

P A R T – II.
FUTURE MANAGEMENT , DISCUSSED AND PRESCRIBED.
CHAPTER-I

Basis of Proposals

General objects of management .

The general objects of management are :-

- 2.1 (i) To maintain, Protect and improve the forest cover specifically on the, higher and steeper slopes to prevent soil erosion and to conserve soil moisture.
- (ii) To improve the degraded forests by suitable measures and to rehabilitate the degraded waste and miscellaneous forests within the shortest possible time.
- (iii) To meet the bonafide requirements of the right holders for timber, fuel and other forest products. The extent possible and to market the surplus for consumption by non-right holders and also to export to other markets if possible .
- (iv) To associate in increasing degree the local population with protection and scientific management of the forests and to promote a sense of community ownership.
- (v) To regulate the local water supply by conservation of the rain water.
- (vi) Consistent with the above, to have sustained yield of timber, fuel and other products for future.

Constitution of Working Circles :-

- 2.2 To attain the objects of management the forests have been divided into working circles according to the composition density situation and silvicultural needs of the forests and local requirements.

So the under- mentioned working circles, have been formed :-

- (i) Coppice Selection Working Circle.
- (ii) Protection cum improvement working circle.
- (iii) Rehabilitation and soil conservation working circle.
- (iv) Plantation Working Circle.
- (v) Tasar PI. Working Circle.
- 2.3 (i) Coppice Selection Working Circle.

This working circle comprises all the forests fit for working under this system, both right free as well as right burdened which can be grown and Economically exploited to meet the demand of the right holders, Non right holders

and for export wherever possible. The total area allotted to this working circle is 28,845.56 Ac./ 11, 538. 23 Hect.

- 2.4. (ii) Protection Cum-Improvement
Working circle.

This working circle comprises all the forests on steeper hill slopes and on worked over area severely affected by head loaders grazing etc. The forests of Mundari khunt Kattidars are also included in this working circle. So total area allotted to this working circle is 49,835. 13Ac./ 19.934.04 Hect

- 2.5 (iii) Rehabilitation and soil Conservation
Working circle.

This working circle comprises all the areas in which the crop is in need of rehabilitation. This includes areas of Sal and Miscellaneous root wastes. Where the forests have been mostly deteriorated by irregular cutting grazing fire and soil erosion. The total area of this working circle is 6176.61Ac./2470.65 Heat.

- 2.6 (iv) Plantation Working Circle.

Plantation working circle embraces all the existing plantation and area fit for planate on. The total area allotted to this working circle is 25.889.61.Ac./ 10.355.84 Hect.

- 2.7 (v) Tasa Pl. Working Circles.

Tasar cocoon is the main source of Tsasr silk. Tasar cultivation plays an important role in improving the socio-economic condition of tribals and others who are contained to the forest areas. At present Tasar cultivation is confined to only Kharsawan Range of Chaibasa North forests Division. This plantation should be encouraged for future in those areas where rearers of Tasar are residing. The total area allotted to this working circle is 7931.06 Ac./ 3172.42 Hect.

2.8 The following table shown the area allotted to the different working circles and total forest areas in different ranges.

Name of the Range	Total forest areas in Ac/ Hect.	Area under CSWC. Ac/ Hect.	Area under protection cum-improvement Ac/ Hect.	Area under Reb and Soil Cons. W.C. Ac./ Hect.	Area under Plantation W.C. Ac./H Hect.	Tasar WC Ac./ Hect.	Remarks.
1	2	3	4	5	6	7	
CHANDIL	<u>30166.76</u> 12066.70	<u>6395.22</u> 2558.09	<u>12336.71</u> U4934.68	<u>1486.90</u> 594.76	<u>2039.12</u> 815.65	<u>962.00</u> 384.80	Area under DWLS. <u>6946.81</u> 2778.72
KERA	<u>23271.21</u> 9308.48	<u>7602.80</u> 3041.12	<u>11851.98</u> 4740.79	<u>1333.94</u> 653.58	<u>1036.73</u> 414.69	<u>1145.76</u> 458.30	-----
SARAIKE LA	<u>30020.39</u> 12008	<u>6486.19</u> 2594.48	<u>6148.18</u> 2459.27	<u>804.67</u> 321.87	<u>14033.21</u> 5613.28	<u>2079.14</u> 831.66	Area Released and under Candra Glass Factory <u>469.00</u> 187.60
KHARSA WAN	<u>42635.42</u> 17054.17	<u>8361.35</u> 3344.54	<u>19498.26</u> 7799.30	<u>2251.10</u> 900.44	<u>8780.55</u> 3512.22	<u>3744.16</u> 1497.66	-----

Block and Compartment

2.9 The forests of this Division have been properly demarcated on the ground by means of cleared lines and stonepillars and have been surveyed on the village cadastral sheets on a scale 16" = 1 mile.

2.10 The areas allotted to different working circles as also to different felling series have been shown on maps on a scale of 4" = 1 mile. On account of haphazard release of forest land and frequent encroachment the position of boundary lines and pillars on

the ground does not tally with the maps in many cases. The state of affairs, therefore, makes it obligatory to bring the map and other records up-to-date.

- 2.11 This working plan has been drawn for a period of 20 years i.e from 1986-87 to 2005-2006 . A review of the results of the treatment prescribed in the plan may, however, be made after 10 year and necessary modifications be incorporated in the plan, if so required.

PART-II.

CHAPTER-II.

Coppice Seledction working Circle.

General Constitution of working Circle.

This working circle comprises the bulk of the forests of classification A, B and part of –C and having crop density above 0.3. These forests have been placed under this working circle irrespective of the fact whether they are accessible or in accessible. In considerations of heavy de mand in the thickly populated pocketed, the forests which would yield small poles, fuel and brushwood as also those which contain malformed and pollarded ceop have been allotted to this working circle. The general character of the vegetation allotted to this working circle has been described in detail in paragraph 1.56 to 1.70 of Part –I. The forests generally comprise Sal with varying proportion of its usual associates and occur mostly in plain, lower slopes of high hills and also in the eastern and northern aspect of high hills. The majority of the present crop consists of poles in different stages. The seedling regeneration of Sal is confined in remote villays. As per All India coppice is confined in remote villays. As per All India coppice quality table Sal Crop is genefally of quality “B” except in remote valleys where it reaches quality “A”.

- 2.13 The extent of miscellaneous crop is also quite significant. It accurs generally on hill tops and on southern as well as western aspect. The main species in miscellaneous forests are Kend, Piar Asan, Dhaura, Doka Sidha, Karla, galgal, salai etc. Response of these species to coppicing is comparatively slow. This working circle covers an area of 28845.56 Acres / 11538.23 Hectare.

Special objects of management.

- 2.14 The special ojects of management are:-
- (i) To meet the bonafide agricultural and domestic requirement of the right holders without deterioration of the forests.
 - (ii) To meet the suppoly of non right holder and the export trade out of surplus.
 - (iii) To improve the stockand quality of the forest by silvicultural treatment.
 - (iv) To maintain the hill slopes under adequate forest cover to prevent soil-erosion, and regulate water supply.

