PART- II

CHAPTER-VIII

BASIS OF PROPOSALS
Objectives of Management

8.1. General objects of management

The forests of Rajouri Forest Division shall be managed with a view to achieve the following objectives.

- Conservation of biodiversity and natural habitat through preservation of natural forests with the vast variety of flora and fauna and maintenance of environmental stability.
- Rehabilitation of degraded forests so as to optimize their productivity and restore their potential to provide ecosystem goods and services on sustainable basis. Checking denudation and soil erosion in catchments through integrated watershed management techniques and practices.
- Securing regeneration of conifer forests under working through assisted natural regeneration and artificial regeneration and maintenance of the health of forest vegetation and forest soils.
- Achievement of a balanced, normal structure of forests through management of forests as per silvicultural requirements of the crop.
- Meeting the bonafide requirements of the local population in respect of forest based resources to the extent possible within the sustainable yield potential of the natural forests.
- Optimally utilising the mitigation and adaptation potential of forests in the context of climate change and achievement of environmental security.
- Encouraging principles and practises of sustainable grazing through participatory management.
- Reducing pressure on forests through appropriate interventions including development of forest fringe belt into high production tree strips.
- Utilisation of natural resources using best management practices and institutionalization and operationalization of concepts of eco-tourism and nature tourism.
- Consistent with the above, to derive the yield of timber and other forest produce on sustainable basis for commercial markets.

8.2. Methods of Treatment to be adopted

The following treatments are proposed to meet the objectives listed above.

- Chir forests which are relatively better stocked shall be managed under some sort of interim management for further improvement of the crop.
- Well stocked fir forests (situated on easier slopes) shall be managed under Indian Selection system.

- All the forests lying very near to line of actual control shall be preserved as such because regular working of these areas is not possible due to presence and activities of defence forces.
- All those forests on steep and precipitous slopes shall be preserved and no fellings of whatsoever nature shall be allowed.
- All chir areas that bear suitable crop for extraction of resin without causing any adverse effects on the health and growth of the crop shall be explored and prescribed according to the availability thereof.
- All forest areas which are poorly stocked and close to habitations shall be taken up for rehabilitation. These forests are under high biotic pressure and shall be developed by raising suitable species of fuel, fodder and small timber in order to meet the local demands and to reduce the pressure on natural forests.
- All the areas that have been degraded and prone to erosion shall be stabilized by carrying out suitable soil and water conservation measures.
- All the areas subject to excessive grazing shall be tackled to increase their productivity and carrying by means of rotational closures, introduction of suitable fodder species and various silvi-pastural operations.
- The forest areas having important medicinal and other non-timber forest products as well as endangered species shall be developed by creating suitable conditions for their natural regeneration and by means of artificial regeneration wherever necessary.
- Areas having tourism potential shall be identified and measures shall be taken to tap this potential.
- All the areas having wildlife shall be identified and efforts shall be made for their protection, preservation and improvement.

8.3. Constitution of Working Circle, their Area and Distribution

In the light of above mentioned objectives of management and methods of treatment, the following working circles are constituted:

1. Chir Working circle.
2. Fir Working Circle.
3. Rehabilitation-cum-Protection Working Circle.
4. Grassland Development (Overlapping) Working Circle.
5. Ecotourism (Overlapping) Working Circle.

Mandatory Working Circles as per the National Working Plan code:

6. Plantation (overlapping) Working Circle.
7. NTFP (Overlapping) Working Circle.
8. Forest Protection (Overlapping) Working Circle.
9. Joint Forest Management (Overlapping) Working Circle.
10. Wildlife Management (Overlapping) Working Circle.

8.3.2 The following table summarizes species-wise area distribution in the above mentioned principal working circle.

Table 8.1. Working circlewise area distribution of Rajouri Forest Division

Working Circle	Chir	Fir	Kail	B/L	Scrub	Blanks	Alpine	Total
Chir Working Circle	10013	0	0	183	1335	2589	0	14120
Fir Working circle	0	4089	0	79	485	640	502	5795
Rehabilitation-cum-Protection Working Circle	7466	4948	144	9797	10516	16333	2950	52154
Total	**17479**	**9037**	**144**	**10059**	**12336**	**19562**	**3452**	**72069**

8.4. Blocks and Compartments

8.4.1 The Range wise break up the territorial blocks, beats and compartments are shown in Annexure-IV. The Kandi Range was created by transferring compartments 152/Rajouri to 227/Rajouri from the then Rajouri range and compartment 1/Kalakote to 65/Kalakote of the then Kalakote range. The numbering of compartments as adopted in the previous plan has been retained. The abbreviations used for the territorial ranges in the lay out as well as in the draft working plan are "Rjr" for Rajouri Range "Kkr" for Kalakote Range and "Kdr" for Kandi Range. The sequence of compartments falling in various ranges of Rajouri forest division is as under.

(i) 1/Rjr to 151/Rjr in Rajouri Range.
(ii) 1/Kdr to 65/Kdr and 152/Kdr to 227/Kdr in Kandi Range.
(iii) 66/Kkr to 101/Kkr and 105/Kkr to 199/Kkr in Kalakote Range.

Compartments 102 to 104 of Kalakote Range have already been transferred to Nowshera Forest Division.

8.4.2 Recognised conventional signs have been used to delineate sub-compartment, compartment range and division boundaries. A single coal tar ring on trees at breast height and intervisible from two consecutive points denote compartment and sub-compartment boundary. A service of double coal tar ring on breast height of tree indicate range boundary. Similarly three coal tar ring mark divisional boundary. The rings along ridges follow linear trend but those along nalla and path have been marked alternatively on trees on either sides of their banks. The important ground features such as nallas, ridges, paths etc along with compartment numbers followed by abbreviations of the respective range name have been carved and coal tarred conspicuously on guide boards, top boards, running boards etc. during the layout. Wherever the adequate tree was not available for making a layout board, a prominent rock was selected in that portion of land and a layout board was painted on that with green paint and having writing on that with white paint. Names of adjoining divisions in abbreviated from have been also been indicated on layout boards along the divisional boundaries.

8.5. Period of the Plan and Necessity for Intermediate Revision

8.5.1 **This plan shall remain in force for a period of 10 years beginning from 1st April 2014 till 31st March 2024.** The plan under revision shall be deemed to have been extended from 1st April 2011 to 31st March 2014. Further, there is no necessity of inter-mediate revision of the present plan.

CHAPTER IX

WORKING PLAN FOR CHIR WORKING CIRCLE

9.1. General Constitution of the Working Circle and Character of Vegetation

9.1.1 This working circle consists of relatively better stocked chir forests in all the three territorial ranges viz Rajouri, Kalakote and Kandi of this division. A few better stocked chir forests are not included in this working circle due to their proximity to Line of Control which makes working in these areas very difficult because of the presence and activities of defence forces. The crop of chir in the forests falling in this working circle is almost pure except in the higher areas where it is found intermixed with oak (*Quercus incana*). In general all age classes are found mixed all over the area but over all there is preponderance of younger trees and deficiency of mature and over mature trees. The type of vegetation found in these forests have already been described in detail in Chapter-II.

9.1.2 Regeneration of the chir crop is not uniform in this division. The majority of the crop is observed to be young and middle aged. In Rajouri and Kalakote Ranges, regeneration is found to be moderate. In Kandi Range, the regeneration is fair to moderate i.e. it is lesser as compared to that of Kalakote and Rajouri Ranges. The overall condition of regeneration is inadequate though established. The natural regeneration is observed to be good inside the protected patches. In unprotected areas the regeneration is not establishing due to frequent grazing and fire incidences.

9.1.3 The distribution of stems over various dia meter classes is presented in the following Table 9.1.

Table 9.1. Table showing the distribution of Stems over various dia meter classes

Diameter- class (cm)	10-20	20-30	30-40	40-50	50-60	60-70	>70
Normal Distribution in percentage	41%	25%	15%	9%	5%	3%	2%
Actual Distribution in percentage	45.87%	24.64%	12.93%	9.53%	4.13%	1.75%	1.15%

9.2. Area and Allotment

9.2.1 The detailed compartment/sub-compartment wise area statement of this working circle is shown in Annexure-V. Range wise area and under species in this working circle is shown in the following Table 9.2.

Table 9.2. Table showing Blockwise area allotted to Chir Working circle

S.No	Range	Block	Compartments	Total Area (Ha.)	Commercial Area (Ha.)
1	Rajouri	Doongi	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 21, 22, 23, 24, 25, 26 & 27.	2868	2000
2	Rajouri	Bathuni	28, 29, 30, 33, 34, 35, 36, 37, 39, 40, 41, 42, 43 & 44.	1603	1182
3	Rajouri	Rajouri	48, 50, 51, 54, 57, 58, 62, 63, 64, 67 & 68.	1283	833

4	Rajouri	Kotli Kalaban	69, 79, 80, 86 & 87.	835	720
5	Rajouri	Ghambir	98	209	81
	Rajouri	**Sub-Total**	**53 compartments**	**6798**	**4816**
6	Kandi	Kalalkass	172, 174, 175, 176, 177, 179, 200, 201, 203, 206 & 207.	1004	671
7	Kandi	Dhangri	214, 215 & 220.	254	182
	Kandi	**Sub-Total**	**14 compartments**	**1258**	**853**
8	Kalakote	Potha	73, 74, 75, 76, 77, 78, 79, 80, 81, 86, 87, 88 & 89.	1534	1149
9	Kalakote	Sailsui	90, 91, 92, 93, 96, 97, 98, 99, 100, 101, 105, 106, 107, 109, 110a & 113.	2620	1965
10	Kalakote	Kalakote	119, 120, 121, 122, 124, 130, 132, 147, 152, 153 & 159.	1910	1230
	Kalakote	**Sub-Total**	**40 compartments**	**6064**	**4344**
	Division	**Total**	**107 compartments**	**14120**	**10013**

9.3. Method of Treatment

9.3.1 The most suitable silvicultural system for chir, which is a strong light demanding species, is "Uniform System" or any of its modification like "Shelter wood system". Such a system envisages heavy openings in the canopy to induce natural regeneration. This system needs complete protection of the area till the fresh regeneration gets established.

9.3.2 There is preponderance of younger and middle aged trees in the crop. Moreover there are no sizeable areas with adequate number of mature trees requiring fellings. The chir crop is already open i.e. of poor density at many places and fresh natural regeneration of chir is inadequate or absent in such areas.

9.3.3 In view of the above facts, the chir forests falling in this working circle are prescribed to be managed under some sort of selection system. This system involves only conservative removal of mature and over mature trees along with removal of dead, dying diseased and unfit trees. This system envisages the attempts to induce natural regeneration by opening the closed areas where the regeneration is not coming on its own due to biotic disturbances. Artificial regeneration work shall supplement the regeneration.

9.3.4 The nature of fellings in the mature and over-mature trees are to be of light selection type whereas the rest of the crop will be treated under improvement cum hygienic fellings and thinning. This method has been adopted since 1961 (Dullu's Plan) for these forests and is still considered suitable for the present plan. This method of treatment is, in fact, inconsonance with the present concept of stress on "Protection and conservation". Moreover this treatment is also suitable to the hilly terrain of this area in view of environmental and ecological implications.

9.3.5 Since the timber production in case of chir crops is not the prime objective but the production of resin has become the main objective of chir growing areas. Thus the objective of the system prescribed for the management of chir crop is not to get the maximum yield of

timber but to induce regeneration where it is wanting and to help establish the unestablished regeneration. This will be ultimately useful for the interest of resin production. Since resin tapping is approaching exhaustion stage, this system endeavours in replacing old chir crop with younger crop and development of chir crop in the blanks/ areas, for the progressive sustained yield of resin.

9.4. Exploitable Size

9.4.1 In order to achieve the objects of management an exploitable diameter of 70 cm is prescribed. Although the concept of rotation is not relevant in selection system, yet for purely academic interests, rotation of 150 years corresponding to exploitable diameter of 70 cm d.b.h. for chir is adopted.

9.5. Felling Cycle

9.5.1 Since there is preponderance of younger and middle age trees, the majority of the chir crop comprises of dia classes 30-40 cms. **A 30 years felling cycle is considered suitable** because it gives enough time to these forests to make good the excessive deficiency of the mature size trees i.e. 70 cms dbh (ob) and above.

9.6. Felling Series

9.6.1 There will be **only one felling series comprising of all the compartments** falling in this working circle.

9.7. Analysis and Valuation of the crop.

9.7.1 For the assessment of the growing stock and prepration of inventory, point sampling technique (Bitterlich's Method) has been adopted, this methodology has been discussed in detail in Chapter –VII. The sample points were randomly distributed in the working circle. In this way 123 points in Rajouri Range, 81 points in Kalakote Range and 27 points in Kandi Range were laid down and studied. The results of the study and statistical analysis are presented in the following table.

Table 9.3. Results of Statistical analysis for Chir Working Circle

S.No		Statistical Attributes*		
		No. of Stems	Basal Area (Sqm)	Volume (Cum.)
1	Attribute Total	54679.15	3771.50	20067.01
2	No.of sample plots (n)	231	231	231
3	Mean (X)	236.71	16.33	86.87
4	Variance (S^2)	224942.32	444.48	12322.08
5	Standard Deviation S	474.28	21.08	111.00
6	Standard Error (S.E)	31.21	1.39	7.30
7	Coefficient of Variation %	200.37	129.13	127.78
8	95% Confidence Lower Limit	175.22	13.59	72.48
9	95% Confidence Upper Limit	298.19	19.06	101.26
10	Confidence Interval (CI)	122.97	5.47	28.78
11	Lower Limit as % of Mean	74.02	83.26	83.43

9.8. Calculation of Yield

9.8.1. The volume available as yield from this working circle has been calculated by Brandis Method i.e. annual possibility/ recruitment formula. The following presumptions in this regard have been made:

Table:9.4.Table showing survival percentage of Chir Trees

Diameter ï class d.b.h. (cm)	Survival percentage
30	35%
40	60%
50	80%
60	90%
70	95%

Table 9.5. Statement showing dia classwise distribution of Stems in Chir Working Circle

Name of the variable	<30	30-40	40-50	50-60	60-70	>70	Total
No. of trees per ha.	166.90	30.61	22.55	9.77	4.14	2.73	236.70
No. of Chir trees per ha	132.18	27.53	21.80	9.47	4.00	2.63	197.61
Chir Volume per ha (M^3)	0.00	13.21	24.63	20.93	14.19	13.91	86.87
Total no. of trees	1671173	306517	225781	97841	41495	27328	2370135
Total no. of Chir trees	1323519	275640	218282	94829	40123	26363	1978756
Total Chir volume (M^3)	0	132307	246659	209572	142035	139254	869827

Table 9.6. Statement showing Diameter classwise potentially available Chir trees in the Chir working circle.

Class	VI	V	IV	III	II	I	Total
Diameter-class	< 30	30-40	40-50	50-60	60-70	> 70	
Total No. of trees assessed at mean value	1323519	275640	218282	94829	40123	26363	1978756
Total No. of trees assessed at lower limit of confidence interval	979669	204029	161572	70192	29699	19514	1464675
Age of entry in the class		61	80	105	127	151	
Years in class transition period		19	25	22	24		
Survival Coefficient of the class		0.35	0.6	0.8	0.9	0.95	
No. of potentially available trees		71410	96943	56154	26729	18538	269774

Based on above assumptions, the volume yield calculations have been made for the entire working circle as below.

a)	Total number of trees in class I	18538
b)	Total number of trees likely to pass on to class I	
	From class II	=26729x24/24=26729
	From class III	56154x6/22=15315
c)	Total recruitment in class I from class II during first felling cycle	42044
d)	Annual recruitment from class II during the first felling cycle (c / 30)	1401
e)	Stock required to be kept as reserve i.e. half of the total recruitment in 'c' above	21022
f)	Surplus stock of class I (a - e)	-2484
g)	Total possibility of yield in first felling cycle subject to the condition that the negative surplus stock in 'f' above is made good (c + f)	39560
h)	Annual yield (g / 30)	1319
i)	Weighted average volume of trees above exploitable diameter as per Kullu Volume Tables in cubic metres	4.87
j)	Total annual volume yield (m3)	6424
k)	Deduct fifty percent from 'l' above to account for mortality	3212
l)	Rounded off to lower multiple of hundred	3200
	TOTAL ANNUAL YIELD FROM THE WORKING CIRCLE	3200 cum

9.8.2. The yield calculated using Von Mantelôs Formula is as under:

	Total
Total commercial volume based on mean value (m3)	869827
Total commercial volume based on minimum availability value (m3)	725696.67
Annual Yield (m3) = 2GS/R	9675.96

9.8.3. The comparative statement of yield computed from the two methods is as under:

Brandis	3200.00 cum
Von Mantel	9675.96 cum

9.8.4. The yield proposed by Brandis method is found to be lesser and it is proposed to be implementd. The estimated volume yield works out to be 0.32 m^3 per ha per annum for the entire working circle and 0.44% of the minimum available growing stock of this working circle.

9.9. Size of the Annual Coupe

9.9.1. The yield calculated on volume basis shall be controlled by an area check. The size of the annual coupe is calculated as under.

$$\text{Annual Coupe (ha)} = \frac{\text{Total commercial area of working circle}}{\text{Felling cycle}} = \frac{10013}{30} = 333.77 \text{ ha.}$$

9.10. Allowable Cut

9.10.1. At a felling cycle of 30 years the average annual felling area comes to 10013/30 = 333.76 ha

Total annual yield (Cum)	Annual coupe (ha.)	Allowable cut per ha. (m3)	Minimum available Growing stock per ha. (Cum)	Allowable cut as % of minimum available Growing stock
3200	333.77	9.59	72.48	13.23

9.11. Formation of Annual Coupe and Sequence of Felling

9.11.1 The annual coupe to be worked out an yearly distribution of work and therefore the sequence of felling coupes has been left to the discretion of the territorial DFO.

9.12. Suggestions For Marking Officer

9.12.1 The marking officer should be a trained forest officer, not below the rank of Range Forest Officer, while conducting the markings; he should keep the following points in mind:

i) Marking for improvement fellings will form an integral part of the major markings and all dead, dying, dry and diseased trees should be marked.

ii) All trees of exploitable size (70cms (ob) and above) standing over or interfering with good established regeneration should be marked. Established regeneration will include all saplings of a height 3 meters and above and trees less than 70 cms dbh (ob).

iii) In groups of trees of and above exploitable size light regeneration fellings should be carried out i.e. small openings should be created in the canopy to induce natural regeneration.

iv) No healthy, fit green standing tree in the approach class i.e. 60-70 cm dia class should be marked normally. However, if odd trees of approach class occur sticking out among poles of less than 30 cms dbh (ob), they should be removed in order to ensure the uniformity of the groups.

v) At places where chir is found in mixture with broad leaved species, no attempt should be made to free the main chir crop by removal of these broad leaved trees (especially oak) because retention of these broad leaved trees in these hill forests is considered important for the proper conservation and regulation of soil moisture.

vi) In removals, the over mature trees should get preference over the relatively younger and healthier ones.

vii) Trees in a few meters wide belt around chaks and along demarcation boundary of forests should not be normally marked except those which are dead or dying.

viii) Thinings should be carried out simultaneously in the congested pole crop. These thinning should be preferably of C- grade. Timely removal of this congestion is essential for the healthy growth of the young crop.

9.13. Supplementary Markings

9.13.1 After the fellings of the trees marked for major markings in an area, the supplementary markings should be conducted. In these markings, all the trees and poles which are damaged in the major fellings or due to any natural cause and those that have died, dried or fallen off subsequent to major markings, should be marked. Large scale markings in these supplementary markings should be avoided and only those trees which are definitely considered unfit for retention or not likely to survive in the near future should be marked.

9.14. Subsidiary Silvicultural Operations

9.14.1. Fire Protection

9.14.2. Southern hotter aspects and areas near habitations are more prone to fires. Dry needles of chir, resinous wood and resin channels render these forests more prone to fire. The forest fires are in fact one of the major reasons of inadequate regeneration. The following measures are recommended for fire protection.

9.14.1.1. Fire Lines

i. Fire lines are much needed in these forests as these forests are full of in and around habitations and hence susceptible to fires. It is suggested that on all ridges and prominent sprus at least 15 m wide fire lines should be maintained. A network of footpaths will supplement to the role of fire lines in these forests. Fire lines are also recommended in the areas where the chir forests come in contact with oak forests. In such areas oak crop should be separated from chir crop by fire lines because any forest fire travelling into oak areas will badly damage the oak forests which are vital for conservation and regulation of soil moisture.

ii. In case of areas bearing young and unestablished regeneration, steep areas with shallow soil cover and areas where efforts are being made to induce regeneration, the fire lines should be provided all around such areas.

iii. In case construction of permanent fire lines is not feasible, 15 meter to 30 meter wide temporary fire line should be established. In these temporary fire lines, the fellings should not be done to clear up the area but these should be control burnt every year.

9.14.1.2. Control burning

Areas, where the major fellings have been conducted and regeneration is already established, should be control burnt at an interval of every two years. While carrying out the control burning of areas the following should be kept in consideration.

a. It should be done generally during the period December to February.

b. The operation of "control burning" could be started from the top portion of an area then extended downwards on the slope (control burning proceeding upwards on the slope is dangerous for the crop).

c. In areas under resin tapping is progressing it should be ensured that on area upto 1.5m radius around each tree (under tapping) is cleared of chips and other inflammable material before the control burning begins.

d. Small patches of unestablished regeneration should be strictly protected against any damage during the operation of control burning.

e. Control burning in no case should being before a thorough disposal of the slash/ debris in a worked area.

v. Inspection/ observation posts should be located at vantage points to keep a close watch over any forest fires especially during the hot season.

vi. Adequate number of fire watchers should be engaged to actively work for the protection of these forests from fires.

9.15. Disposal of Debris

9.15.1. Since these chir forests are easily accessible due to development of good network of roads and foot paths and are mostly surrounded by habitations, the falling debris is generally

removed away by the contractors and any leftover staff removal is used up by the locals. However, if need arises, the undisposed debris should be burnt off in heaps, far removed from the crop, particularly advance growth and young regeneration.

9.16. Tending

9.16.1 Cleanings in congested young regeneration of about 2 m height, is beneficial for the crop. Tendings of the young regeneration viz cleaning and thinning in the sapling stage (established regeneration) is a most for artificially regenerated crops.

9.17. Grazing Control

9.17.1. The menace of grazing by local and migratory livestock population has been a major factor adversely affecting regeneration and general health of the growing stock. There is utmost need to protect these forests from uncontrolled, unscientific and unregulated grazing. The areas having unestablished regeneration and areas taken up for artificial regeneration should be closed for grazing.

9.18. Realization of the Yield

9.18.1. Green felling of chir has been considered to be against the interest of resin tapping. In 1986, the Committee on chir resin tapping in J&K in its reports recommended ban on green fellings of chir tree for a period of 5 years. Further in view of the present ban imposed by Hon'ble Supreme Court of India on green fellings and present day stress on protection, conservation, bio-diversity, environment/ecology etc., the calculation of yield as above and its prescriptions remain of academic interest only. Only the dry and fallen trees are being removed.

9.18.2. In this situation, the various measures and silvicultural operations, for the development of the chir acquire the main importance. As already stated, this will result in improvement of the chir crop, replacement of the old crop by the younger classes and regeneration of the chir in areas/blanks where it is wanting. All this will be ultimately useful to get progressive sustained yield of resin.

9.19. Chir Development Programme

9.19.1. Various chir development measures have already been described in the preceding paras of this chapter e.g. fire control, grazing control, tendings etc. As already described, regeneration is not satisfactory, the measures of establishment of unestablished regeneration and promoting fresh regeneration in blank areas shall be back bone of chir development programme.

9.19.2. Effective closure to grazing and a strict fire protection, till the regeneration gets established are the two most important measures for the success of any regeneration programme, natural or artificial in chir forests of thus areas.

9.19.3. In areas where the density of the crop is low, mere closing the area coupled with adequate fire protection shall induce the natural regeneration.

9.19.4. In blank and scrub areas where the natural regeneration is unlikely to come on its own, “direct sowing” of chir or “Planting” of seedlings raised in polythene bags shall be resorted to.

9.19.5. The direct sowing of the chir is done by way of the following methods:-

a. In patches about 2 meters apart with soil dug upto 30 cm depth. This technique is quite suitable when there is enough moisture in the soil.

b. In contour lines 30 cm wide and spaced 2 to 3 m apart with the dug up earth mounded on the down will side to conserve moisture. This is useful on slopes where there is some deficiency in the soil moisture.

c. Contour trenches, preferably broken. This is useful on dry and hot aspects.

9.19.6. Chir can be very well raised in the nursery also, in polythene bags and then planted in the field at the onset of monsoon rains. Planting of these nursery raised seedlings (in polythene bags) is to be preferred to ensure better success in areas which have become quite refractory due to continuously disturbed ecological status. The details of nursery techniques involved and also the planting methods are quite well known and shall also be discussed in the following chapters.

9.19.7. Excessive and unscientific resin tapping is also harming the chir crop. Extraction is not being done strictly as per the norms and prescriptions. Extraction of resin as per the norms fixed from time to time and as per prescriptions given in the NWFP working circle, will also help in the development of chir crop.

