



सत्यमेव जयते

**GOVT. OF MAHARASHTRA**

# **MELGHAT TIGER RESERVE AMRAVATI**



## **TIGER CONSERVATION PLAN : BUFFER AREA**



**PLAN PERIOD : 2014-15 To 2023-24**

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## CHAPTER – I

### INTRODUCTION OF THE AREA

**1.01** This plan for Buffer Zone of Melghat Tiger Reserve deals with the areas comprised within the Reserved Forest and Non Forest areas within the jurisdiction of Sipna Wildlife Division, Gugamal Wildlife Division, West Melghat Division, East Melghat Division Chikhaldara, Akola Forest division and Buldhana Forest Division. The purpose of including the area is to ensure the integrity of the Critical Tiger Habitat or core area with adequate area for dispersal of tigers and with the aim of promoting co-existence between wildlife and human activity, with due recognition of the livelihood, development, social and cultural rights of the local people.

#### **REASONS FOR PREPARING PLAN OF BUFFER ZONE:**

**1.02** Following two developments have necessitated revision of the plan before the expiry:-  
(i) After amendment to Wildlife (Protection) Act 1972 in 2006 (Section 38 V added), the National Tiger Conservation Authority, Ministry of Environment and Forests, Government of India vide their letter no. F-No PS-MS (NTCA)/2007 Miscle, dated 5<sup>th</sup> October 2007 issued detailed format and guidelines for preparation of Tiger Conservation Plan.

(ii) Notification of Critical Tiger Habitat of MTR vide Govt. of Maharashtra notification no. WLP 10-07/CR-297/F-1, dated 27 December 2007 that included the Wan, Ambabarwa and Narnala Sanctuaries to the Critical Tiger Habitat and for the buffer zone, the State Government has issued notification no. WLP-10-10/Q-139/F-1, dated 29<sup>th</sup> September 2010 (**Appendix no. I**).

#### **DETAILS OF THE NOTIFICATION OF BUFFER AREA:**

**1.03** The National Tiger Conservation Authority, Government of India, Ministry of Environment and Forest vide its letter no. 1-30/2003-PT (Part), dated 9<sup>th</sup> September 2010 has conveyed its approval for declaring 1268.03 sq.km. (920.65 sq.km. forest area and 347.38 sq.km. non-forest area) as a “Buffer Zone” of the Melghat Tiger Reserve, under section 38 (v) of the Wildlife (Protection) Act 1972, on the basis of the provisions contained in Wildlife (Protection) Act 1972 and the approval from the NTCA, the Government of Maharashtra issued a notification WLP-10-10/Q-139/F-1, dated 29<sup>th</sup> September 2010 declaring the area of 1268.03 sq.km. as Buffer Zone of Melghat Tiger Reserve.

## NAME, LOCATION, CONSTITUTION AND EXTENT

**1.04** Buffer zone of Melghat Tiger Reserve is mainly situated in the Satpura hill ranges of Central India. It lies in Melghat forests of Amravati, Akola and Buldhana district in Vidarbha region of Maharashtra, bordering Madhya Pradesh in the North and East.

Its area is geographically located as given below :

Latitude : Between 21<sup>0</sup> 07' N and 21<sup>0</sup> 45' N

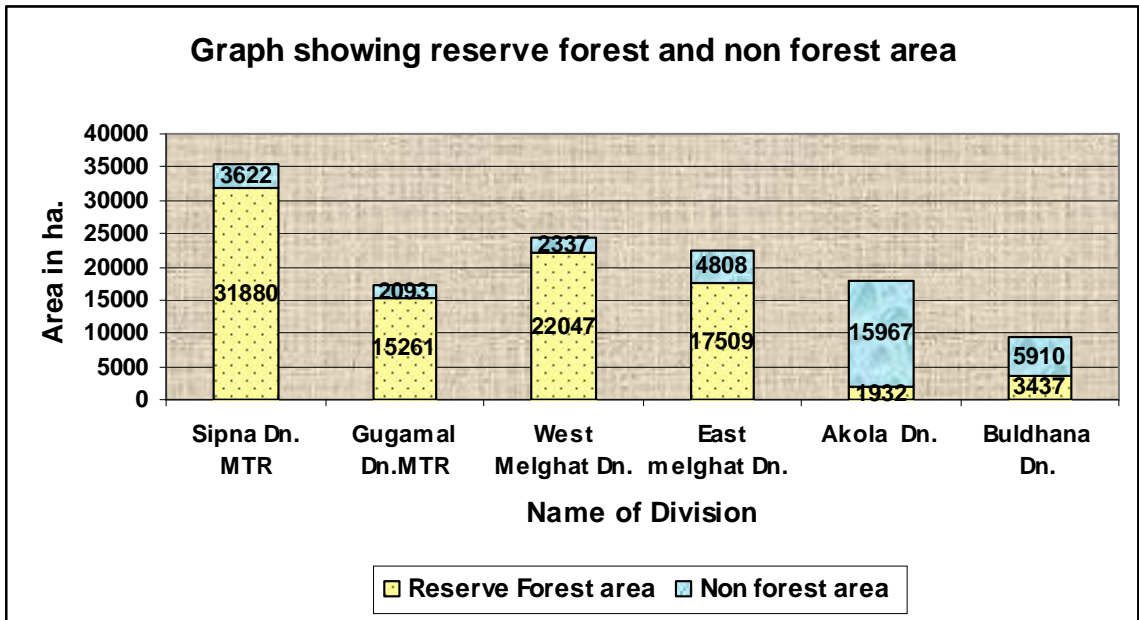
Longitude: Between 76<sup>0</sup> 37' E and 77<sup>0</sup> 31' E

Altitude : 312 M to 1178 M above MSL.

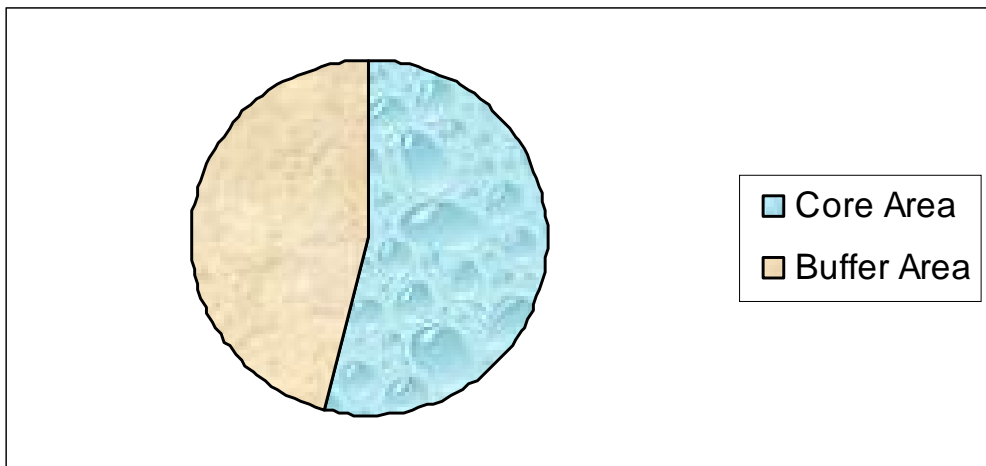
The area comprises partly, the area in-charge of Chief Conservator of Forests and Field Director, Project Tiger Melghat, Deputy Conservators of Forests, East Melghat, West Melghat, Akola and Buldhana forest divisions.

**Constitution:** The area is consisting of the Reserve forest and non forest area. The abstract of area included is given in table below.

Sr. No.	Name of the Division	Reserve Forest area (ha.)	Non forest area (ha.)	Total area (ha.)	No. of villages
1	Sipna Wildlife Division MTR	31879.96	3622.14	35502.10	25
2	Gugamal Wildlife Division MTR	15261.13	2092.96	17354.09	14
3	West Melghat	22046.62	2337.46	24384.08	12
4	East Melghat Dn. Chikhaldara	17508.85	4807.98	22316.83	23
5	Akola forest Dn. Akola	1932.43	15967.48	17899.91	35
6	Buldhana Forest Dn. Buldhana	3436.50	5910.16	9346.66	09
	<b>Total</b>	<b>92065.49</b>	<b>34738.18</b>	<b>126803.67</b>	<b>118</b>



Critical Tiger habitat is surrounded by the total buffer area, 1268.04 sq.km. Graphical Representation of core area visa-vis the buffer is as follows-



**LEGAL STATUS:-**

**1.05** The area 35502.10 ha. of Sipna Wildlife Division and 17354.09 ha. of Gugamal Wildlife Division comprising 39 village declared as buffer of Melghat Tiger Reserve as per notification dated 29<sup>th</sup> September 2010 was previously Multiple Use Area of MTR and has got legal status of Reserve Forests. The area was part of Melghat Sanctuary from 1985 till 1994 when Melghat Tiger Sanctuary was reconstituted and renamed as Melghat Sanctuary. The area was treated as additional buffer area of core zone. It was under the administrative control of the territorial forests divisions till May 1999. After reorganization of area in 1999, the entire area of Melghat Sanctuary and the Multiple Use Area was brought under the administrative control of directorate.



The area comprised in Akola, Buldhana, East Melghat and West Melghat divisions declared as buffer of Melghat Tiger Reserve has got legal status as per the notification issued by the State Government in respect their of.

#### **STATEMENT OF SIGNIFICANCE:**

**1.06** The Melghat Tiger Reserve, owing to its unique flora and floral occurrence and rich bio-diversity has a very significant place in the conservation history of the State of Maharashtra. The area is well known for its unique topographical diversity, as it is dotted by several high hills and deep valleys, which make it quite secure and everlasting from bio-diversity point of view. The area of the reserve is a typical representative of Central Indian Highland forming a part of the Bio-geographic zone 6E-Deccan Peninsula-Central Highlands (Roders and Panwar 1988).

The area of buffer zone of Melghat Tiger Reserve consists of the Multiple Use Area which has the status of Reserve Forerst. There are 39 villages located in this area. The area has been a part of Melghat Tiger Reserve since 1974 and still a part of it. However, till May, 1999, it had been with the territorial divisions and therefore the area has not been addressed adequately as far as protection and habitat restoration activities are concerned, particularly in view of tiger project objectives.

The area is indicated by the Korkus, Nihals and Gaolis. The tribal population inhabiting Melghat have very diverse and rich cultural heritage which has its co-existence with the flora and fauna of the surrounding forests.

The Gavilgarh Fort in the vicinity of Chikhaldara Hill Station is on the fringe of the buffer zone and has important historical significance.

The areas allotted to buffer zone from East Melghat, West Melghat, Buldhana and Akola forest divisions are of good forest growth and worked under various working circles as per the prescriptions given in the working plan of respective divisions.

#### **APPROACH AND ACCESS.**

**1.07** The area is approachable by air. The nearest air port is Nagpur which is about 255 Km. from Semadoh. The nearest railway station is Badnera located on the central railway zone on Mumbai - Calcutta route. The distance from Badnera to Semadoh is about 110 Km. The area is generally inaccessible during the rainy season. The only access to the area is through Harisal, Semadoh and Akot which are located on Amravati - Dharni State highway No. 26 and Akot-Harisal State highway. The distance from Harisal to Amravati is 125 Km.

which has a railway station. On the Northern side, the nearest railway station is at Khandwa which is at a distance of 75 km. from Harisal.

### **GEOLOGY, ROCK AND SOIL:**

**1.08** The only geological formation represented in the Melghat Tiger Reserve area is the Deccan trap and underlying rock is basalt in one form or another. The most common form is a hard dark colored rock, compact or fine grained, but occasionally with numerous phenocrysts. This rock usually occurs in thick layers and outcrops of it give rise to the conspicuous scarps on the hill side. Prismatic jointing is well developed and at many places fine examples of columnar structure can be seen, particularly in the beds of rivers and streams. When the hard scarp undergoes weathering, it is converted into soft earthy brown rocks with rows, representing the original columns of roughly spherical bodies exfoliating in successive concentric shells. A second form occurring in the lower hills is grey vesicular basalt, the cavities being lined with crystals of quartz and other minerals. Then there are the thick layers of basalt tuft, as off grey, dull fine grained rock that occurs occasionally representing the intervals of time that elapsed between the successive lava flows.