- (v) To organise management of the forests in such manner that local people living near them may find sufficient employment in forestry operation.

Stock maps.

- 2.15 The forests have been stock mapped on 14" = 1 mile to topographical sheets. The stock maps show the distribution of Principal species, The average size density, extent of wooded wastes, area fit for plantation, area already planted. The details about stocks, are given in Appendix- I.

Silvicultural System.

- 1.16 In order to obtain the above object of management silvicultural system prescribed is coppice selection system. This will consist of removal of the exploitable trees that are silviculturally available and at the same time maintaining and improving the adequate soil cover.

Silviculturally Availability.

- 2.16 The expression "SILVICULTURAL AVAILABLE" is defined as follows:-
A green and healthy tree is silviculturally available when it fulfills all the three following conditions:-
- (i) It forms part of a congested crop and the principle of improvement compelling warrants its removal.
 - (ii) Saplings or poles or established regeneration of the same or of equally valuable species exist to take its place; and
 - (iii) Its removal does not create permanent gap in the canopy.

Exploitable Diameters:

- 2.17 as per the existing stock, 24" girth or 8" d.b.h. 10" will be the exploitable girth or diameter for all species.

Felling Cycle.

- 1.19 This is prescribed at 20 year.

Regulation of the Yield.

- 2.20 The yield will be regulated by area with selection felling. In each annual coupe the exploitable trees will be marked only. When the tree is silviculturally available.

Constitution of Felling series.

- 2.21 In constituting the felling series, the points taken into consideration are:-
- (i) All forests burdened with rights have, irrespective of their legal classification and situation, been grouped together;

- (ii) Right burdened felling series lie within a radius of 8 km. of the Villages of right holders and;
- (iii) For the sake of continuity, the felling series of the previous plan have been kept intact as far as possible.

Classification of Felling Series.

2.22 In consideration of the measuras required subsequent to the main fellings and dto improve the quality and stocking of the erop, felling Series have been classified into category “A” anf category “B”

Filling Series undet Category “A”

2.23 This category comprises all felling series where the soil conditions are better, stocking of the crop normal, impact of grazing fire, amd human intertenance not too intense and where seedling regeneration may establish. Such felling seres generally lie in compatatively in accessible localities.

Felling Seres under Category “B”

2.24 This category embraces suchy felling seres where the crop is open, Soil is either already lost or is getting lost fast and blands have already appeared or are extending on account of grazing, fire and indistriminate felling. Such Felling series fall in proximity of thickly populated zone With heavy demand.

2.25 This following felling series under coppice Selection system have accordingly been constituted.

Appendix __I gives the details of forests which constitute the different felling series.

Division into Coupes.

2.26. Net area of each felling series has been arrived at after dedueting the unproductive areas which include blanks, plantations and rooted wastes. The unproductive areas has been shown bothe instock maps and management maps wherever the size of the unproductive area is either small or linear incharacter. The net area of felling series has been dicided into coupes to insure the availability of forest produce throughout period of totation.

Demarcation of Coupes :-

2.27. Coupes should be demareated on the ground strictly in the same sequence as shown on the management maps.

2.28 Coupes will be demarcated on the ground by cutting clear line 5' wide all round. Trees along the coupe line or immediately on the side of the coupe shall be double ringed with coal for at barast height.

2.29. Each coupe in right tree felling Series shall be divided into two section by outing internal line to insure efficient control over fellings. The right burdened coupes shall invariably be divided into four sections . the internal lines need not be very wide but must be clearly distrnguishable. The coupe lines must always, during the currency of the coupe, be maintained un- mistakably clear and double – coulter ring must show up properly. _Suitable sign- board indicating the number of coupes, year of fellings etc. shall be put up at coupe corners and at the crossing of important roads and foot – paths.

Priority of allotment of coupes and requirement of funds.

2.30 Coupes will be laid out one year in advance of actual fellings. Immediately after the demareation of coupes, items of work required for the improbement of the future crop be listed. This will include all or a few of measures recommended under sub head “SUBSIDIARY OPERATIONS” depending on the crop.

Regular estimate for the execution of such measures as found necessary for the improvement of the future crop shall be made. The preparation of estimate at this stage will enable the Divisional Forest officer to include the funds required in his budget.

2.31 priority list of the coupes needing measures, of improvement would also be prepared. In the ebent of the entire required funds being not available, work ofimprovement would be done in coupes ranking high in the priority list.

2.32 There is some scope of adjustment too as all the coupes of felling series under category “B” may not require all the measures to the same extent. Some of them in certain year may not need ant.

2.33 Funds for measures recommended under the head “ Subsidiary Operations” may be available from one or more of the plan schemes. The Divisional Fotest officer, has therefore, to press for funds under one or more plan schemes.

2.34 Inspite of all these, if the bare requirement of funds is not available for the coupes in priority I , it is advisable to stop felling in such of the coupes as coppice regeneration is almost sure to fail and the process of creation of blanks will get accelerated. A list of such coupes may be sent to the Conservator of Forests before handing over to the state trading division.

Method of Executing the fellings.

Marking Rules:-

2.35 The following marking rules are prescribed;

- (i) All dry dead or heavily diseased trees with negative increment will be marked.
- (ii) Among healthy green trees Sal and miscellaneous trees that have attained exploitable diameter will be marked.
- (iii) No tree will be marked where:
 - (a) The crop density is low.
 - (b) The regeneration is absent.
 - (c) Where the slope exceeds 60 degree.
- (iv) A well grown stem would be preferred to a badly grown stem even if the former is of inferior species and the latter of a more valuable species.
- (v) Other species of the respective exploitable diameter will be marked on the principle of improvement felling.
- (vi) On the edges of blocks or partial blocks, trees will be retained.
- (vii) All climbers shall be cut at the time of marking.

Execution of felling

2.36 (i) In right – burdened coupes, out of the four sections, one section of the coupe shall be opened to right holders. If the right holders remain unsatisfied the next adjoining section shall be opened for them. This is prescribed in consideration of improper utilization of forest particularly by right holders.

In any right burdened coupe, rights of right – holders will be taken into consideration as recorded in Khatian part- II. After feeding the right holders, the surplus shall be handed over to the state trading division.

In right free felling series the entire current coupes shall be worked by the state trading division.

- (ii) Cutting must be done from one end and must proceed to the other and on even front.
- (iii) Fruit bearing trees such as kend, Mahua, Piar, Mango, Kusum, shall not be felled.
- (iv) Bamboo shall not be cut in the annual coupes.
- (vi) The remaining trees and high stumps shall be cut down at a height not exceeding 6” from the ground level.
- (vii) Trees of seared groves, saran or Jahira shall not be cut.

Disposal of Coupes.

2.38. Before 1980-81, the coupes were disposed by auction. After this period the coupes are laid out by territorial Sicism and handed over to the State Trading Division for exploitation, extraction and sale of the forests produce.