9.19.8. A network of nurseries consisting of one central chir nursery in each range and several project area nurseries shall give boost to regeneration measures.

CHAPTER-X

WORKING PLAN FOR THE FIR SELECTION WORKING CIRCLE

10.1. General Constitution of the Working Circle

10.1.1 This working circle comprises of all the relatively well stocked fir forests of this division which are considered commercially exploitable. The compartments assigned to this working circle are almost same which were included in the Fir Working Circle of the previous plan.

10.2. General Character of Vegetation

10.2.1. A detailed description of these forests has already been given in Chapter –II of Part –I. Fir is the predominant species of these forests. Fir occurs almost pure with the sprinkling of spruce (*Picea smithiana*). The rare trees of yew can also be encountered in these forests. Broad leaved species like *Juglans regia, Quercus semicarpifolia, Aesculus indica* etc. are confined to moist places, nallah banks and sheltered slopes. Kail (*Pinus wallichiana*) is almost absent except for a few scattered trees here and there. Deodar is completely missing in these forests. Therefore all other conifers except fir are of negligible occurrence in these forests. Some patches of *Quercus semicarpifolia* occur on the top most portions of these forests. Patches of *Buxus wallichiana* occur in the lower portions of these fir forests.

10.2.2. The regeneration survey exercise was conducted in the fir forests of this Working circle. It shows that regeneration varied from deficient to moderate. It shows that status of regeneration is very poor and unsatisfactory.

10.2.3. There is preponderance of higher dia classes and overall deficiency of younger age classes and fresh regeneration in these forests. The peripheries of 'behaks" and areas near habitations are almost devoid of regeneration.

10.2.4 The distribution of stems over various dia meter classes is presented in the following Table 10.1.

Table 10.1. Statement showing dia class wise distribution of stems in Fir Working Circle.

Diameter- class (cm)	10-20	20-30	30-40	40-50	50-60	60-70	>70
Normal Distribution in percentage	41%	25%	15%	9%	5%	3%	2%
Actual Distribution in percentage	63.85%	18.77%	6.36%	3.45%	2.91%	1.84%	2.82%

10.3. Area and Allotment

10.3.1. Detailed area statement (Compartmentwise), allotted to this working circle is given in Annexure- VI. Range wise summary of the same is given below:-

Table 10.2 Summary of Rangewise area under Fir Selection Working Circle

S.No	Range	Block	Compartments	Total area (ha)	Commercial area (ha)
1	Rajouri	Darhal	138, 139, 140, 141 & 142.	1751	985
2	Kandi	Budhal	3, 4, 5, 6, 8, 10, 11, 12, 13, 18, 19, 20, 26, 27, 29, 30, 31, 36 & 37	4044	3104
	Division	**Total**	**24 compartments**	**5795**	**4089**

10.4. Silviculture System Adopted

10.4.1. Fir which has shade bearing characters was prescribed to be worked under Indian Selection System in the previous plans. This system is considered suitable even today and is adopted in this plan as well. Selection –Cum- Improvement fellings will be carried out among the trees of exploitable size and above and only improvement fellings will be carried out in the rest of the crop to create congenial conditions for growth and establishment of advance growth, small openings will be created by removing over wood. In those areas where regeneration is absent or deficient, conservative removal of marked trees, avoiding creation of big gaps in canopy is proposed.

10.4.2. This system is suitable to these fir forests in view of the fact that these perform very important protective function, because of their location generally on the steep mountains, in conservation of soil, water and environment. Fir is a very delicate species and has poor regeneration status. Working it under any other system involving wider openings will be detrimental to these forests especially due to the role played by them in soil and water conservation.

10.5. Exploitable Size and Rotation

10.5.1. In view of the overall deficiency of regeneration and higher proportion of mature and over mature trees **the exploitable diameter of 80cm dbh (ob) is adopted for fir**. This will reduce the intensity of cut and avoid the creation of big gaps. So the exploitable diameter of 80 cm dbh (ob) as prescribed in the previous plan is continued.

10.5.2 Corresponding to above adopted exploitable diameter i.e. 80 cm dbh (ob), **a rotation of 240 years is adopted**.

10.6. Felling Cycle

10.6.1. **A felling cycle of 30 years is adopted**

10.7. Felling Series

10.7.1. There will be only one felling series spread over the entire working circle.

10.8. Analysis and Valuation of the Crop

10.8.1. The growing stock has been assessed by "Bittrelich's method" of point sampling, the methodology of which has already been explained in Chapter VII of Part -1.

10.8.2. The mean values of the three variables i.e. volume per hectare, number of trees per ha and basal area per hectare have been calculated for the fir stratum by compiling the arithmetic averages of all the sample points in respect of each of the three variable. The statistical tests were performed for all the three variables. Dia class wise distribution of number of stems and their volume were worked out for each Range i.e. Rajouri and Kandi Ranges where Fir occurs in this division. The total of each of these two variables in the two Ranges gave the growing stock of the whole working circle. The details of the results are given in the following tables.

Table 10.3 Results of Statistical analysis for Fir Working Circle

S.No		Statistical Attributes*		
		No. of Stems	Basal Area (Sqm)	Volume (Cum.)
1	Attribute Total	39899.50	2456.50	18313.16
2	No.of sample plots (n)	146	146	146
3	Mean (X)	273.28	16.83	125.43
4	Variance (S^2)	318584.87	225.73	15613.58
5	Standard Deviation S	564.43	15.02	124.95
6	Standard Error (S.E)	46.71	1.24	10.34
7	Coefficient of Variation %	206.544	89.29	99.62
8	95% Confidence Lower Limit	180.96	14.37	104.99
9	95% Confidence Upper Limit	365.61	19.28	145.87
10	Confidence Interval (CI)	184.65	4.92	40.88
11	Lower Limit as % of Mean	66.22	85.39	83.71

10.9. Calculation of the Yield

10.9.1. The yield will be calculated in terms of number of trees and volume, which in turn shall be subject to area check. Modified Brandis Diameter-Class Method and Von Mantel's formula have been applied for calculation of the yield. The following presumptions have been made in this regard.

- Only commercial area and its growing stock have been taken into account for the purpose of yield calculation.
- The growing stock over commercial area of this working circle is classified within 10 cm diameter classes indicated by Symbols I, II, III, IV, V, VI and VII. Class I stands for trees above the exploitable diameter and the other successively below it to the youngest.
- The number of trees in all those classes being considered for the purpose of yield calculation have been computed at lower limit of confidence interval.
- It takes 194 years, on an average, for trees of Fir to attain exploitable diameter of 80 cm d.b.h.
- It takes 30 years for an average Fir tree to pass from approach class (70-80 cm d.b.h) to Class I i.e. above 80 cm.

10.9.2. The following survival coefficient percentages based on the All India Volume Tables in respect of Fir have been used.

Table 10.4. Table showing survival percentage of Fir trees.

Diameter ï class d.b.h. (cm)	Survival percentage
30	20%
40	40%
50	50%
60	60%
70	85%
80	95%

In view of preponderance of mature and over-mature growing stock, and their vulnerability to rot, the yield finally arrived at shall be reduced by 15 percent.

10.10. Yield Regulation

10.10.1. Modified Brandis Diameter Class Method and Von Mantel's Formula have been applied for calculating yield. The stepwise yield calculation for one felling cycle on the basis of Modified Brandis Diameter –class method is as under.

10.5. Dia- Classwise (In cms) Distribution of stems in Fir Stratum

Name of variable	**<30**	**30-40**	**40-50**	**50-60**	**60-70**	**70-80**	**>80**	**Total**
Total no. of trees per ha	225.80	17.38	9.44	7.95	5.03	3.13	4.55	273.28
Total no. of Fir trees per ha	21.22	8.62	7.24	7.08	4.82	3.11	4.50	56.59
Fir Volume (m^3) per ha		7.34	11.27	21.05	23.62	21.31	40.84	125.43
Total no. of stems in working circle	923334	71064	38584	32493	20562	12780	18640	1117457
Total no of Fir trees in the working circle	86799	35240	29599	28955	19717	12717	18375	231404
Fir volume in the working circle (m^3)		29936	46098	86090	96592	87145	167029	512890

10.6. Diameter class wise potentially available Fir trees from the commercial area of Fir Selection Working Circle

Class	VII	VI	V	IV	III	II	I	Total
Diameter-class	<30	30-40	40-50	50-60	60-70	70-80	> 80	
Total No. of trees assessed at mean value	86799	35240	29599	28955	19718	12717	18376	231404
Total No. of trees assessed at lower limit of confidence interval	57478	23336	19600	19174	13057	8421	12169	153235
Age of entry in the class		73	96	118	139	164	194	
Years in class transition period		23	22	21	25	30		
Survival Coefficient of the class		0.2	0.4	0.5	0.6	0.85	0.95	
No. of potentially available trees		4667	7840	9587	7834	7158	11561	48647

10.7. Yield calculation of Fir Selection Working Circle as per Brandis Diameter Class Method

a)	Total number of trees in class I	11561
b)	Total number of trees likely to pass on to class I	
	From class II	=7158*30/30=7158
	From class III	=0
c)	Total recruitment in class I from class II during first felling cycle	7158
d)	Annual recruitment from class II during the first felling cycle (c / 30)	239
e)	Stock required to be kept as reserve i.e. half of the total recruitment in 'c' above	3579
f)	Surplus stock of class I (a - e)	7981
g)	Total possibility of yield in first felling cycle if all surplus stock in 'f' above is removed (c + f)	15139
h)	Annual yield (g / 30) (If surplus is removed in one felling cycle)	505
i)	Total possibility of yield if all surplus stock in 'f' above is removed in two felling cycles (c + f/2)	11149
j)	Annual yield (i / 30) (If surplus is removed in two felling cycle)	372
k)	Weighted average volume of trees above exploitable diameter as per Kullu Volume Tables in cubic metres	8.20
l)	Total annual volume yield (m3)	3050
m)	Deduct fifty percent from 'l' above to account for mortality	1525
n)	Rounded off to lower multiple of hundred	1500
	TOTAL ANNUAL YIELD FROM THE WORKING CIRCLE	1500 cum

10.10.5 The yield calculated using Von Mantelôs Formula is as under:

	Total
Total commercial volume based on mean value (m3)	512890.00
Total commercial volume based on minimum availability value (m3)	429340.22
Annual Yield (m3) = 2GS/R	3577.84

10.10.6. The comparative statement of yield computed from the two methods is as under:

Brandis	1500.00 cum
Von Mantel	3577.84 cum

10.10.7. Thus the yield worked out by Brandis Method is considered safe and conservative. An annual cut of 1500 cum constitutes the removal of 0.35% of total growing stock of the Working Circle estimated at minimum availability (4,29,340.22 cum). The intensity of annual cut would be 0.37 cum/Ha of the Working Circle.

10.11. Size of the Annual Coupe

10.11.1. The yield calculated on volume basis shall be controlled by an area check. The size of the annual coupe is calculated as under:

$$\text{Annual Coupe (ha)} = \frac{\text{Total commercial area of working circle}}{\text{Felling cycle}} = \frac{4089}{30} = 136.30 \text{ ha.}$$

10.12 Allowable Cut

10.12.1 Given the annual yield and the size of annual coupe, the allowable cut is computed as under:

Total annual yield (m3)	Annual coupe (ha.)	Allowable cut per ha. (m3)	Minimum available Growing stock per ha. (m3)	Allowable cut as % of Growing stock
1,500	136.30	11.00	104.99	10.48%

10.13. Realisation of the Yield

10.13.1. All the fit trees of 80cms db hob and above marked for whatever purpose will count towards the yield. Normally the prescribed yield is adhered, however deviation upto $\pm$ 20% one either side will be permissible and should be spread over subsequent years.

10.13.2. Markings will be carried out the limit of 10 years yield in volume i.e. 15000 cum or area i.e. 1363 ha. whichever is reached first over the entire plan period of 10 years.

10.13.3. In view of the ban imposed by Hon'ble Supreme Court of India on green fellings and present day stress on protection, conservation, bio-diversity, environment/ ecology etc., the calculation of yield as above and its prescription remain of academic interest only. Only, dry and fallen trees are to be removed.

10.14. Sequence of Felling

10.14.1. During the plan period of 10 years, 1/3rd of the total commercial area of the working circle is to be worked i.e.4089/3 = 1363 ha. The yearly distribution of work and therefore sequence of felling coupes has been left to the discretion of the territorial DFO.

10.15. Suggestions for Marking Officer

10.15.1. The marking officer should be a trained Forest Officer, not less than the rank of Range Forest Officer. He must, first of all, acquaint himself thoroughly with the condition of the crop in the compartment by once going over the area of the compartment prior to conducting the markings.

The following suggestions are given for the guidance of the marking officer:

- All the trees of and above 80cms diameter (exploitable size) should be marked.
- No. healthy tree below the exploitable size shall be marked.
- Markings for improvement fellings will form an integral part of the major markings and all dead, dying, dry and diseased trees should be marked except for 10% such trees to be left for wildlife.
- Markings on steep slopes should be avoided.
- In groups of trees of and above the exploitable size, light regeneration fellings should be carried out. The spacing between the retained exploitable trees, in such cases, will vary from 5m to 10m (to be increased in accordance in the quantity in regeneration present).
- In removals the over mature trees should be preferred over the relatively younger and healthier ones.
- No markings should be conducted within a belt of 25mt around or adjoining blanks, pastures and perennial nallahs. Only dead and dry trees are to be marked in these protection belts.

10.16. Supplementary Markings

10.16.1 After the felling of trees marked in the major markings, the supplementary markings of all the trees and poles damaged in the major markings or due to natural causes and those that have died, dried or fallen subsequent to the major markings, should be marked. Any large scale markings should be avoided in these supplementary markings and only such trees as are considered definitely unfit for retention are not likely to survive in the near future should be marked.

10.17. Subsidiary Silvicultural Operations

10.17.1. Left over felling refuse should be control burnt in nallahs or depressions. Villagers should be allowed to take away felling refuse.

10.18. Regeneration Measures

10.18.1. Regeneration status of fir is very poor and leads to the doubting of very survival of these forests. Large scale regeneration programme is required to be launched. Regeneration of the fir has been big problem. Strict protection of fir areas against grazing are prescribed so that natural regeneration can be arrived at. However, it has to be complemented with artificial regeneration operations.

10.18.2. Natural regeneration of fir is very difficult. Different experiments have shown that scrapping of humus followed by some soil working and seed sowing gives good regeneration. Shrub cutting and weeding helps its establishment. Planting has been found to be more successful and economical. The details of measures of natural regeneration and artificial regeneration techniques have been described in the next chapter i.e. “Rehabilitation cum Protection Working Circle”.

CHAPTER-XI
WORKING PLAN FOR THE REHABILITATION-CUM PROTECTION WORKING CIRCLE

11.1. General Constitution of the Working Circle

11.1.1 This working circle consists of areas which were productive once upon a time and have become degraded and denuded mainly due to increase in biotic pressure like heavy lopping, grazing, frequent fires, illicit damages and encroachments. Most of the compartments falling in this working circle are located near habitations and are facing excessive biotic pressure. Some of the compartments which were treated under the prescriptions of Chir Working Circle of the previous plan have also been included in this working circle in view of the poor condition of the crop in such areas. So, this working circle consists of all the remaining compartments which have not been included in Chir Working Circle and Fir Selection Working Circle of this plan.

11.2. General Character of the Vegetation

11.2.1 The Forest included in this working circle are generally degraded as these are poorly stocked, crop is stunted and malformed, density is very low and regeneration has either failed to come up or failed to established. Broad leaved trees have become bushy due to repeated browsing and grazing. Soil has become compact due to excessive grazing and frequent fires thereby most of the rain water is lost as run-off. Problem of soil erosion is severe in the form of land slips and gullies.

11.2.2 As the area allotted to this working circle is spread out almost all over this division, the vegetation encountered varies from the subtropical pine forests in the lower areas to the alpine pastures in the higher altitudes. It means that all type of forests discussed in detail in Chapter-II of Part-I of this plan are met within this working circle.

11.2.3 Forests included in this working circle can be broadly categorized as below:

- Degraded Chir Areas.
- Degraded Fir Areas.
- Small Kail Area.
- Broad leaved portions.
- Blanks and scrub areas.

Degraded chir areas consist of poorly stocked chir crop. Similarly degraded fir areas consist of poorly stocked fir crop. Due to proximity to habitations these areas are under serve biotic pressure. A small portion of kail falling in compartments 107/Rjr, 108/Rjr and 109/Rjr has mostly young to middle aged crop. Some of the compartments like 14/Kdr to 17/Kdr fall in steep slopes, high altitudes and include alpine pastures forming important catchment areas. These compartments have good fir crop in the lower portions and alpine scrub and pastures in the upper zones. These areas need to be protected. Banji oak is the main broad leaved species in the temperate zones whereas Shisham, Khair, Jamun, etc are prominent broad leaved species in the lower sub-tropical portions. Scrub areas and blanks abound in various types of shrubs like *Carissa, Adhatoda vasica, Dodonia viscose* etc in the sub-tropical areas and several types of higher altitudes grasses and shrubs in temperate portions. Broad leaved

areas, blanks and scrub portions are mostly in and around habitations and thus face very high biotic interference.

11.2.4 The regeneration in these fir areas is deficient. Similarly in chir forests regeneration is deficient to fair. It is proved that regeneration in these areas is deficient i.e. almost absent which puts a question mark on the future of these forests.

11.2.5 Detailed area statement of compartment/sub-compartments allotted to this working circle is given in Annexure –VII. The range wise distribution of area under various species/ categories is given below:-

Table 11.1. Statement showing the specieswise area under Rehabilitation cum Protection Working Circle.

S.No	Range								Total
		Chir	Fir	Kail	B/L	Scrub	Blanks	Alpine	
1	Rajouri	2643	2050	144	2699	3472	6484	0	17492
2	Kalakote	3320	0	0	3009	4192	4871	0	15392
3	Kandi	1503	2898	0	4089	2852	4978	2950	19270
Total		**7466**	**4948**	**144**	**9797**	**10516**	**16333**	**2950**	**52154**

11.2.6 Area allotted to this working circle constitutes 72.37% of whole of the area of the division. Further areas devoid of tree cover i.e. blanks and scrub portions constitute 51.48% of the total area of this working circle. This statistics shows that the extent of degraded of forests of Rajouri Forest Division is alarming.

11.3. Special Objectives of Management

- To rehabilitate the degraded areas by protecting the existing vegetation and undertaking various regeneration measures.
- To control soil erosion in eroded and erosion vulnerable areas by means of effective soil conservation measures.
- To protect and improve the small patch of Kail crop.
- To protect and rehabilitate the broad leaved areas especially Banj oak, Khair etc.

11.4. Exploitable Size

11.4.1 Only dry and fallen trees in these forests are to be removed leaving 10% of such dry and fallen trees in the forests for wildlife. No regular fellings are allowed in this working circle.

11.5. Analysis and Valuation of the Crop

11.5.1 The growing stock of the areas allotted to this working circle was assessed by point sampling technique as already discussed in Chapter VII. The whole working circle was considered as one stratum and divided into 5 sub-strata i.e.

(i) Chir Sub-stratum
(ii) Fir Sub-stratum
(iii) Kail Sub-stratum
(iv) Broad leaved Sub-stratum
(v) Scrub and blank Sub-stratum

The number of stems (dia class wise) per hectare in each sub-stratum, territorial range wise, was calculated. Statistical tests were also applied. The results are shown in the following Tables.

Table 11.2 Statistical Analysis of Rehabilitation Stratum

S. No.		Statistical Attributes*		
		No. of Stems	Basal Area (Sqm)	Volume (Cum.)
1	Attribute Total	75291.52	4440	20167.42
2	No.of sample plots (n)	452	452	272
3	Mean X	166.57	9.82	74.14
4	Variance S2	46994.30	44.89	4290.84
5	Standard Deviation S	216.78	6.70	65.50
6	Standard Error S.E	10.20	0.32	3.97
7	Coefficient of Variation %	130.14	68.20	88.35
8	95% Confidence Lower Limit	146.54	9.20	66.34
9	95% Confidence Upper Limit	186.61	10.44	81.95
10	Confidence Interval (CI)	40.08	1.24	15.61
11	Lower Limit as % of Mean	87.97	93.70	89.47

Table 11.3a. Dia classwise distribution of number of stems per hectare in Chir Sub-Stratum

Range	No. of sample points	Dia classwise number of stems per ha										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	62	67.58	30.90	20.29	10.55	4.82	2.63	1.17	0.55	0.11	0.04	138.64
Kalakote	86	20.41	12.21	9.49	5.08	2.08	1.37	0.75	0.19	0.03	0.00	51.61
Kandi	51	94.92	40.96	16.21	12.58	11.19	6.50	1.67	0.99	0.21	0.05	185.28
Whole sub-stratum	199	54.20	25.40	14.58	8.71	5.27	3.08	1.12	0.51	0.10	0.02	112.99

Table 11.3b. Dia classwise distribution of total stems in Chir Sub-Stratum

Range	No. of sample points	Dia classwise number of stems in chir Sub-Stratum										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	62	178601	81674	53640	27890	12746	6941	3089	1466	301	99	366447
Kalakote	86	67756	40523	31514	16878	6909	4539	2492	647	109	0	171367
Kandi	51	142660	61569	24364	18910	16816	9774	2503	1481	312	68	278457
Whole sub-stratum	199	389017	183766	109518	63678	36471	21254	8084	3594	722	167	816271

Table 11.4a. Dia classwise distribution of volume per hectare in Chir Sub-Stratum

Range	No. of sample points	Dia classwise distribution of volume per ha										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	62	0.00	0.00	9.54	11.41	9.83	8.87	5.16	3.26	0.64	0.28	48.99
Kalakote	86	0.00	0.00	4.56	5.74	4.60	4.84	3.65	1.21	0.23	0.00	24.83
Kandi	51	0.00	0.00	7.78	14.22	24.73	23.02	8.11	6.11	1.45	0.34	85.76
Whole sub-stratum	199	0.00	0.00	6.94	9.68	11.39	10.75	5.27	3.10	0.67	0.17	47.97

Table 11.4b. Dia classwise distribution of volume in Chir Sub-Stratum

Range	No. of sample points	Dia classwise distribution of volume										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	62	0	0	25215	30152	25986	23433	13635	8621	1682	737	129461
Kalakote	86	0	0	15127	19073	15270	16070	12134	4009	762	0	82445
Kandi	51	0	0	11695	21368	37164	34601	12189	9182	2181	509	128889
Whole sub-stratum	199	0	0	52037	70593	78420	74104	37958	21812	4625	1246	340795

Table 11.5a. Dia classwise distribution of number of stems per hectare in Fir sub - stratum

Range	No. of sample points	Dia classwise number of stems per hectare										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	24	15.33	14.86	5.63	5.37	5.00	3.02	3.30	2.17	0.91	0.82	56.41
Kalakote	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kandi	47	5.42	1.73	2.77	3.55	5.78	7.02	5.11	3.26	2.63	2.43	39.70
Whole sub-stratum	71	8.77	6.17	3.73	4.16	5.52	5.62	4.50	2.89	2.05	1.89	45.35

Table 11.5b. Dia classwise distribution of number of stems in Fir sub - stratum

Range	No. of sample points	Dia classwise number of stems										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	24	31434	30467	11547	11015	10252	6181	6770	4443	1869	1678	115656
Kalakote	0	0	0	0	0	0	0	0	0	0	0	0
Kandi	47	15709	5027	8015	10279	16748	20357	14802	9458	7615	7053	115063
Whole sub-stratum	71	47143	35494	19562	21294	27000	26538	21572	13901	9484	8731	230719

Table 11.6a. Dia classwise distribution of volume per hectare in Fir sub - stratum

Range	No. of sample points	Dia classwise distribution of volume per ha										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	24	0.00	0.00	4.79	8.37	14.87	14.77	22.63	17.98	8.57	8.34	100.32
Kalakote	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kandi	47	0.00	0.00	2.35	5.52	17.18	34.41	35.00	27.08	24.70	24.81	171.05
Whole sub-stratum	71	0.00	0.00	3.17	6.49	16.40	27.77	30.82	24.00	19.25	19.24	147.14

Table 11.6b. Dia classwise distribution of volume in Fir sub - stratum

Range	No. of sample points	Dia classwise distribution of volume										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	24	0	0	9809	17156	30481	30279	46396	36861	17569	17104	205655
Kalakote	0	0	0	0	0	0	0	0	0	0	0	0
Kandi	47	0	0	6809	16009	49796	99726	101432	78474	71594	71901	495741
Whole sub-stratum	71	0	0	16618	33165	80277	130005	147828	115335	89163	89005	701396

Table 11.7a. Dia classwise distribution of number of stems per hectare in Kail sub - stratum

Range	No. of sample points	Dia classwise distribution of number of stems per ha										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	3	28.31	23.78	15.60	3.15	1.40	4.52	2.64	1.18	0.47	0.39	81.43

Table 11.7b. Dia classwise distribution of number of stems in Kail sub - stratum

Range	No. of sample points	Dia classwise distribution of number of stems										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	3	4076	3424	2246	453	202	651	380	169	68	55	11724

Table 11.8a. Dia classwise (in cms) distribution of volume per hectare in Kail sub - stratum

Range	No. of sample points	Dia classwise (in cms) distribution of volume per ha										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	3	0.00	0.00	11.93	4.28	3.18	15.11	11.67	6.29	2.89	2.60	57.95

Table 11.8b. Dia classwise (in cms) distribution of volume in Kail sub - stratum

Range	No. of sample points	Dia classwise (in cms) distribution of volume										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	3	0.00	0.00	1717	616	458	2176	1681	906	416	374	8344

Table 11.9a. Dia classwise distribution of number of stems per hectare in Broad leaved sub - stratum

Range	No. of sample points	Dia classwise distribution of number of stems per ha										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	68	181.92	54.55	14.68	4.07	1.58	0.53	0.35	0.22	0.11	0.12	258.13
Kalakote	55	45.29	18.71	12.20	3.03	0.54	0.27	0.06	0.02	0.00	0.00	80.12
Kandi	67	226.47	117.12	48.43	11.97	3.46	0.86	0.24	0.13	0.03	0.00	408.71
Whole sub-stratum	190	158.08	66.24	25.86	6.56	1.94	0.57	0.23	0.13	0.05	0.04	259.70

Table 11.9b. Dia classwise distribution of number of stems in Broad leaved sub - stratum

Range	No. of sample points	Dia classwise distribution of number of stems										
		10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100>	Total
Rajouri	68	491013	147237	39624	10986	4262	1436	944	595	308	321	696726
Kalakote	55	136289	56312	36696	9120	1613	825	186	48	0	0	241089
Kandi	67	926030	478909	198012	48951	14135	3496	967	538	129	0	1671167
Whole sub-stratum	190	1553332	682458	274332	69057	20010	5757	2097	1181	437	321	2608982

11.6. Method of Treatment

11.6.1 The methods of treatment shall be discussed separately for each category as follows.

(a) For Degraded Chir Area

11.6.2 Degraded chir areas constitute 14.32% of area under this working circle. As already stated these areas are under various stages of degradation due to excessive biotic interference and frequent fires leading to failure of regeneration. The treatment proposed is closure of the area followed by artificial regeneration of chir. Artificial regeneration of chir by patch sowing is quite successful in the areas where soil is deep and moisture is sufficient. In areas where moisture content is low, seeds may be sown in contour lines, 30 cm deep, 30 cm wide and 2mt. apart with dug up soil mounted on downhill side. In areas where moisture and soil conditions are unfavourable for patch sowing, trench planting of nursery raised plants is suggested. To develop proper ground cover, plantation and seed sowing of grasses, legumes and shrubs is suggested.