Soil types vary considerably, the reason attributed to this is different conditions of weathering and marked variation in rainfall within the area. Soil so derived from the weathering and disintegration of underlying rock is fertile though generally stony and has considerable variation in depth and drainage. Soil is very shallow on the steep upper slopes. It is on terraces, lower slopes and valleys that the soil has some depth.

### **HYDROLOGY AND WATER SOURCES:**

**1.09** The Area is well drained by many rivers Most of the rivers are seasonal and water remains there till Feb. only. The tract has five major drainage systems viz. *Khandu, Khapra, Sipna, Garga* and Dolar and these rivers contribute as the important tributaries of *Tapi* River. There are small numbers of springs which are of perennial nature. Such pools and springs are very important for wild animals and live stock in the area. Absence of large surface water bodies has avoided faunal congregations and consequent damage to habitat.

Water scarcity in summer is a major impediment that affects distribution of wildlife and thereby habitat utilization. The rivers and numerous *nallahs* flowing through buffer area of Melghat Tiger Project are seasonal and have beds strewn with boulders. The rain water is quickly drained out through these rivers & *nallahs*. There are number of pools in these rivers where water is available almost throughout the year, and these are utilized by human beings

as well as animals. There are few springs where water continues to trickle in small quantities even in severe summer.

In summer water is available in *doh's* in the rivers, *nallahs* and from few springs. The wild animals, therefore, descend in the valleys, plain and the lower slopes in search of water leaving their habitat at higher reaches unutilized. There are natural perennial water holes which have the ability to recoup their potential and storage capacity but these are very few. In order to augment water resources artificial water hole, have been created by constructing bunds, anicuts & underground bunds etc. Most of the natural waterholes are over burdened with domestic cattle. Wildlife populations suffer from poisoning for fishing. The occasional use of pesticides and insecticides and natural fish poisons like tree bark or fruits and seldom use of dynamites render the water holes hazardous at times. Many water holes are tapped for fish and by the end of winter the water scarcity attains pinching situation. Augmenting water on compensatory ground i.e. making available alternative waterholes for the cattle and the wild fauna needs to be taken up on priority. Desilting of water holes, protection from poisoning, restricting use by domestic cattle and cleaning of water holes may also improve the situation.

#### **VEGETATION TYPES:**

**1.10** The buffer areas of Melghat Tiger Project are of deciduous nature and have been classified as “Dry Deciduous Forests” in the Champion and Seth’s “Revised Survey of Forest types of India” and fall under the sub-group 5-A southern tropical dry deciduous forests.

The tract being sparsely populated, the biotic factors are less influential except fires which along with general distribution of rainfall, aspect and change in depth and nature of soil are responsible in determining the local variations within the above broad type. Besides receiving less rain fall, the southern part of the region is also subjected to frequent fires, often twice in a year and bear more open forests with species rather resistant to fire. The species with corky bark like Semal (*Bombax ceiba*) survives the fire and their percentage in the stand increases. Fire and biotic interference have increased the percentage of species like Zizyphus, Stereospermum, Dalbergia, Sissoo, and Diospyros in the forests because of their capacity to produce root sucker, an adventitious shoot, from extensively branched underground root system.

The teak forests here owe their existence to the remarkable power of these species to withstand repeated burning and to establish itself on burnt grass land. The purity of the present teak forests is largely attributable to the fact that its associates are less resistant, and

none of them appears able to establish high forest in periodically burnt area. As the fire sweeps in, the bark of teak, having low conductivity prevents the damage of the cambium and phloem.

The geological formation and the soil largely determine the type of vegetation it is going to support. The most of the area here has the soil of trap origin. These soils are rich in mineral and have a high water holding capacity. They have a high rate of exchangeable calcium and ph varying from 6.5 to 7.5 thus supporting the best form of teak. Teak needs a good quantum of moisture to support its long growing season. The places at *ballas* or on slopes, where the moisture condition deteriorates, the teak is soon replaced by Salai ( *Boswellia serrata* ) and Tiwas ( *Ougeinia oogeinensis* )

In Wasali, Zari and Khatkali area species of Chandan (*santalum ulbum*) is limited in some pockets.

The Bel is mainly found in Khatkali, Wari Gullarghat area. Tendu is restricted in the pockets of Golai, Dhulghat and Gadgabhandum and Rangubelly area. The Mango and Jamun is found in Chikhaldara area. Khair and Sisam are limited in Jarida, Hatru of Sipna Division.

#### **1.11 WILD FAUNA AND HABITATS:**

The floristic mix of shrubs, herbs and grass communities is a high impact attribute which governs the relative abundance of wildlife. Buffer area of Melghat harbors a wide variety of wildlife and is rich in avifauna. Tiger, Panther and Wild dogs are the major carnivores. Jackal and Hyena are the scavengers and survive on the carcass left over by top predators. The prey animals are Gaur, Sambar, Barking deer, Spotted deer, Nilgai, Wild pigs, etc. No classification of habitats of different faunal species has been done so far in the area.

In buffer area Panther, Sloth bear, Hyena, Jackal, Sambar, Wild Boar, and Barking Deer are of common occurrence. Cheetal and Nilgai are mainly located in Chourakund and Harisal pockets. Bison's are noticed in Thadada of Harisal pockets. Census carried in February 2010 shows the No. of prey-predators.

#### **1.12 MAJOR CONSPICUOUS CHANGES IN THE HABITAT SINCE INCEPTION:**

As the work of buffer zone formation is being started it is difficult to speak about the major changes in habitat so early. A detail study shall be carried out to establish a base line data for the existing area included in buffer. The cases relating forest right act are being settled. The action is in progress at Collector level. This data will act as reference point for future study of changes in habitat and for other research works.

## CHAPTER - II

### STATUS OF TIGER AND CO-PREDATOR

#### DISTRIBUTION:

**2.01** The area is the home of tiger, Leopard and several other rare and endangered wild animals like Gaur, Nilgai, Sambar, Barking deer, Sloth Bear etc. In buffer area the tiger signs and those of other predators are periodically noticed. These indicate that forest area in buffer zone is fertile and conducive for wildlife. Prey density is good as of ex MUA in comparison to the buffer area comprised in territorial divisions.

#### ABUNDANCE STATUS:

**2.02** Leopard presence is very common all over the buffer areas. The evidences of tiger are found in Shevrimunda pockets of Harisal, Ghatang, Chikhaldara and Jarida ranges. In buffer area Panther, Sloth bear, Hyena, Jackal, Sambar, Wild Boar and Barking Deer are of common occurrence. Cheetal and Nilgai are mainly located in Chourakund and Harisal pockets. Gaur are noticed in Thadada of Harisal pockets. Census carried in February 2010 shows the no. of prey-predators. If the whole landscape is taken in to consideration along with core of Tiger Reserve, the status of Tiger and Leopard can be termed as adequate.

As this is the first Tiger Conservation Plan for buffer area, definite figures about number of wild animals and tiger and co-predators is not available. In the course of time the same will be studied and more information will be gathered.

#### PREY-PREDATOR RELATIONSHIPS:

**2.03** The monitoring as is being in Melghat Tiger Reserve areas is not being done in territorial divisions meticulously. Prey predator ratio is to be suitably maintained to avoid the hazards. Therefore, in the buffer zone the assessment of prey base as well as predators needs more monitoring. Number of prey species has to be increased by improving the habitat and enhanced protection measures in the buffer zone area.

#### ASSESSMENT OF THREATS:

**2.04** Major threats to the area and its resources in the buffer are as below:

- 1) Encroachments for agricultural purposes on wildlife habitats and forest lands by local people.

- 2) Illicit cutting of trees for local needs and commercial purpose.
- 3) Illegal grazing by local/migratory cattle.
- 4) Poaching and hunting of wild animals for local as well as commercial purpose.
- 5) Fires, mostly man made for Mohwa /Tendu / local poaching etc.
- 6) Illegal removal of non-timber forest produce and valuable medicinal plants.
- 7) Illegal removal of soil, boulders, rock, sand, stones, including minerals etc.

### **ENCROACHMENT:**

**2.05** The encroachment on forest land has become a regular phenomenon as periodically govt. regularized the encroachment on forest land. The encroachment reduces the forest area and fragments the **habitat**.

As human population and cattle population increased in the area, more and more forests were dis-forested and encroached to meet the growing needs of agriculture and habitation. In 1964, a High Power Committee was appointed to look into the matter of illegal encroachments. Encroachments were regularized by the Govt. on the recommendations of this committee. Then Govt. launched scheme to grow more grain to fight against hunger. People tried to grow more crops over agriculture land, fallow lands and even on encroachments on forest land in 1971. This movement of growing more crops lead the landless laborers and land holders adjoining fallow forest land to encroach the forest land. Then, again in 1978 Govt. passed special resolution to distribute forest encroached land to encroachers. These gestures have encouraged forest villagers to encroach more forest land. All the encroachers have strong belief that one day the Govt. would distribute the encroached forest land to them. On this belief, the encroachers are always trying to collect some proof of their encroachment such as entry of crop cultivation record over 7/12 abstract from local patwari and other documented proof to fight with forest department in court of law. There are some vested interests, pseudo organizations and even some Non Government Organizations instigating and supporting them to hold possession over encroached forest land by any means. Some times vested interests behind these organizations harass the ground forest staffs who try to evict the encroachment. In view of this complex scenario, it has been extremely difficult, rather impossible for the forest staff to control and remove encroachments. Strong administrative and political will is needed to control this devastatingly harmful phenomenon.

To stop the encroachment completely following control measures are needed to be applied very strictly.

1. Strict legal action against pseudo organizations, and vested interests as even N.G.O.s who misguides and instigates forest villagers to encroach forest land.
2. Joint survey of village land with revenue surveyor and fixing correct boundaries and removing encroachment existing over the forest land. Demarcation of boundaries by constructing permanent pillars, digging of T.C.M. or constructing stone walls and regular maintenance need to be done on.
3. Suitable strict legal action against encroachers by following necessary legal steps and time bound approach to remove encroachment.

#### **ILLICIT CUTTING:**

**2.06** The illicit cutting of trees is another serious threat to the wildlife habitats in buffer area of Melghat Tiger Reserve. The illicit cutting is done to meet out local requirements of small timber, bamboo, for housing and agricultural implements, fuel wood for domestic purposes from wind fallen trees, dead, dying, diseased, dried trees, or even cutting of pole size crop is resorted to for this purpose. Due to increase in the price and heavy demand for valuable timber like Teak, Sajad, etc. as also the development of roads and good communication network, Melghat dweller now, may soon be lured to illicit felling of timber for sale outside is increasing. So it is necessary to develop suitable strategies and exercise strict controls and checks for protection of forests from increasing threats for illicit cutting of trees on the area.

#### **ILLICIT GRAZING:**

**2.07** There is rise in cattle population and forests are getting degraded. The grazing pressure has increased manifold in last few years. The heavy grazing in forest area takes away the available fodder of wild herbivores and also contaminates disease to wild animals. The habitat is also adversely affected.

Grazing is the third but most dangerous foe for forest regeneration and wildlife conservation in all respects. Indiscriminate and uncontrolled grazing leads to heavy trampling by feet of cattle and soil becomes hard, and susceptible to erosion. Due to heavy trampling, the good grown regeneration gets destroyed and the potential wildlife habitat does not recover. This makes the degradation is almost unidirectional causing loss of valuable bio-diversity and some gene pools permanently. In such adversities, the nature stops regenerating the forests automatically. The cattle share food & water always with wild herbivore and may also communicate diseases to them. Due to heavy competition in food & water, wild

herbivores suffer a lot and viable population does not sustain. Carrying capacity of the area gets decreased in the long run. The professional grazier kindles fire in the belief of getting healthy grasses after pre monsoon shower. This also destroys the vegetation, wild life and disturbs the food chain.

**POACHING AND HUNTING:.**

**2.08** There is not much evidence for commercial poaching for tiger skin, horns, wildlife trophy or other animal article, organs for medicinal use or meat for sale. The threat for poaching, however, even for commercial purposes is rare, particularly on the areas bordering Madhya Pradesh towards Dharni, Jarida, in the North and towards Akot side in the South. Generally the hunting of Sambar, Chital, Barking deer etc. are done by tribals traditionally on festival occasions for meat. Such type of hunting's are carried out by groups of people with assistance from pet and trained dogs and local arms such as "Axe," "Koyata", "Bhala", etc. Some times carnivores kill cows or buffaloes, due to which owners get angry and poison the carcass to kill the carnivores, as revenge. Timely payment of compensation and effective, control on illicit grazing etc. do help in reducing such poisoning cases. Such cases are also very rare since past few years and show decreasing trend.