Subsidiary Silvicultural Operation.

2.39. The attainment of the objective enumerated in paragraph 21 in chapter – I of part –II is largely dependent on the efficient execution of the regulations which are enumerated below.

2.40. (1) Regulation for felling series under category “A”

In the year immediately after the main felling following operations are required.

- (i) Dressing down any stumps higher than 6” from ground level.
- (ii) Fencing shoots of Sal and other valuable species from the over top of grass or interior species;
- (iii) Coppice down top broken or otherwise damaged trees meant to be felled ; and
- (iv) Cutting away all limbs.

The close attention has to be given to seedling of Sal which exist in different stages in most of the felling series of this group.

(2) Regulation for Felling Series under group “B”

2.41 All the operation enumerated under item (i) to (iv) in paragraph 2.40 will be carried out in the coupes of Felling Series under group “B” in the year immediately after the main felling. Over and above these, the special items of work considered highly important for attaining the objective are:-

- (a) Provision of effective fencing for 5 to 7 years against grazing depending on the growth of the forest crop.
- (b) Planting up of the blanks with suitable species.
- (c) All other operations such as hoeing in the second and third year of planting, fire protection etc. shall be carried out in accordance with the recommendation of Reviewing committee on afferestation and their modification from time to time.

Other Regulation.

2.42 (i) Right:- Only the residents of these villages which constitute a Felling Series shall be entitled to

exercise their rights in that particular Felling Series. For this the coupe will be demarcated one year in advance and will be divided into four sections.

Only one section will be opened at a time to ensure proper utilization of the forest produce. If the bonafide requirements are not satisfied with the produce of first section, the second and third section will be opened in turn. Execution of fellings and felling rules will be rigidly followed by the right holders.

(ii) Grazing:-

2.43 Coppice coupes will remain closed to grazing for a period of six years from and including the year of felling. this restriction may be extended by the Divisional Forest Officer, in the view of the state of regeneration and its establishment.

(iii) Fire:-

2.44. Efforts will be made to protect the entire working circle from fire. In case of inadequate fund , at least the area felled during the last six years must be protected against fire,

(iv) Unauthorised Cutting:-

2.45. People are in the habit of cutting young crop mainly for Ghoran and for fire wood. The requirement of Ghoran can be met to a great extent from the produce obtained from cleaning operations. This may be given free to right holders if they do the cleaning under the direct supervision of at least a forester.

PART-II

CHAPTER-III

Protection Cum Improvement Working Circle.

General Constitution of Working Circle.

2.46 This working circle comprises the area on steeper hill slopes where is problem of soil erosion and natural regeneration and gradually taking the shape of barren hills.

2.47 In Chaibasa North Forest Division there are some forests areas where crop density is good but due to repeated illicit felling by head loaders and other agencies crop is not reached in pole and middle aged matured tree, the crop generally remains in sapling and bushy stage. So such areas need proper protection against illicit felling by head loaders and other agencies.

2.48 After giving protection the improvement felling is needed to improve the quality of crop. Improvement felling will consist of only hygienic felling such as dead, dying, diseased and over matured trees the forest produce obtained after improvement felling will be distributed among the right holders and head loaders free of cost.

The total such areas of whole division will be distributed into improvement series the area will be treated in 20 years cycle.

2.49 Areas of unusual flora and portion of high quality Sal forest can be selected and formed into preservation plots and allotted to this working circle.

2.50 Seed orchard or elite trees can be earmarked for seed collection for some species. All these will be allotted to this working circle.

2.51 When Chaibasa North forest Division was created in 1964, 39 Village of Ranchi, district with Tamar thana were also transferred to this division. Though these village were notified as P.P.F. yet Mundari Khunt Katti right prevailed in the forests.

2.52 Because of this right Forest Department could not perform any departmental operation in the previous plan.the whole management of the forests was in hand of Mundari Khunt Kattidars.

2.53 In this context a meeting of Manki & Mundas was called on 27.4.80 at sursi F.R.H. the meeting was ended with conclusion that Mundari Khunt-Kattidars did not want Forest Department's involvement in protection & improvement of the existing forests.

Taking these points in consideration the forests on these villages are allotted to the protection working circle.

2.54 **Objects of management.**

(i) To protect and preserve the forests on steeper hill slopes.

- (ii) To improve the stocking of the forests by inducing natural regeneration.
- (iii) To improve health of the crop by hygienic felling.
- (v) To enrich the stocking in larger blanks by sowing and planting.

Distribution of Area.

- 2.55 The total area allotted to this working circle is 4983513 Ac/ 1993404 Hect. The areas fall under this working circle are marked on the maps. The range wise details of the areas are given in Appendix No. VII.

Silvicultural System.

- 2.56 Only improvement felling will be done which will be done which will consists of the removal of dead, dying and over matured trees and also cutting of woody climbers in 10 years cycle.

Method of treatment:-

- 2.57 (i) Such area where crop having good density but not establishing in poles stage due to repeated illieit felling and grazing, will be provided necessary preventive meares taking into cconsideration adaphic and viotic faectors. The preventive measure will include fencing, cut back, and protecting the coppice shoots for at least 3 year . at present time forest protection is very difficult task without association of local public. So they must be involved in protection of forest and their right must be given to fulfil their requirement .
- (ii) In course of silvicultural operation all dead, dying, diseased and overmatured trees will be digit marked for felling. All woody elimbers shall be cut.
- (iii) Fire protection measures will be undertaken special attention in improvement felled areas for at least 3 year.
- (iv) Soil and moisture conservation measure will be undertaken over steekper hill slopes this will constitute contour trenching gully control etc.
- (vi) If there is any blank, sowing and planting joperation shoud be done.

PART- II.

CHAPTER-IV

Rehabilitation and soil conservation working circle.

General constitution of the working circle.

2.58 This working circle comprises such villages containing forests which have been maltreated in past and have been reduced to scrub designated as "ROOTED WASTE" This includes the rooted wastes of Sal and miscellaneous species and also included the areas in need of special treatment as a result of denudation, soil erosion etc.

The Objects of management.

2.59 The main objects of management are:-

- (i) To protect the rooted wastes of Sal and miscellaneous forest against unregulated cutting, grazing and fire.
- (ii) To rehabilitate the rooted waste forests by sowing and planting of suitable species in gaps and degraded lands.
- (iii) To carry out anti- erosion measure and improve the soil and moisture conservation capacities of these lands.

Description of Area.

2.60 Two main categories of forests such as Sal and miscellaneous rooted wastes are covered under this working circle. The areas of above description are extensive and cover many villages. This is the result of grazing, fire and indiscriminate felling in the forests close to habitation. Failure to regenerate well stocked forest after felling has also been converted many areas into blanks. These areas of ten appear along the foot of the hills and along the banks of Nallas. Often eastern and northern aspects, foot of hills and valleys are found sustaining root stocks of Sal whereas on higher slopes, and in western and southern slopes miscellaneous rooted waste occurs.