11.6.3 As already discussed, regeneration of chir is highly susceptible to grazing and fire. All the possible measures to protect the regeneration, natural as well as artificial, should be adopted as explained in Chapter on "Working Plan of Chir Working Circle". All the chir development measures suggested in the above mentioned chapter are integral part of method of treatment of these forests as well.

11.6.4 In-situ soil and moisture conservation measures like contour furrows, staggered trenches, terracing, bunding and mutching etc are also recommended. Minor engineering structures like check-dams, retaining walls etc. should be constructed wherever required. Gully control measures should be taken to control the gully erosion.

(b) For Fir Areas

11.6.5 A already stated in para 11.2.3 of this chapter that there is two types of fir areas falling in this working circle. Compartment 14/Kdr to 17/Kdr fall in steep slopes and high altitudes, consisting of alpine areas (scrub as well as pastures). These areas are to be protected completely. Rest of the fir areas bear degraded fir crops which constitutes 9.49% areas of this working circle. Since these fir forests consist mainly of mature and overmature age classes and there is marked absence of trees of younger age classes and regeneration, the factors responsible for failure of natural regeneration and methods of treatment of these areas are discussed as under:-

i. Pasture lands capping fir forests attract a large number of migratory livestock during summer. Fir forests adjoining these pastures also fall victim to heavy grazing. Grazing should be strictly seeding and sowing.
ii. Failure of regeneration is also attributed to undecomposed acidic humus which requires to be raked before seeding and sowing.
iii. Planting of broad leaved species like populars reduces the acidity of soil and makes the soil conditions favourable for establishment of fir seedlings.
iv. Excessive growth of herbs and shrubs is also responsible for inadequate regeneration of fir. The shrub growth should be cut in order to allow regeneration to establish.
v. In frequent good seed years are also partly responsible for failure of regeneration seed orchards should be laid to overcome this problem.
vi. Removal of debris and collection and disposal of slash should be carried out in such areas to help regeneration to come up.
vii. Spruce should be preferred to fir on exposed sites.
viii. In areas where fir regeneration has failed to come up naturally, artificial regeneration methods should be restored to. No fir nurseryexist in the division at present. Nursery techniques of fir as practized in Himachal Pradesh is described below

1. ***Selection of Nursery Site***: Silver fir nurseries should be located in the natural zone of this species. Southern aspects, exposed ridges, steep slopes, natural blanks and badly drained pockets should be avoided while selecting a nursery site. The area to be selected should be deep, fertile, well drained and loamy.
2. ***Preparation of Nursery Beds:*** The nursery site should first be terraced. Care should be taken, while terracing, that top soil is spread over whole nursery bed uniformaly. Nursery beds should be alternated by drainage channels to ensure proper drainage. Nursery beds of size 2mx1m are prepared on the terraces. The beds should be ready by October. Humus collected from nearby fir forests should be added to enrich the soil.
3. ***Collection of Seed:*** Seed should be collected from healthy middle aged trees cones are collected in October month. The cones should be dried in sun and after these have opened, seed is separately by winnowing 60-70 cones give about 1 Kg of silver fir seed.
4. ***Sowing in Nursery:*** Sowing is done in lines about 8 cms apart. About 4 ounces of seed is sown per bed. Dense sowing should be avoided. Seeds sown deeper than 1.5 cm fail to germinate. Seed sowing should be done in November/ December. Germination takes place in April month.

5. ***Weeding and Aftercare:*** Weeding should be regularly done during growth period i.e. April to July. Tall weeds should be removed before the start of winter season because such weeds may cover and kill the seedlings when the ground is covered with snow.
6. ***Pricking***:- Pricking the seedling ensures fibrous root development. Plants with fibrous roots stand transplanting better than the plants with long tap root. Pricking of seedlings at the age of about 1 year 6 months from the date of sowing has been adopted as standard practice. Pricking during July is found to give best results. At the time of pricking seedlings with shoot-root ratio of less than 1:1.5 should be rejected.
7. ***Selection of Planting Stock***: Seedlings which have a strong leader should be given preference over the seedlings which have a cluster of buds at the growing tip and poor leader. 4 years 6 months old plants of average height not less than 15 cms should be selected for planting.
8. ***Time of Planting***: In July, planting is found to be give best results.
9. ***Site Preparation***: Pit digging should be started in April after snow melts. Bushes wherever occurring in thick lets should be cut and burnt along with the felling debris.
10. ***Spacing***: Plantation of seedlings at a spacing of 3mx 3m in pits of size 45 cms x 45 cms is recommended. Spade planting should be tried on exploitable basis.
11. ***Weeding and After Care***: Weeding should be done in June and October each year. One weeding in first year, two weedings each during second and third years and one weeding during each of fourth and fifth year are necessary.
12. ***Beating Up***: On an average 20% and 10% of plants are required to be replaced during beating up operation in first and second year.

11.6.6 A small patch of Kail occurs in the compartment 107, 108 and 109/Rjr. This patch is almost closed and well protected. The complete protection and closing of this kail patch is prescribed for the survival of kail in this area. Natural and artificial regeneration measures need to be adopted whenever and wherever required as per the discretion of territorial DFO and availability of funds.

(d) *For Broad leave Areas*

11.6.7 Broad leaved areas constitute about 18.78% of the forests falling in this working circle. The principal broad leaved species is oak (*Quercus incana*) in temperate zones while Khair, Shisham etc in sub-tropical zone.

11.6.8 Oak forests have very important role in water conservation and maintaining of regular flow of water in perennial steams of the tract. They occupy moist and shady areas along nallahs. These forests are mercilessly lopped to meet the fodder and fuel wood requirement of the locals. These forests can be improved by taking up natural and artificial regeneration measures. Since oak has very good coppicing property which can be utilized for the promotion of its natural regeneration. Badly lopped, stunted and malformed trees should be cut to induce the growth of coppice shoots. To protect the coppice shoots from browsing the area should be closed with barbed wire fencing. Two shoots should be allowed to grow in the first year and only one shoot in the second year.

11.6.9 For artificial regeneration of oak, sowing and planting in the fenced areas should be resorted to. Planting of one and a half year old nursery raised seedlings should be carried out during monsoon in areas which are comparatively open and exposed. Winter planting can be done

in areas which experience good winter rainfall. Oak cuttings can also be used for artificial regeneration after treatment with rooting hormones. In areas which are comparatively better stocked and situated on cooler aspects, dibbling of two seeds in each hole should be carried out in the month of February and March.

11.6.10 Minor engineering works for soil conservation and measures for gully control wherever necessary are also suggested. Oak forests can be utilized for promoting tasser silk as the insect yielding tasser silk can be reared on oak leaves.

11.6.11 Protection against looping is most important in the oak forests. Following looping rules should be strictly followed to control excessive lopping:

1. No tree below 30 cms dbh (ob) should be allowed to be lopped.
2. Poles and saplings are strictly prohibited to lopping.
3. No tree should be allowed to be lopped around 25 m strip along the habitations.
4. Top one third of the tree should not be allowed to be lopped.

(e) ***For Scrub and Blank Areas***:

11.6.12 As already stated 51.48% of the total area of this working circle falls in scrub and blank areas. These are treeless areas and are scattered throughout the division. These areas abound in various types of shrubs like Carissa, Dodonia viscose, Adhatoda vasica, Vibernum spp. Berbis spp. etc. These are most difficult areas needling treatment on priority basis. These areas prescribed to be treated under silvipastural model. Good quality grasses are to be raised. Since these areas are prone to soil erosion, intensive soil and moisture conservation techniques have to be adopted 30 cm deep continuous/ staggered V-shaped ditch cum bunds shall be made along the contour at 5 m spacing, in the ditch tree species shall be planted and sowing of seeds of shrub species shall be carried out on bunds at 50 cm spacing. Grass seeds shall be sown in between continuous contour furrows 1 m apart. Grass species like Napier, Dinanath, Setaria, Stylosenthies himata, Leucern etc., should be planted. The forest area falling in this category is suggested to be developed as fodder bank for nomadic graziers.

11.6.13 Minor engineering work for soil conservation are also suggested for these forest areas.

Nursery Techniques For Species of Sub-Tropical Zones

11.6.14 Various sub-tropical species like Chir, Shisham, Leucaenia etc are artificially regenerated in the above mentioned degraded areas. Some of the general recommendations for raising these plants in nurseries are given below.

1. Site Selection:

The site of the nursery should be as near the planting as possible. The areas of the nursery should be about 0.4 ha for every 1,00,000 seedlings. The site should have a perennial water supply of 200 liters per day for every 1000 plants. The water should have pH between 5.5 to 7.5 and salt less than 400ppm. The soil should be well drained and fertile. Loam to sandy loam texture with good structure is preferred.

2. Preparation of Beds:

There are four types of beds namely seed flats, containers, housing beds and transplanting beds. Seed flats used for germinating seeds can be made of earthen pots, Shallow wooden boxes, plastic trays or wicker or bamboo baskets of portable size. The growing medium should be disinfected quartz sand or sandy loam soil. Polythene containers are either open at both ends called sleeves or closed at one end called bags. They should be transparent. The size of the container varies depending upon the species to be raised in them and the period for which the seedlings shall be growing in them. Housing beds are sunk by removing top soil to house polythene containers. The depth should be equal to the length of the container. The floor of the container should be provided with a black polythene sheet of 300-500 guage to keep seedling roots from penetrating mother earth. The size of the bed is usually 10mt x 1.2 mt. the transplanting beds are of 10 m x 1.2 m size raised or sunk by 10-20 cm. the soil is dug out, bigger particles removed and pulverized. One part of compost or dry cow dung manure to four parts of soil and 100 gms of 5% Aldex thoroughly mixed with the sieved soil and put back in the dugout space, raised or sunken as the case may be. The number of beds required is approximately one bed of 12 mt x 1.2mt for 2000 seedlings. The seed flat area required is 6% of the transplanting or housing bed areas.

3. Seeds:

The selection of the tree for seed collection should be done with care. Middle aged, vigorously growing, free from knots, trees are usually selected for collection of seeds. Seeds should be used as quickly as possible after collection. If they are stored, they should be sun-dried, put in gunny bags or perforated plastic bags and kept on wooden platforms in well aerated huts. Before storing, seeds should be mixed with prophylactics like gamaxene or neem leaves. The treatment should be given to seeds as and when required. Seeds should be sown in seed flats or in germinating bds if they are small size. They can be sown directly in containers if they are of bigger size. In each pot a maximum of 2 or 3 seeds should be sown.

4. Pricking Out:

Pricking out should be done when the cotyledons have dropped off or at least two leaves have formed and the seedlings stem have reasonable strength to with stand transplanting. This takes about 3 to 4 weeks after germination. The seedlings should be held with thumb and the forefingers by the leaves or just below the first pair of leaves and pulled up softly. This operation should be carried out on a humid day during rains or in the evenings. The distance between transplants varies with the species. It should be 6 cm x 6 cm if the seedling is retained in the transplant bed for six to eight months.

5. Nursing:

Watering should be just adequate so that the soil reaches field capacity. The frequency of watering is about twice a day initially followed up by once a day and finally once in four days. This varies depending upon the climate and weather of the locality. The quantity of the water should be calculated at the rate of 200 cc per plant for each watering. The water should have low salinity and low sodium class. Weeding in each bed should be done at least once in 15 days. Good hygienic should be maintained to avoid past attack. If the attack does take place, fungicide and insecticide should be used as per the requirement. Mulching should be carried one day after watering as it reduces rate of watering and boosts growth.

6. Fertilization:

Fertilization should be done as a foliar spray at a regular interval in appropriate quantities. It should be stopped during the last two months of the nursery life of seedlings to make them hardy and to allow lignifications of the stem. Inoculation of rhizobium and mycorrhizae is necessary to maintain and improve the health and growth of seedlings of some species.

7. Planting Out:

The collar size of the seedling should be sufficient to keep the plant erect and the fibrous root system should be well developed in the seedling. The size of the seedling for planting out varies depending upon the suitability for transportation and its vulnerability to damage during transportation. It also depends upon the locality and presence of weeds in plantation area. The size may vary from 25 cm to 45 cm depending upon above mentioned factors. To reduce the mortality is naked root planting, the seedlings should be hardened before lifting them. Hardening consists of root trimming at intervals, gradual reduction of watering for the last two months of the seedling life in the nursery and shoot and /or side branch pruning. Keeping one third of the crown intact. Excluding those for which naked root planting is possible, all other seedlings are transported in containers which are removed before planting. The containers during their stay in the nursery should be shifted every fortnight to keep the roots away from penetrating mother earth.

11.7. Realization of Yield

11.7.1 No markings for commercial purposes have been prescribed in this working circle, therefore no yield have been fixed.

11.7.2 Since the entire working circle is heavily grazed by local and nomadic livestock populations, the area shall be identified for regulation of grazing. In areas where soil conservation measures and plantation works are taken up no grazing should be allowed till areas are established.

11.8. Annual Treatment

11.8.1. As already stated, 72.37% i.e. 52154 ha area falls in the working circle and hence it requires to be developed. Rajouri Forest Division, Social Forestry division, Rajouri, Agrostology wing and Directorate of Soil Conservation shall be involved in the development of these degraded forests.

11.8.2 State Forestry Action programme (SFAP) has been formulated for a period of twenty years to make it coterminous with Twelfth Five Year Plan. Development of this area during the twenty year SFAP period seems also very difficult as it will amount to treatment of 2000 ha per annum. So, the maximum annual quantum of treatment on realistic basis, keeping in view the present level of funding is fixed as 1000 ha per annum. Thus during the SFAP period, 50% area is assured of complete development.

11.8.3 The annual target of 1000 ha is not an easy one and requires concerted efforts of all the agencies involved i the development of forest lands. The development programme should be prepared by territorial DFO in advance in consultation with DFO Social Forestry Project Officers and representatives of other wings involved in the forestry development, so that targets and methods to achieve them are clearly laid down well in time. All such agencies should work in tandem.

11.8.4 Development should be taken up on watershed basis. Micro water shed shall be the unit of development. Various water sheds falling in the area can be identified and development of these watersheds can be prioritised on the basis of degree of degradation. Project formulation wing of the department should be ascribed to formulate. Integrated Watershed Development Project for this tract.

CHAPTER-XII
WORKING PLAN FOR GRASSLAND DEVELOPMENT (OVERLAPPING) WORKING CIRCLE

12.1. General Constitution of Working Circle and Character of Vegetation.

12.1.1 This working circle overlaps all other working circles of this plan. Most of the blanks in the forests of this division are covered with grasses. Moreover there is alpine zone comprising of 3452 hectare (3068 hectare in Kandi range and 384 ha in Rajouri range). All the blanks and alpine area shows in area statement of different working circles constitute the grassy areas and form major component of this working circle.

12.1.2 Basically two types of grass covers exist in the forests of this division. These are (a) temperate – alpine grass cover (b) Themeda –Arundinella type grass cover.

12.1.3 In temperate –alpine grass cover, the important grass species are *Phalaris tuberose, Polyogan fugare, Poa pratensis, Chrysopogon species,* Legumes like *Trifolium repens* etc. This type of grass cover is found in moist temperate zone at very high altitudes. These grasslands form alpine pastures and hence from grazing ground for migratory cattle during summer months. Extremely cold conditions prevail throughout the year. Major part of the precipitation is in the form of snow.

12.1.4 In Themeda-Arundinella type grass cover, the prominent species are *Heteropogon contortus, Cynodon dactylon, Themeda anther, Setaria species, Eragostis* etc. This type of grass cover occurs in the altitudinal range of 1000-2100 mts with best growth in upper reaches.

12.2. Problem of Grazing

12.2.1 As already mentioned in Chapter III of Part-I, population of Rajouri district has grown from 4.17 lacs in 1991 to 6.42 lacs in 2011. Further there has been tendency, among the uneducated and unaware rural masses, to have more number of animals. The animal population in district Rajouri has also grown many folds. The pressure of growing human population as well as animal population has increased tremendously on the existing land and resources.

12.2.2 About 12% of the tribal population of the State presently residing in Rajouri District. 87% of the tribal population of District Rajouri is concentrated in Darhal, Budhal, Kalakote, Manjakote and Rajouri blocks which almost from the present Rajouri Forest Division. Tribal population mainly consists of Gujjar's and bakerwals. Gujjars constitute 92% of the total tribal population in this district. Some of the tribals of the above mentioned communities have settled but a substantial population is living the nomadic life i.e. practicing transhumance.

12.2.3 Sheep population in district Rajouri has increased from 1.47 lacs in 1988-89 to 2.65 lacs in 1997-98. Similarly goat population has increased from 1.89 lacs in 1998-89 to 3.21 lacs in 1997-98. In 2011 live stock census, it was found that 13.74 lac animal units are residing in Rajouri district.

12.2.4 The huge animal population comprises mostly of unproductive and inferior breeds. These animals have unrestricted entry in our forests. Grazing in these forests is uncontrolled unrestricted and unscientific. Most of the areas of these forests require some respite for grazing at least for some period.

12.2.5 In order to assess the carrying capacity of these forests, 2 ha of area is considered suitable for the grazing of one animal unit. One cattle (Cow or Ox) is considered equal to one animal unit. For arriving at animal units following conversion factors may be adopted:-

(i)	One Cattle	=	One Animal Unit.
(ii)	One Horse/Pony	=	One Animal Unit.
(iii)	One Buffalow	=	Two Animal unit.
(iv)	One Sheep/goat	=	One & Half Animal Unit.

12.2.6 For the live stock population of Rajouri District, as per 2011 census, following animal units are worked out.

Table 12.1 Statement showing details of Animal units living in Rajouri Forest Division

S.No	Category	Numbers	Animals Unit
1	Cattle	1,12,892	1,12,892
2	Buffaloes	1,33,991	2,67,982
3	Sheep and Goat	9,70,900	9,70,900
4	Others	22,530	22,530
Total		**12,40,313**	**13,74,304**

12.2.7 The socio-economic surveys has revealed that average number of live stocks per house hold in 14. Sheep and goat account for about 65% of live stock population. Per animal unit requirement of fodder works out to 35 quintals per annum. As already mentioned in Chapter-III of part-I, total fodder requirement of this division works out to 254.93 lacs quintals per annum whereas forests of this division contribute 165.70 lacs quintals per annum.

12.2.8 The above facts, very clearly depict the problem of grazing in these forests.

12.3. Special Objectives of Management

12.3.1 These are:-

(i) To improve the general health and productivity of pastures.
(ii) To envolve a system for improvement of transhumance activity of migratory herdsmen.
(iii) To introduce new and high yielding varieties of palatable species thereby increasing the carrying capacity.

12.4. Method of Treatment

12.4.1 The above mentioned objectives are much easier said than done. In view of the already explained gigantic problem of the grazing, a multipronged strategy has to be adopted to tackle the problem and to improve the bio-mass production. Following prescriptions are made in this context.

12.4.2 **Rotational Grazing:-** The grazing areas are prescribed to be rotationally closed for grazing compartments/ sub-compartments or parts of the compartment near any village can be grouped into 3 groups. One group can be opened for grazing during Ist year keeping the other two closed for grazing whereas second can be opened during 2nd year and so on chir compartments during the monsoon offer lot of fodder. Preferably, grass should be cut and stalled to animals. Wherever, it is not practical, the compartments should be open for grazing during monsoon on monthly rotation basis. Rotational closing of the area is practically very difficult viz-a viz large number of human settlements and animal population. But if exerted properly and with proper co-operation of the local people, it can be successful. This method if practically implemented in letter and spirit can prove the most effective method of treatment. The compartments/sub-compartments/parts of the compartment can be grouped and prioritized for rotational grazing for various villages by the territorial DFO in consultation with sub-ordinate staff and local people. Hence the compartments and their sequence shall not be mentioned here which will be prerogative of territorial DFO.

12.4.3 Plantation of palatable grasses, shrubs and legumes can be taken up in the blanks nearer the habitations and along the migratory routes of nomadic graziers. There are vast expanses of blanks and at times complete stretch of compartments is almost blank. As per the availability of funds. DFO Territorial can select the areas preferably near to the habitations and plant various fodder species which are high yielding and can improve the carrying capacity of the area. In this context, DFO Social Forestry, representative of Soil Conservation Department as well as Agrostrology Wing of Forest Department can also play an important role.

12.4.4 **Stall feeding:** The concept of stall feeding should be encouraged. This can be done by establishing community fodder banks at various places. These community fodder banks should be strategically located at regular intervals all along the migratory routes of the nomadic graziers. Local people should be encouraged to cut the grass from closures, other forest areas and chir areas during monsoon so that grass can be stall fed. Open grazing in the forest areas should be discouraged at every level.

12.4.5 Local as well as nomadic population should be encouraged to keep superior breed of animals. This will increase the animal productivity and result in decrease in number of unproductive and inferior animals which need to be castrated with the help of Animal Husbandry Department.

12.4.6 In order to meet the objectives of this working circle, DFO Territorial under the Chairmanship of Conservator of Forests, West Circle, should formulate and execute a comprehensive plan with the complete co-operation of other departments like Social

Forestry, Soil Conservation, Animal Husbandry, Sheep Breeding and Agrostology Wing of Forest Department.

12.5. Migratory Routes of Nomadic Graziers

12.5.1 Movement of nomadic graziers from winter pastures in the low lying areas to high land summer pastures with the start of spring is an age old practice. As already mentioned Gujjars and bakerwals are two such communities which practice the lifestyle. Some local people also move alongwith their cattle from their homes to temporary summer houses in the upper areas. The high altitude places which form summer pastures for nomadic graziers are locally called as Behaks or Dhoks, important Dhoks falling in Rajouri Forest Division are Jabri, Lunawali, Pathari, Jandi behak, Sum Ali, Khallabhat, Kala danda, Pithay dev, Laar, Gatiwali, Holi, Allali, Kota Gali, Lambibehek, Bohar Gali, Kundian, Doba gali, Hillan, Belian, Mawal, Kalamuku, Kassari Hill, Ansi, Bela, Daraba, Dhangian, Barmi, Deel, Chopri, Sankh and Kanakhi etc.

12.5.2 Various migratory routes of nomadic graziers from District Rajouri area as under:-

1. Part of Sunderbani to Beri-Pattan to Seri to Nowshera to Chingus to Rajouri to Thannamandi to dera-Ki-Gali to District Poonch.