**FIRE:**

**2.09** Forest fires are of very common occurrence. It is most damaging in summer season. Recurring fires deteriorate and destroys the natural habitat of wildlife. These fires aggravate the already existing water scarcity in the area.

For this purpose the annual "Fire Protection Scheme" for each division will be implemented using MGNREGA and non plan/ plan funds.

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## CHAPTER-III

### HISTORY OF PAST MANAGEMENT AND PRESENT PRACTICES.

#### CONSERVATION AND FOREST MANAGEMENT HISTORY PAST SYSTEMS OF MANAGEMENT.

**3.01** Till British had taken administration of Melghat tahsil under their control in 1853 and there was no forest administration, the forest were irregularly exploited by *Korku* for trade in forest produce in plains. Large areas were under shifting cultivation. Britishers started reservation of forests and completed it by 1913. This reservation of forests gradually brought the indiscriminate felling under control. The Reserved Forest was worked under Improvement Felling up to 1935. From 1936 to 1955 the forests were worked under Stein's plan which prescribed Uniform System in the better quality teak forest and Coppice with Reserve in comparatively poor quality forests. Remote and under stocked areas were not subjected to any type of regular working. Sharma's plan which came into force in 1956 also followed the same working principle of Stein's plan. Sharma's plan was revised by Joshi.

In past, the Melghat forests were worked through following Working Plans and schemes.

- I. Bugshaw's Plan (1893-1915) for Bairagarh and Gugamal Reserves.
- II. Gugamal Reserve working scheme (1910 –1915)
- III. Tapti Reserve working scheme (1912-1915)
- IV. Dunbar Brander's working plan (1915-1916 to 1935-1936)
- V. Stein's working plan (1935-1955)
- VI. Sharma's working plan (1956-1970)
- VII. Bhatena's working scheme (1961-1971) for Debida, Dhulghat, Wan and part of Rupagarh Reserve.
- VIII. Joshi's Working plan (1975 – 1985 )

During the above plan periods, the forests in the area were basically worked under Selection Cum Improvement Working Circle. The objective of these plans and schemes was to harvest timber for commercial purposes. The SCI was considered most natural system as this ensured the sustainability of forests. The improvement operations resulted into preponderance of teak of good quality.

The CWR system was with the objective of producing small timber to meet the requirement of local villages. The areas proposed in this system were not very fertile and hence only small timber was supposed to be taken out. The dry deciduous nature of forests and the poor quality of substratum had depleted these areas further. The opening of canopy invited weeds and grazing pressures. The fuel wood obtained in the process was used for local consumption as well as for commercial sale. Amongst above systems protection working circle ensured the maximum protection to the forests and had thus provided the ideal niche to the wildlife. In the later years, these areas constituted the part of Gugamal National Park.

**First Management Plan** for the Tiger Reserve area (1571.74 sq.km.) after constitution the area as Tiger Reserve on 22<sup>nd</sup> February 1974 was prepared by **Sheikh and Shri. Sawarkar** in the year 1974 for the period 1973-1978, for orienting the activities in the area to realize the needs and objectives of wild life conservation. **The second management plan** was prepared by **Shri. M.G.Gogate** for the period 1988-1998 to ensure maintenance of viable population of the tiger for scientific, economic, esthetic, cultural and ecological values.

Subsequently Shri. P.J.Thosre prepared a Plan for Multiple Use Area (now referred as buffer area under control of Melghat Tiger Reserve) during the year 1995-2004. Mr.Thosare in his plan divided the whole area into three zones i.e. Reserve Forest zone, Village zone, Village area zone assigning almost whole of compartment or in some cases two compartment in the Village zone from which collection of small timber, fuel wood and fodder was allowed for the villagers.

However none of these plans were approved by competent authorities and as such they were never brought in systematic operation. The management plan for the period 2004-05 to 2013-14 for core and multiple use area was prepared by Shri. Ramanuj Choudhary the then Conservator of Forests and Field Director, Melghat Tiger Reserve.

For the management of the area, under the control of Deputy Conservator of Forests, East Melghat Division, the Working Plan is prepared by Shri. Vinod Kumar, Deputy Conservator of Forests for the period 2006-07 to 2015-16. The working plan for West Melghat Division is prepared by Shri. V.R.Tiwari, Conservator of Forests for the period 2008-09 to 2017-18.

The Wildlife (Protection) Act, 1972 has come into force in the State of Maharashtra with effect from 1<sup>st</sup> June 1973. Under this Act, Wildlife Protection (Maharashtra) Rules

1975, Wildlife (stock declaration) Rules 1973 and Wildlife (Transaction and Taxidermy) 1973 rules were adopted by the Govt. of Maharashtra.

All shooting blocks in Melghat were declared closed to shooting by the orders of the Chief Wildlife Preservation Officer during 1968-69. Tiger hunting was banned for two years period from 1<sup>st</sup> August 1970 under Revenue and Forest Department Resolution No. WLP 1570/45414-Y Dated 25-7-1970 and was subsequently extended for further period of three years vide Govt. notification No.WLP1572/ 75100-X, dated 2-8-1972. Since then there has been absolute ban on not only shooting of Tigers but also, all animals of schedule I and II of the Wildlife Protection Act, 1972.

### **OTHER LAND USE- VILLAGES, AGRICULTURE, DEVELOPMENT PROGRAMS, TOURISM ETC.**

**3.02** The buffer zone lies around the critical tiger habitat having 118 villages. The total human population of the villages is 80265 and cattle population is 50747. The non forest area in the buffer zone is mainly use for agricultural purpose. The main crop is Jawar, Bajara, Soyabin, Tur, Kodo, Kutki, Jagani etc. The population mainly consists of Korku, Nihal, Rathiya, Gond.

Tourism in the buffer zone is not a major activity. Nature Interpretation Centre at Harisal developed especially for the tourists visiting from Madhya Pradesh. Chikhaldara the only hill station in Vidarbha region is one of the tourists point in buffer area. The Gavilgarh Fort a historical place on the Chikhaldara plateau has also importance from the tourist points of view. There are no big industries in the buffer area and hence development of tourism industry concentrating on Chikhaldara hill station is a must to generate the employment for the local people. Shahanoor and Wasali on foot hills of Narnala and Ambabarwa Sanctuaries have great tourist potential. It needs to be suitable tapped.

### **RESEARCH, MONITORING AND WILDLIFE HEALTH.**

#### **RESEARCH AND MONITORING:**

**3.03** Wildlife research is a major activity in Melghat Tiger Reserve. It is essential to develop research and monitoring facilities further which would provide a scientific understanding of wildlife populations and habitats required for their proper management and ensure appropriate habitat utilization. Some research experiments have been going on in the area through research wing of the Project Tiger staff in buffer area under control of Field Director, Melghat Tiger Reserve. The staff posted on research duty is supposed to carry out

projects under the guidance of Research Officer. However, since most of the staff posted on research posts is either engaged in other works or is unwilling to take up these works due to old age etc. as also most of these posts are lying vacant research activities are not up to mark.

Systematic procedure was laid down for the collection of research data on various aspects and incentives were provided for individuals and N.G.O.s such as Bombay Natural History Society to take up appropriate studies as supplement.

Monitoring of tigers, co-predators and prey as per the instructions of NTCA was carried out using the newer methodology method since 2005- latest in the buffer area. Latest exercise for monitoring of wild animals was carried out in January 2010 using the same methodology. This exercise is done regularly on year to year basis in the buffer area (Previously MUA) of MTR. However, the same exercise is not carried out in the buffer area of the territorial divisions.

#### **WILDLIFE HEALTH:**

**3.04** A systematic study of wildlife health in buffer area is not done. The domestic cattle should be annually vaccinated for prospective epidemics like FMD, HS, BQ, Anthrax, Rabies etc. No grazing passes should be issued unless the cattle is vaccinated and cattle will be suitably branded every year for such identification. Cattle crossing over from outside the area would not be permitted unless a certificate of their having been vaccinated is produced. Cattle camp in jungles will be strictly prohibited. Any left out carcass should immediately subjected to post mortem and viscera etc. should sent for histo-pathological investigations.

#### **NATURE EDUCATION AND INTERPRETATION:**

**3.05** There is one Nature Education and Interpretation Centers located at Harisal in buffer zone. The Harisal Centre is managed by Melghat Tiger Reserve. The exhibits and displays in the Natural Interpretation Centers will be periodically changed in order to accommodate various aspects associated with value to conservation, biodiversity, tribal culture, forest protection and other wildlife management activities etc. Adequate measures will be taken to maintain all these facilities in place for the benefit of visitors.

#### **ADMINISTRATION AND ORGANIZATION:**

**3.06** The administration and management of buffer area is under control of following authorities.

- 1) Chief Conservator of Forests and Field Director, Melghat Tiger Reserve, Amravati.
- 2) Deputy Conservator of Forests, East Melghat Division, Chikhaldara.
- 3) Deputy Conservator of Forests, West Melghat Division, Paratwada.
- 4) Deputy Conservator of Forests, Buldhana Forest Division.
- 5) Deputy Conservator of Forests, Akola Forest Division.

Details of Range, Round and Beats falling in buffer zone is given in the notification issued dated 29<sup>th</sup> September 2010.

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## CHAPTER – IV

### PRODUCTION SECTORS IN THE LANDSCAPE.

The landscape of buffer is having following production sector in it.

#### **FORESTRY:**

**4.01** The forestry and allied works are being carried out as per working plan/schemes of that division. The working plan of West Melghat Division (by Shri V. A. Tiwari, I.F.S., 2008-09 to 2017-18), East Melghat Division (by Shri Vinod Kumar, IFS and Shri M.K. Rao, IFS, 2006-07 to 2015-16) and Management plan of Melghat Tiger Project (by Shri Ramanuj Chaudhari, I.F.S., (2004-2005 to 2014-2015) provide for a chapter on wildlife preservation.

#### **AGRICULTURE:**

**4.02** The agriculture in the buffer zone is major source of livelihood for locals. The main crop is Jowar, Soyabin, Tur, kutki and kodo. Most of the agriculture is rain fed and so the demand for medium and big irrigation project is rising day by day.

#### **INTEGRATED DEVELOPMENT:**

**4.03** Schemes like eco-development, Joint Forest Management are being implemented in the buffer area of the reserve by the Forest Deptt. The objective is to improve the standard of living of village communities by developing alternative subsistence and income generation opportunities and also to reduce dependency of local people on the forests. Besides this the schemes like Vidarbha Panlot Vikas Karyakram in 4 villages from Chaurakund range, 2 villages from Dhakna range and 3 villages from Harisal range were undertaken to develop soil and moisture conservation activities in the area. The scheme is likely to be completed in December 2011.

In Sipna Wildlife Division, Paratwada 4 villages from Jarida and 4 villages from Hatru range were selected to implement the integrated Watershed Development Programme “Hariyali Project”. The project main objective is to develop soil and moisture conservation activities in the area.

Under MGNREGA soil and moisture conservation works are carried out in the buffer area.

In the buffer area the outside agencies such as Zilla Parishad, Tribal Department, Social Forestry Division, Gram Panchayat are taking the S.M.C. works like Shet-talao,

Bhandharas, Jawahar Vihar, loose bolder structures, Dhaliche Bandhare, C.C.T. Pazar Talao and Road works.

#### **TOURISM:**

**4.04** There are following tourism places in Buffer Zone.

1. Chikhaldara Hill Station- Forest Park, MTDC and Private tourist Hotels.
2. Harisal- Nature Interpretation Center and Tourism Zone.
3. Wari, Narnala shrine and Shiv Temple at Dhargad  
in the core and adjacent to buffer:- Temple tourism
- 4) Chourakund-Rangubeli area- The Rest Houses at these places will be handed over to FDCM as per agreement to develop tourism area.

At above places wildlife eco-tourism needs to be facilitated involving local host community.

#### **DEVELOPMENT OF VIEW POINTS ALONG AKOT-HARISAL ROAD**

**4.05** Melghat Tiger Reserve is bestowed with lush green forests and soaring heights. A drive along any of the roads meandering through the woods is quite enjoyable. Akot-Harisal road passing through the buffer area will be developed with number of view points, spots of interest falling along the road side. This would involve construction of safety railing, resting places, sheds, approaches, huts etc.