2.61 Soil over all these types of areas is invariably infertile. Severe sheet erosion, advancing gullies and ravines are in evidence everywhere. The site conditions with a few exceptions are highly unsuited to any natural tree growth and the entire area is highly impoverished.

Miscellaneous rooted wastes generally contain Parasitic and thorny species such as Karonda Nyctanthes is also found in some of the forests. Sprinkling of Galgul and Salai are seen on higher slopes on higher slopes and hill tops.

2.62. The total area allotted to this working circle is 6176.61 Acres/ 2470.65 Hect.
The details are given in Appendix V.

Method of Treatment:-

2.63 the urgent need of the areas allotted to this working circle is protection i.e .
protection from ruthless cutting, uncontrolled grazing and fire.

The treatment to the wooded wastes of both types forests will be same and is described below.

- (i) Area should be fenced.
- (ii) After fencing, the crop should be cut back. The field material obtained as a result of cut back may be distributed among right- holders free of cost.
- (iii) In the following year, cleaning should be carried out and rigid fire protection has to be ensured.
- (iv) After fencing and cutting back the plants should be planted up by suitable species.
- (v) In areas affected by soil- erosion Anti- erosion measures will be taken up.

2.64. These will consist of the construction of check dams and gully plugging. The diversion channels will be provided and head of the gully will be eased off. On the slopes Babai tuft and vitex negundo cutting will be planted.

2.65 The total area under this working circle will be grouped under suitable number of rehabilitation series. If it is proposed to tackle the entire area in 20 years the rehabilitation series of 2500 Hect. To 3000 Hect will be constituted and annual forest will be about 125 to 150 Hect. In each rehabilitation series.

PART-II
CHAPTER-V
Plantation Working Circle.

2.66 General Constitution:-

This working circle covers

- (a) All the plantation rised in jpast.
- (b) Areas fit for raising plantations.

2.67. Special Objects of management :-

In view of constitution of the working Circle, a single set of the special objects of management shall not be applicable to the whole of the working circle. The objects of management are therefore, forth separately for the planted and plantable areas.

2.68. (A) Special objects of management for the existing plantations:-

- (i) To improve the quality of plantations by scientific management.
- (ii) To improve the sstockingt in plantations by adopting suitable scientific measures including cultural operations
- (iii) To meet theever increasing demand of raw material for wood based industries and others .
- (iv) To ensure soil moisture conservation.

2.69 (B) social objects of management for plantable areas:-

- (i) To bring under vegetation areas hither to bland or partially stocked.
- (ii) To minimize lose of soils amd run of from such areas.
- (iii) Consistent with soil and climatic condition to raise by wood based industries.
- (iv) To inerease the potential of forest produce.
- (v) To provide employment to local people.
- (vi) To meet the increasing demand of forest produce by local people and others.
- (vii) To provide increased quantity of grass for fodder.

Description of plantations:-

2.70 The earliest effort to raise the plantation was made in 1957. Sal Sissoo and other miscellaneous species particularly Chakundi were planted on hills with moderste to deep soil.

2.71 These plantations were raised in patcher but success was not satisfactory due to biotic factor and lack of protection against grazing and even fire.

2.72 Chaibasa North Forest Division, total area of 11,602.78 acres was planted till 1969. Between 1970 to 1987 the plantations have been raised over an area of 18087.77 Hect.

2.73 The details about the above plantation are given in the exploitation scheme prepared separately covering the period from 1975-76 to 1984-85 and from 1985-86 to 1994-95. The main species planted over extensive areas are Acacia, Eucalypts, Chakundi and some where in patcher are gamhar, Karanj etc.

2.74 **Description of Areas.**

Mostly blank or semi blank areas will be taken under this working circle. The impact of biotic and edaphic factors on the forests close to habitation and big town has adversely affected the crop. Due to heavy grazing, illicit felling and fire many forests have turned into wooded waste and some where is now complete blank. Failure to regenerate forests after felling, has also converted many coupes into blank, soil over these areas is invariably poor, erosion has set in and site. As a whole area is completely impoverished unless efforts are made to reforest, there is least chance of getting back forest cover naturally. At the same time no return is forthcoming from these degraded forest. There is more probability of encroachment in such land. The blanks and encroached areas will be taken in this working circle. The total area allotted to this working circle is 25889.61 Ac/ 10355.84 Hect. Which is distributed in all ranges.

THE DETAILS ARE GIVEN IN APPENDIX:- VI

METHOD OF TREATMENT.

2.75 The areas which are included in this working circle, are mostly blank. So by and large the treatment would aim at felling up the intermittent blanks by planting with suitable species depending on edaphic and biotic factors of that area.

The detail of the method of treatment would be same as adopted by Afforestation Division which is reviewed from time to time by "Reviewing committee"

Agency:-

2.76. The planting of blanks are at present done by Chaibasa North forest Division and Singhbhum Afforestation Division. The Singhbhum Afforestation Division is exclusively entrusted with plantation whereas the territorial Division raised plantation along with its

norme work of a territorial division So the Sighbhum afforestation Division, can therefore take up large area for plantation compared to the territorial division.

2.77. Taking plantation areas some time mis – understanding creates among the field staff of both division operating in the same division. In order to remove this dispute A separate five year plantation scheme has already been prepared to allot areas for both division. After expiry of this Scheme second Fire areas plantation scheme should be prepared.

2.78 So both Singhbhum Afforestation Division and Chaibasa North forest Division would raise plantation on the area allotted as per Five year plantation Scheme. In consideration of unforeseen factors the two Divisional forest Officer may either change or modify the allotment of areas fit for plantation as and when felt necessary.

PART- II
CHAPTER-VI
TAASAR PLANTATION WORKING CIRCLE.

General Constitution

2.79 Tasar culture in Bihar manycentury old. It forms and integral part of the life of tribal people in Chhotanagpur and Santhal Patganas. It was linked with the livelihood of the tribal people who took to Tasar culture to supplement their income from Agriculture. However, in the transition period of take over of zaminday forestthere was lot of distruction of Tasar host trees consisting mainly of Assan, and arjun. It sulted in the tribal people taking to other occupation including selling of fire wood removed from the forest areas . not it is cery essential to create large Scale Tasar Host Tree plantations specialllu in these areas of Chhotanagpur and Santhal pargana so that the tribal eople could assume Tasar Culture in big way for supplementing their income.

2.80. JPrier to 1986, Tasar plantation was used to be done by Chaibasa North Forest Division, but realiesing the importance of tasar culture separately Tasar Division with head-quarter of Chaibasa was created in 1986 vide Govt. notification No.639 dt. 8.12.86.

Object of management :-

2.81. The main object of management are:-

(I) To raise large scale plantation exclusive by of the host plants(Assan and Arjun) in vicinity of villages lindedu with rearing of Tasar.

(II) To provide massive employment opportunitites to Adivasies and other weaker sections of the Rural polace.