2. From part of Sunderbani while reaching at Thanna Mandi by Route No. 1 to Ratan Pir to Distt. Poonch.

3. From part of Sunderbani while reaching at Rajouri by Route No. 1 to Manja Kote to Bimber Gali to Distt. Poonch.

4. Part of Sunderbani to Siote to Dharamsal to Mogla to Teryath to Budhal to Severi Gali to Distt. Anantnag (Kashmir).

5. Part of Kalakote to Siot to Dharmsal to Mogla to Teryath to Budhal to Severi Gali to Distt. Anantnag.

6. Rajouri to Darhal to Shakermarg to Hando Gali to Distt. Pulwama (Kashmir)

7. Rajouri to Thanna Mandi to Rattan Pir to District Poonch.

8. Rajouri To Thana Mandi to Kuth wali gali to Distt. Poonch.

9. Part of Kalakote to teryath to Barkh to Distt. Udhampur.

10. Darhal area to Chamber to Sarota to Hando Gali to Distt. Pulwama.

12.6. Welfare of Nomadic Graziers and Development of Migratory Routes

12.6.1 Tribal sub plan has been formulated by the Government of India and is being implemented through District Development Commissioner. A number of measures are being taken under this for the welfare of tribal communities. In District Rajouri also a number of measures are being taken to ameliorate the condition of these communities.

12.6.2 During their seasonal migration, the nomadic graziers face numerous problems such as inclement weather, lack of proper halting places, shortage of water and fodder, lack of proper path for movement, lack of Medicare of human and livestock population etc. cases of friction with local people (Villagers) because of conflicting demand, have become all too frequent. Traffic of vehicles on roads falling along their migratory routes also poses a number of problems.

12.6.3 Government has already opened migratory schools and hospitals for these tribal communities working of these should be made effective. These institutions should also be utilized for educating these people about adopting the superior breeds of animals.

12.6.4 Bridal paths should be made for the safe movement of the tribes. Since they have fixed halting places during the migration along particular migratory route, sheds should be constructed at such places and fodder and water be made available here as well. Patches of forests near such halting places should be fenced and planted with fodder species for their use during migration. Distribution of fodder with villagers living nearby should be clearly done to avoid any conflict. At least 2.5 ha area near every halting site should be fenced for fodder. For providing drinking water to their families as well as animals, water ponds should be constructed with permanent lining material.

CHAPTER-XIII

WORKING PLAN FOR THE ECO-TOURISM (OVERLAPPING) WORKING CIRCLE

13.1 General Description of the area

The Rajouri forest division is considered to be the best destination for the adventure tourism and Eco-Tourism activity. The terrain and the locality of the area is the most favorable for mountaineering and trekking. Apart from these activities, religious tourism is also a major activity in this division.

13.2 Important Activities Identified under Eco-Tourism

13.2.1 Mountaineering

Mountaineering or mountain climbing is the sport or profession of hiking and climbing mountains. While mountaineering began as attempts to reach the highest point of unclimbed big mountains it has branched into specializations that address different aspects of the mountain and consists of three areas: rock-craft, snow-craft and skiing, depending on whether the route chosen is over rock, snow or ice. All require experience, athletic ability, and technical knowledge to maintain safety.

13.2.2 Trekking

The trekking is a long, adventurous journey undertaken on foot in areas where common means of transport are generally not available.

The most adventurous high altitude trekking routes are identified in this division. Local people sometime use these trekking routes to reach the destination for various purposes. These routes can be traversed only during fair weather conditions. These trekking routes must be placed in the tourist map of the State to attract people.

13.3. Infrastructures to be built

13.3.1. Huts

To launch the Eco-Tourism projects in a major way certain basis facilities are required to be built in the area. The tourists require staying facilities and way side amenities in the form of huts and pitching grounds. The huts play a major role in protection of forest as well. To improve the eco tourism activity these huts can be re build at strategic locations.

13.3.2. Other facilities

Also the bridle paths in the forest areas have to be improved so that trekking can be under taken safely. Small bridges, *Trangdees* can be constructed as per the field requirements. Pitching grounds can be developed economically so that it will benefit the eco tourism.

13.4. Important Tourist Spots

1. Shahdara Sharief

13.4.1. This is a religious tourist spot famous for mausoleum of Baba Ghulam Ahmad Shah. This is about 20 Kms from Rajouri Town and adjoining to Thanna Mandi. It is situated at an altitude of 1800 meters, adjoining to compartment 107 of Rajouri Range. This place receives snowfall in winter. Tourists from all over state and belonging to all the religious communities visit this Shrine throughout the year. For the effective management of the Shrine, the trust constituted for the management of same, is delivering goods.

2. Dera–Ki-Gali (DKG)

13.4.2 Dera-Ki-Gali popularly known as D.K.G is basically a pass in Pir Panchal for entry to District Poonch. It is situated an altitude of 2220 meters. It is located at a distance of about 30 Kms from Rajouri on Rajouri –DKG - Surankote – Poonch road. Compartment 108 of Rajouri range is adjoining to DKG. The area has been closed and vegetative cover has improved due to effective protection. DKG Eco-Tourism Society was constituted. 6 huts and other touism establishments were created. A patch of Kail trees exists in this area which has been well protected. Recently Government has completed the Mughal road which connects Rajouri and Poonch District to Kashmir Valley. D.K.G is nearer to famous tourist spots of district Poonch i.e. Baffliaz, Noorie –Chamb, etc. The Mughal Road boosted the importance of DKG along with these places.

3. Tata Pani

13.4.3 The hot water springs located at Tata Pani attract tourists from all over state. Large number of tourists from Kashmir Valley visit these springs to take bath in hot sulphur water to get relief from arthritis and skin diseases. Tata Pani is situated at altitude of 840 meters and is about 40 Kms from Rajouri Town.

4. Manma Mata Cave Temple

13.4.4 A small cave temple of Goddess Manma is located at about 5 kM in Kalakote on Rajouri, Kolakote Road. It attracts local religious tourists especially belonging to Hindu community. Annual festivals in Navratras are celebrated here with much fanfare. This is situated in compartment 98 of Kalakote Range. A small closure of ornamental species has already been raised at the foot steps of cave temple.

5. Palma Recreational Park

13.4.5 In compartment 169/Kandi a recreational park has been created by the Forest division. The park area has been fenced. A number of view points have been constructed in the park. Bridal paths have been made. Ornamental species have been planted, a nallah flowing through the park has been check damed. Various water birds live in the water pools created by the check dams. Palma is situated at 1100 meter altitude and is located at about 4 Km from Rajouri town on Rajouri Kandi Road. It attracts local tourists and day picnickers.

6. Sheshara City Forest

13.4.6 Compartments 46 and 47 of Rajouri range have been fenced, rehabilitated with various species including ornamental species and well protected by Sukhtao Project and hence developed as Sheshara city Forest. It is located adjoining the Rajouri Town on Rajouri Poonch National Highway. Because of thick vegetation a variety of wild animals live in this area. A few view points have also been constructed. It attracts day picnickers and local tourists. It was hand over to department of Wildlife Protection for creation of Sheshara Conservation Reserve.

7. Budhal Kandi

13.4.7 Kandi village is located at 1775 meter altitude whereas Budhal village is located at 1900 meter altitude. This area is situated at about 60 Kms from Rajouri Town and lies in the catchment of Ans river in the Lap of Pir Panjal range. On the upper areas there are alpine pastures, middle area abounds in fir forests whereas lower portions of this tract is full of Oak trees and Chikri. The scenic beauty of this area is beyond imagination. Although this tract is yet not on the tourist map of the state but it has all the potential for the development of tourism.

8. High Altitude Lakes

13.4.8 In the Pir Panjal Range falling in this tract, a number of high altitude lakes locally called as "Sar" occur at an altitude between 13,000 feet to 14,500 feet. These lakes freeze in the winter. There are more than 27 Lakes between Simar Sar to Nandan Sar in an area of 30 x 30 Sq.Km. Of these 7 Lakes are big in size and rest are smaller.

13.4.9 In this area besides these lakes there is highest peak of the tract i.e. Dakyar peak (15390 feet). Budhal area, Dakyar peak and high altitude lakes have lot of tourist potential and can be developed especially for adventure tourism i.e. trekking, mountaineering, rafting, boating, sking etc.

13.4.10 Important high altitude lakes of the tract are as under:-

(a) Suk Sar

This is the first lake if this tract is approached from the Northern direction. It is oval shaped small lake situated at an elevation of about 3000 meters.

(b) Akal Dakshni

It is situated next to Sukh Sar at a distance of about 1 Km and is worshipped by the Bakerwals who pass through this route. This lake is about 200 meters wide and 400 meters long and is situated at about 3300 meters.

(c) Nadan Sar

It is located at an elevation of about 3500 meters and is about 1 Km in length. It is oval in shape and its water flows through Jadi- Marg Nallah into Kashmir valley.

(d) Ravi Walli Marg Group of Lakes

Ravi Walli Marg is a beautiful meadow towards the west of Kotori sar. Four lakes named Kokker Sar, Neel Sar, Bhag Sar and Ding Sar are located at an altitude of about 3300 m in this marg (meadow). This is the best camping site in this area.

(e) Chamar Sar

This is been shaped lake have a circumference of about 2 Km located at an altitude of 3300 m. This lake is full of ice bergs till late July. It takes one days trekking from Ravi Walli marg to Chamar Sar. Chamar nallah which starts from this lake joins bafliaz nallah near Behram Gala.

(f) Bbhag Sar

This is highest situated lake in Rajouri Budhal mountains at an altitude of about 3700m. It is always full of ice bergs. It is oval shaped lake and is very difficult to approach as it is enclosed from all the four sides.

(g) Katori Sar

This is saucer shaped lake situated on the western end Bela Marg at an altitude of 3300 metrs. It is small lake.

(h) Samot Sar

It is situated at an elevation of 3550 m and is about 1 Km in length. It is oval in shape. Samot sar is nearest accessible lakes from Budhal side.

(i) Diya Sar

This is shaped like an Indian earthern lamp and hence named as Diya Sar. Situated at about 3600 m altitude it is about 1 Km in length. It is situated on the western side of Chambar Sar.

(j) Padyaran Sar (I & II)

This twin lakes are situated at an elevation of 3400 meters just below Diya Sar Gali. These are been shaped lakes. Padyaran i is slightly bigger than Padyaran II. Famous Rupari corridor lies nearer to these lakes. Nomadic Bakerwals of Turyath, TataPani, Metka Moghla, Kandi Bakori and Budhal cross Rupari Pass to enter Kashmir Valley.

(k) Gum Sar

This is a small lake at the foot of Dakyar peak situated at an elevation of 3600 meters.

(l) Chandan Sar

It is located at an elevation of 3600 meters and is a big as Nandan Sar. It is located smidst a depression formed by lofty mountains and is at a distance of about 1 hour trekking from Nandan Sar.

13.4.11 Visit to these lakes makes ever lasting memories in the mind. If one really wants to enjoy the beauty of nature in this portion of Pir Panjal, a comprehensive trek of all these lakes is inevitable. These lakes are surrounded by snow clad peaks and mountains. Nature in its prestine beauty manifest itself in these high altitude lakes of Rajouri Region. Crisp, cool air and blue watered lakes give rejuvenating experience to our spirits. This tract is really a heaven for nature lovers.

Activities to be restricted at high altitudes

13.4.12. In the high altitude areas construction of permanent concrete structures must be avoided. Even if there is any construction, it must be suitable to the ecology of the area.

13.4.13 The visitors must be instructed not to leave any garbage in the meadows. The non bio degradeable garbages pollute the area. Also sometimes the wild animals accidently swallow the plastic garbages which remain in their intestine and never get decomposed and proved lethal to the animal. So the visitors must be educated about the norms of visiting eco sensitive areas.

CHAPTER-XIV

WORKING PLAN FOR PLANTATION (OVERLAPPING) WORKING CIRCLE

14.1. General Constitution and Character of Vegetation

14.1.1. This is an overlapping working circle and comprises of blank and degraded forest areas falling in the vicinity of human settlements. Due to excessive biotic pressure these areas are highly degraded to blank or scantly vegetated. Broad leaved trees like oak have become bushy in such areas because of reckless lopping and browsing. Regeneration is almost absent.

14.2. Special Objects of Management

14.2.1 Plantation working circle has been constituted in view of the following special objectives:-

i) To meet the local demand of fuel, fooder and small timber.

ii) To reduce the pressure on natural forests by erecting buffer zones between villages and natural forests.

iii) To improve site quality and soil conditions of the degraded area.

iv) To increase the green cover around the habitations.

14.3. Method of Treatment

14.3.1 A mixture of multiuse, local and fast growing species is prescribed to be planted in order to meet the above said objectives. For temperate areas, Oak, Chikri, Walnut, Robinia, Ailanthus etc. are the suitable species. Similarly for sub-tropical areas Khair, Shisham, Subabul, Anardana, Bamboo, Acacia, Milia and Bauhinia etc shall be grown to meet the fodder and other requirements.

14.3.2 Vegetative fencing like planting of multiuse and non-grazable species e.g. Agave, on the fences shall be resorted to Social fencing i.e. co-operation of people in the protection of plantations shall be the backbone of protection work. So, the people's participation is an important component of this working circle.

14.3.3 Social forestry Division, Rajouri should be involved in execution of works i.e. raising plantations near habitations. RDF (Rehabilitation of degraded forests and VWL (Village Wood Lots) are the two components in Social Forestry works which can contribute to the works undertaken in this working circle. DFO Social Forestry should formulate the annual plan in consultation with DFO territorial so that there is proper distribution of work in priority areas.

14.4. Choice of Species

14.4.1 Suitable species for plantations have been mentioned in para 14.3.1. Besides these, local species like *Toona ciliata, Olea cuspidata, Grewia optiva, Syzigium cumini, Zizyphus species* etc can also be grown.

14.4.2 Since the objective is to meet the local demand of fuel, fodder, small timber and to create the buffer zones between habitations and natural forests, the involvement of local people

becomes imperative, hence the final choice of species to be planted shall be that of local people as per their demand.

14.5. Nurseries and Nursery Techniques

14.5.1 A good number of nurseries are being maintained in this division by various agencies. More project based nurseries can be created as per the requirement from time to time. Nursery techniques of various species have already been discussed in previous chapters.

14.6. Annual Treatment

14.6.1 Annual treatment plan involving quantum of work and areas to be taken up for plantation shall be at the discretion of territorial DFO who will formulate the plan in consultation with DFO Social Forestry Rajouri and local village forest committees. However the success of treatment plan shall be on availability of sufficient funds and desired co-operation of the local people.

14.6.2 Some of the areas prescribed to be taken up on priority basis are the forest areas adjoining Shahdara Sharief, Darhal, Thanna Mandi, Bharote, Dhangri, ManjaKote, Moghla, Methka, Sailsui, Solki and Kandi Bakori.

14.7. Peoples Participation

14.7.1 People's participation is the backbone of this working circle as the treatment proposed aspires to fulfill the local demands of fuel, fodder and small timber, Various aspects of people's participation are discussed as under:-

14.7.2 In view of the excessive biotic interference and severe damages to forests by the expanding population, the foresters, social scientists, planners and NGO's have concluded that there is fundamental need to involve local communities in the protection and management of forests. It has led to the concept of Joint Forest Management/ Participatory Management. The participatory management requires empowering individual community groups with rights and responsibilities for specific tracts of forests. It is the co-operative sharing of rights and responsibilities that make joint Forest management a true partnership between forest communities and Forest Department.

14.7.3 In the process of gathering the support of local people for the afforestation activities some basic issues prevailing in the villages need to be managed in a balanced way. Always "consensus based" approach will yield better results. The intra and inter group rivalries in the villages shall be managed. The unequal economic and social status of the people in the village will not allow them to gel together. The main power groups of the village must be associated with the Joint Forest Management Committies. The participation of women in JFM shall be encouraged. The frequent meeting with the people will slowly dilute the differences among them and make the programme successful.

14.8. Role of NGO'S

Role of Non Govt. Organization in participatory management is also very important. They can play a supportive management role in assisting forest department and village

communities to develop joint participatory management programme. Village communities and forest field staff may need assistance in organizing meetings to discuss how to form management organizations. An increased supply of MFP can generate opportunities for their processing and marketing in which NGOs can help a lot. The sincere NGOs should be involved in the participatory management. The institutions and individuals of such NGOs must be very transparent and their motives must suit to the purpose and philosophy of people's participation.

14.9. Area available for treatment

The compartmentwise area available for plantation activities is presented in the Appendix XV

CHAPTER- XV

WORKING PLAN FOR NON-TIMBER FOREST PRODUCE (OVERLAPPING) WORKING CIRCLE

15.1. General Constitution of the Working Circle

15.1.1 This working circle shall overlap all other working circles of this plan. It includes the main overlapping working circle of the previous plan. This working circle shall be discussed under two headings:-

(A) Resin Extraction
(B) Other Non-Timber Forest Products

15.1.2 This part of the working circle overlaps all the chir areas i.e. Chir working circle and Rehabilitation cum Protection Working Circle. Descriptions of vegetation has already been given in Chapter-II of part-I and Chapter-IX and Chapter-XI of Part -II.

15.2. Special Objects of Management

15.2.1 The object of management is to obtain sustained yield of resin without harming chir crop.

15.3. Past Working

15.3.1 Most of the areas under chir crop were taken up for resin extraction on large scale during 1972-73 & 1973 -74.

15.3.2 French Cup and Lip Method of resin extraction continued to be used till 1987-88. It was replaced by Rill method of resin extraction during 1988-89 and is being adopted till date. Average yield per blaze has increased since 1988-89 i.e. after the adoption of rill method of resin tapping.

15.3.3 Extraction of resin and average yield per blaze during the period from 2001-2002 to 2013-14 is given as under:-

Table 15.1 Details of Resin extraction taken up in Rajouri Forest Division

S.No	Year	No. of Blazes Tapped	Resin extracted (in M. Tones)	Revenue (Rs.)	Expenditure on resin extraction
01	2001-2002	546830	1847.992	3,33,22,015	1,60,18,876
02	2002-2003	488896	2068.688	2,72,73,319	92,40,376
03	2003-2004	541724	1898.885	3,93,28,460	1,44,01,970
04	2004-2005	221024	642.271	1,82,37,395	73,49,638
05	2005-2006	463016	1546.558	4,45,70,211	1,18,39,346
06	2006-2007	349435	1129.236	14,78,011	88,50,670
07	2007-2008	304985	1032.219	1,10,58,230	80,39,911
08	2008-2009	150610	507.555	2,16,96,145	46,98,038
09	2009-2010	108460	290.197	1,15,88,080	36,87,501
10	2010-2011	80100	185.60	84,84,174	3,23,96,137
11	2011-2012	19400	62.298	22,67,688	30,95,411
12	2012-2013	16500	60.813	17,61,924	30,01,618
13	2013-2014	30300	104.40	78,20,860	32,82,500

15.3.4 It is observed that there is almost continuous decrease in number of blazes tapped during the past as shown in the table above.

15.3.5 However resin tapping not been done as per prescribed norms and regulations in the past. During the currency of French cup and lip method, it was misunderstood that deeper the cut and more was the resin yield. The field staff and the tappers could not be made to understand that resin extraction made trees susceptible to wind breaking and fire hazard. Regularity of dimensions (of blazes and interspaces) has also not been maintained. All this has resulted into excessive resin tapping. Similar observations were made by Shri. D.K. Ved during 1982-83 in his plan. On the basis of his observations the assessment of remaining tapping life of chir forests of this division was made in his plan as under:-

i) Trees of 35-40 cm dia class have about 10-15 years resin tapping life more.
ii) Trees of 40-50 cm dia class have about 15-20 years of tapping life more.
iii) Trees of 50-60 cm dia class have about 20-25 years of tapping with a single blaze.
iv) Trees of 60-70 cm dia class have tapping life of 8-12 years more with double blaze.
v) And trees of 70-80 cm dia class have 12-18 years of tapping life with double blaze.

15.3.6 Similarly Rill Method adopted since 1988-89, is also not been practiced in letter and sprit. There is a misunderstanding that more the acid used more the resin yield. Excess use of acid, in quantity as well as in concentration is injurious to the living tissue of the tree. Formation of Rills and leaving of interspaces between adjoining rills as well as adjoining blazes is done with technical precision.

15.3.7 Such irregularities as mentioned above and especially leaving of inadequate interspaces has resulted into girdling of trees which ultimately leads to drying of trees. Breaking by wind and frequent fires also accelerate the process of drying/dying. All this is going to have highly detrimental effect on the sustained yield of resin from these forests.

15.4. Method of Extraction

15.4.1 **French Cup & Lip Method**: This is a traditional method of resin extraction and remained in vogue till 1987-88. In 1985, the minimum tappable diameter was raised from 35 cms to 40 cms dbh (ob) for single blaze and from 60 cms to 70 cms dbh (ob) for double blaze. The Cup & Lip Method prescribes a blaze of 10 cm wide, 2.5 cm deep and 48 cm length in the first year and 38 cm each during the next four years. The channel continues upwards for five years and in the sixth year a new channel is made adjacent to the first row leaving interspace of 10 cms. Later on when the earliest incisions made get healed up them the interspace left earlier is to be tapped. Freshening is done twice a week with a sharp edged freshener. Total freshening in a month was fixed at 4.7 cms.

15.4.2 **Rills Method:** Due to demerits of Cup & Lip Method of resin tapping Forest Research Institute, Dehradun, introduced an improved method in 1976. This method was adopted in this State in 1988-89. Merits of Rill Method over traditional Cup & Lip Method are:-

i) The guide provided in the freshening knife controls the depth of blaze to 2 mm in live bark and sapwood. This eliminates the excessive damage to the living tissue as well as heartwood.

ii) Fast healing of shallow blazes makes it possible to tap the trees for a second cycle thereby increasing the tapping life of a tree.

iii) Does not reduce resistance to windstorms.

iv) Helps in reducing fire incidents.

v) Use of 20% acid mixture acts as a stimulant and facilitates a prolonged resin flow and tapping season resulting in increased resin production.

15.4.3 The Rill Method of resin tapping is prescribed to be continued. This method involves following steps:

a) **Bark Shaving** :The loose and rough bark over a surface area of about 45 cm x 30 cm size and 15cm above the ground level is removed with the bark shaver leaving 2 mm thick living bark which will facilitate easy and smooth freshening of blades. The surface should be very smooth and it looks reddish in colour.

b) **Marking of blaze frame and central groove**: The blazes frame is vertically fixed on the bark shaved surface leaving 15 cms above the ground level and the position of blaze frame marked with the marking gauge. Then the position of the central groove is also marked with the help of wooden board and marking gauge.

c) **Grove cutting**: A central groove 4 mm deep and 7.9 mm wide is made with the help of central groove cutter by moving it downwards. If the groove is not perfect towards the ground, then move the tool upwards to make the groove uniform in depth. But in the subsequent years, groove should be cut downwards only.

d) **Fixing the Lip & resin Pot:** The lip should be fixed properly with the help of two bullock shoe nails so that it fits compactly against the tree to ensure proper flow of resin into the pot. A 5 cm long wire nail should be nailed at a slight angle into the tree about 2 cm below the midpoint of the lip for hanging the resin pot against the tree.

e) **Freshening:** The tapper should stand near the tree on one side of the blaze for freshening it. He should hold the freshening knife at lowest point of central groove and knife should be pulled by the tapper along the blaze line marked on the tree. The same operation should be repeated on the other side of the groove. The second and subsequent freshening should be done at weekly interval with the help of guide provided in the freshening knife. Care should be taken that the guide of freshening knife should move in the previous rill. This will ensure the formatting of correct and parallel rill to the previous one. It should also be ensured that the rills neither extend beyond the limit of blaze mark nor fall short of it. Correct placing of guide in the previous rill while marking subsequent rills will automatically leave equal spacing between the consecutive rills. The average width of the bark left between the consecutive rills is 5 mm and the average width of rills is 5-6 mm. Depth of the rills is about 2 mm in the wood which is sufficient depth to open the closed resin ducts. In a tapping season of eight months, 32 rills are made and thus the blaze acquires a size of 34 cms. So the size of the blaze works out to 34 cms x 20 cms.

f) **Treatment of blaze with acid mixture**: 20% sulphuric acid is prepared by adding 213 cc. of commercial sulphuric acid to 787 cc of water and 20% Nitric acid is prepared by addition 370 cc of commercial nitric acid to 630 cc of water. One liters of each of dilute acids thus prepared are mixed thoroughly in 1:1 ratio forming two liters of 20% acid mixture to be used as stimulant. Freshly blazed rills and treated with acid mixture so prepared, by squeezing the plastic bottle. Sprayer keeping at an angle of 45^0 and 3-5 cms away from it and moving its nozzle in a steady motion along the rill. Precautions should be taken to treat the rills properly and uniformly. This will be possible only when

acid will be discharged from the bottle in form of mist. After spraying the pot should be hung on the nail after removing extra acid from the lips otherwise it will corrode the pots. Mixture of sulphuric and nitric acid used as stimulant for treating the blazes does not help in the manufacture of resin in any way but only in keeping the resin ducts open which facilitates in flow of resin for a longer duration.

g) **Resin Collection and central Groove Cleaning**: The resin pots are removed from the tree and the resin is thoroughly removed from the pot with the help of the scrapper and collected in the tins. At the same time the central groove is also cleaned after each collection with groove cleaner to facilitate smooth running of fresh resin in the resin pot. During the period of April to July when the resin yield is maximum, the resin should be collected as early as possible to avoid overflow from the resin pot but the freshening should be done only at weekly interval and not before.

h) **Closing of tapping:** At the close of tapping season the nails should be pulled out with the help of nail puller and the lips are removed from the tree. The pots and lips are washed with the warm washing soda solution then the useable lips and pots are sorted out for future use.

i) **Crop setting for subsequent years**: The bark shaving should be one above the top of the first years blaze and position of the blaze is marked just above the previous year's blaze. Rest of the operations of first year are repeated. In this manner a channel can be tapped for four or five years. After this next blaze is made at the bottom of the tree in the same manner as in the first year, leaving an interspace of 7.5 cms.