#### **HOME STEAD TOURIST FACILITY**

**4.06** Villagers will be encouraged to develop Home Stead tourist facility in their houses or agricultural land.

#### **FISHERIES:-**

**4.07** The Wan, Sipana, Gadga, Tapi rivers in buffer zone are used for illegal fishing by Tribal for their daily food. Of the meager natural food resourced available to the locals, fish, is a important component which even provides recreation and food source to the tribals. Fishing is often done during night when local sit near river 'doh' or water holes burning fires the whole night. This adversely affects the wildlife coming to waterholes. However, commercial fishing on large scale is not done in the area.

#### **TEA/COFFEE ESTATES:-**

**4.08** There is no tea/coffee estate in the buffer area of Melghat Tiger Reserve.

#### **ROAD/RAIL TRANSPORT:-**

## **RAILWAY**

**4.09** Akola-Khandwa-Indore M.P. Meter gauge railway route is passing through buffer area from Hivarkhed in Akola district to Dhulghat Range in West Melghat Division.

## **ROAD**

Buffer area is having 2 state highways as follows-

1. Amaravati-Paratwada-Burhanpur- State Highway No. 6
2. Akot to Harisal : State Highway No. 204

Also the buffer zone is having a good network of district roads, village roads connecting 118 villages inside the buffer zone.

## **INDUSTRY:-**

**4.10** There is no major industrial work within the buffer area

## **MINING:-**

**4.11** There is no mining work within the buffer area. However quarry of stone, road metal is located near Popatkhed, Tal.Akot.

## **THERMAL POWER PLANT:-**

**4.12** There is no Thermal Power Plant within the buffer area.

## **IRRIGATION PROJECT:-**

**4.13** There is 1 medium irrigation project situated within buffer zone at Wari Hanuman situated on southwest side of buffer area.

## **TEMPLE TOURISM:-**

**4.14** At Wari Hanuman temple situated on southwest side of buffer area and also Narnala shrine and Shiv temple at Dhargad in core adjacent to buffer area are the main sites for temple tourism in the area.

**COMMUNICATION PROJECT:-** No communication project exists in the buffer zone.

Only the communication as follows exists-

- 4.15** 1) Buffer area in Melghat Tiger Reserve and Territorial division are connected by wireless network. The main station Vairat is in the core area.
- 2) Communication is also possible through cell phones and landlines in selected pockets of buffer zone.

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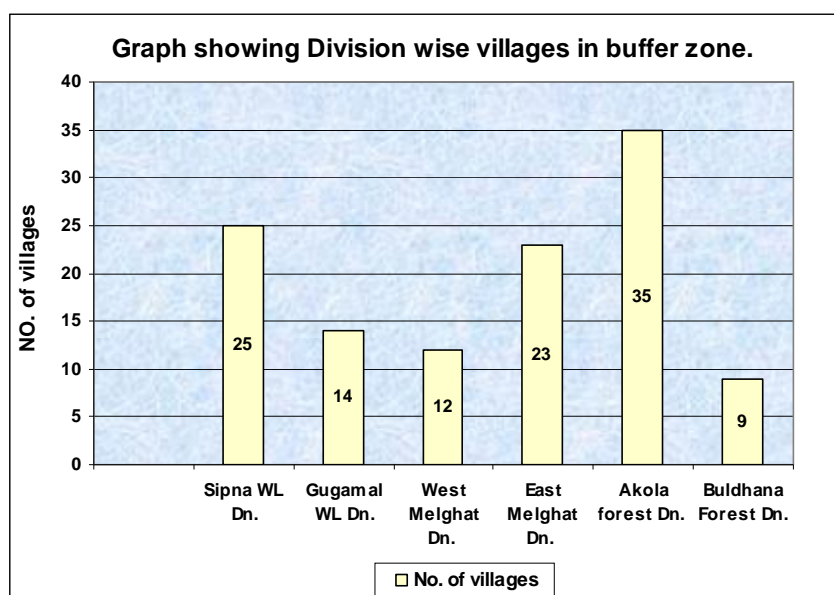
## CHAPTER – V

### LAND USE PATTERNS AND CONSERVATION MANAGEMENT ISSUES

#### LAND USE CLASSIFICATION:-

**5.01** The land classification of buffer area of Melghat Tiger Reserve is as follows.

Sr. No.	Name of the Division	Forest area (ha.)	Non forest area (ha.)	Total area (ha.)	No. of villages
1	Sipna Wildlife Division MTR	31879.96	3622.14	35502.10	25
2	Gugamal Wildlife Division MTR	15261.13	2092.96	17354.09	14
3	West Melghat	22046.62	2337.46	24384.08	12
4	East Melghat Dn. Chikhaldara	17508.85	4807.98	22316.83	23
5	Akola forest Dn. Akola	1932.43	15967.48	17899.91	35
6	Buldhana Forest Dn. Buldhana	3436.50	5910.16	9346.66	09
<b>Total :-</b>		<b>92065.49</b>	<b>34738.18</b>	<b>126803.67</b>	<b>118</b>



- The non forest land mostly covers agriculture land. Agriculture is the principle activity of the tribal and non tribal people in this area.

- In East and West Melghat division villages as well as the buffer of Melghat Tiger Reserve the landholdings are small. All the people do practice subsistence level of agriculture. They raise inferior grains like Kodon, Kutki and Jagni on lighter soil and Gram, Jawar and Wheat on clayey soil. Cultivation of cotton is rare in the buffer area of Buldhana divisions, the crops taken are cotton and Jawar, Wheat, Rice, Bajara, Soyabean, Gram, Til, etc.

#### **SOCIO ECONOMIC PROFILE OF VILLAGES:-**

**5.02** There are 118 villages in the project area having human population of 80265 and cattle population of 50847. The major communities in Melghat are *Korku, Gond, Nihals, Balai* and *Gaoli*. In Buldana division besides these communities Kunbis, Marathas, Andhs, Mali, Banjaras are inhabitants of the area. The inhabitants are dependent on income from agriculture, forestry work and collection of non-wood products.

#### **RESOURCE DEPENDENCE OF VILLAGES:-**

**5.03** The 70-80 Villages within buffer zone are dependent on forest resource for their day to day need. The way of the life of the people in rural areas has direct bearing to the forests as they depend on forests for timber, poles, firewood, Bamboo and grasses for constructing their houses and cattle sheds and making agricultural implements. They also require fodder, flowers and fruits and as well as variety of other non-timber forest produce such as Moha, Gum, Lac, Honey, Tendu leaves, Herbs, Roots etc. for food and medicinal purpose. Fishing from the water holes is a very favorite activity.

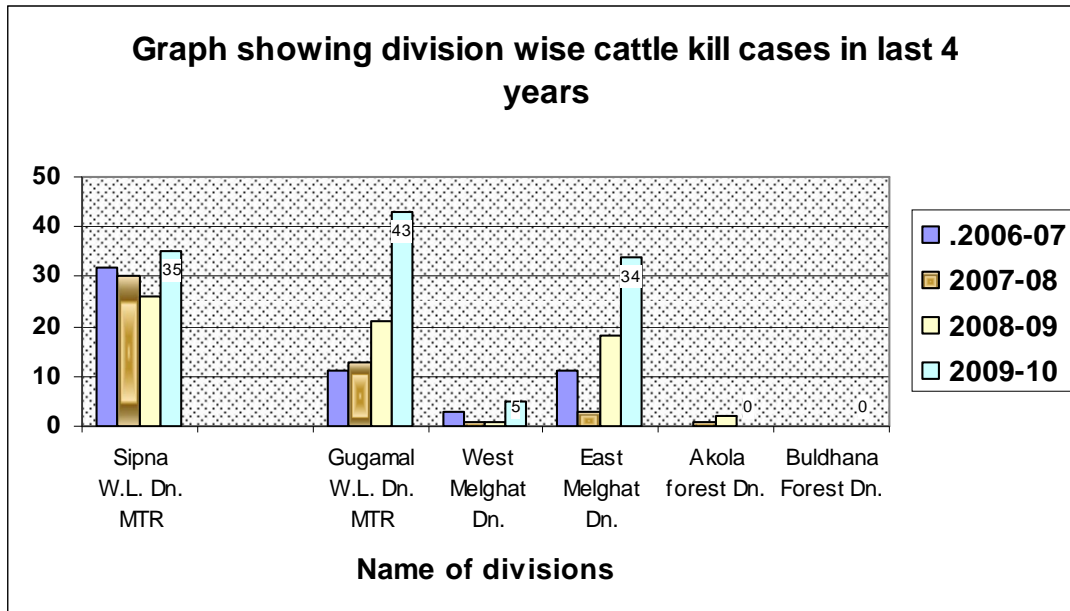
#### **HUMAN DEATH, HUMAN INJURY CROP DAMAGES:-**

**5.04** In any protected area, the human component plays an important role. People residing in and around the protected area, influence the wildlife. The number of people, their life style has direct bearing on the wildlife population. Traditionally Korkus have been drawing their sustenance mainly from forestry works. Their life style has been influenced by stopping of timber harvesting activity in recent past and therefore at present they don't have round the year employment. They do occasional poaching of herbivores like Cheetal and Sambar which affect the availability of food for the carnivore.

**Cattle kills : and compensation paid during last 4 years.**

Name of the Division	Cattle kill cases							
	2006-07	Compen sation Paid	2007-08	Compen sation Paid	2008-09	Compen sation Paid	2009-10	Compen sation Paid
Sipna Wildlife Division MTR	32	130675	30	100141	26	66865	35	62711 (18 cases)
Gugamal Wildlife Division MTR	11	35700	13	39950	21	54935	43	132509 (34 cases)
West Melghat	03	13500	01	3750	01	5500	05	Not paid
East Melghat Division	11	42075	03	7900	18	47266	34	62485
Akola forest Dn.	00	00	01	1175	02	5250	00	00
Buldhana Forest Division	00	00	00	00	00	00	00	00
<b>Total</b>	<b>57</b>	<b>221950</b>	<b>48</b>	<b>152916</b>	<b>68</b>	<b>179816</b>	<b>117</b>	<b>257705</b>

The attack is mainly by tiger followed by Panther and Wild dogs.



The farmers in the nearby villages are afraid of attack of wild animals. Local Leaders take advantage of their fears and make them agitate against the Park authorities.

The compensation for injuries to human beings caused by wild animals are being paid as per revised rates vide G.R. No. WLP/10.08/P.K.270/F-1/dt.2.7.2010.

**ASSESSMENT OF INPUT OF LINE AGENCIES/OTHER DEPARTMENT:**

**5.05** The Field Director, Deputy Conservator of Forests, Akot, Gugamal, Sipna Wildlife and Deputy Conservator of Forests, Akola, East Melghat, West Melghat and Buldhana have regular contact and provide employment under various schemes like Plan, Non Plan, MGNREGA, Vidarbha Panlot, Hariyali, Nav Sanjivani Schemes.

Police Department, Zillah Parishad, Tribal Department, Public Work Department and Non Government Organization's are the other agencies along with the above mentioned lines agencies, who have to work in regular coordination.

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**PART – B**  
**PROPOSED MANAGEMENT**

**CHAPTER – VI**

**VISIONS, GOALS, OBJECTIVES AND PROBLEMS**

**VISION:-**

**6.01** To consolidate the area of the core of the Melghat Tiger Reserve so that core has a viable population of tigers and to provide dispersal habitat for spill over population for wild animals.

**MANAGEMENT GOALS AND LEGAL REQUIREMENT:-**

**6.02** As per Section 38 (V) of Wildlife (Protection) Act 1972, the state Government, on the recommendation of NTCA, is required to notify an area as Tiger Reserve. The Tiger Reserve consists of two parts namely, (i) Core of Critical Tiger Habitat & (ii) buffer or peripheral area. These areas are required to be identified and established on the basis of scientific and objective criteria. The core area is required to be kept inviolate for the purpose of Tiger Conservation whereas in the buffer area a lesser degree of habitat protection is required to ensure the integrity of the critical tiger habitat with adequate dispersal for tiger species and which aim at promoting co-existence between wildlife and human activity with due recognition of the livelihood, developmental, social and cultural rights of the local people.

