

PART-II
FUTURE MANAGEMENT DISCUSSED AND PRESCRIBED
CHAPTER-I

BASIC OF PROPOSALS.

Object of Management:- The ultimate object of management as proposed in this working Plan is to affect an all round improvement of these forests so that they may recoup to their normal health as well as reach the state of sustained and maximum productivity within shortest possible time. Since most of the forests have become much degraded the main emphasis is laid up on the restoration of their normal health in the light of the National Forest Policy of 1988.

The more immediate objects management are:-

- (i) To ensure restoration of the vast areas of degraded forests with rooted wastes by cleaning, stump cutting and other subsidiary silvicultural operations (rehabilitation to works) and fencing.
- (ii) To check run-off and soil loss by carrying out soil conservation measures and plantation works so as to maintain ecological stability.
- (iii) To restore the forests to their normal health i.e., the normal productivity level from their felling except the removal of dead, deformed, dying stems and from subsidiary cultural operations.
- (iv) To ensure a rigid protection against fire and grazing particularly to newly regenerate areas through VFMPCs and forests Department.
- (v) To maintain the ecological balance planting in blanks, scrubby land, open miscellaneous forests as well as on non-forests lands under social forestry, extension and farm forestry schemes.
- (vi) Local demands of fuel wood, small thin etc. will be met with austere use of subsidiary cultural harvests.
- (vii) Consistent with preservation and conservation of natural and geological heritage vis-avis maintaining the intrinsic relation ship between forests and forests people joint forests management efforts will be encouraged.

General Methods of Treatment:- The forests this division in division are in different stages of reservation and growth, Now the forests of the division are not able to produce major timber as most of the area have become very much open and depleted due to excessive biotic pressure and local demands, the existing forests has almost become unproductive for last 5 to 6 yr. There had been no felling of coupes which speaks of the bad condition of forest. In the last working plan of Sri. R. Prasada are under C.W.C. as 71932.88 Hect. soared over felling series but depletion of the forests has been so intense

that at present hardly and coupe is fit for exploitation. A large chunk of forest area from the last working plans CWC had to be transferred to Rehabilitation Working Circle.

(2) Majority of the forests of this division has become non productive due to excessive biotic pressure therefore it is advisable to adopt the system of COPPICE SELECTION instead of coppice with standard as practice in the last working plan R.C.C.F. (Central) Bhuneshwar has also suggested the same system.

(3) The site condition and the present condition of the crop in the division are need of quick improvement. It can be possible by coppicing the crop as early as possible.

(4) It is being proposed that forests having density 0.4 and above with at least pole crop will be worked under coppice selection system in which only those trees will be harvested which has attain a harvestable dia of 15 cm and above. Under the system it will be possible to retain good no. of crop for ecological balance.

(5) To meet the bonafide requirements of the local people and industries felling cycle of 20 years and 30 years are proposed instead of 30 to 60 years in earlier plan. There would be except that regular thinning at 5th, 10th, & 15th year will be carried out. The product of things in P.F. s will be handed over to right holders for their bonafide use where as State Trading will works in the Reserve Forest.

(6) In recent time lot of forestry activities in from of social Forestry and Farm Forestry has taken place out of the forests area. Thus is an interesting development and in one of the important ways to reduce the biotic pressure on existing natural forest besides increasing the area of land under tree cultivation, Therefore a separate working circle for non- forests area being proposed to deal such activities and waste land areas.

Constitution of Working Circle:- To achieve the above of management following working circle are proposed.

- (i) Coppice Selection Working Circle.
- (ii) Rehabilitation Working Circle. (Includes mines rehabilitation)
- (iii) Plantation-cum-soil Conservation Working Circle.
- (iv) Protection (Overlapping) Working Circle.
- (v) Wildlife Working Circle.
- (vi) Miscellaneous regulation working circle.

Plan Period:- The period of the plan will be 10 years i.e., 1997-98 to 2007-08. It would however be advisable to review the position after the expiry of 10 years. In case of Parasnath wildlife sanctuary (1993-94 to 2002-2003) has been prepared by Sri. A.K. Patra under the guidance of Sri. B.D. Singh, Conservator of Forests, Hazaribag Circle which is under consideration of the Government. It is deriraole that this plan should be approved by competent authority. A detailed, village wise, break up of the total is given in Appendix II.

BLOCKS /AND COMPARTMENTS

Each village is a unit. The demarcated forest each village is shown on 16"= 1 mile/ (1:3960) cadastral maps. It has also been shown on 6" = 1 mile / (1:10560) air photo maps for the villages falling in 'catchments of D.V.C. and on 4"=1 mile/(1:15840) topographical maps for the villages outside the D.V.C. catchment.

STOCK MAPS:-

Ocular stock- maps have been prepared on 6"= 1 mile/(1:10560) or 4"= 1 mile/(1:15,840) topographical maps. The stock maps indicate the following:—

SAL (Blue Wash)

- (a) above 10 cm (4") in diameter.
- (b) 5 Cm to 10 Cm (2"—4") in diameter.
- (c) Below 5 Cm (2") in diameter.

Miscellaneous (Red Wash)

- (a) Above 10 cm (4") in diameter.
- (b) 6 cm to 10 cm (2"—4") in diameter.
- (c) Below 6 cm (2") in diameter.

Blank and plantation areas (yellow)

Protection area..... Blank

Eroded areas..... (Black dots)

Bamboo (Black dots).

Scrub (Red hatch)

Rooted waste of sal (Blue hatch)

Encroachment.. (Red lines)

COPPICE SELECTION WORKING CIRCLE

General Constitution of Working Circle- This working circle comprises the bulk of the good forests of this division having crop density of 0.4 and above along with pole stage crop. All the commercial forests of the last working plan which has at the moment become non-productive been included in this working circle. It includes both right burden as well as right free forests. In some cases small pockets of scrub etc. had to be included in this working circles for the of management.

