose main occupation is to make articles from bamboo
Gaothan	A site kept Reserved for Housing
Geru	Red ochre or red earth
Ghani	Local crusher for oil extraction
Ghat	A road with a steep gradient
Gully	Water channel
Jagir	An estate conferred by the state in return for service
Jagirdar	The holder of jagir
Jamindari	An estate belonging to a zamindar
Jhiras	Temporary small wells dug in nalas during summer
Jowar	A cultivated millet (*Sorghum vulgares*)
Jungle	Forest
Kacha (roads)	Temporary (roads)
Kankar	Lime nodules
Katha	Catechu
Kharif	Monsoon crop
Khasara No	Serial number given to any portion of land entered in land records.
Khories	Valleys in between two hills or hillocks
Malki Land	Lands belonging to private individuals
Mouza	A village area
Murum	A reddish hard soil
Myrobalans	Aonla, Harra and Beheda
Naka (Forest)	Barrier on road for checking forest produce in transit
Nala	A water course
Nadi	River
Nistar	Forest produce required for bona fide agricultural or domestic purposes
Nistar Patrak	Record of rights on Government Land.

Occupational-Nistar	The nistar granted to village craftsman i.e. Nistar mahars, blacksmiths, chamars etc. at concessional rate for their craft purposes.
Padit	A barren or Waste Land
Paidawar	Wild edible flowers, fruits or roots
Patta	A Sanad granted for use of land
Patwari	Village Officer (Sub-ordinate of Revenue Department)
P. C. No	Patwari Circle Number
Pucca	Permanent Construction
Pulla	Bundles of cut grass
Rabi	Winter Crop
Rahadari	Transit
Raiyatwari	A form of land tenure, applied to land in raiyatwari tenure and to villagers
Ramna/Kuran	A Grass Reserve close to Grazing
Regur	Block cotton soil.
Rith	A deserted village site
Satkatha	Miscellaneous tree species
Sericulture	Rearing silk/tussar worms.

B] LIST OF FLORA

Common Name	Botanical Name	Family	IUCN Status
1. TREES SPECIES.			
Ain/Saja	*Terminalia elliptica*	Combretaceae	LC
Amba/Mango	*Mangifera indica*	Anacardiaceae	DD
Anjan	*Hardwickia binata*	Caesalpiniaceae	LC
Apta	*Bauhinia racemosa*	Fabaceae	LC
Arjun	*Terminalia arjuna*	Combretaceae	LC
Awala	*Phyllanthus emblica*	*Phyllanthaceae*	LC
Babul	*Vachellia nilotica*	Leguminosae	LC
Bahawa/Amaltash	*Cassia fistula*	Fabaceae	LC
Bartondi	*Morinda citrifolia*	Rubiaceae	LC
Beheda	*Terminalia bellirica*	Combretaceae	LC
Bel	*Aegle marmelos*	Rutaceae	NT
Bhirra/Halad bhirra	*Chloroxylon swietenia*	Rutaceae	VU
Bhokar/Gondani	*Cordia dichotoma*	Boraginaceae	LC
Biba	*Semecarpus anacardium*	Anacardiaceae	LC
Bija	*Pterocarpus marsupium*	Fabaceae	NT
Bor	*Ziziphus mauritiana*	Rhamnaceae	LC
Char	*Buchanania lanzan*	Anacardiaceae	LC
Chichwa	*Albizia odoratissima*	Leguminosae	LC
Chinch	*Tamarindus indica*	Leguminosae	LC
Dhaman	*Grewia tiliifolia*	Malvaceae	LC
Dhawada	*Anogeissus latifolia*	Combretaceae	LC
Dhoban	*Dalbergia paniculata*	Combretaceae	LC
Dhudhi/Kala Kuda	*Wrightia tinctoria*	Apocynaceae	LC
Garadi	*Cleistanthus collinus*	Euphorbiaceae	VU
Gliricidia	*Gliricidia sepium*	Leguminosae	LC
Gulmohar	*Delonix regia*	Caesalpiniaceae	LC
Haldu	*Haldina cordifolia*	Rubiaceae	LC
Hela	*Trillium govanianum*	Melanthiaceae	EN
Helkani	*Madhuca insignis*	Sapotaceae	CR