15.4.4 The length and height of channel above the ground level in the successive years shall be as under:-

Table 15.2 Details of length and height of blazes on the Chir trees

Year	Height of bases of Channel from ground level	Height of Channel in Cms.	Height of the top most point of the channel from ground level (In Cms)
Ist	15 CM (Length of Cup) + 3cms (Lip) = 18cms	10 + 34 = 44	62
2nd		44 + 34 = 78	96
3rd		78 + 34 = 112	130
4th		112 + 34 = 146	164
5th		146 + 34 = 180	198

15.4.5 Extraction of resin is done departmentally through wage mates. Various compartments are grouped into resin lots and these resin lots are put to open auction during the month of February-March. The wage mate who offers lowest rate of extraction for a particular lot is allotted the work. On allotment of the work the wage mate has to sign an agreement with the department. Crop setting is done latest by 2nd week of April. Regular collection of resin is done from fourth week of April ending November. Peak season of resin collection is from April to July. Final delivery of resin at transit depots is completed by ending January. Wage mates are allowed to transport resin tins from forest areas to transit depots through mules. They cannot use mechanized transportation up to transit depots.

15.5. Assessment of Future Tappable Life

15.5.1 Resin Channel survey exercise was conducted on the forests of Chir Working Circle and Rehabilitation Cum Protection Working Circle by laying of 0.1 ha sample plots. All the Chir trees in the sample plots were analysed for the bark area utilized for resin extraction and assessment of the future tappable space. A total number of 177 plots were surveyed. During the survey, dimensions of the blazes, accuracy in the formation of rills and intervening space between the two channels were also observed.

15.5.2 During the survey, dia class wise number of Chir trees in the sample plot of 0.1 ha area was recorded. This data total number of stems available in the working circle was estimated. The bark area of each Chir tree was analysed and the blazes (both rill as well as cup and lip method) laid over it was recorded. It was decided in the meeting that the total number of blazes that can be laid in the stem of each dia class and it was safely concluded that only 60% of it shall be used for resin extraction so that it will yield sustainably. The following table shows the space available for laying of blazes and number of blazes to be laid for sustainable yield.

Table.15.3. Statement showing the number of blazes vs Dia class of the Chir tree

Dia class of the Chir tree (in cms)	Total No. of blazes can be laid	No. of blazes to be laid for sustainable yield
40-50	20	12
50-60	20	12
60-70	25	15
70-80	25	15
80-90	30	18
90-100	30	18
>100	30	18

Based on the observations from 177 plots of 0.1 ha area following calculations are made

Table.15.4. Statement showing the details of blazes laid

Dia class	Blazes per stem	Total No. of stems	Total blazes available	Blazes laid			Available (+) / excess exploitation (-)	%
				Cup and Lip	Rill	Total		
40-50	12	2,32,066	27,84,792	6,13,246	19,65,153	25,78,399	+2,06,393	+7.41
50-60	12	2,36,016	28,32,192	16,53,099	24,72,735	41,25,834	-12,93,642	-45.68
60-70	15	2,57,741	38,66,115	24,76,685	27,08,751	51,85,436	-13,19,321	-34.05
70-80	15	1,11,589	16,73,835	12,05,755	13,16,356	25,22,111	-8,48,276	-50.68
80-90	18	48,388	8,70,984	4,43,394	4,46,356	8,89,750	-18,766	-2.15
90-100	18	11,850	2,13,300	1,22,452	1,86,640	3,09,092	-95,792	-44.91
>100	18	0	0	0	0	0	0	0.00
Total		**8,97,650**	**1,22,41,218**	**65,14,631**	**90,95,991**	**1,56,10,622**	**-33,69,404**	

15.5.3 The data presented in the above table shows that the blazes were laid in excess and the crop was over exploited for resin. It is recommended that the total enumeration of number of stems available for resin extraction (Dia class wise), space available for laying of blazes so that resin extraction will become a sustainable activity, has to be carried out. Based on the results of the sample study on the growing stock and the resin blazes study is concluded that the Chir trees were fully utilized for resin extraction and hence the working plan recommends that the resin extraction activity must be stopped.

15.5.4 Also the Government has enunciated a policy of 20% annual reduction in blazes and the same is being implemented. This policy shall take care of availability of future blazes. The policy is in consonance with the need of the Chir crop viz-a viz extraction of resin. It is proposed that the said policy of the Government should be implemented in letter and spirit.

Other Non –Wood Forest Management

15.7. Objective of Managemnt

15.7.1 A wide range of bio-diversity exists in the forests of Rajouri Forest division due to wide variation in altitude, aspect, topography etc. A variety of non-wood forest products of high economic and medicinal importance are obtained from these forests. The objectives of management of this part of working circle are as under:

i. Development, conservation and protection of non-wood forest products yielding plant species in order to conserve bio-diversity of the tract.

ii. Providing employment to the people living adjacent to the forests on sustained basis.

15.7.2 The habitat of various non-wood forests product yielding species has degraded because of overall degradation of forests and over exploitation in the past. Hence it becomes imperative to have a long team strategy for development of non-wood forests product yielding species and their judicious exploitation.

15.7.3 Important Non-wood forest product yielding species of the division are as under:-

Common Name	**Botanical Name**
Bunafsha	Viola Species
Kuth	Saussuria lappa
Mushkbala	Valerina wallichi
Kakarsinghi	Pistacia integrima
Rasount	Berberis lycium
Dhoop	Jurinea macrophyla
Bankakri	Podophyllum Hexandrum
Ananardana	Punica granatum
Khair	Acacia catechu
Guchhi	Morchela species
Brahmi	Taxus bacatta
Suranjan talkh	Colchicum Luteum
Pyrenthrum	Chrysanthemum Cinerarifolium
Behra	Terminalia belerica

15.8. Treatment Proposed

15.8.1 For the development, conservation and protection of above mentioned important non-wood forest product yielding species, their plantations on massive scale should be taken up. Already fenced closures can be taken up for planting medicinal plants in interspaces to reduce the cost. Since nursery and harvesting techniques of most of the medicinal plants have not been standardized so far, techniques assistance of RRL Jammu can be sought for raising these species.

15.8.2 Techniques for regeneration of some of the important Non-wood forest product yielding plant species are as under:

15.9. Taxus baccata (Yew Brahmi)

15.9.1 Scattered trees of Taxus bacatta are found is shady ravines in fir forests at an altitude of 1800 m to 3000 m. It has attained world wide attention due to the fact that it is a source of an anti-cancer drug called Taxol which is highly valued alkaloid and extracted from leaves and bark of the tree. Moreover, timber of this tree is exceedingly strong and durable.

15.9.2 The fruit of *Taxus bacatta* is a berry, 0.3-0.4 inch long, flashy covering Aril. The aril is first green but changes to bright pinkish red during autumn. Fruiting season is during September to November. Natural regeneration appears at shady protected places under bushes. Artificially it can be raised through seeds. Seedlings can also be raised through tissue culture. The branch cuttings treated with rooting harmone have been found to be the best method of vegetative propagation of this species.

15.10. Punica granatum (Anardana)

15.10.1 It is found on dry, hot and rocky slopes as an undergrowth in open chir and scrub forests at an altitude of 2000-6000 feet. Anardana is an important MFP of this tract and is a good source of revenue to the locals. Moreover this species is a good soil binder.

15.10.2 It flowers in April-May and fruits in July to September. The fruit wild state is about 1.5 inch in diameter, globose with reddish brown coriaceous rind which has astringent properties. It comes gregariously in natural condition. Artificially anardana can be raised from seeds as well from cuttings. A nursery should be established in this division for propagation of anardana. Further, besides propagating local clones, superior exotic clones should also be introduced.

15.11. Pistacia integerrima (Kakarsinghi)

15.11.1 It is chiefly on dry and hot slopes with shallow soil and in valleys along rivers. The valuable part of the tree is horn like, hard rugose galls, 15-18 cms long known as Kakarsinghi produced on leaves and leaf stalks as a result of Hemipterous insect attack. These horns are of great commercial value and used in indigenous medicine and dyeing and tanning. Leaves are used for fodder. Its timber is hard, durable and easy to work.

15.11.2 Fruit is an oblique drupe which ripens from June to October. Natural regeneration appears chiefly under protection of bushes. After wards, the plant requires light. Seeds are formed just before rains. They do not stand storage. About 1900 seeds weigh a kilogram. There germinative capacity is 5% and they require 10-30 days for commencement and completion of germination. Sowing gives better results than planting.

15.12. Acacia catechu (Khair)

15.12.1 Khair generally occurs in the altitudinal zone of 300 meters to 1200 meters. It is a constituent of broad leaved forests generally growing below the chir zone. Associate of Khair are *Acacia modesta, Albizzia lebbek, Dalbergia sissoo, Mallotus phillippensis as trees and*

Dodonia viscose, Punica granatum, Carissa spinarum, Adhatoda vasica as shrubs. It grows best on porous alluvium consisting of sand and shingles on well drained send stone. A detailed survey of Khair has been conducted in whole state (forests as well as private lands) in 1995-96 and a comprehensive management plan has been prepared. Total enumeration of the Khair trees was conducted and its occurance was reported in following compartments of this division:

i) Kalakote Range: Compartment, 118, 119, 120, 121, 122, 123, 124, 125, 126, 148, 149, 150, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 164, 165, 168, 170, 171, 172, 173, 175, 176, 177, 178 and 179.

ii) Kandi Range: Compartments 172, 175, 209 and 210.

15.12.2 It is recommended that the detailed survey of Khair trees must be conducted by total enumeration so that separate management plan can be drafted.

15.12.3 Katha is obtained from the heartwood of the Khair. Medicinal and economic importance of Katha and other by –products like Kutch needs no mention here. Moreover Khair is an important species for afforestation of the degraded areas in tropical and sub-tropical zones.

15.12.4 Sandy loam soil, overhead light, adequate irrigation and drainage are the basic conditions of good nursery site for Khair. Seeds can be collected by lopping small pod bearing branches in December-January and spreading them in sun for few days. Pods are heaped in gunny bags and beten with sticks. Seeds are seprated by shaking and winnowing in a flat basket. Khair seeds are succeptible to fire damage. Seeds are sown in April –May. Seeds should be soaked in cold water for 24 hours before sowing. It is advisable to sow the seeds in the same year in which they are collected. Daily irrigation is necessary in nursery till the onset of monsoons. During rainy season frequent removal of weeds should be done for proper growth of Khair seedlings. Direct sowing in lines gives better results.

15.13. Atropa belladonna

15.13.1 An alkaloid called Atropine is obtained from the leaves and roots of the plant. Atropine is issued in the preparation of belladonna plaster and Tincture. Plant gives returns in the first year of its plantation, leaves are harvested twice in the first year and 2-4 times in 2^{nd} years. One hectare of plantation yields about 110 Kg of laves and 22 Kg of seeds. Leaves contain highest content of alkaloid in between flowering and fruiting.

15.13.2 This species can be successfully raised in the temperate forests of Kandi and Rajouri ranges. Plants can be raised in the nursery by sowing seeds. Seedlings are transplanted in the field in 30 cm deep pits at a spacing of one meter during spring.

15.14. Valerina wallichii (Mushkbala)

15.14.1 It constitutes ground flora in the moist shady places of temperate zone forests in Rajouri and Kandi Ranges. Root of the plant has medicinal importance. Its germ plasm can be collected from the wild and planted in closures.

15.15. Chrysanthemum cinerarifolium (Pyranthrum)

15.15.1 Its flowers are used in manufacture of insecticides. It is found in temperate forests of this division. Seeds are sown in nursery during February and seedlings are planted out on the onset of rains in the same year in 30 cm deep pits at a spacing of 1 meter. Yield of flowers

goes on increasing after first year. Any single year's plantation can provide yield upto 5-6 years.

15.16. Hyoscymus muticus

15.16.1 This plant yield the alkaloids hyoscymine and atropine. Seeds are sown in the month of February in the nursery located at an altitude of about 1800 meters. Seedlings are planted in Oct-Nov in pits 30 cm x 30 cm x 15 cm at a spacing of 1 meter. Plants start flowering in April and fruiting in May. About 2.75 quintals of leaves can be harvested per hectare in the month of July.

15.17. Dioscoria deltoidea

15.17.1 Its rhizomes provide an important alkaloid used in the manufacture of pills effective in family planning. It is found in temperate forests of this division. Rhyzomes are sown in March –April or October-November but not in rains as water logging can rot the rhizomes. Production starts three years after sowing and it yields 80 quintals of rhizomes per hectare.

15.18. Dioccoria composite

15.18.1 it grows in tropical and sub-tropical regions with annual rainfall ranging from 85-160 cms. The plant is resistant to frost and high temperature and needs humid and hot conditions of optimum growth. Rhyzomes are main source of Diosgenin an important alkaloid of steroid industry. Diosgenin accounts for about 50% of total steroid drugs output in the world. This species can be propagated either by seeds or tubers.

15.18.2 **Seed Propagation**: Optimum temperature for germination of seeds is 30^0 c March –April is the best time for raising nursery from seeds. Fresh seeds should be sown in plastic bags of 7.5 x 15 cm size provided with drainage hole. Two seeds per nag should be sown and nursery should be located in shade. The best time for transplanting in the field is at the start of monsoons i.e. July-August. Irrigation should be done frequently.

15.18.3 **Tuber Propagation**: The best time for planting tuber pieces is from March to early June. Tuber pieces of about 70-80 gm each are planted. To avoid rottening of tuber 0.5% solution of systemic fungicide viz. Bavistin for 15 minutes followed by applying paste of bavistin to cut ends give effective control.

15.19. Colchicum luteum (Suranjan talkh)

15.19.1 This species grows in altitudinal zone of 2400-3000 meters as ground flora. Colchicum is widely used in local medicines especially in curing of gout and Rheumatism. For the propagation of this species its germ plasm can be collected from wild and planted in closures.

15.20. Pedophylum hexandrum (Bankakri)

15.20.1 This species is found in western mixed coniferous forests as an under growth at an altitude of 2400-3000 meters. It is found to contain an alkaloid called Podophylotoxin which is used

in treatment of cancer. For propagation of this species it can be collected from wild and planted in closures as its nursery techniques are yet not standardized.

15.21. Morchela species (Guchhi)

15.21.1 It is a kind of fungus Morchela of economic importance is basically the fruiting body of the fungus. These fruiting bodies are seen emerging from soil in the coniferous forests. Guchhi is said to have very high nutritive value and is an edible fungus. Artificial growth of Morchela has yet not been obtained. In view of its over exploitation, it is prescribed that collection of Guchhis should be stopped in various zones on rotation basis i.e. say one block is closed for Guchhi collection during one year and rest of the blocks remain open. During the next year, another block can be closed for Guchhi collection and keeping other open. This will help in increasing the production of Guchhies as the fruiting bodies in the closed areas shall get chances to ripen and this will lead to good seed (Spore) production and then it, dispersal.

15.22. Jurinea macrophyla (Dhoop)

15.22.1 It grows in alpine zone of Budhal block. Dhoop is obtained from roots of this species. Since the propagation technique of this species has not been standardized, its germs plasm can be obtained from the wild and grown in closed areas free from biotic interference.

CHAPTER-XVI
WORKING PLAN FOR THE FOREST PROTECTION (OVERLAPPING) WORKING CIRCLE

16.1 GENERAL CONSTITUTION

16.1.1 The general principle followed in constitution of this working circle has been explained in earlier chapters. This working circle has been formed for protection of forest wealth by way of regular patrolling in the forest as well as non-forest areas of the division. Forest resources particularly timbers and fuel wood are very valuable and are growing in nature in open conditions. Forests meet up the basic needs of the people. Forest produces are largely used as industrial raw materials. Forests i.e. green vegetative covers maintain environmental living conditions for human being and all other animals. So its protection is necessary and is to be ensured.

16.1.2 The pressure on the forests is also very high as there is increase in population and because of the easy money it brings through illegal activity. The working circle extends over the whole of the Rajouri Forest Division as the whole of the forests is under severe biotic especially human pressure. The protection can also be from other stresses like fire, soil erosion, herbs and firewood collectors.

16.2 SPECIAL OBJECTS OF MANAGEMENT

1. To provide protection of the valuable forests of Rajouri Forest Division.
2. To prevent free flow of illegal timber.
3. To protect the forests against fire.
4. To prevent encroachment on forest land.
5. To prevent poaching of wildlife.
6. Increase social fencing measures through effective JFM programmes.

16.3 PROTECTION ENFORCEMENT SYSTEM

16.3.1 The DFO is in overall charge of the protection of forests in the division. The Range Officer is entrusted with the responsibilities of enforcing protection measures in the range by way of patrolling and detecting forest offences. He is required to draw damage reports and send them to the DFO to get it sanctioned either for compounding of offence or for prosecution which has to be decided by the DFO. The Block Officer is entrusted with the responsibility of enforcing protection measures in the Block area by way of patrolling and detecting the forest offences. Block forest officer is also empowered for accepting the compounding fee from the offenders as well as sending the cases for prosecution. Foresters are directly assisted by the Forest Guards posted under him. The Forest Guards posted in the beats are entrusted with the power of detecting forest offences and they are required to report to the Block Officers under whom their services have been placed.

16.3.2 The Forest Protection Force has been created by J & K Government in 1996 with a view to provide maximum protection to natural forests. The gamma unit looks after one forest

division which is headed by Deputy Director. The Dy. Director is assisted by Assistant Directors and Inspectors.

16.3.3 The new concept of JFM has provisions for formation of Self Help Groups, Forest Protection Committees or Village Forest Committees which are given the responsibility of protection in lieu of the usufructs that they receive from those areas.

16.4 LEGAL PROVISIONS

Forest is a renewable resource and its management cannot be successful without its protection. So there are legal provisions for protection of forests in **Jammu & Kashmir Forests Act 1930 A.D.** and its amendments and Forest Rules. All the forest personnel engaged in the management of forests have been duly empowered for protection of forests. The Divisional Forest Officer is in overall charge for protection of forests in the division and the Range Officers, Block Officers and Forest guards in their respective protection Units to assist him.

16.5 THE JAMMU AND KASHMIR FOREST ACT (1930 AD.) (Amended in 1997)

Section (2): Definitions

In this Act unless the context otherwise requires: - ~

a) "cattle" include elephants, camels, buffaloes, horses, mares, geldings, ponies, colts, fillies, mules, asses, pigs, ram, ewes, sheep, lambs, goats and kids;

b) "composition" means the cost of forest produce together with the compensation imposed under the provisions of this Act;

c) "demarcated forest" means forest land or waste land under the control of the Forest Department, of which the boundaries have already been demarcated by means of pillars of stone or masonry or by, any other conspicuous mark, or, which hereafter be constituted a demarcated forest under section 3'

d) "forest based industry" means an industry or unit in which any forest produce is used as raw material or as a source of energy or fuelwood;

e) "forest offence" means an offence punishable under this Act, or under any rule made under this Act.

f) "Forest Officer" includes the Principal Chief Conservator, Chief Conservator, Conservator, Deputy and Assistant Conservators, Divisional Forest Officer, Range Officers, Junior Range Officers, Foresters, [Deputy Foresters], Forest Guards, Members of the Forest Protection Force and any person whom the Government or any officer empowered by the Government may, from time to time, appoint by name or as holding an office to carry out all or any of the purposes of the Forest Act, or to do anything required by this Act or any rule made under this Act to be done by a Forest Officer;

g) "Forest produce" includes.-

(a) The following, when found in or brought from, a forest or not, that is to say; timber, cautchus, catechu, wood oil, resin, natural varnish, bark, lac, mahus flowers, myrabolams and krench lobidwoladioscoria, firewood, humus, charcoal, rasoant, carbon chips, rosin, turpentine and fungi (guchhies); and

(b) The following when found in, or brought from, a forest, that is to say:-

(i) Trees and leaves, flowers and fruits and all other parts or produce not here in before mentioned of such trees;

(ii) plants not being trees (including kuth, grass, creepers, reeds and moss) and all parts' of produce of such plants;
(iii) wild animals and skins, tusks, horns, bones, silk cocoons, honey and wax and all other parts or produce of animals; and
(iv) Peat" l [surface soil], rock and minerals (including limestone, laterite, mineral oils and all. products of mines or quarries);
h) "river" includes streams, canals, creaks and other channels, natural or artificial excepting such kuhls and channels as are constructed and maintained by the Zamindars at their own expenses for purpose of irrigation and in regard to which no settlement has been arrived between the Forest and the Revenue Departments to bring them within this. definition; "saw mill" means any device and machinery with which and the premises (including the precincts thereof) in which or in any part of which sawing is carried on with the aid of electrical and mechanical power;
(j) "timber" includes trees and bamboos when they have fallen or have been felled, and- all wood whether cut up or fashioned or hallowed out for any purpose or not;
(k) "transporter" includes a person, a private agency, a Government Department, Corporation or any other agency engaged in transport of forest produce whether on his own behalf or on behalf of any other person;
(l) "tree" includes palms, bamboos, stumps, brush-wood and cane;
(m) "undemarcated forest" means and includes all forest land (other than demarcated forest) which is the property of the Government and is not appropriated for any specific purpose and further includes all the undemarcated and berun line forest vested with the Forest Department under the provisions of section 48 of the Jammu and Kashmir Village Panchayat Act, 1958 or any other law for the time being in force.

Section (6): Acts prohibited in demarcated forests

Any person who

(a) Sets fire to a demarcated forest, or kindle any fires, or leaves any fire burning in such manner as to endanger such a forest;

(b) Kindles, keeps or carries any fire except at such seasons as the Conservator of the Circle may from time to time notify in this behalf;

(c) causes any damage by negligence in 'felling any tree or cutting or dragging any timber;

(d) fells, girdles, lops, taps, or burns any tree, 'or strips off the bark or leaves from, or otherwise damages, the same;

(e) quarries stone, burns lime or charcoal or collects, subject to any manufacturing process, or removes, any forest produce; knowingly receives or is in possession of illicit forest produce.

(f) clears or breaks up any land or erects a fence, enclosure or any structure for cultivation 3 [or cultivates or attempts to cultivate any land in any other manner in any demarcated forest or for any other purpose];

(g) in contravention of any rules which the Government may from time to time in the Jammu and Kashmir Government Gazette be prescribed, hunts, shoots, fishes, poisons water or sets traps or snares;

(h) in such' forest or part thereof duly declared to be, closed by competent authority trespasses cattle or pastures cattle, or permits cattle to trespass; or

(i) removes or damages the utensils, lips, nails or other articles fixed to trees for the collection of resin;

(j) installs or establishes a saw mill or forest based industry within such limits outside the demarcated forest to be prescribed by the Government from time to time,

……. shall be punished with imprisonment for a term which may extend to two years but shall not be less than three months and with fine which may extend to six thousand rupees but shall not be less than one thousand rupees. If the conviction relates to clause (f), the Judicial Magistrate shall order for the restoration of the land to the Forest Department.

Nothing in this section shall be deemed to prohibit
(a) any act done by permission in writing of a Forest officer, or under any rule made by the Government; or
(b) the exercise of any right created by grant or contract in writing or concession, made by or on behalf of the Government.

Section (15): Power to make rules to regulate transit of forest produce: The control of all rivers and their banks as regards the floating of timber, as well as the control of all timber and other forest produce in transit by land or water is vested in the Government who may from time to time make rules to regulate the transit of all timber and other forest produce. Such rules may (among other matters):
(a) prescribe the route by which alone timber or other forest produce may be imported, exported or moved into, from or within the State;
(b) prohibit the import and export or moving of such timber or other produce without a pass from an officer duly authorized to issue the same, or otherwise than in accordance with the conditions of such pass;
(c) provide for the issue, production and return of such passes and for the payment of fees thereof.
(d) provide for the stoppage, reporting examination and marking of timber or other forest produce in transit in respect of which there is reason to believe that any money is payable to State on account of the price thereof, or on account of any duty, fee, royalty or charge due thereon or to which it is desirable for the purposes of this Act to affix a mark;
(e) provide for the "establishment and regulation of depots to which such timber or other produce shall be taken by those in charge of it for examination, or for the payment of such

money, or in order that such marks may be affixed to it; and the conditions under which such timber or other produce shall be brought to, stored at and removed from such depots;

(f) prohibit the closing up or obstructing of the channel or banks of any river used for the transit of timber or other forest produce, and the throwing of grass, brush-wood, branches and leaves into any such river, or any act which may cause such river to be closed or obstructed;

(g) provide for the prevention and removal of any obstruction of the channel or banks of any such river and for recovering the cost of such prevention or removal from the person whose acts or negligence necessitated the same;

(h) prohibit absolutely or subject to conditions within specified local limits the establishment of saw-pits, the converting, cutting, burning, concealing of marking of timber, the altering or effacing of any marks on the same, and the possession or carrying of marking hammers or other implements used for marking timber;

(i) regulate the use of property-marks for timber and the registration of such marks, prescribe the time for which such registration shall hold good, limit the number of such marks that may be registered by anyone person, and provide for the levy of fees for such registration. The Government may direct that any rule made under this section shall not apply to any specified class of timber or other forest produce of any specified local area.