Though it is desirable to coppice the forests of above type, it is proposed to carry the regular felling only after 10 years i.e current plan period. Right now the forests allotted to this working circle will be provided strict protection. there are tow important reason to do so.

Firstly, the past history of coppice area shows that the coppice coupes were not worked as they were found uneconomical to exploit. The situation has not improved since then rather it has deteriorated. The area suitable for allotment to this working circle has decreased from 71,932.88 hect. of last plan to 32,356.60 hect. in current plan. So it is proposed that no further coupe should be worked during current plan period.

The other important reason is that during the last plan a conspiarous part of the forest of the division were prescribed for Rehabilitation through cut back and fencing. Unfortunately this prescription not followed during the last plan period till now. With the result the forest in the division are only in two stages—pole stage or in bushy stage ideally a forest 'composition must belong to different age classes. Under such a situation if felling in the coppice areas are recommended without rehabilitating or treating the degraded forest, the chance are that the forest, of Giridih division will become devoid of even pole stage forest, Therefore, the scientific approach will he to bring first at least an area equal to coppice selection working circle in different stages of growth. However, removal of silviculturally available tree like dead, diseased or dying, wind fallen will be carried out during this period,

MANAGEMENT OBJECTIVES

The special object of management are (1) To exploit the existing forest in such a way so that the demand of local people for small timber is met while the forest cover is maintained and improved.

(ii) To ensure success of coppice regeneration.

(iii) To meet the demands of the right holders as indicated in Khatjan Part II.

The area of this working circle is 29,374.19 hac.

The silvicultural system adopted is coppice selection to meet the bonafide demands for small timber besides retaining good no. of crop to maintain ecological balance. It would

be advisable to retain few old crop as mother trees so that regeneration through seeds can be ensured.

ROTATION: - In reserve forest rotation would be 30 yrs. where as in P.F. it would be 20 years. In the last working plan of Sri. R..Prasada 1969—70 to 1978—79 rotation varied from 30 to 60 years, Since the forest of this division is situated in a sporadic manner protection have not been up to mark all those aged and natural trees had been illegally harvested by local people, it has become difficult to protect trees in the age crop of 30 to 60 years therefore rotation has been reduce to 20 to 30 years.

SELECTION MARKING: (i) Although there shall be no regular felling during the current plan period but once the forest is amply protected and taken care of it is aspected that crop will improve considerably. When review shall be made after completion of this plan period trees having 15 cm .and above die would be marked for felling.

Yield: - *Though* felling is not being prescribed In coppice selection area during the current plan period it is proposed to fix yield by volume as directed by C.C.F.(Dev.) Bihar vide his letter *no.289* dt. 13.3.96 for this 2% random enumeration will he carried out for each Working circle regarding the growing stock.

MARKING RULES FOR SELECTION FALLING: The following rules are laid down for the guidance of marking officer-

- (a) The stems selected for the felling should e health, well formed and vigorously growing stems from 15 cm and above dia at breast height fro both type of rotation they should be superior and of economic value.
- (b) Asam, Bija, Siris, Gamhar, Karam, Toon, Dhaura, and Panjan, would have equal preference with Sal provide they are healthy and promising.
- (c) More trees should be retain near and around blanks, gullied and eroded areas.
- (d) While exiting the selection felling efforts should be made not to damage trees around it.
- e) **40 mother trees** should be retain per hac. of different epps. whose role will be to help regeneration through seeds,

LEASE TO M/S BENGAL PAPER MILS LTD. Since the lease agreement between state with M/S Bengal paper mills ltd. has expired and there had been no working of Salai and other had been no working of Salai and other hard wood in the division there is no need of detail prescription. State trading wing of the forest department. is also not harvesting salai due to uneconomic marketing.

SUPPLY TO RIGHT HOLDERS :- A list of right holding houses has prepared for each village containing forest (b) As regular felling has not been recommended during current plan period, right holders will be allowed to get forest produce from dead dying and diseased trees which will he removed regularly.

Forest produce derived out of routine 5th, 10th, & 15th year thinning can also be

utilized by the right holders. (c) Thinned—out materials will be handed over to the member of V.F.M. P.C. provided they take genuine interest in protecting and managing their forest as per guidelines of Govt. of Bihar time to time.

(d) Demands of the right holders would be determined by the Divisional Forest Officer.

Since no coupe felling is proposed in current working plan, sequence of felling has not been prescribed. It can be considered. When the next working plan of this division is being prepared after 10 years.

Method of Effecting Felling (a) Only dead dying, diseased and wind fallen tree would be removed in a regular way.

- (b) Sandal, Bamboo, Semal, Mahua, Kusum Palas, Ber, and Amala and other fruit bearing trees would not be felled.
- (c) No felling would be carried out in a strip 30 meter wide on either side of P.W. D. or F.D. Road.
- (d) Young, healthy and well formed sapling below 15 cm dia will not be felled. They would form part of the future crop and thus unnecessary sacrifice of advance growth would be avoided.
- (e) Felling should be done in such a way that mother trees and fruit bearing tree are not damaged. All trees, including old high stumps and pollards, should be cut with sharp tools as close to the ground as possible. The left over stumps should not be more than 15 cm in height and should have a slanting slope to discourage accumulation of water.
- (f) Trees standing in Jahiras of Saranas (Sacred grove) would not be felled or removed.

Cultural operations have been neglected in these forests in the period covering last plan and afterward. Damage to the forests and loss in growth which is visible now, it is not possible to do all the cultural operations in the past due to inadequacy of funds. Renounce crunch has been so severe that hardly any amount was spent on it during 1990—96. An ambitious Bihar Forestry Project is on the way supported by World Bank. Recommendations regarding the extent of cultural operations in this working plan have been made on the above assumptions.

CLIMBER CUTTING:- Climber cutting is supposed to be carried out in the forests of this working circle.