Hiwar/Shenkai	*Acacia leucophloea*	Leguminosae	LC
Jambhul	*Syzygium cumini*	Myrtaceae	LC
Karu	*Sterculia urens*	Malvaceae	LC
Kalam	*Mitragyna parvifolia*	Rubiaceae	LC
Kadamb	*Anthocephalus cadamba*	Rubiaceae	LC
Karanj	*Pongamia pinnata*	Leguminosae	LC
Katesavar	*Bombax ceiba*	Malvaceae	LC
Kavath	*Hydnocarpus pentandrus*	Achariaceae	VU
Khair	*Acacia catechu*	Leguminosae	LC
Kusum	*Schleichera oleosa*	Sapindaceae	LC
Lendia	*Lagerstroemia parviflora*	Lythraceae	LC
Lokhandi	*Ixora* pavetta	Rubiaceae	LC
Maharukh	*Ailanthus excels*	Simaroubaceae	DD
Mahua	*Madhuca indica*	Sapotaceae	LC
Mowai / Moi	*Lannea coromandelica*	Anacardiaceae	LC
Mokha	*Schrebera swietenioides*	Oleaceae	LC
Neem	*Azadirachta indica*	Meliaceae	LC
Palas	*Butea monosperma*	Leguminosae	LC
Pangara	*Erythrina variegata*	Fabaceae	LC
Pimpal	*Ficus religiosa*	Moraceae	LC
Ritha	*Sapindus trifoliatus*	Sapindaceae	DD
Rohan	*Soymida febrifuga*	Meliaceae	LC
Teak/Sag	*Tectona grandis*	Verbenaceae	EN
Salai	*Boswellia serrata*	Burseraceae	LC
Shiras	*Albizia lebbeck*	Mimosaceae	LC
Shisam	*Dalbergia latifolia*	Fabaceae	VU
Shivan	*Gmelina arborea*	Verbenaceae	LC
Sisoo	*Dalbergia sissoo*	Fabaceae	LC
Tendu/Tembhurni	*Diospyros melanoxylon*	Ebenaceae	LC
Tiwas	*Ougeinia oojeinensis*	Leguminosae	LC
Umber	*Ficus racemosa*	Moraceae	LC
2. SHRUBS			
Ambadi	*Hibiscus sabdariffa*	Malvaceae	NE

Bor	*Ziziphus mauritiana*	Rhamnaceae	LC
Chillar/Mysore thorn	*Caesalpinia decapetala*	Leguminosae	LC
Dhayati/ Dowari	*Woodfordia fruticosa*	Lythraceae	LC
Dikamali	*Gardenia resinifera*	Rubiacene	LC
Ganeri/Gangutai	*Lantana camara*	Verbenaceae	LC
Henkla/ Bharatti	*Gymnosporia Montana*	Celastraceae	LC
Kharmati/ kad-dhaman	*Grewia villosa*	Tiliaceae	LC
Kovidar/Kanchan	*Bauhinia variegata*	Leguminosae	LC
Lokhandi	*Ixora brachiate*	Rubiaceae	LC
Mendhi/Mehendi	*Lawsonia inermis*	Lythraceae	LC
Murudseng	*Helicteres isora*	Malvaceae	LC
Nirgundi	*Vitex negundo*	Verbenaceae	LC
Ranbhendi	*Abelmoschus manihot*	Malvaceae	DD
Rui	*Calotropis gigantean*	Ascloepiadaceae	NE
Tarota	*Cassia tora*	Leguminosae	NE
Wantulashi	*Ocimum sanctum*	Lamiaceae	LC
3. HERBS			
Aghada	*Achyranthes aspera*	Amaranthaceae	NE
Anantmul	*Hemidesmus indicus*	Apocynaceae	NT
Bhutganja	*Cannabis sativa*	Cannabaceae	NE
Bhumi Amla	*Phyllanthus niruri*	Phyllanthaceae	NT
Chikta	*Desmodium dichotomum*	Leguminosae	LC
Halga	*Galega officinalis*	Fabaceae	--
Jakhamjodi	*Tridax procumbens*	Compositae	NE
Malkangani/Danti	*Celastrus paniculatus*	Celastraceae	NE
Ghaypat	*Agave Americana*	Asparagaceae	LC
Kena	*Commelina benghalensi*	Commelinaceae	LC
Lajalu	*Mimosa pudica*	Fabaceae	LC
Ranzendu	*Zinnia peruviana*	Compositae	NE
Ringani	*Solanum xanthocarpum*	Solanaceae	--
Rantil	*Guizotia abyssinica*	Compositae	NE