Section (16): Penalty for breach of rules made under section 15

Any person, who infringes any of the rules made under section 15 may be punished with imprisonment for a term which may extend to two years but shall not be less than three months and with fine which may extend to five thousand rupees but shall not be less than one thousand rupees: Provided that where the' value of timber seized exceeds rupees five thousand the fine may extend up to the value of timber so seized.

THE LAND TRANSPORT RULES (Order No. 448 of 1935)

(Sanction is hereby accorded to the rules for the transport of timber by land under section 15 of the Forest Act, as proposed by the Chief Conservator of Forests)

Rule 4. No timber or other forest produce shall be moved on any route on which a depot or checkpost has been established unless covered by a pass issued by the Forest Officer or the Revenue Officer or by the owner of a private forest or his agent.

Rule 5. Such pass shall be in the form as may be prescribed by the Chief Conservator of Forests and shall specify kind and quantity of timber, the mark it bears and the place it came from and shall be legibly signed or stamped by the Forest Officer, or when such timber or forest produce comes from the forests under the administrative control of the Revenue department or a private forest by the Revenue officer or by the owner of such forest or his agent respectively.

Rule 6. All passes issued by the Revenue officer or the owner of a private forest or his agent, shall be exchanged for a pass issued by the Forest officer at the forest depot or check post to which the timber or other forest produce covered by the pass is brought.

(In order to ensure that the provisions of this rule are being observed, the person in charge of any vehicle, whether carrying any timber or forest produce or not, shall stop his vehicle for inspection at any checkposts if required to do so by the officer in charge of such post)

Rule 7. The forest officer issuing a pass shall levy fees according to the scale in force at the time under the orders of the chief conservator of Forests who shall from time to time publicly notify a reasonable scale of fees according to the local circumstances of each place.

Rule 8. The moving of any timber or other forest produce through or out of any demarcated or undemarcated forest or from any sale depot except by routes on which checkposts have been established under Rule 2 is prohibited.

Amendment to Land transport Rules

In partial modification of para 6 of instructions previously issued under this office No. C. XII 292/AB dated 11/2/1936, it is ordered that for purpose of the transport of timber by land, timber from the following species will henceforth be included for the operation of the rules:-

(a) All conifers

(b) All broad leaved trees of the Special class

1. *Juglans regia* (Akhur, Akhrut)
2. *Fraxinus excelsior* (Sum, Sinno, Hum)
3. *Buxus sempervirens* (Chikri)
4. *Acer spp*. (Trikana, Kanzal)
5. *Prunus padus* (Tarani zum, Bharat, Jammu)
6. *Cedrela spp.* (Tun, Tooni)
7. *Ulmus wallichiana* (Bran, Bari, Mannu)

(c) The following A class trees:-

1. *Dalbergia sissoo* (Tali)
2. *Cedrela serrata* (Drave, Dadri)
3. *Olea cuspidate* (kan)
4. *Aesculus indica* (Bunkhor, Wandun)
5. *Prunus armenica* (Hari, Sari)

(d) And the following B class trees:-

1. *Morus alba* (Tut)
2. *Celtis australis* (Kharakm Brimji)

Fees for carriage of timber by land

Under the powers vested in the Chief Conservator of Forests vide rule 7 of the Land transport Rules, I hereby sanction the following rates of fees for transport of timber by land in both the Jammu and Kashmir provinces.

1.	Timber in the round	6 paisa per piece exceeding 5ft in length
2.	Sawn timber	2 paisa per piece exceeding 5ft in length
3.	Pieces below 5 ft in length may continue to be re-exempted from the payment of fees	

Section (17): Government and Forest officer not responsible for damage to forest produce at depot

The Government shall not be responsible for any loss or damage which may occur in respect of any timber or other forest produce while at a depot established under a rule made under

section 15, or while detained elsewhere for the purposes of this Act and no Forest Officer shall be responsible for any such loss or damage unless he causes such loss or damage negligently, maliciously or fraudulently.

Section (26): Seizure of property liable to confiscation

(1) When there is a reason to believe that a forest offence has been committed in respect of any forest produce, such produce together with all tools, arms, boats, carts, equipment, ropes, chains, machines, vehicles, cattle or any other article used in committing any such offence may be seized by a Forest Officer or Police Officer.

(2) Any officer seizing any property under this section shall place .on such property a mark indicating that the same has been so seized and shall, as soon as may be, make a report of such seizure before an officer not below the rank of the Divisional Forest Officer (hereinafter referred to as 'authorised officer'):

Provided that when the forest produce with respect to which such offence is believed to have been committed is the property of the Government and the offender is unknown, it shall be sufficient if the officer makes, as soon as may be, a report of the circumstances to his official superior.

(3) Subject to sub-section (5), where the authorised officer upon receipt of report about seizure, is satisfied that a forest offence has been committed in respect thereof, he may, by order in writing and for reasons to be recorded, confiscate forest produce so seized together with all tools, arms, boats, carts, equipment, ropes, chains, machines, vehicles or any other articles used in committing such offence. Copy of the order of confiscation shall be forwarded without any undue delay to the person from whom the property is seized and to the Conservator of Forest Circle in which the timber or forest produce, as the case may be, has been seized.

(4) No order confiscating any property shall be made under Sub-section (3) unless the Authorised Officer,
(a) sends an intimation in writing about the proceedings for confiscation of the property to the Magistrate having jurisdiction to try the offence on account of which the seizure has been made but no order to be passed;.
(b) issue a notice in writing to the person from whom the property is seized and to any other person who may appear to the authorised officer to have some interest in such property;
(c) gives to the officer effecting the seizure and the person or persons to whom notice issued under clause (b) a hearing on date to be fixed for such purpose.

(5) No order of confiscation under sub-section (3) of any tools, arms, boats, carts, equipment, ropes, chains, machines, vehicles or any other article (other than timber or forest produce seized) shall be made if any person referred to in clause (b) of sub-section (4) proves to the satisfaction of authorised officer that any such tools, arms, boats, carts, equipment, ropes, chains, machines, vehicles, cattle or any other articles were used without his knowledge or connivance or, as the case may be, without the knowledge or connivance

of his servant or agent and that all reasonable and necessary precautions had been taken against the use of objects aforesaid or commission of forest offence.

(6) Where the cattle are involved in the commission of a forest offence, the same after seizure by any officer, as the case may be, shall be entrusted to any responsible person under a proper receipt on an undertaking to produce the same when required in case there is no cattle pound within a radius of five kilometers from the place of such offence:

Provided that notwithstanding anything contained in section 30, in case of unclaimed cattle a Forest Officer not below the rank of Range Officer, after giving sufficient publicity in the vicinity of the place of offence for the owner to come forward to claim the cattle within seven days from the date when such publicity has been given, may dispose them of by public auction. The provisions of the Cattle Trespass Act, Samvat 1977, shall apply in respect of the charges to be levied for the upkeep and fee of the cattle.

Section (26-A): Power of search and seizure

Any forest officer not below the rank of Range officer, having reasonable grounds to believe that forest produce is, in contravention of the provisions of this Act, in the possession of a person in any place, may enter such place with the object of carrying out a search for the forest produce and its confiscation:

Provided that such search shall not be conducted otherwise than in accordance with the provisions of the Code of Criminal Procedure.

Section (26-B): Revision before Court of Sessions against order of confiscation

(1) Any party aggrieved by an order of confiscation under Section 26-A may within thirty days of the order or if facts of the confiscatian have not been communicated to him, within thirty days of knowledge of such order submit a petition for revision to the Court of Sessions Division whereof the headquarters of Authorised Officer are situated.

Explanation I. - In computing the period of thirty days under this sub-section, the time requisite for obtaining certified copy of the order of Authorised Officer shall be excluded.

Explanation II. - For the purposes of this sub-section a party shall be deemed to have knowledge of the order of confiscation under section 26 on publication of such order in two daily newspapers having circulation in the State.

(2) The Court of Sessions may confirm, reverse or modify any final order of consequential nature passed by the Authorised Officer.

(3) Copies of the order passed in revision shall be sent to the Authorised Officer for compliance or passing such further order or for taking such further orders or for taking such further action as may be directed by such Court.

(4) For entertaining, hearing and deciding a revision under this section, the Court of Sessions shall, as far as may be, exercise the same powers and follow the same procedure as it exercises and follows while entertaining, hearing and deciding a revision under the Code of Criminal Procedure, Samvat 1989.

(5) Notwithstanding anything to the contrary contained in the Code of Criminal Procedure, Samvat 1989, the order of Court of Sessions passed under this section shall be final and shall not be called in question before any Court.

Section (26-C): Bar to jurisdiction of Courts etc. under certain circumstances

(1) On receipt of report under sub-section (4) of Section 26 about intimation of proceedings for confiscation of property by the Magistrate having jurisdiction to try the offence on account of which the seizure of property which is subject matter of confiscation, has been made, no Court, Tribunal or Authority (other than Authorised Officer and Court of Sessions referred to in Section 26 and (26-B) shall have jurisdiction to make orders with regard to possession, delivery, disposal or distribution of the property in regard to which proceedings for confiscation are initiated under section 26; notwithstanding anything to the contrary contained in this Act, or any other law for the time being in force.
Explanation. - Where under any law for the time being in force, two or more Courts have jurisdiction to try the forest offences, then receipt of intimation under sub-section (4) of section 26 by one of the Courts shall operate as bar to exercise jurisdiction on all such other Courts.

(2) Nothing in sub-section (1) shall effect the power saved under section 34 of the Act.

Section (26-D): Penalty for forcibly opposing seizure: Any person who opposes the seizure of tools, arms, boats, carts, equipment, ropes, chains, machines, vehicles or cattle liable to be seized under this Act or forcibly receives the same after seizure shall be punished with imprisonment for a term which may extend to two years but shall not be less than three months and with fine which may extend to six thousand rupees but shall not be less than one thousand rupees.

Section (26-E): Power to keep property seized on Sapurdnama: Any officer, who or whose subordinate has seized any tools, boats, carts, arms, vehicles, machines, equipment, implements, chains, ropes or cattle or any other articles used in committing any forest offence, including the forest produce, under section 26, may keep the same on the " Supardnama " of a respectable person on the execution of a bond thereof, by such person, for the production of the property so kept on "Supardnama" if and when required by the Magistrate having jurisdiction to try the offence or before the authorized officer empowered under sub-section (2) of section 26, on account of which the seizure has been made.

Section (27): Upon the receipt of any report under sub-section (4) of section 26 the Judicial Magistrate shall, with all convenient dispatch, take such measures as may be necessary for the arrest and trial of the offender and the disposal of the property according to law:
Provided that before passing any order for disposal of property the Magistrate shall satisfy himself that no intimation under subsection (4) of section 26 has been received by this court or by any other court having jurisdiction to try the offence on account of which the seizure of property has been made.

Section (28): Forest produce, tools, etc., when liable to confiscation : All timber or forest produce which in either case is not the property of the Government and in respect of which a forest offence has been committed and all tools, boats, carts, motor vehicles, machines, ropes, chains, equipments, arms, cattle or any other articles in each case used in committing any forest offence shall, subject to the provision of section 26, 26-B and 26-C, be liable to confiscation upon conviction of the offender for such offence.
Such confiscation may be in addition to any other punishment prescribed for such offence.

Section (29): Disposal on conclusion of trial for forest offence of produce in respect of which, it was committed. Without prejudice to the provisions of section 26-C when the trial of any forest offence is concluded, any forest produce in respect of which such offence has been committed shall, if it is the property of the Government or has been confiscated, be taken charge of by a Forest officer, and in any other case, may be disposed of in such manner as the Court may direct.

Section (30): Procedure when the offender is not known or cannot be found: When the offender is not known or cannot be found the Magistrate may if he finds that an offence has been committed, but subject to section 26-C order the property in respect of which offence has been committed, to be confiscated or forfeited together with all tools, boats, carts, motor vehicles, machines, ropes, chains, equipments, arms or cattle and other article used in committing the offence, and taken charge of by the Forest officer, or to be made over to the person whom the Judicial Magistrate deems to be entitled to the same:
Provided that, no such order shall be made until the expiration of one month from the date of seizing such property or without hearing the person (if any) claiming any right thereto, and the evidence (if any) which he may produce in support of his claim.

Section (31): Procedure as to perishable property seized under section 26: (1) The Judicial Magistrate or subject to such rules as may be prescribed, the Authorised Officer under sub-section (2) of section 26 may, notwithstanding anything hereinbefore contained, direct the sale of any property seized under section 26 and subject to speedy and natural decay, and may deal with the proceeds as he would have dealt with such property if it had not been sold.
(2) Notwithstanding anything contained to the contrary in any other law for the time being in force, the Judicial Magistrate shall make an order under sub-section (1) within thirty days from the date of presentation by the Forest Officer or any other party having any interest in the property.

Section (32): Appeal from orders under section 28, 29 or 30
The officer who made the seizure under section 26 or any of his official superiors or any person claiming to be interested in the property so seized, may, within the period ordinarily allowed for appeals from the orders of such Judicial Magistrate appeal from any orders passed under section 28,29 or 30 to the Court to which, orders made by such Judicial Magistrate are ordinarily appealable; and the order passed on such appeal shall or shall not be final according to law relating to criminal procedure for the time being in force in the State.

Section (33): Property when to vest in State: (1) Property ordered to be confiscated by an Authorised officer under section 26,subject to the result of revision before Court of session under section 26-B shall upon conclusion of proceedings in revision vest in the Government free from all encumbrances after the expiry of specified period of revision.

(2) when an order for the confiscation of any property has been passed under section 28 or 30, as the case may be, and the period limited by section 32 for an appeal from such order has elapsed and no such appeal has been preferred, or when on such an appeal being preferred the appeallate Court confirms such order in respect of the whole or a portion of

such property, such property or such portion thereof, as the case may be, shall vest in the Government free from all encumbrances.

Section (34): Saving of power to release property seized: Nothing hereinbefore contained shall be deemed to prevent any officer empowered in this behalf by the Government from directing at any time the immediate release of any property seized under Sec.26.

(State Council Resolution No. 10 dated 27th January, 1900)

The following powers are exercisable by officer in charge of a division where specially authorized in that behalf by the Conservator of Forests:-

1. To notify seasons during which the kindling etc of fire is not prohibited section 6 (b)
2. To direct the release of property seized (section 34)
3. To permit acts otherwise prohibited in state forests.

The Conservators (Chief and circle) are also empowered to exercise all or any of the above powers.

Section (35): Penalty for counterfeiting or defacing marks on trees and timber and altering boundary marks: Whoever, with intent to cause damage or injury to the public or to any person or to cause wrongful gain as defined in the Ranbir Penal Code:-

(a) knowingly counterfeits upon any timber or standing tree a mark used by Forest Officer to indicate that such timber or tree is the property of the Government, or of some person or that it may lawfully be cut or removed by some person, or
(b) alters, defaces or obliterates any such mark placed of a tree or on timber by or under the authority of a Forest Officer; or
(c) alters, moves, destroys, or defaces, any boundary mark of any forest or waste land to which the provisions of Forest Act are applicable.

Shall be punished with imprisonment for a term which may extend to two years but shall not be less than three months and with fine which may extend to two thousand rupees but shall not be less than five hundred rupees.

Section (36): Power to arrest without warrant: Any Forest officer or Police officer may without orders from a magistrate and without a warrant, arrest any person against whom a reasonable suspicion exists of his having been concerned in any forest offence punishable with imprisonment.

Every officer making an arrest under this section shall without unnecessary delay and subject to the provisions of this Act and to release on bond take or send the person arrested before Judicial Magistrate having jurisdiction in the case, or to the officer in charge of the nearest Police station.

Section (36-A): Offences non-bailable: Notwithstanding anything contained in this Act or in any other law for the time being in force all offences under this Act other than those compoundable under section 38 shall be non-bailable, and nothing in section 497-A of the Code of Criminal Procedure, Samvat 1989 shall apply to offences under this Act.

Section (36-B): Power to release on bond person(s) arrested: Any Forest Officer of a rank not inferior to that of a Range Officer, who or whose subordinate has arrested any person or persons under the provisions of section 36 and subject to provisions of section 36-A and 38 of this Act may release such person or persons, on executing a bond thereof by such person or persons to appear, if and when so required, before the magistrate or before the authorized officer under Sec. 26(2) having Jurisdiction in the case.

Section (36-C): Requisition for police assistance: Any Forest Officer may requisition the services of any Police Officer to assist him for all or any of the purposes specified in section 26, 35 and Section 36 of this Act and it shall be the duty of every such officer to comply with such requisition.

Section (36-D): Police Officers bound to seek technical clearance from Authorized Officer: Any Police Officer seizing any property under the provision of this Act or rules framed there under shall be bound to seek technical clearance of the authorized officer to lodge a complaint to the magistrate under section 26 of this Act.

Section (37): Power to prevent commission of offences: Every Forest officer and Police officer shall prevent and may interfere for the purpose of preventing the commission of any Forest offence.

(Comments: Forest officers (and Police Officers) are bound to prevent and may interpose for the purpose of preventing forest offences. This would naturally include the right of warning people and of taking cognizance of persons wandering about in the forest armed with axes, saws etc although this latter is not in itself an offence).

Section (37 –A): Power to try offences summarily: Any Magistrate of the first class, specially empowered in this behalf by the Government in consultation with High Court, may try summarily, under the Code of Criminal Procedure, Samvat 1989 any such offence punishable with imprisonment for a term not exceeding two years or with fine not exceeding six thousand rupees, or with both, and the provision of the said Code shall, as far as may be, apply to such trial, but notwithstanding anything contained in the said Code, in the case of conviction for any offence in summary trial under this section, it shall be lawful for the Magistrate to pass sentence of imprisonment for any term for which such offences are punishable under this Act.

Section (38): Power to compound Offences

(1)Any Forest officer not below the rank of Range Officer may from time to time by notification in the Jammu and Kashmir Government Gazette empower a Forest officer not below the rank of a Ranger

(a) [accept] from any person against whom a reasonable suspicion exists, that he has committed any forest offence involving damage not exceeding five thousand rupees other than an offence specified in section 35 or section 43, a sum of money by way of composition for the offence, which such person is suspected to have committed:

Provided that the sum of money accepted by way of composition shall in no case be less than double the amount involved in the loss caused by such offence, and

(b) when any property has been seized as liable to confiscation, [release] the same on payment of the value thereof as estimated by such officer.

(2) On the payment of such sum of money, or such value, or both, as the case may be, to such officer, the suspected person if in custody, shall be discharged, the property, if any, seized shall be released, and no further proceedings shall be taken against such person or property.

Notification No. F/16 dated 23rd November, 1931- (1) Under State Counsil Resolution No. X of 5th June, 1924, all officers of the Forest department of rank not inferior to that of Probationary Assistant Conservator of Forests and such Forest rangers as may from time to time be notified by name are invested with the powers described in section 38 of the Forest Act, 1987.
(2) This notification supersedes Notification No. F/12 dated the 19th July, 1926.

Section (39): Presumption that the possession of forest produce is illicit: When in any proceedings taken under this Act or in consequence of anything done under this Act a question arises as to whether the possession of any forest produce of a person is illicit or not such possession shall be presumed to be illicit until contrary is proved by the accused.

Section (39-A): Double penalties for offences: The penalties which are double of those mentioned under the provisions of this Act or rules framed there under shall be inflicted in cases where the offence is committed after sunset and before sunrise, or after preparation for resistance to lawful authority or where the offender has been previously convicted of a like offence.

Section (41): Investment of powers to Forest Officers
(1) the Forest Officers are invested with the following powers, that is to say:-
(a) powers to enter upon any land and to survey, demarcate and make a map of the same.
(b) the powers of a Civil Court to compel the attendance of witnesses and the production of documents and material objects;
(c) Power to hold an inquiry into forest offences and in the course of such inquiry, to receive and record evidence; and
(d) power to issue search warrants under the provisions of the Code of Criminal Procedure, Samvat 1989: Provided that powers under clause (b) and (c) shall not be exercised by a Forest officer below the rank of a Range Officer Provided further that the powers under clause (d) shall not be exercised by a Forest Officer below the rank of a Divisional Forest Officer.

(2) Any evidence recorded under clause (c) of sub-section (1) shall be admissible in any subsequent trial before a Judicial Magistrate; provided that it has been taken in the presence of the accused person.

(3) Any Forest Officer not below the rank of a Range Officer may delegate his powers of inquiry to the Forester if the offence is compoundable under section 38 of this Act.

Section (42): Forest officers to be public servants

(1) No suit or criminal proceeding or other legal proceeding shall be initiated against any public servant for anything done by him in good faith under this Act.
(2) No Court shall take cognizance of any offence alleged to have been committed by a Forest Officer while acting or purporting to act in the discharge of his official duty except with the previous sanction of the Government.

Indemnity for act done in good faith - No suit shall lie against any public servant for anything done by him in good faith under this Act.

Section (43): Any Forest officer or Police officer who vexatiously and unnecessarily arrests any person or detains any person when arrested or seizes any property on pretence of seizing property liable to confiscation under this Act, shall be punished with imprisonment of either description for a term which may extend to six months or with fine which may extend to five hundred rupees or with both.

16. 6 THE LEGAL POWERS OF FOREST OFFICERS

16.6.1 Power of Arrest

By the JK Forest Act (section 36) any Forest Officer (or Police officer) may without orders from a Magistrate, and without a warrant, "arrest any person against whom a reasonable suspicion exists of his having been concerned (*i.e.,* as a principal or abettor) in any forest offence provided that the offence is punishable with imprisonment.

There must be no "unnecessary" delay in sending the person arrested before a Magistrate having jurisdiction. Alternatively, the forest officer making an arrest can hand over the person to officer in charge of the nearest Police station.

16.6.2 Power to seize Property

The Forest officers are entitled to seize all forest produce in respect of which there is reason to believe a forest offence has been committed, as well as all cattle, tools, boats, carts, vehicles etc, used in committing it. (Section 26). A mark has to be put on the property seized, and a report made at once to the Authorised officer for initiation of confiscation proceedings under section 26(3) of JKFA under intimation to Magistrate having jurisdiction: where property seized is government property and no offender is found, then a report to the seizing officer's superior is alone sufficient.

16.6.3 Power to interpose and prevent Offences

Forest officers (and Police officers) are bound to prevent, and may interpose for the purpose of preventing, forest offences. This would naturally include the right of warning people, and of taking cognizance of persons wandering about in the forest armed with axes, saws, etc. Forest officers can also take cognizance of movement of ponies, vehicles etc in and around the forests to check modes of illegal transportation of timber etc. Forest officers, properly empowered, are also entitled to guard against fire, by notifying certain seasons *during which only* the carrying of fire in government forests is permitted.

16.6.4 Power to demand Aid from certain Persons

This is the place to mention that in certain cases forest officers are empowered to demand aid in the execution of their functions.

At a timber station or depot, all servants, whether Government or private, employed at such stations, may be called upon to aid in case there is danger to the property stored there, in any emergency (such as cases of flood or fire). (J & K Forest Act, section 18)

Forest officers may also demand aid in extinguishing forest fires, in preventing offences, and in discovering and arresting offenders, under section 48 of the Act. In this case the persons liable to give such aid are—

(a) Rightholders*;*

(b) Persons holding permission to take produce or to graze cattle;

(c) the servants and employees of *(a)* and (A);

(d) every person employed by Government or remunerated by Government for services in any village contiguous to the forest;

and these persons are also bound to give information of offences that may come to their knowledge.

16.6.5 Aid by the Police

The section 36-C of J & K Forest Act states that any Forest officer may requisition the services of any Police officer to assist him for all or any of the purposes specified in section 26 (seizure), 35 (defacing tree marks and altering boundary marks) and section 36 (arrest) of this Act and it shall be the duty of every such officer to comply with such requisition.

The Forest Act is categorical that Forest officers have right to demand the aid of the public force (Police) in searching for stolen property, or in preventing offences, or arresting offenders, or in cases of fire.

Under the Criminal Procedure Code, if it is a case of offence of the graver kind *(e.g.,* theft) cognizable by the Police, the Police would be bound to take up the case on the information of a forest officer. Under the Forest Act, all offences (except those minor ones which are compoundable under Section 38) are "cognizable" by the Police; hence, according to section 156 of the Criminal Procedure Code, the Police officer has power to investigate such a case and is bound to do so (section 157), if it occurred within his jurisdiction, unless the proviso to the section applies.

Further under section 150 Crpc:- Every police officer receiving information of a design to commit any cognizable offence shall communicate such information to the police officer to whom he is subordinate, and to any other officer whose duty it is to prevent or take cognizance of the commission of any such offence**.**

NOTE: Section 156(Crpc): Police officers power to investigate cognizable case.-
(1) Any officer in charge of a police station may, without the order of a Magistrate, investigate any cognizable case which a Court having jurisdiction over the local area within the limits of such station would have power to inquire into or try under the provisions of ChapterXIII.

(2) No proceeding of a police officer in any such case shall at any stage be called in question on the ground that the case was one which such officer was not empowered under this section to investigate.

(3) Any Magistrate empowered under section 190 may order such an investigation as above-mentioned.