As climber infestations on the Parasnath hill is very severe, its removal should be governed by the principle of wildlife management.

As has been stated earlier, one of the main causes of forest fires on the Parasnath hill is the habit of local aborigines to roast the pods of Bauhinia vahlii over open fire in the forests, Mahua trees, which are the principal cause of forest fires in Chotanagpur are

absent here. So an intensive programme of climbers cutting would also reduce the & incidence of fire here.

CLIMBERS:- Cut hack operation should be done under this working circle. All high stumps would be cut back. Any the marked for retention but damaged due to felling would all so cut back. In the 5th year, once again the cleaning should be repeated. During this cleaning all creepers, climbers and shoots of inferior *species* interfering with the growth of Sal and other valuable species would be cut back. At this cleaning the number of coppice shoots per stool would be reduced to 2 or 3.

The best time for cleaning is during the rains, But there may be difficult in getting labour due to agricultural demand at the same time. Efforts should, however be made to carryout this operation during the rains as far as possible or soon there after. The work should be completed latest by the end of 'February for getting as much advantage of the growing season for trees.

The object of' things is to obtain the largest possible volume/ha. with good diameter increment. Thinning also ensure the elimination of suppressed stems and the concentration of improvement growth upon specially selected ones.

The present crop in most of the forest is quite open. If the proposed 5th year cleaning is done properly, thinnings would not required in these forests.

Three thinnings at the ages of 5,10 and 15th years are prescribed for the forests of this working circle. Best stems should always be selected as centers of specimen, Thinning is best done when the crown is full of leaves, all dead, dying, suppressed and dominated trees should be cut back. Thinning amongst the dominants should ensure that the crown of the trees do not press against each other. Thinnings, however, should not create permanent gaps in the canopy.

UNREGULATED FELLING:- No unregulated felling would be permitted.

GRAZING:- The forests that are complete free from right would be closed for grazing. In the rest of the forests, where fellings has undertaken or cultural operation carried out, grazing shall be closed. This closure has to be enforced rigorously. Near thickly populated areas, it many sometimes be necessary to fence the felled areas to protect than from grazing. Areas where such fencing would be done is left the direction of the local Divisional Forest Officer.

FIRE PROTECTION:- Fire protection measures has been deal with separately under miscellaneous area regulation working circle in page 135 to 137

CHAPTER — III
REHABILITATION WORKING CIRCLE

GENERAL CONSTITUTION OF THE WORKING CIRCLE:- This working circle includes all the rooted wastes, gullied and eroded which has been reduced to this stage due to adverse biotic factors like unregulated cutting, excessive grazing and frequent fires. The crop contains sparse Sal or miscellaneous grown with thorny scrub forests. Such areas have preponderance of root stocks of sal and miscellaneous spp. with average height of plants not exceeding 3 meter and die below 5 cm.

The density of these crops less than 0.4 Major chunk of the forest Giridih Division falls under this category. The se forests contains only leaves, twigs, and small branch wood which are available to local villagers. The soil and water conservation capability of such vegetation is naturally very low.

The **pressure** of biotic factors in the Giridih divisions is very severe, as a result of which many coppice areas fail to regenerate. There fore, community forests, which have preeminently *Sal* crop would also be managed under the prescription of this working circle.

Rehabilitation of such degraded forest will be the main concern and objective during the current plan period. If this is not done, the areas will be lost for ever and natural spp will be difficult to retain. It is proposed to take at least 20,000 Hect. Such areas in next 10 yrs. from 1997—2006.

The main forestry activities under this Working circle will be R.D.F. role of V.F.M.P.C. will be important in regenerating these forests, V.F.M,P.C. will be working P.F. areas where as R.D.F. activities under reserve forest shall be under token by Department. Right holders will be provided forest produce received from subsidiary silvicultural operation.

OBJECT OF MANAGEMENT :- The special object of management are:- (i) To rehabilitate the rooted wastes of Sal from unregulated cutting, grazing and fire. (ii) To plant the blanks by suitable spp. (iii) To check soil erosion and moisture conservation for vegetations and mankind.

AREA STATEMENT:- Total area allotted to this working circle is 83,735.35 hect. as detailed herewith.

SL. NO.	Name of Range	Area in hect.	Remarks
	Giridih Division		
1	Khurchutta	7955.81	
2	Giridih	13,895.50	
3	Dumri	18,269.12	
4	Parasnath	4,485.58	
5	Gawan	12,310.12	
6	Sat gawan	16,036.69	
7	Jamua	3,621.05	
8	Dhanwar	2,224.11	
9	Doranda	4,910.37	

	Total	83,735.35	
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(i) A list of the areas in which rehabilitation operation have already been done is given in APPENDIX—

(ii) Forest alloed to this working circle have already been listed in APPENDIX—II

GENERAL PRESCRIPTION: - The main line of approach towards the management of such areas will be as following: (i) Fencing and cut back of rooted waste areas. (ii) Filling of small blanks by planting natural spps. The area allotted this working circle have adequate stocks of Sal and miscellaneous spps. is preventing the forests to grow. To get healthy crop out of it the area should be properly fenced and protected from adverse factors.

There are small blanks in less than 2 to 5 hacters within such areas. These type of blanks must be treated simultaneously by artificial means i.e. planting natural spps. The choice as spps. will be important here to retain the composition of forests and must be natural spps.

TREATMENT METHODS

(i) **Fencing:** - Fencing will be done by cattle proof trenches o stone Wall fencing or brush wood fencing, depending site and availability of fund however, trench fencing of size 1.75m X 1.25m is most desirable. The seeds of Khair and Babul, will be sown on the dug soil outside the trenches.

(ii) **Cut Back :-** After fencing, all the high stumps will be cut down to 15 cm from the ground in the first year. In the 4th year multiple shoots arising from the base of the trees should be reduced from the base of the trees should be reduced to 2-3 shoots per stump. In the 7th year the inferior stem from each stump should be cut leaving two shoots per stump and up to 800 per hect. In the 15 year entire area will be coppiced leaving tree stumps not more than 15 cm high.