(III) To restore and improve significantly the tribal culture of rearing tasar silk worms and in this way to provide a rich return, which would improve their soio-economic condition.

(IV) To boost of tasat silk tribal and earn valuable foreign exchange for the country.

2.82 Significance of Tropical Tasar silk:- Tasar silk is apun by the tasar Silk work.

Antherca Mylitta:- Which is a wild non-Mulberry silk worm reared out – door mostly on forest food plants like Terminalia, Arjun Terminalia Tomentosa.

2.83 **Distribution of Area:-**

The atate Sevculture department has identified & pilot project centre in the Distriet of Singhbhum but of eight JP.P.Cs. only two i.e. Kharawan, Kuchai P.P.Cshave been identified in chaibasa north forest division.

2.84 Since Tasar rearers are found in all Range of this Division. So Tasar plantation areas are distributed in all Ranges. The total area allotted to this working circle is 7931.06 Ac. 3172.42 Hect. The details of areas are given in appendix X

2.85 **Tasar Plantation :-**

Assan and Arjun are main species for Tasar host trees plantation. For economic plantation, their spacing are 1.2. m.x 1.2. m while for Block plantation it is at 2mx2m

2.86 Economic plantation are mostly raised in Raiyati land while Block plantation in the forest are of the state. The blocks of Tasar host trees plantation are generally called as pilot project center.

2.87 Tasar trees generally have a long gestation period but the most redeeming feature of Tasar plantation is the fact that the plantation require only three years to come to full yield . From fourth year, the plantation become self supporting.

PART-II

CHAPTER-VII

PLANFOR AREA UNDER ADITYPUR INDUSTRIAL

COMPLEX AND ITS ADJOINGSS.

GENERAL:-

2.88 In a memorandum approved by the council of ministers in the meeting held on 22nd Novmber,'1960 vide Development Commissioner's letter No. Pland III- 122/60-623/PD of the 16th December'1960, the forest land in south of the Chandil – sinnirailway line had been set apart for the development of industries Its result was that 1362.92 Acres forest land was released and a large number of industries came up. No land remained vacant except forest land so the pressure to release the forest land was gradually increasing. The forests, which were in neighbouring of industries, were deteriorated and turned into blands.

2.89 After promulgation of forest Conservation Act. 1980 it was declared as principal that No forest land should be a sad for non- forestry purpose and the release of forest land takes clearance from central Ministry of forest and environment department whose Chirman was the Prime Minster of India. At Present State Government has no power to release forest land for non-forestry purpose. In this way the under this Act. Forest land is ditectly under the control of Central Government.

2.90 After deterioration of reosts the forest lands in adjoining of Aditypur Industrial complex are mostly barren. There is always probability of enchroachment because these lands are far off from Sareikells Range and Range Officer does hot have effevtive control over land.

2.91. Tasking these views in consideration it is kmy suggestion that either New Rang with headquarter at Adityapur should created or shift the head quarter of Sakaing for range office and residence at Gamaria in Adtyapur Industrial complex.

Descripatation of Area :-

2.92. Aditypur Industrial complex falls under Gamharia best of Saraikells Range, prior to the forest conservation Hect.1980, 1362.92. acres of forest land was released.

2.93. The details of the released land are given in the table below :-

Sl. No	Land to whom	Vilage Thana &	Area in Acres.
Dateof Transfer			

Thana No			
1	2	3	4
5			

1.	M/S Hindustan Tools & 4-1968	Asangi	4.00	2-
	Dies. In Adtypur Indu- Stires area, through The aditypur Develop- Ment Jamshedpur.			
2.	Special Offcer Adity- Pur, Development Jamshe- dpur.	Kalikapur 50	26.20	31-1-1970
3.	-do-	dindli 128	66.70	7-3-1970
4.	-do-	Dindli 129	67.05	9-12-1970
5.	-do-	Asangi 126	6.62	26-6-1971
6.	-do-	Asangi 126	4.85	7-1-1973
7.	Managing Director Adityapur, Jamshedpur.	Krishnapur 132 Parabtipur 133	24.22	16-4-1974
8.	Managieng Director Adityapur, Jamshedpur.	Bara Gamharia- 66 Gangapur-124 Asangi-126	132.88	7-4-1974
9.	-do-	Asangi – 126 Dindli – 128	15.22	7-6-1974
10	Managing Director Adityapur, Jamshedpur.	Asangi – 126 Dindil – 128	3.00	11-7-1974

11.	-do-	Asangi – 126	2.40	11-7-1974
12.	-do-	Kalikapur- 50 Sidhadih – 70	55.14	11-7-1974
13.	-do-	Krishnapur 132	12.47	19-5-1975
		P.H.E.D.Division, Adityapur, Jamshedpur.		
15.	Managing Director	Asangi 126	23.74	24-5-1976
		Adityapur, Jamshedpur.		
16.	Astt. Engineer No- 4,	Kuluk	199.58	2-8-1976
	Bihar, state Housing	Tanga		
	Board, Jamshedpur.	130		
17.	Managing Director	Dindli 128	10.00	2-7-1977
	Adityapur Development			
	For ESI Hospital.			
18.	-do-	Kalikapur – 50	58.78	7-1-1978
19.	-do-	Dindli 128	18.00	7-1-1978
20.	Adityapur JPoletechnic	Dindli 128	10.00	19-1-1978
	Eeppt. Jamshedpur.			
21.	Managing Director,	Asangi 126	25.70	10-7-1978
	Adityapr, Jamshedpur.			
22.	-do-	Hatiadih 60 Asangi 126 Bhatia 127	236.78	10-7-1978
23.	Chief Administrative	Krishnapur	3.63	11-9-1978
	Industrial Developmant	132		
	Authyority, Jamshedpur.			
24	xecutive Engineer PHED.	Asangi 126	2.10	7-7-1979
	Division Adityapur.			
25	Chief Administrative Officer	Sankarpur	66.44	23-9-1979
	Adityapur Industrial Deve-	49		
	Lopment Authority.	Sankodig -1		
26.	-do-	Sri Ram Chandrapur	276.97	27-1-1982

Sikhardih – 71

Ramchandrapur - 452

Total:-362.92

Method of Treatment :-

- 2.94. After stock mapping it was found that the most of forest lands in Gamharia beat are plain and blanks. Due to coming up a number of industries, the population pressure is increasing on these land. At present to protect the forest land is a great problem. In this are the labour charges are very high and scarcity of labour is general phenomenon. So it does not suite to the General Afforestation Scheme.
- 2.95. Since dust and smokes of industries are polluting the environment of this area and causing health hazard to the human being living in this area. So Urban Forestry Programme will be more useful for subh area. Under URBAN FORESTRY Programme the area adjoining of industries should be fenced with R.C.C pillar and barbed wire.
- 2.96. Then the whole area should be divided into block and Sectors. Each block should be surrounded by roads the green shelter belt in the shape of botanical species should be attractive to the local inhabitants. The Adityapur industrial Authority should be involved in this programme.
- 2.97. if it is possible, there should be created biological park. This approach will not serve only to protect the forest land, but also will improve the Ecological Imbalance as well as reduce the sound and Air pollution. The green shelter belt around the industry will also purify the air. In order to get co- cooperation of common people effective so that they could realize its importance should be propagated so that they could realize its importance in human life.