**MANAGEMENT STRATEGY:**

**6.03** The management strategy would involve:

1. Co-existence agenda in buffer/fringe areas (landscape approach/sectoral integration) with ecologically sustainable development programme for providing livelihood options to local people, with a view to reduce their resource dependency on the core. The strategy would involve reciprocal commitments with the local community on a *quid-pro-quo* basis to protect forests and wildlife, based on village level, participatory planning and implementation through eco-development committees (E.D.C.)
2. Mainstreaming wildlife concerns in the buffer landscape by targeting the

various production sectors in the area, which directly or incidentally affect wildlife conservation, eco-development through 'Tiger Conservation Foundation' as provided in the Wildlife (Protection) Amendment Act, 2006 and in coordination with various Govt. departments in various production sectors of economy.

3. Addressing tiger bearing forests and fostering corridor conservation through restorative strategy in respective working plans of forest divisions, involving local communities, to arrest fragmentation of habitats.
4. Ensuring safeguards/retrofitting measures in the area in the interest of wildlife conservation.

#### **6.04 MANAGEMENT PRINCIPLES:**

The management of the buffer area will have to be carried out on following broad principles:

1. Implementation of forestry activities after mainstreaming wildlife concerns.
2. Implementation of eco-developmental activities for reducing resource dependency of local people on surrounding forests.
3. Co-ordination with governmental / non governmental production sectors in the landscape for mainstreaming conservation.
4. Habitat management and improvement activities in the existing habitat of tiger and its prey species through active involvement of local communities. The management will be based on specific forest lands and non forest lands forming part of village level micro plans. Community participation will be solicited in the overall management of the buffer area.
5. Site specific eco-development initiatives based on participatory village level micro plans will be carried out for the local communities for strengthening their livelihoods through a balanced approach of rationalization of resource use, biomass regeneration and alternatives, so that the ecological status of the area could be improved and maintained
6. Reciprocal commitments by the local people through specific measurable actions as per MOUs for improving protection and conservation of the area will be implemented. This may include rationalization of resource use from the forest, participation in fire protection and anti-poaching efforts.
7. Ecotourism activities in the buffer area will be used as an important tool of Eco development for strengthening the livelihood of the local people and the nature education.

8. Capacity building of the field staff as well as eco-development committee members will be undertaken on a regular basis through the Govt. funds and through the Tiger Conservation Foundation. Similarly intensive nature conservation awareness programme shall be part of the buffer area management strategy with a focus on different stakeholders, particularly, local communities.

#### **PROBLEMS IN ACHIEVING OBJECTIVES:-**

**6.05** There are several constraints and problems posed by people and conflicting approaches adopted by different agencies working in the area which have an adverse effect on implementation of conservation programmes and hamper the process initiated for achieving the objectives of management.

**6.06** The project area lacks in natural openings and well-developed grasslands and meadows and as a result, adequate habitat edges do not occur in the area. Existing water holes and grasslands are regularly visited by the villagers for their livestock. This creates competition with the needs of the wildlife and results in struggle between conflicting needs. Direct effect of the deficiency in terms of grasslands and water resources is that the herbivore population in the area is inadequate. As a result the main predators like Tigers and Panthers sometimes meet the part of their food requirement by predated on the cattle grazing in the area. This becomes a major source of conflict between the cattle owners that is 'Gaolis' and the 'tiger' and hence the management.

**6.07** The increasing threat for wildlife poaching and illicit cutting in the whole area in general and the core and specific areas assigned for special management in particular, demand young, willing and trained forestry personnels who can patrol the areas with courage, conviction and use arms as well as intelligence wherever required with a view to control effectively the menace of poaching whether by locals or by outsiders. The personnels engaged in protection also essentially have to be motivated and trained professionally in befriending local people, be sensitive to the demands of their service as well as to the needs and problems of the local people. The harsh conditions and the non family nature of head quarters and lack of incentives make the posting unattractive for staff.

**6.08** The local people residing within the area do face problems owing to stringent laws for wildlife management and this fact need to be taken note by a management which needs to be sensitive on this issue. Main problems are –

- i) Remoteness of the area- This poses severe constraints as far as the availability of various facilities.
- ii) Hilly and undulating terrain – Though the inhabitants are used to it, this proves to be an obstacle for movement of provisions and other things of day-to-day need from main areas, especially in monsoon period, when some areas are cut off.
- iii) Loss of usual concessions like fuel wood, small timber, NTFP fishing etc. and limitations the alternative provided.
- iv) Loss of continuous income due to stoppage of forestry works, MFP collection etc.
- v) Occasional crop raiding by wild ungulates, though few complaints are normally lodged for this.
- vi) Scarcity of water especially during summer season.
- vii) Loss of livestock by wild carnivore’s killings.
- viii) Inflicting of injury or death due to attack from wild animals specially mauling by sloth bear.
- ix) Lack of industrial and infrastructure development due to strict implementation of the provisions of Forest Conservation Act, 1980 and Wildlife Protection Act, 1972 as well as relevant judgments of hon’ble Supreme Court in the matter.

## **STRENGTHS-WEAKNESSES-OPPORTUNITIES-LIMITATIONS (SWOT)**

### **ANALYSIS:-**

#### **6.09**

##### **STRENGTH**

- \* Good forests of adjoining forest divisions adjacent with core area in a large chunk is an asset for dispersing population from core.

##### **WEAKNESSES**

- \* Biotic interference in buffer area is biggest weakness.
- \* Large road network in buffer fragments the habitat.
- \* Lack of good grass land is impediment for dispersal of herbivores and consequent large carnivores.
- \* Restrictive and regulative use of the natural resources available.

##### **OPPORTUNITIES**

- \* Large open area due to degradation of forest can be a big opportunity in developing grassland by proper management intervention.



- \* Large road network if properly managed can be of great help for tourists and ultimately help in complete withdrawal of tourist pressure from core.
- \* Good scope for the Eco-development work to win over the local people.
- \* Newly created Tiger Foundation has opened up new window of opportunity.

### **THREATS**

- \* Poaching in this area is a big threat and organize networks of poachers with national and international ramification due to the traditional adivasi culture.
- \* Large cattle population is another threat in spreading diseases in wildlife population.
- \* Long porous border with Madhya Pradesh poses difficult conditions of protection.
- \* Dry, deciduous nature of forests, coupled with high summer temperature and practices of large rural population make this area extremely fire prone.
- \* The exponential increasing demands of ever increasing population.

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**CHAPTER – VII**  
**MANAGEMENT STRATEGIES**

**DELINEATION OF BUFFER ZONE IN VARIOUS SUB ZONES (E.G. ECO-DEVELOPMENT ZONE, FORESTRY ZONE, PRODUCTION SECTOR ZONE ETC.)**

**7.01** The buffer zone area of Melghat Tiger Reserve needs to be managed to provide sustainable utilization of resources by local people supplemented by Eco-Development measures aimed at restoration of rural ecosystem to a level of self-sufficiency as early as possible in order that pressures of resource needs on adjacent protected area are effectively mitigated.

**7.02** The area within the buffer zone consist of forest area of Akola, Buldhana, East Melghat, West Melghat territorial forest division and the forest area of Sipna and Gugamal wildlife division previously known as Multiple Use Area of Melghat Tiger Reserve. The forest area of these divisions are classified as Forestry Zone. The forest areas of territorial divisions are worked under various silvicultural operations and the forest area of Sipna and Gugamal wildlife division are worked as per prescriptions are based on wildlife management prescriptions. This is need of following similar prescriptions in buffer area in charge of territorial division and wildlife division. The NTFP’s collection and regeneration fellings in buffer areas as per working plans approved needs to be followed to meet local people livelihood needs and habitat improvement works to increase the prey base in buffer areas proposed to be carried out to sustain the tigers of the areas.

The non forest area of 4 territorial divisions consisting of 79 villages and non forest area of Sipna and Gugamal wildlife divisions consisting of 39 villages are included in the Eco-Development zone, as these areas needs villages based eco-development activities.

**7.03** Area statement of these zones is given in table below:

Name of Zone	Forest area of forest division	Forest area	Non forest area of MTR	Non forest area of forest division	Grand Total (ha.)
Forestry Zone	44924.40 ha.	47141.09	-	-	92,065.49
Eco development zone	-	-	5715.10	29023.08 ha.	34,738.18
Total	44924.40	47141.09	5715.10	29023.08 ha.	1,26,803.67

Total number of villages in eco-development zone is 118, out of which 7 are deserted villages. Out of these 7 villages 6 villages namely Malkapur bhil, Khasgaon, Aurangabad,

Alampur, Sarfabad, Bordi are from Akola division and 1 village namely Kasod belongs to Buldhana forest division. These villages are having non forest area and the treatment to this area will be as per the prescription given in the working plan of the respective divisions. Therefore, the eco-development works will have to be carried out in remaining 111 villages.

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## CHAPTER – VIII

### FORESTRY ZONE

**8.01** Forestry zone consists of forest area in charge of Gugamal, Sipna wildlife division and West Melghat, East Melghat, Akola and Buldhana Forest Divisions. In these divisions the forestry works are going on as per working plans of respective division. The prescription and the area worked under the working circle division wise are given below-

**8.02** Division wise and working circle wise area in this zone is given as below-

Working Circles prescribed in Working Plans / Management Plan

Working Circles	East Melghat Division	West Melghat Division	Buldhana Division	Akola Division	Total
Selection-cum-Improvement Working Circle	5,679.60 ha.	10,065.03 ha.	Nil	634.93 ha.	16,379.56 ha.
Improvement Working Circle	Nil	11,981.59 ha.	3,436.50 ha.	Nil	15,418.09 ha.
Teak Plantation Working Circle	1,500.56 ha.	Nil	Nil	Nil	1,500.56 ha.
Protection Working Circle	8,839.35 ha.	Nil	Nil	Nil	8,839.35 ha.
Afforestation Working Circle	1,489.34 ha.	Nil	Nil	1,297.50 ha.	2,786.84 ha.
Forest area of MTR (Ex MUA)	-	-	-	-	47,141.09 ha.
Total	17,508.85 ha.	22,046.62 ha.	3,436.50 ha.	1,932.43 ha.	92,065.49 ha.

#### PRESCRIPTIONS FOR IMPROVEMENT WORKING CIRCLE IN VARIOUS WORKING PLANS:

##### (A) BULDHANA FOREST DIVISION

- 8.03** i) No healthy green tree of any kind is permitted to fell.
- ii) Plantation of Teak and Anjan and miscellaneous species at silviculturally prescribed spacing shall be carried out.
- iii) Soil and moisture conservation works will be carried out.
- iv) All dead trees, after retaining 2 dead trees per ha. shall be marked by felling.
- v) All malformed advance growth of teak up to 30 cm. shall be cut back.

- vi) No fruit bearing tree shall be marked for felling.
- vii) Cut-back operation will be carried out in the year following main felling.
- viii) All climbers, except of NTFP importance, in the plantation area shall be cut.

**(B) WEST MELGHAT DIVISION-**

**8.04**

- i) No healthy green tree of any kind is permitted to fell.
- ii) Plantation of teak and miscellaneous species at silviculturally prescribed spacing shall be followed.
- iii) Soil and moisture conservation works will be carried out.
- iv) All dead trees after retaining 2 dead trees per ha. shall be marked for felling .2 stag trees/ha. will be retained for the purpose of wildlife management.
- v) All malformed advance growth of teak and other coppiceable species up to 30 cm. shall be cut back.
- vi) Bija, Shisam, Semal, Kulu and all edible fruit trees such as Mahua, Tendu, Awala, Mango, Jamun, Char, Bel, Biba, Behada etc. will be reserved against felling. Religious trees such as ficus etc. shall be retained.
- vii) CBO shall be taken up in the immediate year of main felling.
- viii) All climbers except Malkanguni will be cut.

**ANALYSIS OF ABOVE PRESCRIPTIONS OF IMPROVEMENT WORKING**

**CIRCLE AND RECOMMENDATIONS:**

**8.05** The above mentioned working plan prescriptions will continue in this area. Beside these the following prescriptions are recommended from the wildlife point of view.

- i) During planting operations browsable species and fruit bearing trees should be planted.
- ii) Tree plantations should not be taken up in any patch smaller than 5 ha. At least 2% of coupe area should be retained as well as interspersed grassy blanks, and may be developed as meadows for increasing prey base for tigers.
- iii) Indiscriminate climbers cutting may adversely affect bio-diversity climber cutting should be limited to the common woody climber species namely Kukadvel, Palasvel, Piwarvel etc. affected trees growth.