(iii) **PLANK PLANTATIONS:-** The large blank i.e. between 2 to 5 ha. will be panted with natural spps in the first year rains after the cut back operation has been prepared. The planted seedlings will have and weeded twice in first year first in July -Aug, second in October. Similarly one hoeing and weeding will be carried out in the 2nd year.

(iv) Soil and moisture conservation measure:- Such areas need soil and moisture conservation measure it will be done through digging and cutting of V—ditches on which grasses nr shrubs viiii he grown. The trench fences will be covered with Agave, Babul, or other suitable spps. V.ditches will be dug at 50 cm spacing along the contour and will be reinforced with grasses and shrubs at 10 to 15 cm interval.

(v) Protection from fire & Grazing : It is essential to protect the treated areas from fire and grazing the area to be tackled under this working circle has to be worked through VFMPc as per the Govt. resolution No.5244 dt.8.11.90 on J.F.M Hence local people participation has to be taken for the protection and management of such forests.

A model estimate for rehabilitation such area is giving in table at the end the chapter . Year wise financial investment (at current rated) to takel such areas during the plan period is given in table - of this chapter.

MINING RECLAMATION:-

INTRODUCTION . This contains all such forest areas which are at present under occupation of mining activities. Further more it au comprises of non-forest area like govt. revenue land and private land which are under the mining activities. The main mining activities of Giridih district is COAL and MICA. Mica mining operations are in stage of closure due to lack of export order and discovery substitute conductor in place of MICA. But there had been good growth of coal industries & mining. Therefore a large amount of geographical area is under these industries which had to be treated well sow as to check ecological degradation.

As a considerable amount of forest and non forest land are under mining operation, the population residing under mining towns had been one of the major biotic factor causing innumerable damage to the local forests. It should be mandatory for the Govt. or Non-govt. agencies engaged in mining activities to take care of raising suitable vegetation cover on the land under their jurisdiction. This will control massive dust pollution in such area which had been causing various lung diseases to the people living in and around such mines.

O8JECT OF MANAGEMENT :

- (i) To rehabilitate rooted waste forests under mining area.
- (ii) To encourage massive afforestation increase biomass.
- (iii) Checking soil, water and air pollution in the mines.
- (iv) Launch environmental awareness programmes to restore ecology of the area. Total area under mining operation is 2475.085 Ha. (6115.935 Acres), which consists of forest land only. But more than appx. 10,000. Ha. of non-forest land are under mines.

DETAILS OF MINING AREAS IN GIRIDIH DIVISION

Sl. No.	Name of Lessee/Mining Agent	Name of PFS	Mining area in Ha.	Remarks
1	2	3	4	5
1.	M/S Charki Mica Mining Co. Ltd Koderma.	Charki Nagua Haradhari, Baghjutu, Dodraha Terai.	410	
2.	M/S Christian Mica Co. Giridih	Bendro	50.00	
3.	M/S Sindo Mica Mining Co. Koderma	Jesam, Makwali Sewatand, Sindho	402.00	
4.	M/S Karintari Mica Mining Co Koderma	Yadgar, Garhisankh	144.00	

5.	M/S Chandwal Rajbhagdiya, Giridih	Sankh, Karwadih, Kharkhan, Kirintari, Balhara.	564.00	
6.	M/S Bhotanka Mica Co. Giridih	Dharbe	533.00	
7.	M/S Karuna Mica Co. Giridih	Murai, Katakoko	62.00	
8.	M/S Gawan Mica Mining Co. Domchanch	Khirkiya, Tikulia Lohra.	360.00	
9.	M/S Rameshwar Ram, Giridih	Kusmai, Rajpura	37.00	
10.	M/S A.K. Hasan Ansari	Kandkiro	-	

COMPENSATORY AFORESTATION :- Compensatory afforestation programme carried out under the provision of Forest Conservation Act, 1980 shall be one of the major under this working circle,

GENERAL PRESCRIPTION: - Forest department would undertake suitable step to rehabilitate and restock degraded forest area under the mines through its RDF programmes. This should be accorded priority over other regular afforestation programmes.

Where ever there is a major lan blanks open forest area or mined over area, it would be brought under afforestation . Attempts should be made to go for local species suitable to the soil and climate. Expenses for this progrmme should come from mines agencies and, other govt funds.

Road side plantation, creation of green belts, parks and garden are other activities which would be highly desirable.

Large mining agencies should sponsored community nurseries through which local villages would be provide seedlings of their choice. They are also suggested to encourage an organise environmental awareness programmes to balance the ecology of the area.

Chapter-IV

PLANTATION—CUM—SOIL CONSERVATION WORKING CIRCLE

GENERAL CONSTITUTION OF THE WORKING:- This working circle comprises all the blanks and open scrub forests which are suitable for plantation including old plantation a areas. It also includes barren hills and undulating terrain where there is adequate soil depth for raising plantation. Old plantation which are still in need of protection to grow or have filed, would continue to from part f this working circle. Still plenty of blank areas are available for plantation in all the ranges of territorial as well as affrication division.

The special object of management are:

OBJECT OF MANAGEMENT:- The special object of management are:-

(i) To provide tree cover to the blank areas with suitable spps. Which can tolerate the adverse local condition and survive to produce maximum biomass.

- (ii) To tend the existing plantation and harvest the mature plantation.
- (iii) To re-afforest the exploited are the exploited areas in season.
- (iv) To check soil erosion and conserve moisture for existing vegetation and mankind.
- (v) To develop pasture land and plant fodder spp. for local villagers so as to reduce grazing pressure on the forests.
- (vi) To improve economy of the local people by planting a medicinal plants which are found locally and agave sislana for rope making.