Such plantation should not be exploited in future. The whole area should be treated as recreational forestry Since there is no any such place in Adityapur complex so people will like it.

PART – II
CHAPTER - VIII
Miscellaneous Regulation

Inor Forest Produce

2.98 (I) **KENDU LEAF:-**

BIRI:- Common man's cigar is made out of Kendu leaf. It is a basic raw material for the manufacture of Biri and is found abundantly in dry open forests and denuded areas. Upland and fallow land are quite favourable for this species. It grows to a large sized tree, if protected from paking in earlier stage Kendu leaves for the manufacture of biri are plucked from 3' to 4' high trees which give out thin soft leaves. It is also hot eonvenient to pluck leaf from big trees Kendu leaves of Chaibasa North Forest Division are marketable every Range . they fetch quite a good revenue. But for the management of Kendu leaves, no expenditure is in curred.

2.99. No operation, at present is undertaken to improve the quality of leaf. Revenue may increase to a great extent if arrangement is made by the department to coppiece the Kendu plants in time where by leaf, more in number and batter in number and batter in quality would be avaibale for collection. In the year of coppicing yield is likely to increase again, the yiesd may group by 25 %. The plants of Kendu should be coppiced by the middle of February. Leaf will be available after 40 to 45 days of coppicing. If it rains within a week of coppicing, improved quality leaf is ensured and become available for collection earlier, where, where as if it rains after the new leaves have just come out or remains cloudey for days , the quality of leaf is adversely affected by eruption of "pox". In Biri trade, quality of leaf generally goes by the states, JOrissa leaf is taken as quality I, and that of Maghya JPradesh quality II, wher as the leaf of Bihar is graded as quality III.

2.100. To assess the quality of leaf, size and thickness of leaf are taken into account. Quality I leaf is over 6" in size and yields and 3 biris and there isles wastage in the factory. Till 1986, Kendyu leaves of forest and revenue land in Chaibasa Northe Forest Division were sold by tender and lastly auction for one year or three years. Kandu leaves were collected by constructure in marck '1987, Bihar Government forests & Environment Department. Patna appointed Bihar State Forest Development corporation Limited as Agent for Kendu leaf trade. The Govern nebt will realize the revenue directly from the corporation.

(II) GRAZING :-

2.101. people have right to graze domestic in almost all the forests of Chaibasa North Forest Division. Their rights are recorded in khatian JPart II and are exercised by the village, without any hiteh or hindrance. In fact, No attention is jpaid even to the newly coppice area which are supposed to remain closed against grazing for five years.

2.102 . It is observed that the number of cattle is increas sing from day to day and has multiplied many times. Cattle are maintained for the purpose of ploughing, the earting, Gohar and to some extent from mild and for dung manure. Stall feeding and growing and growing of fodder for cattle are not known. Cattle in all cases, are taken to forests where they graze for the while day and are led back only in the evening.

2.103. The practice of maintaining cattle in this manner along with their increasing number, have already eaised immesse damge to the forest crop and forest floor and the same is continuing unabated. The forests in the neighbourhood of thickly populated villages are the worst hit. The forest in such cases have started teceding leaving blanks over consienble areas aling the fringers. The coppice shoots do not get established on account of heavy intensity grazing and welll stocked forests get thinned and opened up. This condition of the forests, exjposes the compact forest floor directly to the onslaught of rains causing erosion. Forest more is gradually closing its fertility on account of erosion and in many eases avery bit of soil is already gone exposing the rock and boulders which lain underneath soil in the past.

2.104. The unrestricted grazing thus adversely affects the forests and forest growth and at the same time creates favourable conditions for erosion which reduces the fertility of forest soil.

2.105. Though bad effects of ucontrolled grazing are well. Know, still no efforts have been made to regulate grazing, Owing mainly to the difficulties one may have to end forcing grazing restrictions.

2.106. But the role played by the forests in rural and national Economy is of great importance over and above its direct contribution to agricultural economy and it is viewed as matter of necessity bo minimize the intensity of grazing and to regulate the same in a manner that least damge is and caused to the forests.

2.107. Two factors in this connection have to be considered here :-

- i) Intensity of grazing- that is to say, number of heads of cattle grazing jper acre.
- ii) Duration – whether the grazing is continual or intermittent.

As regards the intensity of grazing, experience from Uttar Pradesh shows that optimum grazing results are obtained by allowing 2 Acres of average forest to one cattle unit.

The quit gas the following measure:-

One Cow or Bull or Bullock or Calf ...1 Cattleunit

One Buffalow	..	2 “ “
One Sheep or Goat	..	1 “ “

Regarding duration, intermittent grazing is far less harmful than continual grazing. For example-over comparable plots, the damage by grazing by 10 units for 4 (four) years would be less than damage by grazing by 5 units for 8 year.

2.108. In Consideration of intensity of grazing and its duration, the following suggestion are made.

- i) The areas where coppice shoots do not get established and alarming the problem of erosion grazing should be closed for the least 5 years.
- ii) The rooted waste area should be fenced and no grazing should be allowed, till the establishment of the crop.
- iii) The areas where coppice shoots are established and forest floor is having good crop cover, the rotational grazing is proposed and having in intensity of grazing to one cattle unit for every 2 Acres of forest.
- iv) The villagers who are residing in the vicinity of plantation and fenced forest area should be encouraged for stall feeding. The grass cutting should be allowed free of Cost.

2.109. The various causes leading to the forest fire in Chaibasa North Division and the damage done to the forests have been dealt with in paragraph of part- I

On various accounts, the problem of forest fire is treated as now, with more hope than efforts. With the available resources and their augmentation as far as practicable, there is a possibility of saving large tracts of planned way backed by sincerity and desire.

1.110 The following recommendations are accordingly made :-
The forests may be divided into two parts :-

A) Those lying in the interior in compact blocks with very sparse population.

2.111. For type "A" it would be effective if the people are repeatedly requested to refrain from setting or causing fire in the forests during the fire season. Normally people inhabiting this type of forest are ignorant and generally not hostile to administration. In case, they have to set fire in the forests as for picking Mahua flowers etc. they may be shown alternative way of cleaning the forest floor round the Mahua trees.

ii) An influential local man may be appointed as a fire- watcher whose duty should be to explain to the villagers the damage caused to the forests by fire and to see that they do not set or cause fire in the forests.

iii) Exterior boundary lines and boundary lines embracing last five coupes which ordinarily adjoin each other and main paths inside the forest should be carefully fire- traced.

Buring should be done twice, one in the end of February and the second in the last week of April.