**PRESCRIPTIONS FOR SELECTION CUM IMPROVEMENT WORKING CIRCLE  
IN VARIOUS WORKING PLANS**

**8.06**

**(A) WEST MELGHAT DIVISION**

- i) Crop is managed on 20 years felling cycle, regulation by area and selection girth (BH) of 120 cm. for Ain, Haldu, Kalamb, Dhawda and Salai.
- ii) All dead trees will be worked for felling after retaining 2 such trees per ha.
- iii) No tree shall be marked for felling unless it is silviculturally available, no teak trees (seed origin) in pre harvestable girth class i.e. (105 U 120cm.) shall be marked for felling. The removal of tree should not accelerate soil erosion & create blanks.
- iv) Bija, Shisam, Semal, Kulu and all edible fruit trees such as Mahua, Tendu, Awala, Mango, Jamun, Char, Bel, Biba and Behda etc. will be reserved against felling. Religious trees such as ficus etc. shall retained.
- v) Planting of teak and miscellaneous species, at silviculturally prescribed shall be carried out.
- vi) All climbers except malkanguni will be cut.
- vii) Lantana and other growth of inferior species interfering or likely to interfere with the reproduction of teak and other valuable species will be cut back.

**(B) EAST MELGHAT DIVISION:**

**8.07**

- i) The felling cycle has been fixed as 20 years, regulation by area and selection girth (BH) 120cm.
- ii) The soil and moisture conservation works will be carried out.
- iii) Bamboo, Jamun, Arjun and grasses shall be planted along the nallah and river banks.
- iv) The area will be completely protected and felling of any kind shall not be permitted.
- v) All climbers will be cut.
- vi) All dead trees after retaining 2 dead trees per ha. shall be marked for felling.
- vii) Semal, Kulu and all edible fruit trees such as Mahua, Tendu, Awala, Mango, Jamun, Char etc. will be reserved against felling. Religious trees such as ficus etc. shall be retained.
- viii) CBO shall be taken up in the immediate year of main felling.

**(C) AKOLA FOREST DIVISION:**

**8.08**

- i) The teak trees of exploitable girth and above, that are silviculturally available and available coppice trees will be marked for felling.
- ii) Natural regeneration will be encouraged through improvement of site quality conditions by taking up suitable site specific soil and moisture conservation measures.
- iii) Thinning of coppice crop shall be undertaken depending upon the site and crop requirement.
- iv) Felling cycle fixed for 20 years and 75 cm. harvestable girth for teak is prescribed.
- v) No planting is prescribed, gap planning and seed dribbling proposed in undertaken in under stocked areas.
- vi) All dead tress shall be removed, except 2 per ha. which acts as snags and deus for wildlife.
- vii) Teak and miscellaneous species shall be planted as per the suitability of site.

**ANALYSIS OF THE ABOVE PRESCRIPTION OF SELECTION CUM IMPROVEMENT WORKING CIRCLE AND RECOMMENDATIONS:**

**8.09** The above mentioned prescription will remain continue in this area. Besides these the following prescriptions are recommended from the wildlife point of view.

- i) Though silviculturally mature and available tree should not be fell in open areas.
- ii) The status of regeneration should be use as and overarching condition of tree felling.
- iii) Area with un established regeneration should not be felled.
- iv) Timber removal / thinning permitted should not open the canopy more than 60% in winter month.
- v) The plantation activity and tree felling activity should be staggerd and safeguard from induce as effect specially near the human habitat.
- vi) Only indigenous species should be taken up for plantation.
- vii) NTFP harvesting should be base on regeneration status and productivity of each produce.

**WORKING PLAN PRESCRIPTIONS FOR PROTECTION WORKING  
CIRCLE IN EAST MELGHAT DIVISION:**

**8.10**

- i) The area shall be protected completely, no felling of any kind of live tree is permitted. Soil and moisture conservation works and seed sowings shall be taken up wherever possible.
- ii) All dead trees except two per ha. will be marked for felling.
- iii) CBO will be carried out in the next year of felling in the area.
- iv) All climbers, which are not of ecological and economical values, and affecting trees growth shall be cut.
- v) On steep slopes, neither CCT nor DCT works will be carried out to prevent soil erosion. Gabion and Loose boulder structure shall be taken in nallas. On the gentle slopes, cement bandharas and earthen bunds depending on site shall be taken up on a large scale to provide moisture regime in the area.

**ANALYSIS OF ABOVE PRESCRIPTIONS OF PROTECTION WORKING CIRCLE  
AND RECOMMENDATIONS:**

**8.11**

- i) To preserve the habitat in its undisturbed form.
- ii) Habitat improvement Works in the form of soil and moisture conservation works should be undertaken.
- iii) Strict protection measures should be adopted to protect the existing wildlife and its habitat in the area.

**WORKING PLAN PRESCRIPTIONS FOR TEAK PLANTATION WORKING  
CIRCLE IN EAST MELGHAT DIVISION**

**8.12**

- i) The crop is worked on 20 year cycle.
- ii) Plantation of teak will be carried out in this area on suitable patches.
- iii) Up to 20 trees per ha. of young to middle aged Semal, Khair, rosewood and other superior non- teak tree species will be retained in uniformly spread manner.
- iv) No felling will take place in 20 meter strip along either side of streams.
- v) Selective climber cutting over entire area of the coupe.



**ANALYSIS OF ABOVE PRESCRIPTIONS OF TEAK PLANTATION WORKING  
CIRCLE AND RECOMMENDATIONS:**

**8.13** Juxtaposition of coupes of consecutive years enlarges disturbances and temporary loss of habitats for tigers and dense forests species. The large timber production also creates prolonged disturbance working against habitat use by Tiger, Sambar, Gaur, Wild dogs etc. A coupe should not be closer by 500 meter from any other current year or previous coupe of the same working circle irrespective administrative boundary.

**PRESCRIPTIONS FOR AFFORESTATION WORKING CIRCLE IN VARIOUS  
WORKING PLANS:**

**8.14**

**(A) EAST MELGHAT DIVISION**

- i) Natural regeneration and coppice regeneration are supplemented by artificial regeneration. Plantations of Khair and teak are doing much better than other species. The planting shall be taken up in the next year of main working.
- ii) Soil and moisture conservation works shall be taken up in the area by constructing cement plugs, gabian and loose boulders in the nallas.
- iii) The area will be regenerated with suitable species. No harvesting is prescribed in the working circle. Tending of existing root stock, saplings, coppice shoots and poles, supplemented by plantations, are prescribed as the main activities in this working circle.

**(B) AKOLA DIVISION:**

**8.15**

- i) No tree will be worked for felling.
- ii) The dead trees will be removed leaving 2 trees per ha. which acts as snags and dens.
- iii) Intensive soil and moisture conservation works shall be carried out in order to increase the productivity of the soil and to check soil erosion. Gap planting with teak and other species and seed dribbling shall be undertaken as per the condition of soil.
- iv) The unwanted under growth weeds which prevent the development of seedling regeneration will be removed to protect and develop rooted stock.

**8.16 ANALYSIS OF ABOVE PRESCRIPTION OF AFFORESTATION WORKING CIRCLE AND RECOMMENDATIONS:**

- i) Extensive plantations of natural blanks neither succeed nor compatible with habitat requirements of Cheetal, Nilgai and Chinkara. Hence, natural blank area should be allowed to remain as natural blanks or developed as meadows if possible. Tree plantations should not be taken up in any patch smaller than five ha. At least 2% of coupe area should be retained as blanks or maintained as meadows if possible.
- ii) Choice of species for planting in forests close to protected areas should be restricted to species naturally found in these forests. Introduction of exotic species is discouraged.

**8.17 PRESCRIPTION FOR WORKS TO BE CARRIED OUT IN THE AREA OF FORESTRY ZONE OF MTR (EX MUA)**

- (i) Soil & Moisture conservation works like *nala* bund, gully plugging, gabion structures CCT etc. will be carried out to the extent technically feasible.
- (ii) Desilting and maintenance of waterholes and creation of new water resources like *vantalis*, anicuts, *bandharas* etc. wherever necessary will be taken up.
- (iii) Maintenance and development of natural openings into potential grass lands/meadows will be taken up.
- (iv) Removal of lantana, *Rantulsi*, *Cassia tora* and ecologically unfriendly species will be done to eradicate these from the area.
- (v) Propagation of good varieties of grass through seeding, planting of grass tussocks on scattered / raised grass beds will be taken up in suitable patches.
- (vi) Integrated habitat development works will be carried out in degraded areas or area near villages by taking up SMC, water conservation and development and plantation of fruit, fodder and shelter tree species, all activities being taken up in the same area in an integrated manner.
- (vii) Construction of roads, trails and pathways, considered essential for management and wildlife research and eco tourism will be taken up.
- (viii) Existing waterholes in the area will be listed, shown on map, maintained and protected.
- (viii) Existing and known prime habitats like nests, dens, caves, natural saltlicks etc. will be listed shown on map, maintained and protected.
- (ix) Wild animals and important plant species occurring in the area will be listed, mapped

and monitored with regard to status.

- (x) All cattle visiting the area or the waterholes will be vaccinated for immunisation, given an identity mark (ear tagging/branding) and no cattle without such mark/immunisation would be allowed to enter the area. The street dogs will be prohibited to enter into Melghat Tiger Reserve and vaccinated and castrated to the extent possible.
- (xi) All check gates, boundaries of RF and villages, check *nakas*, barriers at entry points will be maintained and rules for entry will be enforced.
- (xii) Regulated grazing on rotational basis and only up to carrying capacity for cattle, which have been immunised, will be allowed in the area. The cattle in all villages in the zone will be immunised and ear tagging etc. will be done regularly by the management.
- (xiii) No cattle camps/ labour camps will be allowed in the area.
- (xiv) The collection of *Mahua* flowers and seeds by local people for meeting their personal bonafide needs will be allowed from entire area of the zone except eco-sensitive area.

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## CHAPTER - IX

### ECO-DEVELOPMENT ZONE

**9.01** 5715.10 ha. non forest area of the Multiple Use Area of previous plan the Melghat Tiger Reserve and the non forest area 29023.08 ha. of Akola, Buldhana, East Melghat and West Melghat is included in this zone. The Multiple Use Area which acts as buffer of MTR was under the management of Melghat Tiger Reserve since 1<sup>st</sup> May 1999 after declaration of unified control system. This area consists of 39 villages. The non forest areas of Akola, Buldhana, East Melghat and West Melghat division consist of 79 revenue villages. The division wise area under eco-development zone is given below in the table.

<b>Sr. No.</b>	<b>Name of forest division</b>	<b>Non forest area in ha.</b>	<b>No. of villages</b>	<b>Remarks</b>
1	Sipna wildlife division, Paratwada	3622.14	25	
2	Gugamal wildlife division, Paratwada	2092.96	14	
	<b>Total MTR</b>	<b>5715.10</b>	<b>39</b>	
3	West Melghat division, Paratwada	2337.46	12	4 villages in Buldhana division and 3 villages in Akola division are deserted villages.
4	East Melghat division, Chikhaldara	4807.98	23	
5	Akola forest division	15967.48	35	
6	Buldhana forest division	5910.19	09	
	<b>Forest Division Total</b>	<b>29023.08</b>	<b>79</b>	
	<b>Grand Total</b>	<b>34738.18</b>	<b>118</b>	

**9.02** In Melghat Tiger Reserve eco development scheme was first introduced in 1992-93. The scheme was introduced with a view to seek participation of local communities and send a message to the public that tiger project aims at care and development of local people also along with conservation of wildlife. This scheme was implemented in five villages of Melghat Sanctuary namely; Kelpani, Bori, Dhargad, Gullarghat and Madizadap and 16

villages from previous Multiple Use Area namely; Hatru, Sarwarkheda, Chilati, Simori, Domi, Ruipathar, Khatkali, Chunkhadi, Bicchukheda, Navalgaon, Khadimal, Marita, Khokmar, Awagad, Harisal and Raksha. The buffer of the Melghat Tiger Reserve now consists of additional 79 villages from East Melghat, West Melghat, Akola and Buldhana division. These villages are revenue villages consisting of the non forest area. Eco-development schemes will be implemented in these villages as per the requirements of the villages. Therefore, in this plan, the objective is to provide continuity to the eco development programmes of past years, strengthen and broaden them and to institutionalize such programmes for co-existence of public along with wildlife.