Shevari	*Sesbania sesban*	Fabaceae	LC
Undirkani	*Merremia emarginata*	Convolvulaceae	LC
4. CLIMBERS			
Chillar	*Caesalpinia decapetala*	Leguminosae	LC
Gulvel	*Tinospora cordifolia*	Menispemaceae	NE
Gunja	*Abrus precatorius*	Leguminosae	NE
Khaj-kuiri	*Mucuna pruriens*	Leguminosae	LC
Yeruni	*Zizyphus oenoplia*	Rhamnaceae	LC
Palasvel	*Butea superb*	Fabaceae	LC
Shatavari	*Asparagus racemosus*	Asparagaceae	---
Ran kakadi	*Cucumis dipsaceus*	Cucurbitaceae	--
5. GRASSES & BAMBOO			
Manvel/ Bamboo	*Dendrocalamus strictus*	Gramineae	NE
Bhurbhushi grass	*Eragrostis amabilis*	Poaceae	NE
Ghanya marvel	*Bothriochloa pertusa*	Gramineae	NE
Hariyali	*Cynodon dactylon*	Gramineae	NE
Kali Musali	*Curculigo orchioides*	Hypoxidaceae	EN
Kunda	*Ischaemum pilosum*	Gramineae	NE
Kans grass	*Saccharum spontaneum*	Poaceae	LC
Kolsya grass	*Desmostachya bipinnata*	Gramineae	LC
Marvel grass	*Dichanthium annulatum*	Poaceae	NE
Pavanya	*Sehima nervosum*	Gramineae	NE
Shipru grass	*Cyperus rotundus* L	Cyperaceae	LC

C] LIST OF FAUNA
A. COMMON BIRDS

S.N.	Common Name	Zoological name	IUCN Status	CITES Status
1	Peafowl/Mor	*Pavo cristatus*	LC	Appendix-III
2	Ghar	*Milvus migrans*	LC	Appendix-II
3	Bhardwaj	*Centropus sinensis*	LC	--
4	Sutar/Woodpecker	*Chrysocolaptes festivus*	LC	--
5	Kotwal	*Dicrurus macrocercus*	LC	--
6	Chittur	*Francolinus pictus*	LC	--
7	Lawa	*Coturnix coturnix*	LC	--
8	Jungle Fowl	*Gallus gallus*	LC	--
9	Common Myna	*Acridotheres tristis*	LC	--
10	common parakeet	*Melopsittacus undulatus*	LC	Appendix-II

B. COMMON ANIMALS

S.N.	Common Name	Zoological Name	IUCN Status	CITES Status
1	Leopard/Bibtya	*Panthera pardus*	VU	Appendix-I
2	Taras	*Hyaena hyaena*	NT	Appendix-III
3	Indian fox	*Vulpes bengalensis*	LC	Appendix-III
4	Kolha/Indian Jackal	*Canis aureus indicus*	LC	Appendix-III
5	Sloth bear	*Melursus ursinus*	VU	Appendix-I
6	Jungle cat	*Felis chaus*	LC	Appendix-II
7	Blue Bull	*Boselaphus tragocamelus*	LC	--
8	Black Buck	*Antelope cervicapra*	LC	Appendix-III
9	Cheetal	*Axis axis*	LC	--
10	Wild Boar	*Sus scrofa*	LC	--
11	Common Langur	*Semnopithecus entellus*	LC	Appendix-I
12	Barking Deer	*Muntiacus muntjak*	LC	--
13	Wild dog or Dhole	*Cuon alpinus*	EN	Appendix-II

14	Dhaman or Rat Snake	*Ptyas mucosu*	DD	Appendix-II
15	Hare	*Lepus ruficaudatus*	LC	--
16	Indian crested Porcupine	*Hystrix indica*	LC	--
17	Indian rock python	*Python molurus*	NT	Appendix-I
18	Indian cobra	*Naja naja*	LC	Appendix-II
19	Common Krait/Manyar	*Bungarus caeruleus*	LC	--
20	Red Sand Boa	*Eryx johnii*	NT	Appendix-II
21	Monitor Lizard	*Varanus spp.*	LC	Appendix-II
22	Russell's Viper	*Daboia russelii*	LC	Appndix-III