Area Statement :- .The total area allotted to this working circle is 44,766.44 ha. as detailed in appendix

GENERAL PRESCRIPTION:-In the past, large-scale plantations were raised in the forest areas of the present Giridih & Giridih Afforestation Division. Unfortunately most of the plantations raised during. the time have either failed or have been illicitly felled.

Therefore, a lot of care and precaution is needed for raising successful plantations. A detailed guidance regarding afforestation technique has recently been issued the present P.C.C.F., Bihar vide his letter No. 455 dt. 2.5.95. The involvement of VFMPs in **the work is desirable**. The choice of species should be worked out in consultations with the VFMPs committee members and more and more emphasis must be on -natural and local species. Special precaution roust be taken to save the plantation from grazing, fire and illicit felling.

SISAL PLANTATION:- Sisal is an useful plant aad can grow on shallow soils and in drier areas. It is very useful in soil conservation measures. Therefore, it is recommended that its plantation may be carried out in drier areas. Similar attempts should be to reproduce Bamboo in the area which was once considered suitable.

SANDAL PLANTATION :- There had been sandalwood trees on the Parasnath hills. This bill being the religious place for the JAIN communities, it is recommended to at least go for 50 hac. of sandal plantation every year in continuity.

Scheme for Sandal plantation will be pro-pared by respective Divisional Forest Officer. A model scheme is given in Appendix-IX

EXPLOITATION OF OLE PLANTATION: - A total of ha. plantation have been raised since 1984 onwards. Though the success of old plantations are not very good ocular estimate of survival is about 30-40%

It will be in fitness of things that the matured plantations are exploited so that the local medand of small timber and firewood are met to some extent. If they are not exploited, in all probability they will be illicitly felled. Most of these plantations are of fast growing species like Acacia, .Ecalyptus and chakundi. The desired rotation of these plantation should be 10 years. In fact all those are which has been exploited in particular

year must be again replanted in the consecutive planting reason but due to severe resource crunch a small portion of exploited plantation are only being replanted thus more and more area are becoming available for plantation.

YEAR WISE FINANCIAL REQUIREMENT FOR AFFORESTATION :- A part from the felled over plantation area, there exists blank areas in the division as estimated about 45,000.00 hact. area have been identified in this division village wise detailed of these areas are given in appendix-IV

It is proposed that felled over areas as well as blank areas will be re—stocked through artificial means within the period of this plan starting within the period this plan starting with 1997-98.

Based on the prevailing rate of afforestation today, a model estimate. For 1 hoc, plantation is given in page no. 118 at the end of this chapter. This projection may change with the change in wage rate from tin to time. The concerned Divisional Forrest Officer will prepare an annual estimate to carry out plantation schedule and will et it sanctioned by proper authority.

WILD LIFE WORKING CIRCLE

GENERAL CONSTITUTION:- This working circle overlaps entire area of the division but special emphasis has been given on Parasnath Wild Life sanctuary. Wild life includes all the wild Animals of shcedule I to IV of wild life action Act, 1972. Parasnath wild life sanctuary was constituted by S.O. no. 1013 dated- 21-0864 by Govt. of Bihar. Details of notification has been given as appendix —VII page no.396

AREA OF THE WORKING CIRCLE: (i) 4933.13 hact, of the Parasnath wild life sanctuary. (ii) It also overlaps entire area division.

OCCURRENCE OF WILD LIFE:- Both type of animals herbivores and carnivores are seen around Parasnath hills, terrain is well suited for carnivores li1 leopard and the enrichment of herbs, under growth is heaven for herbivores. For propagation, development and conservation wild life, the forest of Parasnath hill in was notified as Parasnath wild life sanctuary in year 1984. Wild life are also see in different part of the division.

OBJECT OF MANAGEMENT :- The special object of management are :-

- (I) To protect, preserve and develop Parasnath wild life sanctuary.
- (ii) To provide safe breeding place wild life.
- (iii) To improve its habitate and carrying capacity of wild life.

WILD LIFE CENSUS:- For the management needs it is essential to know the total population, in Parasnath hill.

The main objectives of survey are (i) To determine whether a particular habitable population is increasing, decreasing or stable.

(ii) To compare the no.of wild life in area before and after management.

PRESCRIPTIONS :- The following prescription are being enlisted for this working circle.

(i) Regular annual census of wild life of Parasnath wild life sanctuary.

(ii) Water resource survey and its improvement.

(iii) Food availability survey and its improvement.

(iv) Anti poaching measures to be strengthen.

(v) Encouraging TOURISM.

SPECIAL NOTES ON PARASNATH WILD LIFE SANCTUARY :- The Parasnath wile life sanctuary constituted of lush green Parasnath Pahar stood with majestic, stock silence and with gigantic gorgeousness. Parasnath is situated in south—east part of Giridih District and about 2 Km away from Giridih town. Parasnath is one of the most famous pilgrim centre of the Jams. The area is popularly known as Madhuban which is considered to be one of the sacred citadels by both Swetamber and Digamber community of Jain.

Forests of contemporary Parasnath Pahar has been declared as PARASNATH WILD LIFE SANCTUARY by Govt. of Bihar. Bihar Gazette notification part— 2 No.21 dt. 12.08.1984 in order to preserve the flora and fauna of this part of the forest.

The Parasnath sanctuary is constituted of forests, which were under private management till 1945. It was under one Aandjico kalyanji trust. The Govt. of Binotified it as private protected fore by Gazette notification No. 215 — VIF3/47R

Dated 1st January, 1946. Except a small area of 1855 area (750.71 Ha.) of Phulibagan, the remaining forest on the Parasnath hill was under private management till 1964. The management of the forests the Parasnath hill was taken over by Go in 1st April, 1964 vide revenue Dept. notification no. C/F — 17020/64 — 1326 B dated 1st April 1964.