2.112 For type "B" compact block of valuable forest say entire felling series should be made unit of protection. Maximum effective measures including the strength of fire – Watchers required to protect such selected forests should be employed. The present practice of allotting all the forests of a range to firewatchers, knowing full well that there does not stand even remote chance of protecting these forests, by them, has to be modified. Fire – watchers in adequate number may be protecting these forests from fire. Fire watchers should be invariably be influential people.

i) All boundary lines and roads inside the forest should be carefully fire – traced. Burning should be done twice, once in last week of February and the second time in the last week of April.

iii) Printed hand bills, explaining the cause of forest fire, the damage it does, the preventive methods and law on the subject, should be widely distributed.

iv) Suitable sign- boards should also be fixed at important points.

v) In case of forest fire, the services of the villagers may be availed of under the provision of Indian Forest Act.

vi) There should be instituted a system of prizes for meritorious work in saving the forest from fire either for prevention or for promptly extinguishing it.

WILD LIFE

2.113 When Dalma wild life sanctuary was created vide S.O/221 dt. 17 July'1976. Forest of Bandhdih, Khokhro, Kaira felling series which fall Chandil Range of Chaibasa North forest Division, come under this sanctuary. So wild life such as elephant, bears, wild boar, hogdeer etc. are abundant in these areas. In rest part of the Division Bears and wild boars are found in abundance. Leopards are also seen in forest of Kharswan Range. In this way the forests of Chaibasa North Division is very poor in wild life. At times, Elephant come from adjoining divisions and make their temporary abode.

V – Forest roads.

2.114 For predevelopment of the forests, both silviculturally and Economically, it is necessary to have a net – work of roads. Good roads render effective control over the working of staff and silvicultural operations effectively. The roads are also important both from the stand point of extraction of forest produce as well as supervision. The details about the road in Chaibasa North forest Division are given in Appendix IX.

2.115 The maintenance of these roads are not satisfactory. It does not need emphasis that road once constructed must be maintained thoroughly or else the entire capital outlay will go into waste. All culverts and cause way are required special repairs.

VI – Maintenance of Boundaries

2.116 In Chaibasa North forest Division the condition of boundaries is in a state. boundary pillars are often displaced, dismantled and even missing. No attempt has been made to plant aloe etc. the present bad condition of boundary line can only be improved by executing a scheme, together with rigorous execution and follow – up method can only bring the boundary up to a mark or in short time it will be difficult to delineate forest from non – forest land.

2.117 It is therefore, suggested that the maintenance of boundary pillars should be first and foremost duty of Forest Guard. The Beat Officer must invariably check the pillars twice a year with maps and the Range Officer check 50% and the higher officer 10%. The Divisional – Forest officer will ensure the compliance of the above by checking these in course of tour and by calling a return from all once every month.

2.118 It is further recommended that at each boundary pillar two Morabha (Aloes) plants may be planted in such a way that one of them is strictly in line with the preceding one and the other with the succeeding one. Every year during the rains, also planting or replacement of aloe should be done. The best time to start aloe planting is the period of Rohan when there is a few premonsoon showers.

2.119 It is also recommended that every Forest Guard may be allotted a definite number of aloe plants which he must himself put in. the Range Officer should also plant a number of aloe plants himself. This will exhibit the importance the operation deserves.

2.120. It should also be impressed on every one that proper boundary maintenance is the very foundation of forest management and therefore, he who does not know the boundary of his charge does not know the forest.

VII- Range of Tanning Material

By the local tanners

2.121. Mochis, right – holding or Non-rightholding, generally remove tanning material- barks, fruits and leaves from forest. Fruit and leaves do not cause any damage to trees, but banking of Assan trees cannot be allowed unchecked barking generally kills the tree and as such, certain restrictions have to be imposed.

2.122. Stripping of bark of assan trees may be done in the current coupes and in coupes of the following year if already laid out. Standards shall not be stripped. Debarking forest in these

two sets of coupes will do no harm since the trees will be cut away the same or the following year.

2.123. If it is indispensable to take tanning bark from outside the coupes specified above, stripping of only matured and moribound trees may be done. Wherever commercial exploitation is possible the divisional forest officer will prepare a scheme and obtain sanction there to.

VIII – Removal of fodder Grass

2.124. Generally grass for fodder may be removed by right holder or Non rightholders free of charge from the forests or plantations. Commercial removal of grass for trade or by any other Government Department from the JPlantation grass may be charged as per rate fixed by department from time to time.

2.125. Every effort should be made to get the grass removed from the plantation either free or on payment. If found necessary, local people should be encouraged to prepare way by cutting grass from plantation areas.

IX- Fruits and Leaves

2.126. Rightholders have full liberties to collect from any part of the forests for their own consumption fruits and leaves. But leaves of Khjur (phoenix acaulis) and Mahua (Bauhinia Vahlii) if removed for sale may be charged. If Khjur and Mahulan leaves occur extensively to permit commercial removals, it has to be advisable to sell them in general auction, but it has to be ensured that pluckers get their due remuneration as in the same of Biri leaves Collection,

X – Petty Fellings

2.127. A few trees outside the prescribed areas may be felled by order of the Divisional Forest Officer for the following purposes :-

- i) For use in departmental work.
- ii) For supply of Sample timber for research and trade.
- iii) For meeting special free grants trees will be recorded in form No. 2, but not count

towards yield.

XI – Sample plots, Preservation

Plots, etc.

2.128. Sample plots that may be laid out and their surrounds preservation plots, protected trees and field experiments will be excluded from the operation prescribed in this plan.

XII- Buildings and Wells

2.129. A list of buildings and wells constructed and maintained by the forest department is given in appendix VIII and XI . It need be emphasized that proper maintenance of buildings is necessary. Regular white – Washing and repairs enhances the life of buildings and at the same time helps to improve the sanitation, which has direct impact on health of staff. Old buildings, if may be replaced.

XIII – Establishment and labour

Executive Staff :-

2.130. Executive staff delopin this division is adequate, except at some plades ohere the present staff of Singhbhum Afforestation Division is operating. It may be requiring additional staff for sub – beats for which the divisional forest offcer, Chaibasa North Division may obtain sanction for creation of additional sub beats or beats.

Gazetted Officer

2.131. In view of various miscellaneous work to be taken up in the division during the plan period a gazetted Assistant is necessary for assisting the divisional forest officer.

Ministerial Staff

2.132. The present strength of ministerial staff is adequate.

Range Officer

2.133. Posting of a Range clerk clerk to each Range office has been very necessary. At present the Range Officer to do field work and office work single handed and thus, and inveitble delay.

Commonly a beat officer or a coupe overseer is entrusted with offece word at the cost of field work which often proves very heavy. It is therefore, recommended that a whole time clerk may be posted to every range office to the beat officer or the coupe overseer who is kept engage in office will also be free to devote full time in the field.

PART – II
CHAPTER –IX

Control and Records.

2.134. The standard forms laid down in chapter VI of the Code of working Plan Procedure shall be filled in and maintained in the manner prescribed in the code. The period between 1st July' to 30th June' will be reckoned as the Working Jplan year.

