

PUBLICALLY AVAILABLE SUMMARY OF THE WORKING PLAN FOR BHAMRAGAD FOREST DIVISION VALID FOR THE PERIOD FROM 2007-08 TO 2016-17

For: Bhamragadh Forest Division

OBJECTIVE OF MANAGEMENT:

The main objective of the Forest management is to protect, conserve the natural forest of the area. Along with the conservation, plantation of endemic species to the forest will be also on a priority. To provide employment to the local community and provide them the needed material on time. To provide nistaar material to the local villagers. To harvest bamboo from all the areas on scientific lines. To conserve the local flora and fauna along with the scientific management of wildlife. To meet the growing demands of paper and straw board Industries.

LEGAL POSITION:

Reserved Forests have been declared RF on 5th May, 1992. RF is 324,825.204 ha. Forests in the tract dealt with were declared Protected Forests under sec 29 of IFA1927 and notified under Ex MP Gazette Notification No FLD-4669 II-8316-E, dated June 15, 1955 also in 1959 and 1960. Out of these PF, RF has been declared as per the provisions of IFA, 1927. Remaining PF to the extent of 42,784.140ha has been left to meet the local requirements under right and concessions. 122.337 ha of Zudupi Jungle under Revenue Department have been transferred to Forest Division in the tract. Govt Notification No 2105-10-50-XI dated 4/6/1955. Bombay Govt Gazette Notification No. FLD/4659-3313-E, dated 23-4-1959. No. FLD-125-II/3314, DT 15-6-1959. No FLD/3685/9316/CR-42/F-3, dated May 5, 1992 under section 20 of IFA, 1927.

RIGHTS AND CONCESSIONS:

Forests are not burdened with any adverse rights, privileges or concessions. The concession are (1) Grazing of cattle free or at concessional rates, (2) removal of certain kinds of forests produce for bonafide, domestic use by the forests villagers free, (3) enjoyment of commutation system. Grazing, Extraction of Small Timber & Poles, Supply of salai wood in marriage ceremonies, Fuel Wood *Moha*, *achar*, *tendu* or other edible fruits, flowers and roots are allowed to be removed free of cost from all over the forests for domestic consumption.

Geography of area:

Bhamragadh Forest Division is located in Gadchiroli Forest Circle, which encompasses following ranges- Bhamragadh, Etapalli, Gatta, Kasansur and Tadgaon forest ranges. The forest areas of this division occur in the compact blocks and in some scattered patches. Forests of this division lay between the parallels of latitudes 19° 17' to 20° 03' north and between the meridians of longitudes 80° 08' to 80° 57' east. As per the Form No 1 of Bhamragadh Forest Division, the forest area is as given in Table No-1.

TABLE SHOWING RANGE WISE & CATEGORIES WISE FOREST AREA (in hectare)

Sr. No	Range	Reserved Forest (ha)	Protected Forest (ha)	Zudupi Jungle (ha)	Total Area (ha)
1	Bhamragadh	81,414.960	4,789.500	0.000	86,204.460
2	Etapalli	87,361.540	11,710.694	13.480	99,085.714
3	Gatta	56,676.344	7,788.799	3.347	64,468.490
4	Kasansur	58,232.454	7,861.606	0.000	66,094.060
5	Tadgaon	41,139.906	10,633.541	105.510	51,878.957
Division Area		324,825.204	42,784.140	122.337	367,731.681