Section 157 (Crpc): Procedure for investigation.-

(1) If, from information received or otherwise, an officer in charge of a police station has reason to suspect the commission of an offence which he is empowered under section 156 to investigate, he shall forthwith send a report of the same to a Magistrate empowered to take cognizance of such offence upon a police report and shall proceed in person, or shall depute one of his subordinate officers not being below such rank as the State Government may, by general or special order, prescribe in this behalf, to proceed, to the spot, to investigate the facts and circumstances of the case, and, if necessary, to take measures for the discovery and arrest of the offender: Provided that- (a) when information as to the commission of any such offence is given against any person by name and the case is not of a serious nature, the officer in charge of a police station need not proceed in person or depute a subordinate officer to make an investigation on the spot; (b) if it appears to the officer in charge of a police station that there is no sufficient ground for entering on an investigation, he shall not investigate the case. (2) In each of the cases mentioned in clauses (a) and (b) of the proviso to sub-section (1), the officer in charge of the police station shall state in his report his reasons for not fully complying with the requirements of that sub-section, and, in the case mentioned in clause (b) of the said proviso, the officer shall also forthwith notify to the informant, if any, in such manner as may be prescribed by the State Government, the fact that he will not investigate the case or cause it to be investigated.

16.6.6 Power to use Weapons or to use Force

With regard to question whether a forest officer is justified in using his weapons in resisting offences etc; no special rule is laid down on this subject, but the usual law of the right of private defence of course applies to forest officers as to any others. This right is stated in sections 97-106 of the Indian Penal Code, and it extends to defending one's self or the person of anyone else against any offence affecting the human body, or one's own property, or the property of Government, or of anyone else, whether movable or immovable, against theft, robbery, mischief, or criminal trespass, or attempts to commit these offences. The right extends even to killing the person attacking, in those very grave assaults against the person, which reasonably cause immediate apprehension of death or *grievous* hurt (section 100, Indian Penal Code), but not otherwise; and in cases against property (section 103, Indian Penal Code) only in grave cases of robbery, house-breaking by night, or mischief by fire to a human dwelling or place used for the custody of property, but not otherwise. In *all* other cases it only extends to causing harm, short of death, to the wrongdoer.

In *no* case does it extend to doing *more harm than is necessary* to effect the object of defence.

In no case also does it arise if there is time to apply to the public authorities for help.

It may also be mentioned here that if a *public servant* causes death, though exceeding his real powers, but acting in good faith and doing what he believed to be lawful and necessary

for the discharge of his duty, and bearing no ill will to the person killed, he cannot be charged with murder, but only with culpable homicide. (Section 300, Indian Penal Code)

The Criminal Procedure Code says (section 46) that a *Police* officer, *or other* person authorized to make an arrest, may use all means necessary to effect the arrest if that arrest is forcibly resisted; but this does not extend to causing death, unless the offence for which the arrest is made is one punishable with death or transportation for life.

This could not of course deprive the officer of the right to kill the person resisting if the *resistance was so violent that it caused to the officer*
reasonable apprehension that he himself would be killed, or subjected to grievous hurt; because, in that case, the right of defence above alluded to would come into play.

16.6.7 Power of Search and Arrest

The powers incidental to an arrest, such as the power of entering a house, breaking a door and so forth, have been already described. And the "search warrant" has also been alluded to. Forest officers are invested with powers under Section 41(1)(d) to issue search warrants under the provisions of the Code of Criminal Procedure. The same powers cannot be exercised by a forest officer below the rank of a Divisional Forest officer.

JAMMU AND KASHMIR FOREST DEPARTMENT
(Under section 41(1)(d) of J&K Forest Act and Section 94 of CrPC)

Warrant to Search Suspected Place of Deposit

To

.....
(Name and designation of a Forest Officer above the rank of a Forest Guard)

No..... Dated:.....

Whereas information has been laid before me, and on the inquiry thereupon had, I have been led to believe that the _____
_____(describe the house or other place i.e., name of the owner of the house or premises to be searched) is used as a place for the deposit (or sale) of property (or if for either of the other purposes expressed in the section _____(state purpose i.e., nature of offence and section of forest act or other law applicable).

This is to authorise and require you to enter the said house (or other place) with such assistance as shall be required, and to use, if necessary, reasonable force for that purpose, and to search every part of the said house_____ (or other place, or if the search is to be confined to a part, specify the part clearly), and to seize and take possession of any property_____ (or documents, or stamps or steals, as the case may be) (add when the case requires it) and also of any instruments and materials which you may reasonably believe to be kept for the manufacture of forged documents, or counterfeit 'stamps, or false seals (as the case may be) and forthwith to bring before this officer such of the said things as may be taken possession of, returning this warrant, with an endorsement certifying what you have done under it, immediately upon its execution.

Dated, this ..... day of..... 20.....

Divisional Forest Officer,

Rajouri Forest Division,
Rajouri

16.6.8 Power to conduct Prosecutions

It will naturally be asked what powers forest officers of any grade have to conduct prosecutions, or to appear as complainants in a Criminal Court, on behalf of the State, to procure a summons against an offender, and conduct the case. It is to be regretted that nothing definite is laid down about this. Most certainly, forest officers ought to have a definite standing before the Magistrates' Courts in this respect.

At present everything is matter of inference, or at best of the permission of the Magistrate. A forest officer can certainly take cognizance of an offence and arrest an offender and take him before a Magistrate. Of course, therefore, he may appear on the trial (if one follows) as complainant; but to be complainant is not the same thing as being allowed to conduct the case, to examine or cross-examine witnesses, and address argument to the Court. By the Police Act, section 24, it is expressly provided that any Police officer may lay information, act, investigate and prosecute any case before a Magistrate. By the Criminal Procedure

Code, section 495, the Magistrate may in any trial before him (or preliminary enquiry) *permit* any person to conduct the prosecution. So the forest officer might get *leave* to prosecute. Government might also appoint forest officers "public prosecutors" for their own class of cases, under section 492. In any grave case the Government would appoint a public prosecutor or send a Government Advocate; but this does not remove the daily inconvenience of wanting a recognized *locus standi* for forest officers in the Magistrates' Courts, and the want of some section in the forest law just like the section 24 of the Police Act, or, better still, like the French Code.

As to the powers of forest officers to act in civil suits, see the section on Government suits in the Chapter on Civil Procedure law.

16.6.9 Power to compound Offences

Officers specially empowered by the Government under section 38 of the J & K Forest Act, have the right to '*compound*' all forest offences (except those grave ones specified in section 35 or section 43 of the Act). The composition consists in accepting a sum of money as compensation for damage done: if this is paid, the person is set free, and any property or cattle seized is let go.

No person, it will be understood, is in any way bound to pay the sum required. If he thinks the sum too high, or that he has committed no offence, or can show a valid excuse, he may refuse to pay and submit to be tried for the alleged offence before a Magistrate.

16.6.10 Powers under Forest Act, Section 41

Lastly, forest officers may be invested with certain special powers under section 41, J & K Forest Act.

The power under (a) relate to the survey of land, and enquiries into rights, and may be required when a forest officer is sent on survey duty, preliminary to a settlement or otherwise, or perhaps when he is working with a Forest Settlement Officer without himself being actually appointed Joint Settlement Officer (in which case he could be vested with the powers of the office).

The power under (c) relates to the powers of a civil court invested with forest officers to compel the attendance of witnesses and the production of documents and material objects;

The power under *(d)* relates to the detection of offences, and to this has been already alluded to.

16.6.11 Power to record Evidence on the spot

Under section 41 *(c) t*he forest officer empowered may hold a preliminary enquiry into a forest offence just as the Police do, only with this important difference that he may *record evidence;* and this, *provided it has been* taken in the *presence* of the *accused,* is admissible in a subsequent trial before a Magistrate, but may, of course, be disproved or contradicted.

How officers should record evidence in such cases may be learned from the section on record of evidence under the Criminal Procedure Law.

The use of this power is very limited: it is not intended to be used as a matter of course in every forest case, but only where the forest officer comes across some case in which the witnesses are at hand, and the accused is either arrested on the spot or can at once be

brought there; also where the facts are such that the evidence of them is likely to disappear by lapse of time and influence of weather etc, unless they be proved, and the record of them secured, at once. It would not of course be applied where no offender was found, or where none could properly be arrested at or near the spot, nor would it be where the witnesses were not on the spot or close by and could be questioned at once: in such cases a police investigation must be sought, or a complaint made to a Magistrate. At best, the power in the Act is merely a half measure, a tentative introduction of a new power, which will no doubt, on revision, be placed on a proper basis.

16.6.12 Powers as receivers of Government Revenue

Forest officers have also certain powers in connection with collection and receipt of revenues, and expenditure of Government money.

There are departmental rules about the power to expend money provided in the divisional budget, and also rules about keeping accounts, dealing with revenue received, supplying subordinates with funds by imprest advances, and so forth, which are laid down in the Departmental Code, and with which this manual has no concern. Forest officers may also receive revenue from sales of forest produce and so forth, but they have no functions to execute for its actual recovery. Generally payments are made before delivery, but where this is not so, or where otherwise there are outstandings to be recovered, all the forest officer has to do is to report (in a form prescribed by order) to the Collector who can recover as an arrear of land revenue (J & K Forest Act, section 52)

(a) All money payable to Government under the Act or rules;
(b) All money payable on account of any forest produce,
(c) All money as expenses incurred in the execution of the Act in respect of such produce.

16.7 OFFENCES AGAINST THE AUTHORITY OF PUBLIC SERVANTS

1. Resistance to Summons, Arrest etc

In order that the legal powers given to public servants may be exercised to any purpose, it is obviously necessary that a corresponding liability should be imposed on private persons in case they resist the execution of those legal powers. If forest officers, for example, can demand the aid of certain persons in putting out a forest fire, it must be made penal in those persons to neglect or refuse to give such aid. If a forest officer can arrest an offender, it is penal for the offender to resist *prima facie* lawful arrest.

The penal provisions are provided in Indian Penal Code in chapter (X) under heading "of contempts of the lawful authority of Public Servants"

Under sections 172-173 are punishable, cases where a *legal notice, summons,* or *order* is to be served, and the person *absconds* or *resists* service. The latter section includes also the intentional *tearing down* of notices etc, legally *posted,* as, *e.g.,* in cases where a summons which cannot he served personally, is attached to the door of the house where the person resides.

Under section 174 is punishable the intentional refusal to *attend* in obedience to a summons, order, etc lawfully issued. Section 175 punishes a similar *refusal* to *produce documents.*

Sections 178-79 and 180-81, refer to refusal to take oath, or answer questions, or to sign depositions and statements, and to making false statements on oath.

Section 182 may sometimes come within the practice of a forest officer. Here the offence is that of a person giving *false information* to a public officer, so that the officer may *use his power* (of arrest, search, seizure, etc) to the *injury* or *annoyance* of any person, with whom, but for the false information, the officer would never have thought of interfering.

2. Resistance to Seizure or Arrest

Forest officers have in certain cases the power to seize property liable to confiscation or cattle in the act of trespassing. Resistance to seizure in such cases is punishable under section 183.

Resistance to lawful arrest of the person comes under section 224, and resistance offered to the arrest of another person, under section 225.

3. Omission to give Aid or Information

More directly important to forest officers are sections 176-7, which punish the intentional omission to give information of a fire, a forest offence, etc, or the giving of false information by persons under legal obligation to give information, and of course true information, as far as they know.

Section 187 further makes it penal to refuse or neglect intentionally to give assistance in cases in which the public servant is empowered by law to require assistance.

4. Obstruction in executing Public Duty

The general case of obstruction of a forest officer in the execution of his duty is punishable under section 186.

Section 189 punishes threats of injury to a public servant, with the object of inducing him to do, or forbear from doing, any official act; the threat is punishable whether it imports injury directly to the public servant, or indirectly to someone in whom the offender believes the public servant to be interested.

In another part of the Code will be found similar provisions applying to cases where the offender goes beyond threats, and actually uses force, or causes hurt, or grievous hurt, in the attempt to deter the public servant from his duty. (Sections 332, 333, and 353, Indian Penal Code)

Section 184 punishes obstruction to a lawful sale conducted by a public servant as such: and section 185 refers to illegal bids at such auctions.

Sections 170-171 punishes the personating of a public officer or wearing a garb or carrying a token similar to that used (as a matter of fact) by any class of public servants.

16.8 APPLICATION OF RANBIR/INDIAN PENAL CODE TO FOREST OFFENCES

Ordinary Acts of mischief, trespass, petty theft of woods and offences against produce in transit, are generally best prosecuted under the Forest Act. But wherever the offences are of serious nature and special criminality appears to be involved, the RPC should be resorted to.

Some of the sections, which may be used while prosecuting forest offenders, are listed below. For details the RPC may be referred and in cases of very serious nature it is always advisable to appoint a pleader as no manual can be a substitute for and experienced legal practitioner.

Table 16.1: Application of RPC/IPC to Forest offences

S.No	Nature of offence	R.P.C Section	Comments
Offences directly connected with Forest or its produce			
1.	Theft or misappropriation with its attendant offences	378, 403	Theft always refers to movable property which is in possession of the person robbed which means the section can be applied when the tree is cut and separated from ground or soil is taken out, fruits pulled out etc. if the log was lying on road side and not in possession of any one it is not theft but criminal misappropriation (s. 403)
2	Receiving stolen property	410, 411, 413, & 414	Property possession of which transferred by theft, extortion or robbery or which has been criminally misappropriated is a stolen property (s. 410). Dishonestly receiving and retaining it is punishable u/s 411. Habitual dealing in such property (s. 413) and assisting in concealment is u/s 414. Here circumstances are important as receiving the property at night at a very low price and trying to bury it and conceal
3	Mischief	425, 427, 437, 430-1, 428-9	To prove mischief we need to prove the intention of the offenders to cause or knowledge that it is likely to cause wrongful loss to public or to a person. It only relates to property and not men. Minor mischief is covered u/s 426. If the damage is Rs. 50/- or more (s. 427) and if the damage by mischief by say fire is Rs. 100/- or more, it is covered u/s (437)
4	Criminal	441, 413-4, 445-50	It is advisable to apply the provisions of special Act.
5	Abetment of	40, 108	Refer S. 107 to understand abetment. It is not

	offences	explanation 2, 109, 111, 115, 114	necessary that offence is committed. S. 40 explains that offences under special Acts, are also included in abetment so there is no need for its specific mention in the RPC.
6	Attempt to commit offences	511	An attempt requires some penal action done towards the commission of the offences. Its punishment is equal to the act itself. Prosecution for attempt should be considered only in serious offences.
Offences indirectly connected with forest Administration			
1.	Unlawful assembly	141-143, 144	If five or more persons assemble with the object of resisting the execution of Forest law or by means of criminal force or show of such force, compel anyone to do what he is not bound to do or not to do what is legally entitled to do with the object of committing an offence under any law, such assembly is unlawful and punishable under 141-143. If the party is armed, S. 144 applies.
2.	Giving aid & information	48 JKFA, 176, 187, 177, 201	If a person is illegally duty bound to give information or render assistance in forests cases u/s 48 JKFA omits intentionally to do so, he is punishable u/s 176 or 187 respectively. If the information given is false (s. 177) and if evidence is caused to be destroyed (s.201) shall apply. The non-compliance of Sec. 48 JKFA is also punishable under Sec. 49 of JKFA.
3.	Giving false evidence	191 – 195	
4.	Concealing offenders	202	
5.	Breach of trust	105, 409	If the Forest Contractor rather than transporting timber which may be very costly burns it or buries it and does not use it himself (S. 105) but if clerk makes away Government cash, he is liable u/s 409.

16.9 SEIZURES

As explained above in Forest Act in Section 26 that when there is a reason to believe that a forest offence has been committed in respect of any forest produce, such produce together with all tools, arms, boats, carts, equipment, ropes, chains, machines, vehicles, cattle or any

other article used in committing any such offence may be seized by a Forest Officer or Police Officer.

16.10 PROTECTION AGAINST FOREST FIRES

Fires are most destructive elements. They destroy all life forms, cause serious soil erosion, kill all the microorganisms and destroy the ecosystem that had been built up over a long period of time. Repeated fires arrest progressions of vegetation by process of degradation. They also denude soil paving way for massive soil erosion and siltation of dams, besides causing atmospheric pollution. Timely prevention and suppression is the key to fire control. Guidelines for prevention and control of forest fires have been issued by Government of India in letter no 9-6/99-FPD of Ministry of Environment and Forests.

16.10.1. Fire management

16.10.1. a) Objectives

i. To promote conservation of biodiversity and arrest the degradation of forest lands.
ii. To improve the sustainable production of timber and non timber forest produces in forest lands.
iii. To maintain the balance of eco systems in forests and conserve rare and endemic species.
iv. To maintain soil cover and prevent soil erosion.

16.10.1.1. Forest fire management assumes great significance as forest fires, have a profound impact on biodiversity and productivity on forestlands. Considering the permanent damage a forest fire makes to the forest and environment, even if it is on a smaller intensity, ecological and social impacts of it are hard to quantify. Hence, an attitude emphasizing total prevention of forest fire is to be evolved. Awareness on fire damages must be inculcated in the minds of the people. Often forest fires are not reported. Even if reported, the losses are under-estimated. Forest Department often fails to project the actual losses due to forest fire and hence the Government is not giving sufficient funds to prevent loss due to forest fire. This, in turn, affects the efficiency of the system. Method of approach in a fire situation is to be re-vamped. It is with the above goal in view that the Department has now formulated Fire Management Plan, prescribing essential components required for the plan, based on which Division level plans have been drawn up for the project period. This working plan describes briefly the salient features of a fire plan and recommends implementing it successfully.

16.10.1. b) Time and Source

Fires in the forests start from Mid of April continuing up to arrival of monsoon to this tract (either second fortnight of June or upto end of July) every year. The interface of the forests with the human interests in enclosures and among the peripheral dwellers has increased with the increase in boundary length and these are the sources of fire. Farming, rehabilitation, Gujjar and Bakarwal settlements and encroachment areas in and around the forests are the sources of most of the forest fires.

16.10.1. c) Causes of fire

Most of the fires are accidentally caused due to carelessness. These are

i. Fires caused by trespassers and forest users by careless slinging of burning cigarette butts and matches on to the forest floor.

ii. Fires caused by campers in forests who do not put out campfires and fires lit for cooking, before leaving.

iii. Fires started by occupants adjacent to forests when they burn slash for land clearing.

iv. Incendiaries - fires willfully set by people for burning vegetation either for collection of NWFP or for hunting lesser animals or by the graziers for getting new flush of grass. Fires caused by the unemployed youth seeking employment as firewatchers are also common.

16.10.2. Fire Management planning

Fire management plans are prepared for each Division. The Range should be treated as the unit for planning with support maps at 1:50000 or larger showing details of relief and features which are having a bearing on fire, details of which are enumerated in the standard format supplied.

Annual action plan should be prepared based on the strategic plan for protecting the forests from fire. Planning should be prophylactic rather than curative, the concern should be for preventing fire. More emphasis should be given to development of a preventive strategy rather than control.

Planning should be location specific, identifying clear, measurable, cost effective and achievable goals for each, specifying responsibilities as regard to detection, communication, organisation and control of fire. Planning should be done after prioritization having due regard to the resources available. Planning should be more intensive for areas, which are more fire prone.

Wherever possible, participatory fire management strategy should be evolved based on the broader guidelines issued on this aspect. No plans will be approved without this component in future. For prevention of fire and for minimizing fire damage, 'preventive burning' should be planned and strategy laid out. Undue and unwise rigidity regarding the width of fire lines should be dispensed with and a need based strategy for this prescribed for different areas. Use fire as a management tool in protection and habitat management for wildlife.

Command structure with unity of command should be specified for each strategy. Illustration of this and positioning of equipment should be annexed to the plan for quick, efficient and on the spot organisation of fire fighting teams. Data should be gathered on the sources of secondary support such as the voluntary fire fighters, NGOs, organisation etc.

Details of the resources like man power, vehicles, wireless etc available with other wings of Forest Department and also those with other departments like Fire force, Meteorology etc. should be tapped during fire season.

Fire safety measures should be described in the plan and briefing on fire should essentially include briefing on fire safety also. Unsafe and careless fire fighting strategy will not only be hazardous or even fatal to the men at the fire front, but also will impede their efficiency in

fire situations resulting in more areas being destroyed by fire. Some of the instructions to be given in this regard are

a. Wear non synthetic clothes to cover the body so as to protect it from radiant and convection heat which usually keeps the fire fighter at bay.

b. The head gear and goggles to protect the head and eyes from radiant heat, flying embers and sparks.

c. Use foot wear, preferably leather boots, while working in fire burnt areas.

d. Carry enough quantity of water to guard against desiccation by heat.

e. Keep a first aid kit with the team while going to fight fire.

f. Even though casualties of men during forest fires are rare in Kerala, there are cases where the raging and fast moving grass fires change speed and direction with changes in wind. Therefore, in any fire situation, watch the fire intensity, spread and behavior and plan for an escape route in case of danger.

g. Keep communication between fire fighters effective while combating fire.

h. Remember that the air near the forest floor is heavier, cooler and fresher.

i. In case the fire fighter is surrounded by fire, cutting off the escape route, shield the body with any non-conducting, non-burning material.

16.10.3. Briquette Manufacturing

The Chir pine needles must be put in use for meeting the requirement of heat energy so that its availability in the Forest floor is reduced in one hand and improves the local economy on the other side and reduces the forest fire hazard significantly. The Forest Department shall create awareness among the people so that they will come forward for purchase of briquette making machine from the market. Like other Himalayan states, the forest department may enter proper agreements with the local people for collection of needles.

The chir pine needles are collected from the forest. The needles containing carbon, resin, lignin and other organic macro-molecules, burnt in controlled environment for inducing carbonisation process. The carbonised material is mixed with cowdung and the slurry mass is converted into briquettes. The wet briquettes are sundried to remove the excess moisture. Now, the briquettes can be used for heating process. In temperate Kashmir valley it can be used for warming of homes during winter season. Also, as the fuel it can be used in the boilers in industrial areas. By making briquettes the fire hazard is reduced in forest area, giving a livelihood to the local people and meets a part of energy demand.

16.10.4. Budget

The quantum of actual works relating to fire management activities is wholly dependent on the availability of funds in time for these works. Thrust will be given on fire prevention management and creating local awareness about the damages caused by fire through

participatory fire management programmes. An annual allocation of Rs.10.00 lakhs would be required for the fire management activities.

16.10.5. Participatory approach for fire protection

PFM can be adopted in areas adjacent to habitations in degraded forests to ward off the damages due to fire as described in chapter on Participatory Forest Management.

- Engagement of seasonal fire watchers and deploy them at sensitive places so that fire hazard is reduced.
- The bridal paths are to be constructed / renovated so that the inaccessable places are reached in the least time.
- At identified places the ridge tops must be cleared from combustable materials so that fire incident from one side of the ridge does not cross to the other side.

16.11. BOUNDARY CONSOLIDATION

Timely updating of maps, survey and demarcation of boundaries are highly essential for protection and scientific management of forests. It is very important that the forest boundaries are properly demarcated and maintained for the effective protection of forests. The total length of main line boundary of Rajouri Forest Division is more than 1329 miles with 15113 BP's, out of which a very little length has been demarcated. The remaining boundary, which is very vulnerable, should be demarcated as early as possible. This work should be given top priority and completed during the present plan period itself.

16.11.1 The forest area of Rajouri Forest Division is 720.69 Sq. Kms consisting of 15113 and 4293 B.P's in main and chak lines, running over 1329 and 242 miles in main and chak line respectively as recorded in Form-1 of the division.

16.11.2 ENCROACHMENT

The forests of this division are under a great pressure of encroachments. The encroachment is heavy near habitations and around the 'Chaks'. While increase in population is the root cause - of this, low productivity of agricultural fields and land hunger are the other reasons. They may be done by a single family or collectively by a group of families. In the latter case a number of villagers collectively and in open defiance of law, encroach upon some treeless and/or even land with scattered trees in forest area and start cultivating it and making their huts on it. It has been observed that this collective encroachment is usually done with the direct or indirect connivance or even encroachment of some political party.

In addition to the causes mentioned above, the other factors responsible for this encroachment upon forest land are;

(a) The lack of proper boundary inspection and thus delay in detection of cases of encroachment.
(b) Absence of alternative employment for landless or the people with very land.
(c) Absence of clear policy of Govt. and other legal difficulties.