ABBREVIATIONS

CR – Critically Endangered

EN – Endangered

VU – Vulnerable

NT – Near threatened

LC – Least concern

NE – Not evaluated

DD – Data Deficient

PART -I

SUMMARY OF FACTS ON WHICH THE PROPOSALS ARE MADE

INTRODUCTION

This Management Plan of Forest Project Division, Kinwat deals with the notified forest areas which has been earmarked to the FDCM Ltd. for Management purpose vide Principal Chief Conservator of forest Maharashtra State Nagpur's letter No. D-14/PLNIKA-AA/BN/88 Nagpur Dated 16/06/1995. Forest area of Kinwat Forest Division has been purposed in the Management Plan for a period of ten year from 2026-27 to 2035-36, for its scientific and sustainable management. The total area of this Division considered for present Management Plan is 15785.581 ha (4 Range, 09 Round, 18 Beats) which is distributed in 68 compartments (67 FDCM Comptt. + 1 MFD Comptt.) of Reserved Forests and and 5 Gut numbers lying between latitude 19.266 &19.766 latitudes North and in between longitudes 78.016 & 78.316 East.

Kinwat Forest Project Division was constituted in the year 1976 with it headquarter at Kinwat, Dist. Nanded. This Management Plan replaces the Management Plan written by Shri. U. M. Dhopeshwarkar, the then Divisional Manager, Forest Division, Kinwat which was written for the year for the period from 2016-17 to 2025-26. The total area of this Division at that time was 15789.721 ha which was spread over in 68 compartments. The unproductive and scattered area which is un-manageable, such area of Mahoor & Kinwat Tahsil 6403.39 ha divided in 25 compartments was handed over back to forest Department i.e. to Nanded Division in the year 2006-07. The 4.140 ha forest area of Ambadi Range has been diverted under FCA 1980 for non-forestry for widening of Ambadi-Jawarla Road, MDR-94 with letter no-F. No. FC-II/MH 100/2019- NGP/5004 Dt.19.02.2019.

The total area covered in this Plan is 15785.581 Ha of Reserve Forest spread over 68 compartments. This is the Fourth management Plan of the division constitutes a forest area in Kinwat Tahshil of Nanded district. The scientific management of the above mentioned forest areas of Forest Project Division, Kinwat have been proposed in the Management Plan for the period of 10 years, 2026-27 to 2035-36. For revision of the previous management plan and to write up the plan for all these areas, the field works (Enumeration & Stock Mapping) were started during the year 2025-26 & completed in the same year. This management plan for Kinwat Forest Project Division broadly follows the National Forest Policy of 1988 and Forest

Policy of Maharashtra State 2008 with emphasis on conservation, preservation and protection of forests, wildlife and environment. Besides this, in order to enhance the productivity of the area by converting less valuable forest into a valuable Teak stand, the Silvicultural system of "Conversion to uniform system with supplemental artificial regeneration of Genetically superior stock" as per the recommendations of the committee appointed by Government of India, has been adopted in this management plan for Conservation and Uniform System with supplemental Artifical Regeneration working circle (CWC). The idea is to convert suitable existing uneven aged forests to even aged teak forests to enhance the quality and productivity of the forest.

The present plan is the Fourth Management Plan of Forest Project Division, Kinwat. It deals with an area of 15785.581 Ha in 68 compartments. The division constitutes a forest area in Kinwat Tahshil of Nanded district.

OBJECTIVES OF THE MANAGEMENT PLAN: -

The National Forest Policy of 1988 will be the guiding principle to decide the general objects of management and these objects are mentioned here under.

1) To preserve forest cover on steep hill slopes, along the Nala banks and water courses and to prevent soil erosion.
2) To enrich the growing stock in the natural forests and to restock all the under-stocked and degraded forests, to achieve normality of growing stock in shortest possible time.
3) To increase the productivity of forests by using improved plantation technology and to maintain the same on sustained yield basis.
4) To meet the requirement of small timber, fuel wood, fodder and minor forest produce of the rural and tribal population on top priority.
5) To increase the production of NTFP and to manage the same scientifically to utilize the potential to the maximum possible extent on sustained basis.
6) To conserve and protect wildlife.
7) To stop further degradation of the area & promote existing vegetative cover by proper soil conservation measures & intensive planting.

PERIOD OF THE PLAN: - This plan is prepared for a period of ten years i.e. from 2026-27 to 2035-36.