Management plan of the Parasnath wil life sanctuary (1993—94 to 2002-2003) had been prepared by Sri A.K.Patra, IFS Divisional Forest Officer of Giridih pivi ision under the guidance of Sri 5.D.Sing Conservator of Forests,Hazaribag Circle Which is under process of approval by St Govt.

CHAPTER-VI

PROTECTION (OVERLAPPING) WORKING CIRCLE

GENERAL CONSTITUTION OF THE WORKING CIRCLE: - Constitution of this working circle is due to rapid loss of forest cover in our country. It has been estimated that 27 hac of tropical forest are losing per minute. This is global phenomenon reason for reason for loss of forest cover are different for different countries, In our country heavy biotic pressure on our forests is one of the main reason for rapid loss. of forest cover.

The acute prevailing poverty in our country puts extra pressure on forest especially for meeting the energy requirement is met from bio energy.

Under such **circumstances** protection of our natural forest is definitely **difficult, but at the same time it has** to be **protected** & improved at any cost. The conventional **system of protection i.e.** through **legislation etc. has** failed to check the depletion & degradation. Therefore *new* & innovative **approaches must be** adopted which are in accordance with **our** National Forest Policy. With this objective this new working circle has been constituted for the first time.

AREA OF WORKING CIRCLE:- Hill slopes with inclination of 45° more would come under this working circle. Protection is needed to the entire forests area of the division. Therefore it is proposed that this working circle will overlap the entire forest area of this division.

Area.....387.74.....Hact.

OBJECT OF MANAGEMENT :- The main object of management of this working circle are-

- 1) To protect & improve the existing forest cover.
- 2) To identify the main reasons of degradation of forests cover & to suggest possible intervention to tackle them.
- 3) To protect & conserve vegetation on steep hills & slopes.

IDENTIFICATION OF MAIN CAUSES OF FOREST DEPLETION/ GRADATION.

Some of the major causes for continuous degradation or depiction of forests are.

- a) Lack of effective infrastructure **at** divisional level to the forests.
- b) Inordinate delay in the disposal of forest cases.
- c) Lack of peoples involvement
- d) Shortage of fuel for cooking & 'non-availability of alternative, source of fuel for cooking purpose.
- e) Ever increasing human & livestock population.
- f) Inadequate fire control **measures.**
- g) Poverty of the people.

SUGGESTION TO TACKLE LOSS OF FOREST COVER:- To overcome above problems mere scientific management of forest may not be adequate. We have to come out of our traditional domain and have to intervene with suitable programmes with other agencies.

Most of reasons for continuous degradation of the forests can be reduced by proper intervention.

I.A. LACK OF EFFECTIVE INFRASTRUCTURE AT DIVISION LEVEL:- Like other forest division Giridih division is also facing illegal felling and removal of trees, fire woods etc. The division has lack of transport facilities which hamper patrolling work. There is no fast communication facility between divisional headquarter and range headquarter, between range headquarter to field staff. Th. forest guards, foresters and range officer of forests are not given armed guards to check the enormous govt. property. J.F.M. can be one of the approach to protect the forest but of the same time it **is** equally necessary to make policing and patrolling effective. The rising prices of forest produce have organized the gangs of smugglers. Armed patrolling become specially necessary when smugglers are heavily armed.

Due to paucity of fund as well as due to lack of adequate **emphasis** on improving the infrastructural facilities, this aspect has been altogether neglected till now, Therefore it is recommended that

(A) **REPLACEMENT/ADDITION OF VEHICLES:**

- (i) **DIVISIONAL LEVEL:-** The old jeep must be replaced with new one. One additional vehicle must be provided so that regular patrolling team could be sent to different areas.
- (ii) **RANGE LEVEL:-** It appears essential to provide a regular jeep at range level for effective patrolling of forest **area** and **also** the quick movement of ROF to the various under-going works in range for properly supervision. Till the policy decision is taken at P.C.C.F/Govt. Level on this issue, it is proposed to provide a motorcycle to all ROF.
- (iii) **BEAT LEVEL:-** The foresters also provided with motorcycle.
- (iv) **SUB BEAT Level.** Forest guards must provide with cycle.

(B) **ESTABLISHING OF WIRELESS NETWORK FOR IMPROVED COMMUNICATION:-**

It is essential to set up wireless net work in all territorial division all rant quarters and some of important beat headquarter and Nakas. It will check wood smuggling large extent.

(c) **CREATION OF ARMED PATROLLING PARTY:**

In the present age of armed smugglers it **is** possible for the unarmed staff to heck iii felling and removal. It is proposed to have armed patrolling party of at least eight persons at the divisional level. Subsequently, it switched over to, range level. The phasing of acquisition of above estimated costs are indicated in table at the of the chapter.

LACK OF SPEEDY TRIAL OF FORESTS CASES: - The whole idea of the provision of punishment TRIAL OF FOREST for **various offences** in I.F.A. was to use the Act, as different, unfortunately it could not se ye the purpose for mainly due to two reason—first, the punishment was meager and secondly in most cases trial was too much delayed.

It is a policy matter but in my opinion way must be found out for **speedy** trial of forest cases. There is need for law officers in each territorial division,

LAC OF PEOPLE'S INVOLVEMENT:- It **was** believed that forest department could protect and develop the forests through Act./rules policing ect. but the efforts of last several decades negates this theory. So in our National Forests Policy 1988 has laid great emphasis on the need of local people in the protection and management of our National forests.

Endorsing the National Forest Policy, the State Govt. also came out with its resolution No, 5244 dt. 08.11.90 which laid down in detail **the** principle and procedure to introduce J.F.M. in the state. Since then lot of ground has been covered and thousands of VFMPCS have been formed to protect and manage degraded forest.

In Giridih division also 44 such VFMPCS have been formed covering a forest area of F 22,576.2 hac. some of the suggestion to make it effective and operational are given below:-

In all degraded **forest areas** where the VFMPCS have been formed, **steps should be** taken to prepare management plan with their consent all rehabilitation work must be started through VFMPCS and the profit sharing arrangement must start as laid down in the Govt. resolution for also such forest the management plan must be prepared by the territorial Divisional Forest Officer by 1997-98 the plan must conform to the norms laid down in this plan.