#### **POLICY AND INSTITUTIONAL FRAMEWORK:-**

**9.03** The Govt. issued a G. R. no. FDM 2011/F.C. 100/F-2, dated 5<sup>th</sup> October 2011 regarding strengthening of Joint Forest Management Committee and its linkage with Gram Sabha and preservation of forts in the forest area (The copy of the G. R. dated 5<sup>th</sup> October 2011 is enclosed as Appendix no. III). The principles of this G.R. would be followed in implementing the prescription. Activities related to ecological, cultural, social, eco development and livelihood issues would also be facilitated by the Melghat Tiger Reserve Conservation Foundation.

As per the above G. R., the Joint Forest Management Committees established in the areas of Sanctuary, National Park and Tiger Project will be termed as Eco-Development Committees with the only difference that usufruct sharing shall not be allowed in such cases but will have the powers as given to other Joint Forest Management Committees.

The main group of activities to be included under village eco-development programme are as follows. These are only indicative and more innovative activities may also be devised, in consultation with and the needs of the villages:-

- Activities directly enhancing productivity of habitat and develop livelihood options, such as tourism.
- Activities for improving the productivity of NWFP in adjoining forests, agriculture lands, horticulture, sericulture, apiculture, cottage industry, low impact tourism and development of alternative income generation programmes.
- Activities which support sustainable alternative to unsustainable use of forest resources adjoining PAs.

**9.04** Participatory Rural Appraisal (PRA) or other appropriate techniques would be used to develop active participation and commitment of local people in determining mutually

agreeable investment priorities and arrangements for implementation of the eco-development programme. These PRAs would be specifically tailored to focus on the mutual interaction between people and the PAs and the resolution of such interactions. The objective of the PRA is to find mutually agreed solutions to mitigate negative mutual impacts and that such actions will result in measurable improvement to biodiversity conservation.

In making a microplan, socioeconomic data regarding no. of families in the villages, incomes presently derived from the PA or the forest area, the location and distribution of the resources, the seasonality of supply and demand and the beneficiaries would be collected.

The plan would include community suggestions for alternative ways of providing resources and incomes, arrangements and agreements for access to resources, mutual obligations reciprocal agreements between people and PA authorities to reduce pressure on PA. Identify investment activities and mechanisms for conflict resolution and monitoring. The reciprocal agreements would include specific and measurable actions to ensure that people are willing to make to conserve biodiversity in return for Eco-development investments.

The microplan shall aim at making the VEDC free from unsustainable dependences on the PA by the end of the plan period. The microplan will also prescribe measures to be taken to make the Village Eco-development Committee self sustainable to carry on the programme after the end of the project.

#### **INTEGRATION OF RURAL DEVELOPMENT PROGRAMME:**

**9.05** Majority of rural development program are implemented through Zilla Parishad, therefore, co-ordination between Zilla parishad and the Forest Department is a must to take the development works on priority basis in the village of buffer zone. A committee of forest officers as well as Zilla Parishad Officers can be formed for the implementation and supervision of works.

#### **PRESCRIPTIONS:**

**9.06** The past management practices, previous conservation and improvement activity and the requirement of the villages in territorial division area will be different from that of the previous Multiple Use Area. Therefore, this zone a will be classified in two sub zones namely-

**Sub Zone I** - Comprising the non forest area of Sipna and Gugamal wildlife divisions consisting of 39 villages.

**Sub Zone II** - Comprising the non forest area of territorial forest divisions consisting of 79 villages.

### **Sub Zone I -**

The area consist of buffer area (previously termed as Multiple Use Area) consisting of 39 villages. The area is managed since a long time in past on the basis of Annual Plan Operation sanctioned by the Government of India under project tiger and eco development schemes. The people residing in these areas are well conversant with the issues like wildlife monitoring habitat improvement, grazing, attack by wild animals on domestic animals and humans and compensation paid with respect to it.

- (i) To take up soil and moisture conservation works in an intensive manner on watershed basis with a view to arrest soil erosion, induce optimum water conservation in the area and to maintain and enhance the bio-diversity and the gene pool available in the area.
- (ii) To sustain the wildlife habitat with a view to maintain as well as enhance its capacity for co-existence with domestic animal
- (iii) To device managerial practices with a view to restore the degraded natural ecosystems.
- (iv) Suitable meadow development activities well be taken up, a planned site specific model for meadow development would be developed and implemented. The purpose will be availability of grass for domestic animals in the area so as to reduce their dependence on the forest areas.
- (v) To survey and assess the occurrence and distribution of wild animals and monitor their use of different habitats periodically with a view to know the impact of various managerial practices and their response by wildlife.
- (vii) All the cattle and human injury/ kill cases will be handled on urgent basis. To decrease such cases, a regular campaign of handling and reducing man-animal conflict shall be undertaken in these areas.

### **Sub Zone II:**

These villages are newly included in the buffer zone of Melghat Tiger Reserve. Villages are not conversant with the issues of conservation to the extent villagers of ex MUA. They are also not aware with the activities like wildlife monitoring, habitat development etc. Their problems may be different as those of the villages in sub zone I. Their livelihood dependency on the forest needs to be assessed. Most villages are not dependent on the forest areas owing to their long distance from it.

The prescriptions given in sub zone I will also be implemented in sub zone II. Besides this following prescriptions are proposed.

- (i) Assessment of wildlife in the area.
- (ii) Awareness amongst the people about the activities like wildlife monitoring, grazing, attack by wild animals and compensation paid.
- (iii) Knowing about the livelihood and dependency on forest and providing assistance

**MONITORING AND EVALUATION:**

**9.07** The eco-development work is taken up with specific objectives and goals and it needs to be monitored and evaluated periodically.

The monitoring of work will be done by Deputy Conservator of Forests concerned in consultation with Field Director and keep a watch on the works to ensure that desired impact of Eco-Development works is seen and attitude of villagers changes favorably for wildlife conservation and they actively participate in protection and management. The programme will be evaluated for its impact at an interval of 5 years at State level.

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## CHAPTER X

### POST RELOCATION STRATEGY AND ECODEVELOPMENT OF RELOCATED VILLAGES

**10.01** Out of the 22 villages in Melghat Sanctuary three villages namely; Bori, Koha, Kund were rehabilitated in the year 2001-2003. Vairat and Churni were rehabilitated in 2011-12 at Ghatladki and Narsala. Amona village from Wan Sanctuary of Akot wildlife division was relocated at Kasod and Nagartas and Barukheda villages were relocated at Wari in the area of buffer zone of MTR which is on the border of core area in 2010-11. Dhargad village was relocated at Dharul in 2011-12 and Gullarghat village at Dahikhed in the year 2012-13. Somthana (Bk.) & Somthana (Khurd) are being relocated. Therefore, in all 11 villages out of 33 have been relocated so far. Therefore, pre-empting any attempt of return of these villagers to their previous site, is utmost important. For this the following procedure shall be adopted:-

**(i)** Declare these villages as revenue villages and give all facilities and benefits as are available to other villages by the government. The matter should be pursued at the revenue division level and at the level of Collector, Akola District.

**(ii) Handholding of relocated families through forest departments-**

These villagers shall not develop the feeling of being left out. So the Forest Deptt. should continue some eco developmental and community based activity in these villages. It may be done by department directly or through NGOs.

**(iii) Providing long term livelihood options to the villagers-**

They should be trained as trekkers, watchmen, eco tourist guides etc. Some of the villagers are well conversant with the forest activities. Therefore, they can also be involved in trekking along with the field staff. They can also be the eco tourist guides and also act as watchmen. Some local artisan may be trained to develop souvenirs for the tourists. A few villagers may also be identified as individual beneficiaries to develop as caterers and the home stays for the tourists, whenever such potential is foreseen.

**(iv) Convergence of Govt. schemes through a committee of officers headed by District Collector-**

In the district level and divisional level coordination committees, the forest officers shall emphasize and bring home the importance of converging various government schemes to develop positive synergy and providing cumulative benefits of government schemes to these villagers.

**(v) Institutionalizing of Relocation Programme-**

The condition of relocated villages shall be reviewed periodically, in a span of next few years, preferably every 3 years.

**(vi) Availability of funds through Melghat Tiger Foundation/ CSS-**

Suitable provisions should be made, so that some funds from the Tiger Conservation Foundation as well as Centrally Sponsored Schemes should also go to these villages for the developmental activities. This will create positive effect towards the tiger project and they would not feel isolated and due to this would develop a positive and favorable attitude towards the wild animals and conservation issues.

**(vii) Socio economic studies on various themes of these villages:**

The subject can be a part of thesis for the students of ecology, sociology, tribal culture, rural development etc. from the Sant Gadge Baba University, Amravati. The basis will be mainly whether the relocation has brought changes in the social and economic aspects of the villages. In addition, studies on various themes such as, whether and how effective has been the relocation, whether relocation has brought any change in the life, culture and livelihood of the villagers, its positive and negative effects. This is to ensure the continuity of relocation process in the reserve and to provide a positive climate for future relocation.

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## CHAPTER - XI

### IMPLEMENTATION STRATEGY

**11.01** Implementation of various schemes, programmes, plans would be on the basis of G.R. dated 5/10/2011 and any other instructions from the NTCA, State Govt. or the PCCF (WL), from time to time.

#### **TIGER CONSERVATION FOUNDATION AND DISTRICT LEVEL**

##### **CO-ORDINATION COMMITTEE:-**

**11.02** The Tiger Conservation Foundation is a new institutional framework which can complement the tiger reserve management and liaison with various eco-development committees apart from production sectors in the landscape. The Foundation is registered under the Mumbai Public Trust Act, 1950, of the State as a Trust, and as prescribed in the guidelines, has a State level Governing Body, apart from a field level executive committee under the Chairmanship of the Field Director with representatives of the Eco-development committees as nominated by the Governing Body. The Foundation would act as a “non profit center” and as a “development agency” by increasing local participation.

Tiger Conservation Foundation has been formed for Melghat Tiger Reserve, its buffer and adjoining landscape. The name of the TRUST is the Melghat Tiger Conservation Foundation which hereafter will be referred to as the 'The Foundation. The office bearers are as follows.

- |    |  |                  |
|----|--|------------------|
| 1. | Field Director, Melghat Tiger Reserve                            | Chairman         |
| 2. | Deputy Conservator of Forests, M.T.R. Sipana<br>WL Dn. Paratwada | Member Secretary |
| 3. | Deputy Conservator of forest, M.T.R. Gugamal<br>WL Dn. Paratwada | Member           |
| 4. | Deputy Conservator of forest, M.T.R. Akot WL<br>Dn. Akot         | Member           |
| 5. | Representative of Eco-development Committee<br>M.T.R.            | Member           |
| 6. | Representative of Eco-development Committee<br>M.T.R.            | Member           |

- |    |                               |        |
|----|-------------------------------|--------|
| 7. | Range Forest Officer, Wan     | Member |
| 8. | Range Forest Officer, Semadoh | Member |

### **INTEGRATION OF RURAL DEVELOPMENT PROGRAMS:**

**11.03** Majority of rural development programs are implemented through Zilla Parishad of the district. To integrate the activities a committee consisting of Field Director as Chairman with Chief Officer of Zilla Parishad as Co-chairman with all concerned Block Development Officer and Range Forest Officers as member will be constituted with Deputy Conservator of Forests, Akot Wildlife Division as member Secretary and Deputy Conservator of Forests, Sipna Wildlife Division, Deputy Conservator of Forests of Gugamal Wildlife Division, Conservator of Forests (Working Plan) as Member and Deputy Conservator of Forests (Territorial) as Member . The committee will meet regularly and integrate all Rural Development Scheme in the villages of buffer zone. Help of N.G.O. Self help group and local clubs will be sorted for the integration of Rural Development.

### **MONITORING AND EVALUATION.**

**11.04** Monitoring and evaluation of all works carried out in buffer zone will be done through executive committee of the Melghat Tiger Reserve Conservation Foundation. This work can also be sub contracted to any other individual, NGO or agency, if decided by the Field Director.

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## CHAPTER - XII

### MAINSTREAMING STRATEGY WITH VARIOUS PRODUCTION SECTORS

**12.01** In the buffer zone the major sector is forestry. The mainstreaming of wildlife conservation with the forestry is already provided in the working plans of concerned forest divisions. The prescription will be strictly followed and if necessary suitable changes can also be made.