SOCIO-ECONOMIC CONDITIONS-

The tract is located in the remotest tract of Maharashtra state, which encompass bordering Chhattisgarh and in contiguous to Bastar region i.e. the most backward area of the Country. Total geographical area of the tract is 4000 square kilometer. Out of which forest area constitutes 3778 sq km amounting to 92% of geographical areas. On perusal of the provided data, it is found that the Scheduled Tribe population is about 84% and Scheduled Caste 4%. Population density is 23 people per square kilometer. Similarly the cattle population amount to cattle unit 125,000. Whereas carrying capacity of these forests is about 334,000 cattle units. Enough area is available for cattle grazing. Geographical area of district = 12,504 km². Education rate is 60.3%. (That of State is 77%) *Adiwasis* like *Madias*, *Pradhan* Oraon and *Gonds* practice cultivation of primitive type. They still stick to their ancestral methods of cultivation during agricultural season. They depend mainly on forestry operations and forest based products. Their living condition in recent years has improved substantially, though more efforts are needed to improve their socio-economic status. Electrification of all villages has not been undertaken in interior villages. Wherever power is available it is utilized for lift irrigation. Even diesel pumps are used for lift irrigation. Paddy is the main crop and once it is harvested, the fields are left fallow for the remaining period of the year.. In this area, most of the people live in the thatched roof-huts built from stout posts of *ain*, *garari* or miscellaneous species and plastered with mud and *cow dung*.

FOREST RESOURCES:

- (1) **Small timber, Fire wood, Bamboos:** These are used for preparation of mats, baskets and construction of huts and other materials for local use and for sale to other areas for earning livelihood.
- (2) **Thatching Grass:** This is commonly used for thatching the roofs of the huts.
- (3) **Fruits, Flowers and Leaves:** *Mahua*, fruits of *tendu*, *khirmi* and *achar* for their bonafide consumption. *Palas* and *Mahua* leaves are used for preparation of *patrawalies* (leaf plates) and *drona*.
- (4) **Fibers:** *Palas* roots are dug and cured to obtain fiber for making ropes.
- (5) **Other Products:** Edible tubers and roots are obtained by *Adiwasis* for consumption *Tendu* leaves are used for preparing *chutta* or *bidi* for local use. *Tendu* leaves are plucked by the villagers and given to licensee to pluck and processing of *tendu* leaves every year. Gum, honey, wax are collected for trade. Barks, roots, medicinal plants are extracted either for local consumption or for minor trade.
- (6) **Medicinal Products:** The tract dealt is very rich in medicinal plants found naturally. They are utilized by local *Vaidyas* or local people through their traditional knowledge. The forest produces in demand in these areas are as under:- *Teak*, *Ain*, *bija*, *haldu*, *shisham*.
- (8) **Tendu leaves** – There is a keen demand of *Tendu* leaves for bidi manufacture.

FLORA AND FAUNA: Following tree species commonly forms the top storey of these forests: *Ain* (*Terminalia latifolia*), *dhaora* (*Anogeissus latifolia*), *lendia* (*Lagerstroemia parviflora*), *hiwar* (*Acacia leucophloea*), *anjan* (*Hardwickia binnata*), *bija* (*Pterocarpus marsupium*), *rohan* (*Soymida febrifuga*) *chichwa*, (*Albizia odoratissima*), *harra* (*Terminalia chebula*), *bahera* (*Terminalia bellerica*), *semal* (*Bombax ceiba*), *jamun* (*Syzygium cumini*), *kulu* (*Sterculia urens*) *haldu* (*Haldina cordifolia*), *Moha* (*Madhuca indica*), *teak* (*Tectona grandis*), *mowai* (*Lannea coromandelica*), *karam* (*Mitragyna arviolora*), *Garari* (*Cleistanthus collinus*) *aonla* (*Emblica officinalis*), *apta* (*Bauhinia recemosa*), *khair* (*Acacia catechu*), *ghont* (*Zizyphus glaberrima*), *kakai* (*Flacourtia indica*) *khirmi* (*Mimusops hexandra*) *medsing* (*Dolichandrone falcata*), *kalaphendra* (*Randia uliginosa*), *lokhandi* (*Ixora parviflora*), *palas*