(ii) For other degraded areas efforts must be made to form the committee and this work must be over by 1997—98.

(iii) Training of forest staff (ROF & below) and VFMPCS member is essential to make J.F.M. a success. It is proposed the in every range six such training should be arranged in every year.

(iv) Apart from training it is essential to organise awareness seminars/symposium at village level to develop interest among local villagers in forests conservation and development. For every VFMPCS six seminar in a year should be arranged.

It is proposed to arrange visit of a group VFMPCS members to other villages maybe in division or nearby division VFMPCS really performing in an efficient manner.

RIOTIC PRESSURE FOREST:- The maximum pressure on our forest is wood. The report of working group on energy planning commission (1979) has estimated 68.5% of energy requirement in rural area 4.5% in urban areas are met through fires

The Bihar forestry project has estimated total demand of firewood in Bihar **is** 28,815 thousand m³ where as the annual administration report of 1988—89 reports the production 166 thousand of fire wood only. So there is vast difference between legal production and demand of fuel wood. It **is** met through ii removal of firewood from our forests.

The problem is also acute in Giridih division. Total population of Giridih is out of which rural population is approx 201 and urban approx 2.24 Lac Requirement of fire wood works out to be.

Based on the production figure of the Bihar forestry project has estimated average production of fire wood at 0.159 m³ per hac; Average production of fire wood is totally equate to meet the local requirement.

Since early a lot of emphasis has laid on social forestry and farm forestry certain other measures are essential to be t to reduce the demand of fire wood if forest are to be saved.

Steps like promotion of use of commercial fuels like oil, coal electricity etc. may be beyond the scope of division level efforts but some of the measures which are well within the means of divisional level could be taken up.

TO PROMOTE USE OTHER SOURCE OF ENERGY: - There are several agencies in the state which are promoting the use of other source of energy like biogas, solar cooker, solar *cell* etc. The local forest staff can and should Act, as coordinator to bring such scheme to the villagers which are inside the forests or are on the fringes. The VFMPCS may be used for this efforts,

(ii) VFMPCS can be used as agency to promote improved smokeless chullahs biogas plant.

(iii) To take steps to promote the use of improveburning devices for dead bodies in rural area and use of electric crematoriums in urban areas,

(iv) To continue thrust on social forestry.

EXCESSIVE GRAZING CATTLE: - Our country has more than 19% of the world live stock population. The problem of grazing is much more severe in Giridih division certain steps plans must be integrated in forestry plan to reduce the problems. Some of suggestion are:-

(i) With DRDA a programme must be started in and around the forest areas to make available high yielding varieties of cow and Buffalos. Stall feeding preferable.

(ii) Through VFMPCS, the advanced technology of live stock management must be made available to the villagers.

(iii) Development of pasture, planting fodder spp. must be made an integral part of afforestation programmes in the division.

LACK OF EMPLOYMENT OPPORTUNITIES: - it is recommended that the activities proposed in different working circle must be taken up so that the people living in and around the forests areas get employment.

INADEQUATE FIRE CONTROL MEASURES :- Sporadic incidence of fire has been reported in the division collection of Mahua seed is major factor which causes fire in the area.

Following activities are proposed control it.

- (a) Cutting or restoration for three months April to June.
- (b) keeping fire watcher for three month April to June.
- (c) Installation of wireless sets for last communication.
- (d) Construction of watch **tower**.

CHAPTER-VII

MISCELLANEOUS REGULATION Working CIRCLE

GENERAL CONSTITUTION OF THE WORKING CIRCLE:- This working circle contains all such non-forests wasteland belonging to govt. or private individuals which has great potential or raising vegetation. In fact this is an area where in main activities of Social Forestry are being undertaken. With the intention of reducing biotic pressure on forests, it has been highly recommended that more and more area outside the forests must be brought under tree cultivation.

National Wasteland Board assisted by state waste lands, Board, National Eco Afforestation Board and other agencies are coordinating efforts in this field and supporting massive afforestation projects.

Besides wasteland development, other activities under this working circle shall comprises:-

- (1) Strengthening of Boundary pillars in forests.
- (ii) Fire control measures.
- (iii) MFP collection.
- (iv) Control over Grazing.
- (v) Eco-development programme

MANAGEMENT OBJECTIVE :-

- (i) Wastelands development
- (ii) Social Forestry Programmes
- (iii) Fire and Grazing control methods
- (iv) MEP collection ant Tribal development.

AREA STATEMENT:- Total area allotted to this working circle is :

- (a) Forest area 1,63,196.94 Ha.
- (b) Non-forests area 1.25 Lakh Ha.

PRESCRIPTION: - The main line of approach towards the management of such mining areas will as follows :-

- (1) Fencing and cutback of rooted waste sal/miscellaneous areas.
- (ii) Filling of blanks by local and suitable species through modern afforestation techniques.
- (iii) Encouraging Urban forestry.
- (iv) Development of Botanical parks, even use, picnic spots etc. for the recreation purpose.

For details prescription Rehabilitation and plantation working circle kindly be consulted.

RECONDITIONS:- (A) Wasteland DEFERMENT PROGRAMME

The status report prepared on the waste and of Bihar indicates that more than 1.25 lakh Ha. (Appx.) of wastelands are available in the district of Giridih. A special efforts must be done to check this figure and identify such wastelands ground for future planning. It is proposed that this job may be undertaken by Divisional Forest Officer, Giridih Division who has reasonable staff resources for this purpose.

Once this identification is completed a detail project report may be prepared a detail project report may be prepared in consultation with District administration and submitted to National wasteland/Eco-afforestation Board for implementation and funding Depending up on resource. Available, all efforts should be done to complete this project within this plan period. ie. 1997-98 to 2006-07.