#### **FORESTRY:-**

**12.02** The following activities shall be undertaken.

- The forestry and allied works will be carried out as per management plan for buffer area, by the concerned Divisions.
- Monitoring wildlife/tiger presence in standardized formats on a daily basis.
- Foot patrolling by staff to ensure protection.
- Monitoring of carnivore kills.
- Monitoring of water recourses.
- Timely payment of compensation for livestock depredation by wild carnivores.
- Payment of compensation for crop damage by wild animals.
- Regulating livestock grazing in areas prone to wild ungulates.
- Monitoring village cattle for disease.
- Retention of old/dead trees as prescribed in management plan and working plan
- Development of meadows.

#### **AGRICULTURE:**

**12.03** The agriculture in the buffer zone is major source of livelihood for locals. The main crop is Jowar, Soyabin, Paddy, Wheat, Tur, kutki and kodo.

- Adoption of 'Eco-development' as a land use to produce food as well as to conserve wildlife.
- Discouraging sudden change in cropping patterns (viz. Lure crops) to avoid accentuating man –wild animal conflict.
- Maintaining a habitat mosaic, viz. fallow land, cultivation field, fruit orchard, plantation, under planting of spices, small timber etc. to mimic natural forest.

- Promoting soil conservation.
- Providing economic incentives for safeguarding wildlife concerns.
- Fostering use of green manure bio-insecticides and discourage use of chemical manures and chemical pesticides.
- Facilitating marketing of local products through the Tiger Conservation Foundation.
- Use of market instruments through the Tiger Conservation Foundation (production certificate for organic products)

**INTEGRATED DEVELOPMENT (ECO-DEVELOPMENT) DEVELOPMENT THROUGH DIST. ADMINISTRATION)**

**12.04** In Buffer area of Melghat Tiger Reserve, the integrated activities are as under.

1. In same villages like Chourakund, Dabhiya and Bhandum soil-moist conservation works are in progress under Vidarbha Panlot Vikas Mission
2. S.M.C. activities are also taken under, Hariyali Yojana and Maharashtra Rural Employment Guarantee Scheme.
3. Fire Protection work and road work are also taken under MGNREGA. These works are taken in consolation with Joint Forest Management Committees.
4. Regular Gram Sabha are taken by the field staff for taking consent and manpower for various integrated activities.

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## CHAPTER – XIII

### RESEARCH, MONITORING, TRAINING AND WILDLIFE

#### RESEARCH PRIORITIES, MAIN PROJECTS AND IMPLEMENTATION:

**13.01** As research on wildlife aspect is not done earlier and so it is necessary to list out some research priorities in buffer zone. Following indicative subject should be targeted for research.

1. Man animal conflict : Reasons, Scope and Solution
2. Study on seasonal migration of major carnivora and herbivora within buffer and between buffer and core.
3. Study of impact of forest fire on wildlife.
4. Study of impact of NTFP, Tendu leaves collection on wildlife and sustainable collection methods.
5. Study on avifauna and its habitat
6. Socio-economic study of villages within buffer zone.
7. Development of meadows and studies of existing meadows.

The list is not exhaustive but indicative.

The individual projects on each subject should be called from reputed institutes like Wildlife Institute of India, Bombay Natural History Society etc. and projects should be implemented through these institutes with financial support from NTCA.

#### MONITORING FRAME WORK.

**13.02** Monitoring frame work for assessment of different activities in buffer zone will be developed for various activities.

#### TRAINING NEEDS ASSESSMENT AND H.R.D.

**13.03** Training, motivation and capacity building through refresher courses are indispensable for enhancing management capabilities of officers as well as staff. As wildlife management has emerged as specialized field with special attitudinal requirements, which are different from the larger forestry umbrellas, training in wildlife management and related issues has gained additional importance. As such, all field persons and managers of the

reserve must be trained in various aspects of wildlife management. These aspects will be covered in more detail in a separate HRD plan.

#### **WILDLIFE HEALTH MONITORING.**

**13.04** Wildlife health should be regularly monitored. Any unnatural death of major wild animal will be investigated by expert veterinarian by doing post mortem and pathological investigations. The vaccination of the cattle of all 118 villages will be done every year through local veterinary department

#### **MORTALITY SURVEY.**

**13.05** Any unnatural death of wild animal will be documented and reported.

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## **CHAPTER – XIV**

### **TIGER POPULATION AND HABITAT ASSESSMENT**

Daily monitoring, Tiger Population estimation, Habitat assessment, Special Database Development and Analysis and Reporting Framework will be the same for buffer zone as prescribed in Chapter 9 of Tiger Conservation Plan of Core Area.

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## CHAPTER - XV

### PROTECTION AND INTELLIGENCE GATHERING

**15.01** Protection of wildlife is an important aspect of wildlife management in buffer zone. Detailed standing orders (**No. 001 and 012**) have been issued by PCCF office regarding protection of wildlife outside protected areas (**Appendix II**). These standing orders will have to be scrupulously followed in addition to the measures given below.

#### **15.02 DEPLOYMENT OF NATIVE WORK FORCE.**

As the working area of a beat guard is vast and buffer zone beat guard are having other regular forestry works to be implemented a work force of native villagers will be formed by engaging them on daily wages. Within the guidelines of State Forest Department. The native work force will be constituted in following groups, wherever required.

- a) 3 labour group for patrolling camps to be constituted for strategic areas in 1st phase 10 patrolling camps will be constituted all over the buffer zone.
- b) Check nakas at strategic points will be constituted with 1 labour round the clock, 10 such check nakas will be constituted.
- c) A strike force will be constituted with head quarter at round level/Range level within buffer zone having 5 labours in the group. 5 such strike force will be constituted in 1st phase.

The possibility of entrusting the above activities to the EDC shall be explored.

#### **15.03 PATROLLING STRATEGY INCLUDING JOINT PATROLLING**

Regular patrolling of the area will be done by concerned beat guard, patrolling camp labours and strike force. Each and every area of forest will be patrolled every day. Joint patrolling with field staff of core zone will be programmed every week by concerned Range Forest Officer. The members of the EDCs shall be motivated to assist in patrolling works.

The patrolling done by each and every staff along with patrolling camps, strike force should be reported daily to concerned Deputy Conservator of Forest in prescribed proforma and patrolling register at Round Officer level shall be maintained by concerned Round Officer.

#### **15.04 MAINTENANCE OF VILLAGE LEVEL CRIME DOSSIERS**

Crime dossiers of every village within buffer zone will be maintained and updated every time. The dossiers should contain the name of wildlife offenders, his socio-economic profile, modus operandi, particular of each offence.

A watch should be kept by concerned beat guard on such offenders and weekly report about the activity of such criminals should be submitted by beat guard to his Range Forest Officer.

#### **15.05 FIRE PROTECTION**

Strict fire protection of the buffer zone will be done by cutting fire lines, engaging fire watchers to detect fire and by extinguishing the fire as soon as noticed.

Awareness creation in the villages should be done by taking meetings. The work of fire protection can be entrusted to village Eco-development Committee as done in buffer zone of Kanha Tiger Reserve, Madhya Pradesh with excellent results.

To prevent forest fire due to Tendu leaves collection, the tendu collection centres of the village where forest fire had occurred should be closed for a year or two. This decision can be taken at the level of concerned Dy. Conservator of Forest.

#### **INTELLIGENCE GATHERING AND CO-ORDINATION:**

**15.06** Intelligent gathering should be done by providing cash prizes to informers provided at Range office level to gather intelligence. A provision to grant rewards, subject to a maximum of Rs. 1000/- in each case, to persons for helping and assisting in detection of wildlife crime and apprehending offenders involving wild animal in scheme-I has also been made in the Melghat Tiger Conservation Foundation Operational Manual as contingency fund. The G.R. regarding Secret Fund and its use has been issued by state Government vide G.R. no. Misc/08.13/F-1 dated 13/08/2013.

Co-ordination with police department will be continued through District Tiger Cell Committee and Divisional level Tiger Cell Committee.

The reserve forms an important corridor between forest areas of Madhya Pradesh and Maharashtra ensuring contiguity of forests in Satpura. Therefore, coordination with M.P. forest officials is also being done in preventing poaching over border areas.

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## **CHAPTER – XVI**

### **ECO-TOURISM, INTERPRETATION AND NATURE EDUCATION.**

#### **TIGER CONSERVATION FOUNDATION AND MANAGEMENT OF COMMUNITY BASED ECOTOURISM PROGRAMS.**

**16.01** The Wildlife (Protection) Amendment Act, 2006 (Section 38 (V) provides for establishment of a Tiger Conservation Foundation in Melghat Tiger Reserve, to facilitate and support management, apart from taking initiatives for involving people in conservation. The Foundation is a new institutional framework which can complement the tiger reserve management and liaison with various eco-development committees and their confederations apart from production sectors in the landscape. The Foundation, shall undertake various activities related to mainstreaming of conservation: Eco-development, staff welfare, visitors regulation, field research, facilitating eco-development committees for building programs, ecotourism and Joint Forest Management.

#### **ECO-TOURISM GUIDELINES AND CONSTITUTION OF PARK WELFARE**

##### **FUND:**

**16.02** Eco-tourism, interpretation and nature education should be implemented as per recent policy of State Government declared vide G.R. No WLP-1002/C.N.-53/F-1, Dated 20th Feb. 2008. Necessary financial assistance can be provided from state plan scheme or Tiger Conservation Foundation.

##### **INTERPRETATION PROGRAM:**

**16.03** Tourist will be interested in camping in wilderness area either in small group of one or two families or student groups of 20 to 30 the various camping sites with tent facilities. The tent facilities will be managed by the village committees under the guidance of the project tiger the realization from tent facilities may go to village committees or by forest employee cooperative societies.

##### **TREKKING PROGRAMS:**

**16.04** Melghat is trekker's paradise trekking routes are available connecting each of the camping sites, a system will be adopted to send the trekkers forming their group along with

local guides engaged through Tiger Conservation Foundation. These local guides engaged are conversant with the area. The guides will be paid as per prevailing rates.

**NATURE EDUCATION:**

**16.05** Nature education and interpretation facility is at present available in the core area at Semadoh, Harisal, Gullarghat. The exhibits and displays in the Nature Interpretation Center associated with value of conservation bio-diversity, tribal culture, forest protection and other wildlife management activities. The two centers Wasali and Shahanoor shall be upgraded and maintained on the basis of NIC in the core.

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## **CHAPTER - XVII**

### **ORGANIZATION, ADMINISTRATION AND BUDGET**

#### **BUFFER AREAS COORDINATION COMMITTEE AND ITS LINKAGES WITH TIGER STEERING COMMITTEE & TIGER CONSERVATION FOUNDATION.**

**17.01** Executive committee of the Tiger Conservation with the helps of Foundation. Committee proposed in chapter 8.3 will serve the purpose of coordination.

#### **COORDINATION WITH EDCs, CONFEDERATION AND OTHER LINE AGENCIES/DEPARTMENTS/PRODUCTION SECTORS**

**17.02** Co-ordination with EDC will be done by executive committee of Tiger Conservation Foundation

#### **STAFF DEPLOYMENT**

**17.03** Presently there is no special organization for buffer zone. The existing staff working in the area included in buffer zone will carry out all the activity of the buffer zone through concerned Dy. Conservator of Forests.

During the plan period reorganization of Range, Round and Beat exclusively of buffer area will be done and submitted to Govt. for sanction.

#### **FUND RAISING STRATEGIES:**

**17.04** The funds for regular protection, maintenance and forestry works will be continued to receive from state funds.

The funds for special protection work, wildlife habitat development, eco-development, Eco-tourism will be asked for from National Tiger Conservation Authority on the basis of this plan.

The rural development programme of Zilla Parishad will be integrated with eco-development works.

Tiger Conservation Foundation will also augment the various activities which are related with its aim and objectives.

#### **SCHEDULE OF OPERATION:**

**17.05** As the buffer area is included first time under this plan detailed schedule of operation can not be prepared. The different activities indicated in the plan will be prioritized and implemented as per availability of funds.

**17.06 ACTIVITY BUDGET:**

As per the activities indicated in chapter VIII and chapter IX of this plan relating to prescriptions and the fact that implementation would be effected through the villages eco-development committees, after preparing the microplan of each EDC, the budget forecast is not possible at this movement. Preparation of the microplan as per the guidelines in the G.R. no. FDM-2011/F.C.100/F-2, dated 5/10/2011 is envisaged. The annual budget would vary depending upon the number of microplan prepared and at various stages of implementations.

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