(*Butea monosperma*), gugal (*Gardenia latifolia*), achar (*Buchanania lanzan*), kusum (*Schleichera oleosa*), kumbhi (*Careya arborea*), dhaman (*Grewia tilifolia*), bell (*Aegle marmelos*), kuda (*Holarrhena pubescens*), amaltas (*Cassia fistula*) BAMBOO- Major Species of Bamboo found in the tract is *Karka*. The rarely found species along the banks of nala is Katang (*Bambusa arundinacea*). **SPECIES IN NEED OF CONSERVATION**-The following species are in need of conservation measures. *Doroxylum indicum*, *Radermachera xylocarpa*, *Eriolaena hookeriana*, *Spondias mangifera*, *Careya arborea*, *Ehretia laevis*, *Hymenodictyon Excelsum*, *Litsea glutinosa*, *Mallots philippensis*, *Pterocarpus marsupium*, *Trema politoria*, *Ficus cunia*, *Yaesa indica*. **MEDICINAL PLANTS**-The important medicinal plants are found in this division e.g. *Asparagus racemosa*, *Chlorophytum tuberosum*, *Equisetum sp*, *Hygrophila auriculata*, *Bauhinia diffusa*, *Terminalia bellerica*, *Terminalia chebula*, *Emblica officinalis*, *Soymida febrifuga*, *Solanum violaceum*, *Glorisa superba*, *Pueraria tuberosa*, *Plumbago zexlamica*, *Plengenia indica*, *Cassia absus*, *Holarrhena antidysenterica*. *Hemidesmus indicus*, *Helicteres isora*, *Evolvulus alsinoides*, *Vernonia cineria* etc

THE FOREST FAUNA :- DISTRIBUTIONS OF WILDLIFE-The faunas are widely distributed in areas adjoining rivers. The wild animals commonly found in the tract are as follows: **CARNIVORE**-A few numbers of carnivores are found in the tract: Tiger (*Panthera tigris*), Panther (*Panthera pardus*), Hyena (*Hyena hyena*), Wild Dog (*Cuon alpinus*), Wolf (*Canis lupus*), Jackal (*Canis aureus*), Fox (*Vulpes bengalensis*), Jungle Cat (*Felis chaus*) **HERBIVORE**- Sambhar (*Cervus unicolour*), Cheetal (*Axis axis*), Nilgai (*Boselaphus tragocamelus*), Wild Boar (*Sus scorfa*), Barking Deer (*Muntiacus mujtjak*), Langur (*Presbytis entellus*), Monkey (*Rhesus macaque*), Hares (*Lepus nigricollers*), Hare, (*Lepus reficaudatus*). The main species of concern is Langur. **OMNIVORE**-Sloth Bear (*Melursus ursinus*). **RODENTS**- Main rodents are: Flying Squirrel (*Petaurista petaurista*), Porcupine (*Hystrix indica*), mouse deer, rats, mice etc. **WILD BIRDS**-Painted Sand Grouse (*Pterocles indicus*), Common Sand Grouse (*Pterocles exustus*), Pea Fowl (*Pavo cristatus*), Grey Jungle Fowl (*Gallus sonneratii*), Painted Partridge (*Francolinus pictus*), Grey Partridge (*Francolinus pondicerianus*), Black Breasted Quail (*Coturnix coromandelicus*), Red Spur Fowl (*Galloperdix spadicea*), Crane (*Grusantigone*), Spotted Bill Duck (*Anas poecilorhyncha*), Pigeon (*Treron phoenicaptera*), Dove (*Streptopelia spp*), Cotton Teal (*Nettapus coromandelianus*), Whistling Teal (*Dendrocygna javanica*) Cuckoo (*Cuculus varius*), Snipe (*Capella galliachges*) etc. Great Indian Hornbill group was also seen by the author in Nelgunda Forests during April, 2005. **Reptiles**- The tract is full of reptiles. Many types of lizards including monitor lizards are found. Snakes of various types are found. Even crocodiles (Magar) are found in the course of Indravati River.

HCVF PROTECTION AND MAINTAINENCE:

- Periodical estimation survey is necessary to have the distribution of wild animal's population and their distribution known to manager of the tract. Estimation will of carnivore as well as that of herbivore at a regular interval coinciding with All India Estimation of Wild life.
- In summer the water availability in the interior of forests recedes leading to wild animal concentration around river and water pool. That makes these animals vulnerable for to be liquidated by greedy people. Hence, alternative to natural water resources, water is to be provided in the form of Water Holes at proper places.
- Multipurpose watch Tower will be erected at suitable places to have watch on movement of wildlife, fire control and check on grazing.
- Herbivore needs salt to meet their requirement. At suitable places, Salt Licks will be placed to meet the requirement of these animals.
- To be more sensitive towards wild animals, from time to time, awareness camps regarding wildlife and their importance must be organized for public as well as forest personnel.