Every year 3000 Ha. of wastelands can be tackle by Govt/Non—Govt. agencies in this district, Thus during this plan period atleast it would be possible to bring 25 - 30 thousand Ha. area under tree cultivation.

Here it is worthwhile to mention that NWDB requires the project on watershed basis and it has already identified Forest Department as Project Implementation Agency. This opportunity must be utilized for further details the “Guide lines for Watershed Development” issued by NWDE, ministry of Rural Development, Govt. of India can be referred to.

B. **SOCIAL FORESTRY PROGRAMMES** :- Social Forestry is going to be the main component of this working circle. A separate Social Forestry division is working under this area with headquarters at Giridih. Presently it is starved of activities and if some steps are not taken to revise its activities, it is likely that it had to be wounded up.

The present population of the district has been enthusiastic towards Social forestry programmes. World bank fund, central govt. fund under JRY, PMRY, NWDB etc. are available for this programme. The details of guidelines regarding its activities has been given in "VANROPAN PADHATI" issued by P.C.C.F., Bihar in 1995.

GRAZING: - The forests are subject to heavy incidence of grazing. The no. of cattle which are dependent on fodder grazing are much more than the forest cover which can support them. Cattle from outside also graze in forest. Besides the damage caused by grazing, incalculable damage, is done by perpetual trampling. The following observation made at the Coweeta Hydrological Lab. In the U.S.A. is of interest.

After 6 years of grazing, surf infiltration of water was reduced by 90% tree growth in the best timber sites was reduced by 50% and desirable timber species were eliminated from the under story. Trampling of the cattle tended to destroy the productive litter and humus layers on the forest floor, The compact soil lost much of its 'ability to absorb rainfall and flood peaks along with erosion increased rapidly. The ground became compacted from the trampling of cattle hooves. The upper 6" of soil, where most of the feeding roots of trees are located, lose most of its power to absorb life giving water so even the larger trees also suffered because their growth too was retarded."

It has to be admitted that control and regulation of grazing have not been given the attention it deserves, Proper grazing should be restricted for brought from outside. Rotational grazing should be aimed at as the ideal. The attainment of the ideal may be difficult in the conditions prevailing in the division at the moment. It would however, be sufficient for the time being if the administration is able to ensure complete protection from grazing in 1-5 years old newly regenerating coppice forest and new plantations. This has to be enforced, if need be., even by fencing. The local staff has to treat these rules very seriously. Adequate publicity should be made amongst the local villager. about areas available for and closed to grazing and about the grazing rules. Cases should be instituted against offender who violate grazing rules. Villagers should be encouraged to cut and remove fodder grasses from forests, specially from afforestation areas for stall feeding of cattle.

REMOVAL OF BURS WOOD. Except for some forests in the Interior, the stocking of the forest is not optimal and indiscriminate removal of brush, wood should be discouraged. Collection of brush wood should be confined to the current and *next years coupe as also to coupes that* are due for thinning or clearing. Miscellaneous spp. below 5 Cm dbh are to be cut as brush wood in thinning and cleaning coupes brush wood, would mean that material which is not required as part to the future crop.

FIRE PROTECTION: - It is unfortunate fact that most of the forests of the division get but, some times over more than once every year. The attempts to tackle the problem can be described as half hearted. This is because of inadequate manpower and funds. Besides causing physical damage to the plants and tree due to heat, fire have more harmful & lasting effect on the soil. The top soil gets baked hard. Humus, which would have improved the structure of the soil is burnt and there is loss of nitrogen also. In experiments made on seven soil types in the U.S.A. it was found that "Annual burning

reduced the infiltration an average of 38% in comparison with that in soils protected for approximately 5-6 years. The causes of forests fires are by now quite well known and in order to prevent the forests from getting burnt the following recommendation are made :-

- (i) Adequate number of suitably sited fire lines should be laid out
- (ii) All boundary lines , roads & path inside the forests should be carefully fire traced in February each year.
- (iii) The leaves under each Mahua tree in and near forests should burnt under proper department supervision or through village forest protection committees.
- (iv) Adequate publicity should be made about the causes of forest fire, the damage it causes the preventive methods etc.

In addition to the preventive measure enumerated above, arrangements for fire fighting has also to be made. During fire season, gangs of labours should be kept ready in each range office specially for fire righting. To give them mobility and speed, they should be provided with a truck and pick up van villagers assisting in fire prevention of fire fighting should be suitable rewarded and those who cause fire or do not co- operate in extinguishing it should be suitably punished.

FIRE RECORDS:- A record of every fire would be kept in the felling series historeis on a tracing on 6"=1 Mile (1:10560) or 4"=1 Mile (1:154840) scale kept exclusively for the purpose. Area affected by the standard symbols given in the manual. Each tracing would last for a period of 5 years after which another map would be maintained.

MINOR FORESTS PRODUCT:-

KOREY :- It occurs in part of these forests. The divisional forests officer may issue permit for its exploitation on the approved schedule of rates.

MAHULAN:- In the moist forests, Bauhina vahii, (Mahulan) is a nuisance, It's bark produces good ropes. People should be encouraged to come forward for exploitation on Mahulan for rope making. Besides bringing in some revenue it would also get rid the forestry of veritable source of injury to the crop.

TANNING BARK:- The chief trees whose bark is used for tanning are Asan, Kahua. Later is mostly along river banks. It may be advisable to auction a few lot of kahua trees along the important rivers on a trial basis. As whose scale striping a bark could result in the death of the trees. Proper system of stripping has to be evolved after experiments in the field. Stripping of bark from Asan trees should be also wed only the current coupes and in the coupes of the following year standards should not be allowed to be stripped.

NARABOLANS:- At present myrabolans is not being exploited regularly. Efforts should be made to auction myrabolan in suitable lots, Harra (Terminalia chebula) occurs in profusion on Parasnath hill.