2.135. Three complete sets of Control Forms have been prepared in loose – leaf clutch file. One set is a Flying set, which will be filled up yearly and sent to working plans Officer within two months of the close of the working plan year. It will then be forwarded to the Chief Conservator of Forests (Management) , Bihar for approval of deviations, if any and countersignature.

Records

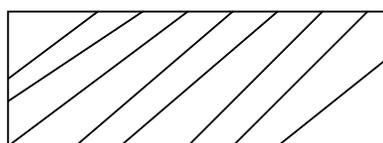
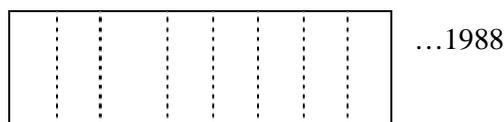
2.136. In addition to the Control Forms the following records shall be maintained :-

i) Felling series histories. This provides useful information of results of application of particular silvicultural prescription to the forests on which proposals and further improvement are based. The importance of the upkeep of these felling series histories in meticulous details cannot be over- emphasized.

2.137. A complete set in duplicate one for the divisional forest officer and the other for the Range Officer have been prepared in the working plans division and sent to the Divisional Forest Officer. Summary of work done, cost incurred, outturn or produce, etc. Shall be filled in by the Range Officer in his copy and from this the Divisional forest officer will post his copy up – to date. The felling series histories will be checked by the Conservator of forests during the course of office inspection.

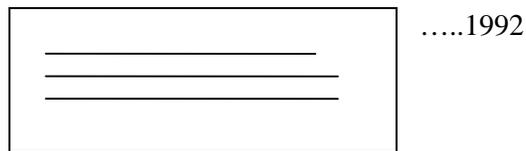
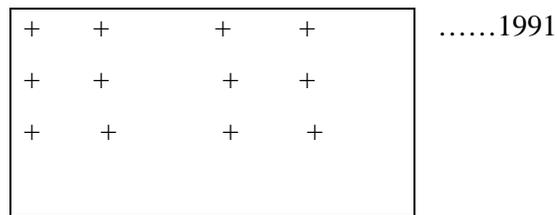
Fire – Records

2.138. Fire will be maintained on a scale 1" = 1Mile for each range and the division on the basis of felling. Series maps(4"= 1Mile Scale) on which areas burnt from year to year are indicated by distinct symbols as per code of working plan procedure (Appendix II – V). the symbols beginning from 1988 would thus be :-



...1989

...1990



2.139. A brief note of the burnt areas will be recorded in form (F) of the felling series history/

The fire map on 1" mile scale would be main tained for 5 years. After that, a fresh set of map wuld be prepared.

Forest Journal

2.140. the Forest Journal should be maintaine according to standing orders. This record will be of immense value if impotant silvicultured, administrative and payment notes are regularly recorded. Instances of gregations flowering, mortality shall invariably by recorded in this journal.

Plantation Journal

2.141. A Plantation Journal for each plantation series shall be maintained according to atanding instructions. Important observation will be recorded in the plantation journal, Remarks, Suggestions and instructions of inspecting officers with regard to plantation shall be invariably recorded.

Nurseary Journal

2.142. A Nursary journal for each nursery shall also be maintained on the lines of plantation journal.

MAPS

2.143. (1) **Felling Series Maps:-**

(a) Stock maps, prepared on 4"= 1 Mile topographical maps, showing the details of crop with density and regeneration have been affixed to felling series hostions.

(b) Management maps on 4"= 1 Mile scale topographical maps showing the coupes already worked and coupes to be laid out and their sequence have been shown. Management maps have been enclosed in both copies of felling series history.

(2) **Working plan**

2.144. Prepared on 1"= 1 mile scale map showing all forests and their distribution into felling series. Plantation already raised and those set for plantation have also been shown. In addition, the map shows location of Ranges, Beats and Sub-beats, forest Rest House and forest roads.

PART –II
CHAPTER-X

Financial forest cost and cost of the plan.

2.145. Ever since the creation of the chaibasa north forests Division, it has remained a surplus Division. Though the account has an up word trend but from 1982-83 to 1986-87. the amount has an down – ward trend. This will be eviditure and surplus or deficit positon of the division from 1971-72 to 1986-87.

	Revenue	Expenditure		Surplus (+) Or Deficit (-)
1	2	3		4
1971-72	10,98,085-00	5,08,395-00	(+)	95,89,689-00
1972-73	7,93,268-020	6,22,640-00	(+)	1,70,628-00
1973-74	7,49,606-00	6,83,878-00	(+)	65,728-00
1974-75	20,01,269-00	5,74,000-00	(+)	14,27,269-00
1975-76	18,45,118-00	5,79,942-00	(+)	12,65,176-00
1976-77	26,45,853-00	10,03,082-00	(+)	16,42,771-00
1977-78	30,83,005-00	13,,03198-00	(+)	17,79,807-00
1978-79	33,55,858-00	16,09,046-00	(+)	17,46,812-00
1979-80	23,20,923-00	19,32,455-00	(+)	3,62,386-00
1980-81	30,04,000-00	19,32,455-00	(+)	10,71,545-00
1981-82	28,23,379-00	23,73,937-00	(+)	4,50,442-00
1982-83	8,77,224-00	26,41,739-00	(-)	17,64,515-00
1983-84	6,40,872-00	21,90,159-00	(-)	15,49,287-00
1984-85	10,22,113-00	15,88,380-002	(-)	5,66,267-00
1985-86	8,10,388-00	32,15,731-001	(-)	24,05,343-00
1986-87	9,29,451-00	24,68,824-00	(-)	15,39,373-00

The fall in revenue is due to fallowing reasons:-

2.146. 1. Change of old question and contract system due to creation of state traking wing in the department.

2. Transfer of collection and sale of main miner forest produce like kendu leaves and sal seed to the Bihar state Forest Development Corporation.
3. Working of Timber Coupes and sale of obtained forests produce by the state Trading wing from 1981-82.
4. Loss of forest wealth due to excessive illicit felling and at normal human pressure in day to day work on the forests.
5. Excess expenditure in belrolling and protection of forests against illicit felling and encroachment.

The annual expenditure of the Division for the period from 1971-72 to 1986-87 have been shown on paragraph 2.145. this is inclusive of plan expenditure.

Cost of the Plan

2.147	1.	Cost of the maps enlarged on state file Recorder and other expenses on stock mapping and field work.	49,000-00
	2.	Pay of AWPO.	1,70,457-00
	3.	Travelling allowances of WPO, AWPO., & other Estb.	64,713-00
	4.	Pay of Estb.	4,54,685-00
	5.	Office Expenses.	<u>1,37,933-00</u>
		Rs:-	8,77,082-00

The area of the Chaibasa North Division is 1,26,094.78 Ac./ Hect. The cost of the plan works out to Rs. 6.96 per Ac/17.39 per Hect.