- In wildlife abundance areas, meadow will be developed by clearing the tree species in 25 hectare in first phase in first year of working. Another meadow will be developed in second year of working. Area should be of the order of 20 ha. In subsequent years if success is promising another areas will be taken for which DCF will get sanction from CF.
- For nesting of birds like Great Indian Hornbills, tall, lofty salai, bija, semal, ain trees should be identified particularly along Indravati river tract along Chhattisgarh State boundary. Author had an opportunity to have the glimpses of Great Indian Hornbill near Nelgunda village on lofty tree on the bank of Indravati.
- Along the long stretch of roads passing through the tract, fruit trees like jamun, neem, mangos and ficus species should be planted to have shelter and fruits.

The general measures suggested are as follows: The area should be strictly and effectively protected from fire. To keep vigilant watch on poachers/villagers. Water pools, which provide water to wild animals during summer, should be kept under constant watch. Informers should be promptly rewarded. Salt licks should be developed. Shelter and hiding places should be developed at the required places. Construction of bunds, anicuts, forest tanks etc. on nalas at suitable places should be carried out for providing permanent water holes to the wild animals.

SILVICULTURAL SYSTEM: Coppice with Reserve silvicultural system was adopted to meet the bonafide need for small size timber and fuel to the local population. Silvicultural system proposed to have selection thinning in each girth class to get the normal stand in due course of time and natural regeneration to be supplemented with artificial regeneration to have preferential treatment to species preferred. The inadequacy of the natural regeneration of teak in these areas forced to resort to clear felling and planting in order to achieve the objects. These areas were included for systematic management for the first time with the object of improvement and so, selection felling was prescribed. Under improvement felling, removal of all dead, dying and unsound trees and thinning in congested patches in favour of teak and superior Injali species, like *ain, haldu, dhaoda, shisham, lendia, kusum*, were prescribed. Removal of inferior tree growth interfering with natural regeneration of teak and other valuable species was also prescribed. Selection felling was prescribed. Creation of permanent gaps was avoided. For regeneration sufficient seed bearers, suitably distributed all over the areas, were retained. Thus silvicultural system adopted was selection felling with natural regeneration.

ENVIRONMENTAL SAFEGUARDS:

Moist Forests of Bhamragadh, Lokbiradari Project of Hemalkasa, Land of Baba Amate Social Work, Holy Confluence of Indrāvati, Pamulgautami and Paralkota at Bhamragadh. Great fall of Binagunda, Treasure of Surjagarh, Cane brake of Moharli, Largest teak recorded in puplbpa hill range.

THE ENVIRONMENTAL PLEDGE: In course of promoting ecotourism in the tract following environmental pledge should be displaced at strategic places:

- *STATIONERY AND OTHER PUBLICITY MATERIAL ON RECYCLED PAPER.*
- *POLYTHENE BAGS:*
- *ALTERNATE SOURCE OF ENERGY FOR FUEL.*
- *GARBAGR DISPOSAL.*
- *WATER CATCHMENT AND TREATMENT.*
- *ECO LODGES AND RESORTS*
- *PLANTING OF SAPLINGS*
- *ALTERNATE USE OF FUELS.*
- *USE OF LOCAL ETHNIC MATERIALS IN CONSTRUCTION OF PROPERTIES*

- *EMPLOYMENT OF LOCAL COMMUNITIIES*
- *LIMIT DISFORESTATION.*
- *NON BIODEGRADABLE GARBAGE.*
- *KEEP LOCAL WATER CLEAN*
- *PLANTS LEFT IN THEIR NATURAL ENVIRONMENT.*
- *RESPECT LOCAL CULTURES.*

With all these above information all Monitoring related Records will be seen at range offices. The general publics hereby can the Working Plan of Bhamragadh Forest Division on request. In all stakeholder onsultations and general meetings the public of Bhamragadh is invited and their suggestions are always welcome. This public summary will be keep updating on yearly basis.

DATE: 01/01/2014

DFO Bhamragad Forest Division