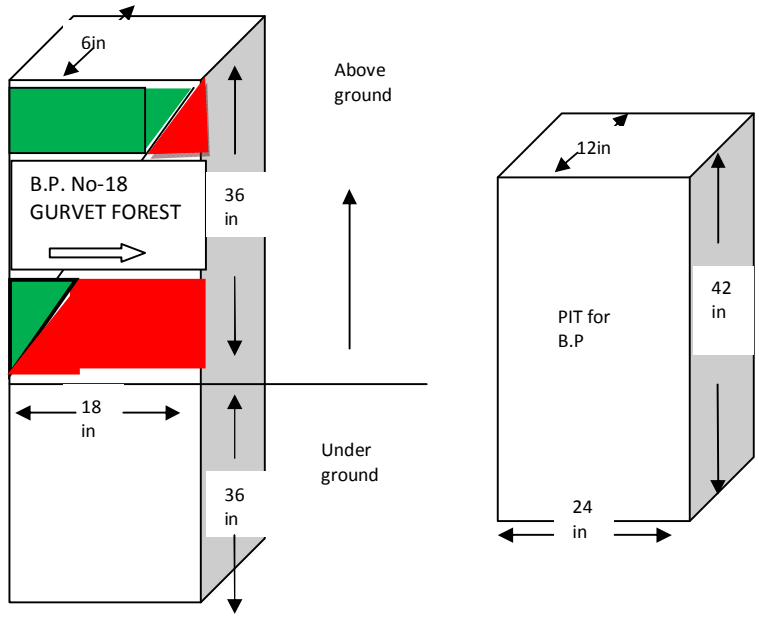
The Government of J & K has already decided that anybody who has the 'Girdawari' of 1971 AD for any land shall be treated as legitimate owner. Now the forest land encroachers have started getting certificates from Girdawars and Patwaris to the effect that land in question was occupied before 1971, even if the land (forest land) has been occupied recently. Thus forest department suffers in the hands of revenue department.

In 1982 AD Government has given wide ranging powers to Divisional Forest Officers, to evict the encroachers from the forest land but because of the connivance of local revenue, police and forest personal it becomes a difficult task to detect the encroachment and evict the encroachers. The other legal difficulty is that even after the detection of encroachment and prosecution of offender in the court of law, he continues to cultivate the land and from its earnings, keeps on pursuing the case in the court. Thus he does not lose anything even if he pursues the case for several years.

16.11.3 A new B.P. design has been proposed with a view to increase the effectiveness of forest demarcation in the field to prevent encroachments. The specification of B.P. design are presented below:-

Component	**Specification**
Height (above ground)	36 inches
Width	18 inches
Thickness	6 inches
Underground Base	36 inches
Structure	Cast on spot in 12"X24"X42" pit on steel frame
Surface	Plastered, green/red painted carved BP number and direction, name of forest written in white Paint.
Cost	Rs.2250 + carriage of material, cost escalation etc

Fig 16.1: BOUNDARY PILLAR DESIGN



CHAPTER-XVII

WORKING PLAN FOR THE JOINT FOREST MANAGEMENT (OVERLAPPING) WORKING CIRCLE

17.1. The J&K (Rehabilitation of Degraded Forests & Village Plantation Rules 1992)

17.1.1 The Joint Forest Management had started in the State with the issue of Government order for this purpose. J&K Govt. vide SRO-60 of 1992 dt. 19-3-1992 notified J&K (Rehabilitation of degraded forests and village plantation) Rules 1992, in view of the necessity of active participation of local people in the afforestation and protection of the plantations.

17.2. Salient features of these rules are*:*

(i) **Composition:** There shall be constituted a Village Forest Committee in each village for the purpose of protection and management of degraded forests. One adult male/ Female member of each independent household residing at the edge of degraded forests shall be the member of the committee. Each village committee shall have an executive committee of eleven members (including at least two women and two members of SC/ST/OBC). The members of executive committee shall be elected annually. The executive shall elect of its members as president and one treasurer. The concerned block forests shall act as Member Secretary.

(ii) **Meetings:** The Member Secretary of executive committee shall convene at least four meetings of executive committee and two meetings of General body in a calendar year.

(iii) **Agreement:** The village committee shall enter into a agreement with the DFO in terms of conditions agreed upon by the bodies. The agreement shall be in the form "A" appended of these rules.

(iv) **Functions:** The committee shall assist the department in the executions of works of protection, Plantations and prevention of trespass, encroachment, grazing theft etc. and inform the forest officials of any person attempting trespass or willful damage. The committee shall also assist the forest officials in distribution of usufruct amongst committee members.

(v) **Sharing of harvest:** The committee in consultation with all members will determine how to share a minimum 25% of the proceeds from the first major harvest from the plantation in kind or sale proceeds of produce of plantation of degraded forests amongst members after deducting the cost incurred by the department of raise, protect and maintain the plantation.

(vi) **Works:** The contents of the works to be under taken shall be decided in consultation with the village committee.

(vii) **Usufructury benefits:** The block forester in consultation with executive committee and with the approval of DFO will distribute among beneficiaries their share of usufruct from the final harvesting, not before the crop attaining the age of ten years. The members shall be entitled to collect free of royalty, without causing any damage to plantations, grass, fodder, dry fallen wood, pruning, thinning etc., with the permission of block forester.

17.3. Description of the Programme and Area

The National Afforestation Programme was started by Government of India in the X five year plan by amalgamating the programme and schemes of similar objectives. The aim of the programme is afforestation of degraded forests with the active involvement of local people. It was implemented through the registered society called Forest Development Agency (FDA). The programme basically the contain components such as advance work, creation and maintenance of closures for next three years. The degraded forests can be treated under any one of the modes such as aided natural regeneration, artificial regeneration, regeneration of perennial herbs and shrubs, silvipasture development and development of bamboos etc. The programme studies the socio-economic conditions of the people living close to the forests, their aspirations, available resources in their vicinity and the ways to fulfill their demands. The programme has a component of entry point activity under which some of their felt needs and infrastructure bottlenecks can be fulfilled.

The programme right from its introduction, was successfully implemented in this division. Later, in 2010, State Forest Development Agency (SFDA) was created by confederation of the individual FDA's. The following table shows the physical and financial progress achieved during the X and XI five year plans in this division.

Table 17.1. Table showing the Physical and Financial achievement of the FDA

Year	Fund released (in Lakhs)	Advance Work (Ha.)
2003-04		600
2004-05	51.85	100
2005-06	59.41	400
2006-07	61.00	0
Total X Plan	172.26	1100
2007-08	64.29	300
2008-09	55.00	250
2009-10	38.00	200
2010-11		
2011-12	48.00	200
2012-13	31.00	150
Total XI Plan	236.29	1100
G. Total	408.55	2200

17.4. Village Forest Committees

The Village Forest Committees (VFC) are the basic unit of the programme. All the households are the members of the General Body of the VFC. The VFC elects its Chairperson of the Executive Committee of the VFC. The Block officer is the Member Secretary. They collectively operate the consensus plan made by the public. The list of VFC's of this division is as follows.

Table 17.2. Table showing the VFCôs Rangewise

S. No.	Rajouri Range	S. No.	Kandi Range	S. No.	Kalakote Range
1	Manyal	1	Nagoon	1	Androla
2	Sasalkote	2	Larkuti	2	Bhatera
3	Sarotha Chowkian	3	Targain	3	Mahu
4	Mangal Nar	4	Sewa Jagir	4	Baroh
5	Rajdhani	5	Gakhrote	5	Manma
6	Shahdara	6	Bakori	6	Metka
7	Lah	7	Kandra	7	Khah
8	Hill tak	8	Bhindi		
9	Bhadakhana				
10	Tota Mohra				

17.5. Entry Point Activity

The Entry Point Activity (EPA) made the programme very successful. The small requirements of the people are being met by the EPA of the NAP. As the people are residing in the remotest part of the State, they depend on the Forest Department to fulfill their local demands like construction of small bridges, bathroom and other basic amenities. The EPA is very useful in addressing their demands.

CHAPTER- XVIII

WORKING PLAN FOR THE WILDLIFE MANAGEMENT (OVERLAPPING) WORKING CIRCLE

18.1. General Description of Fauna

18.1.1 The Rajouri Forest Division has varied climatic conditions ranging from sub-tropical in lower portions of Kalakote to alpine in upper reaches of Pir Panjal in Budhal and Darhal blocks. Due to the varied climatic conditions, variety of Fauna is found in this tract. A detailed list of animals as well as birds existing in the forests of this area has been given alongwith relevant details in Chapter –II.

18.2. Objective of Management

18.2.1 The Chief objective of wildlife management in this area is to protect and preserve the wildlife in general and the species which have already reached the brink of extinction in the tract for eco-logical educational and recreational purpose.

18.3. Evaluation of Existing Wildlife

18.3.1 Explosion in the population of human being as well as live stock has already taken the toll of wildlife. Wildlife has diminished very fast during the recent past and even some species have almost become extinct. The reasons for the present pathetic condition of wildlife are:-

(i) Destruction of habitat due to very high biotic pressure.

(ii) Practically there is no control over the hunting in this division.

(iii) It is very important to note that Markhor (*Capra falconari*) is regarded as king of wild goats, occurs only in Pir Panjal is not represented in any Wildlife Protected area throughout the country.

18.3.2 The Government of Jammu and Kashmir has set up a Wildlife Division for Poonch, Rajouri with its head quarter at Rajouri. An Assistant Wildlife Warden has been posted as Incharge Wildlife Division. The newly created Wildlife Division has already taken up Wildlife Survey of this area. The Wildlife is frequently observed in the following areas.

1. Shashera
2. Dera-ki-Gali
3. Ghamber Mughlan
4. Doongi Bathuni
5. Fatepur.

18.4. Detail of the Areas

Scheshara Conservation Reserve

18.7.1 Compartment 46 and 47 of Rajouri Range was brought under Scheshara Conservation Reserve. This area is undulating with moderate to steep slope and drains into river Sukhtao. Altitude of the proposed area varies from 900 m to 1140 m. The important wild animals reported from this area are leopard, barking deer, wild board, jackal, common Indian hare, Indian porcupine, Python, Cobra, Kalij Pheasant, Peafowl, Partridge species etc. These

compartments were recently transferred to Department of Wildlife Protection for further Conservation of the Wildlife.

Dera-Ki-Gali

18.4.1 The wildlife are frequently observed in the Compartment 74, 75, 77, 78, 79 of Surankote Range of Poonch Forest Division along with compartment 107 and 108 of Rajouri range Forest division. The altitude of the area varies from 1650 m to 2396 m. The important animal species reported to be existing in this area are Brown bear, Himalayan black bear, Leopard, Wild boar, Jackal, Common Indian Hare, Goral, Rhesus Monkey, Langoor, Kashmir Flying squirrel etc. Important avi-Fauna in this area is Monal Pleasnt, Kalij pleasant, black partridge, Grey partridge etc.

18.4.2 This area is ecologically rich but fragile and hence needs utmost care and protection on priority basis. Most of the animal species inhabiting this area are rear and endangered and consequently placed in schedule –I of Wildlife (Protection) Act, 1972 and J&K Wildlife Protection Act 1978, and appendices I and II of CITES. The scenic beauty and picturesque landscape of the area in association with its beautiful wildlife, hides in itself immense potential for eco-tourism and offer opportunities for recreational and educational purposes like nature interpretation and conservation awareness.

Ghambir Muglan

18.5.1 Compartment 88,89 and 95 of Rajouri Range of this Forest division is situated at an altitude of 1800 m to 3400 m. Goral (*Nemorhedus goral goral*), a goat like animal holding an intermediate position between goat and antelope is the key species of the area. Other animals reported in the area are Leopard, Jackal, Kalij pheasant, partridge species etc.

Doongi Bathuni

18.6.1 Compartment 26 to 36 and Compartment 38, 39 and 40 of Rajouri Range are frequented by Wildlife. The altitude of this area ranges between 800 m to 1200 m. A rich spectrum of faunal diversity has been reported from this area. Important animals are Leopard, Barking deer, Common Indian hare, Jackal, Wild board, Rhesus Monkey, Pea fowl; Grey partridge, Kalij pheasant etc.

18.6.2 This area represents one of the best forest stretches of sub-tropical portion of Rajouri forest Division with respect to its faunal diversity. Further availability of water at a number of places in the form of natural nallas make this area an ideal habitat for a number of animal species.

Fatehpur

18.7.1 Compartment 97 to 101 of Rajouri Range is frequented by may Wildlife Conservation. This area lies on Rajouri, Thanna Mandi road and is situated at an altitude of 1100 to 1400 m. The key faunal species of this area are leopard. Kalij pheasant, Common Indian hare.

18.8 Method of Treatment

18.8.1 For the proper and scientific management of the wildlife it is essential to know the number, distribution, habit and habitat of various wildlife species found in this area. For this purpose census of the wildlife should be carried out with the help of latest techniques at the earliest.

18.8.2 Communication and extension wing of the department should be strengthened to make people aware of wildlife protection act and rules. Wildlife protection committees should be constituted.

18.8.3 Various development works for the development of habitat should be taken up. Such works are construction of water points, construction of watch towers, bridal paths etc. Plantation of local species should be taken up in the gaps and effective measures for controlling the forest fires should be taken up.

18.8.4 The National Forest Policy (1988) has given the mandate to maintain the biological diversity. Since the forestry operations have the potential of changing forest conditions and therefore, habitats in a variety of ways. Hence, there is need to change traditional outlook in forestry especially in managed forests. This new approach to managed forests relates to issues pertaining to micro and macro habitats. The micro habitat elements include snags, den trees, tall and large crowned big old trees, trees with flaking and splitting bark, fallen trees, partially submerged (in streams) fallen trees, large hallow logs etc. Current research and management experience suggests retention of ten snags of large size per hectare in randomly distributed pattern. Similarly, five large hollow logs randomly distributed on forest floor per hectare should also be retained. Trees partially fallen in streams should be kept in spate category. Big size tall old trees with large spreading crown ought to be retained as well.

18.8.5 As far as possible, exotics should be avoided in the interest of native plants. In case it is unavoidable, exotics can be planted in suitable admixture with native species.

18.8.6 Treeless openings in all the cases should not be treated as blanks. They need to be managed for their associated characteristics, structural and biological attributes as well as ecological functions.

18.8.7 Caves, dens and overhangs are used by various species e.g. carnivores likes leopard and bear use such sites for shelter and breeding places. All the management activities in the forests should be planned and executed in such a way that these sites are not disturbed.

18.8.8 No markings of any nature should be carried out a width of at least 100 meters on either side of all streams/ channels of consequence, in view of their biological, ecological and watershed values.

18.8.9 Man-animal conflicts must be managed by both forest and wildlife departments. The Department of Wildlife Protection may create control rooms in interior areas so that the persons posted in these places can reach the conflict places at an earliest. Also the wildlife department provided the cages, nets, tranquillisors drugs vehicles for mobility to the field staff for effectively managing the conflicting situations.

CHAPTER-XIX
Misclleoneous Regulation

19.1. Development Of Chikri (*Buxus wallichiana*)

19.1.1 Chikri occurs gregariously on the southern slopes of Pir Panjal in Rajouri area between 1300 m to 3500 m altitude. These forests prefer northerly, cool, gentle sloping hills with relatively high moisture content and thick soil cover. In this Division it occurs along Ans nallah and its tributaries as well as in Darhal and Thanna Mandi catchments along nallas. *Buxus* occurs on shale and mica and avoids limestone formations. It also avoids exposed and hot aspects.

19.1.2 Chikri occurs in pure or nearly pure patches extending from a few to several acres in area. It generally occurs as a second crop in oak and fir forests, though at places it grows in monospecific stands due to the damage done by Gujjars, Bakerwals and local villagers to the over wood for fodder and fire wood purposes.

19.1.3 Chikri is a slow growing species. Plant is of medium size. It belongs to family Buxaceae. Other associates of Chikri are :

i) Quercus incana, Aesculus indica, Machillus spp., Litsea spp.
ii) Woodfordia frutocosa, Viburnum spp., Indigofera spp., Sarcocca saligna.
iii) Ferns.
iv) Rosa spp., Hedera helix.

19.1.4 This species has been of great economic importance right from Moghul period. The old traditional centres of manufacturing the Chikri wood articles are still existing at Thanna Mandi in Rajouri, which is situated on old Mughal Road. The Chikri wood articles like wooden utensils, wooden shoes, wooden combs and other souvenier articles have been in use since old times. The latest use in the manufacture of geometrical instruments, photoframs, furniture, toys etc. the good tumury and finshing properties of Chikri wood make it as valuable as ivory wood of Europe.

19.1.5 In view of the properties of Chikri wood and its uses mentioned as above, it can be utilized to promote the cottage industry in this area.

19.1.6 There is 32% decrease in Chikri trees during the last 20 years. There is some increase in number of trees in upper dia- classes but this increase is temporary as it is due to restricted movement of people in forests of Kandi Range and due to highly distributed conditions (militancy) in this area. Reckless cutting of Chikri trees for marking Chikri wood articles in Thanna Mandi market has already brought near endangered conditions for this species in the forests of Thanna Mandi area. This pressure is on the move to Kandi forests through Darhal area.

19.1.7 Chikri can be propagated through cuttings. Treatment of cuttings with growth hormones enhances the rooting percentage. Nursery raised plants can be transplanted on suitable sites. Care should be taken in selection of site as the species avoids exposed and hot aspects.

19.1.8 Natural regeneration comes in abundance. Effective protection of Chikri closures promotes regeneration and growth of Chikri. Hence, Chikri closures can be made and cutting of Chikri by the artisans should be regulated for sustained supply of chikri wood.

19.2. Encroachment and Demarcation

19.2.1 As already discussed in detail in Chapter –I, the demarcation in these forests is almost non-existent. Hence, it was not possible to make any estimate regarding forest area under encroachment. Major potion of the forest blanks around habitations are possibly under encroachment. It has been observed in Rajouri area that the local people consider only enclosed areas as forest lands whereas areas outside such closures are considered as land belonging to them. So a peculiar situation emerges, where areas which look complete forests or grasslands have been actually divided by local villager among themselves for their use. This is additional form of encroachment to the normal type of converting forest land into agricultural land.

19.2.2 Demarcation work has to be taken up on priority and on war footing in this division. R.C.C boundary pillars should be fixed. The pillars should be serially numbered and their forward and backward bearing recorded, distance from neighboring pillars should also be recorded.

19.2.3 Permanent bench marks need to be surveyed and fixed to make demarcation line permanent. Demarcation file of each compartment has to be updated and built up with help of revenue records in cases where demarcation record is not available . For the safety of demarcation records, *Mufaz Khana* was recently opened the Jammu and the demarcation files will be deposited. The process of translation of demarcation files to English and electronic form of storage and retrival through internet is also plan.

19.2.4 After completion of demarcation work, a detailed annual programme should be framed for inspection of boundaries. Every Forest Guard and Forester should inspect their respective boundaries (demarcation lines) at least once in every year and they should submit a certificate to this effect. Range Officer and D F O can check some percentage of demarcation line randomly. In order to facilitate the inspection of demarcation line, inspection paths should be constructed all along this line. It will also act as buffer for possible encroachment as well as fire line.

19.2.5 Whenever any incident of encroachment is detected, it should be immediately reported and action against the defaulters and efforts to evict the encroachers must start at once. If the case is brought to the court, it should be vigorously followed. The recently Amended Forest Act has given vast powers to forest officers which can be utilize in the best interests.

19.2.6 Some amount of money should be placed at that disposal of DFO to get information secretly about various kinds of forest damages, their nature, location and defaulters. Such money utilized should not be put to audit or scrutiny.

19.2.7 It is important to mention here that due to non-existent demarcation line large scale encroachment and other factors mentioned above, lot of difficulties were faced in the layout of boundaries at the time of field work of this plan. So, at times, location of demarcation was based on guess work and hence stock maps may not show exact boundaries in such areas. After completion of demarcation work, necessary corrections can be made on ground as well as on maps.

19.2.8 Inside the forests, there are large number of scattered small chaks. Productivity of these chaks is very low. Whenever possible these chaks may be acquired on payment of usual compensation.

19.3. Buildings, Roads, Paths and Bridges

19.3.1 Statement of buildings maintained by Rajouri Forest Division is given in Annexure XII. Some more buildings are proposed to be constructed during this plan period. Inspection hut, Kandi, needs to be rebuilt since it has been torched by militants. Moreover beat and block head quarters should be fixed at suitable locations. Guards huts should be constructed at beat head quarters. Similarly proper accommodation should be provided to block forest officer at block head quarters.

19.3.2 There is already a good network of roads constructed by Border Road Organization, PWD and army and almost all the forest areas have become quite accessible. The details of roads had already been given in Chapter-III. However, some roads/foot paths/ Inspection paths, have been made and maintained by Rajouri Forest Division the list of same is given in Annexure-XIII. Further construction of foot paths all along demarcation line has already been proposed. Moreover in Darhal and Budhal blocks more foot-paths need to be constructed. Emphasis should also be on the maintenance of existing foot paths/ roads.

19.3.3 A good number of bridges have been constructed and maintained by Border Roads Organization, PWD and Army. In some parts of Budhal and Darhal blocks, a few wooden bridges should be constructed by territorial division.

19.4. Fire Protection

19.4.1 Chir forests falling in sub-tropical zone are highly susceptible to fire especially during long dry spells in summers and winters. The proper regeneration of chir forests is very much dependent on strict fire control especially in areas where crop is open and established regeneration in inadequate. So protection against fires is on of the most important needs of all forest areas.

19.4.2 Efforts should be made to involve people in fire protection measures. People should be educated about the hazards and long term harms of forest fires. Fire protection committees should be constituted and reward should be given to individuals doing exemplary work in fire control in forests.

19.4.3 Control burning should be done in every chir forests in February i.e. before the start of resin tapping season. If it is not possible to carry out control burning in entire fire sensitive forests, a belt of sufficient width can be control burnt around important natural regeneration areas. Further 15 m fire line should be maintained on all ridges and prominent spurs in chir areas.

19.4.4 Details of fire Protection have already been discussed in proceeding chapters. The recommendations, for fire control should be implemented strictly.

19.5. Soil Conservation

19.5.1 The problem of soil erosion is very serve in this area. A soil conservation range is existing in this division to tackle this problem. Recently a soil Conservation Division has also been established in this area by the Directorate of Soil Conservation. Various Soil Conservation works executed by above said agencies are (a) Fencing of denuded areas (b) Sowing and Planting of enclosed areas (c) Check damming.

19.5.2 Detailed land use survey of this tract should be done. Data regarding soil character and degree of erosion in different areas should be collected. Micro watersheds requiring treatment on priority basis should be selected and treatment plan on integrated watershed basis should be prepared. Lands upto 33% slope may be cultivated with agricultural crops using agronomic practices like contour farming, mulching, inter-cropping with legumes, high yielding, improved seeds, fertilizers, manure etc.

19.5.3 Lands having 33% to 50% slope can be utilized for horticulture whereas those with more than 50% slope should be brought under permanent vegetation of fuel, fodder and timber species. Such plantations should be supplemented with soil Conservation measures like contour trenching, staggered trenching, gully plugging, etc.

19.6. Illicit Damage

19.6.1 Illicit damage in the form of illicit cutting of trees for fuel, fodder, timber and MFP and in the form of encroachment is rampant in this tract like any other division of the State. Timber sale depots should be opened in the non – concessional areas and sufficient quantity of timber should be made available at reasonable rates to curb the menace of illicit damage for timber. Detail of damage cases in Rajouri Forest Division from 20001-01 to 2013-14 is given chapter.

19.6.2 The Division of Forest Protection Force had been set up in this area with head quarter at Rajouri town. Effective utilization of this force shall contribute a lot in controlling the illicit damage.

19.7. Forest Nurseries

19.7.1 The detailed list of nurseries existing in this division has already been given in Chapter V of Part-I. Further details of nursery techniques have already been given in preceding Chapter of Part-II. More nurseries especially temporary nurseries at project sites have to be established during the plan period. Some important aspects of nursery techniques are reproduced again as under:

i) For one hectare plantation area, about 10 Sq.m space of nursery is required.

ii) The nursery soil should be preferably deep sandy loam sand and a mixture of soil, sand and manure in ratio of 6:3:1 is suitable.

iii) In case of prickings into bags, usually 2500 bags are kept in each sunken bed for planting one hectare area at the spacing of 2m x 2m.

iv) An assured water supply is the fore most requirements of any nursery site.

v) Seeds should be thoroughly ripened before sowing.

19.7.2 Chir nurseries can be established at a number of suitable sites in chir areas, keeping in view all the considerations required for this. For banj oak, suitable sites suggested for setting up nurseries are near Thanna Mandi, near darhal near Dhaleri and Bakori. Similarly suggested sites for temperate species like Fir, Kail, Walnut, Horsechest nut and even Taxus are near Budhal, near Darhal and near Kandi inspection hut site.

19.7.3 Sowing of seeds should be done shortly before the time when these germinate in nature. So the timing of sowing is very important. Some pretreatment should be given to the seeds before sowing them, as per the requirement of seeds of a particular species. Fir should be sown before snowfall while chir is sown in the beginning of rainy season. In case of fir one pricking of $1^{1/2}$ years old seedling at 15 cm spacing is necessary. Generally $3^{1/2}$ years old plants are planted in the field. At refectory sites, $4^{1/2}$to $5^{1/2}$ years old plants are planted.

19.8. Seed Collection and Storage

19.8.1 Seeds should be collected from healthy and middle aged trees. Mother trees in the ideal stands should be identified for the seed collection. Time of collection of seeds varies from species to species as under:-

Fir	-	October / November
Banj Oak	-	November
Aesculus indica	-	October / November
Dalbergia sissoo	-	December / January
Albizzia lebbek	-	January / February
Chir	-	March / April

19.8.2 Identification of mother trees has been taken up by Seed Development Division of State Forest Research Institute especially in case of chir in this area. Seed storage facility should be made available at least at divisional head quarter level. Seeds of improved varieties should also be procured from other sources/agencies.

19.9. Maps

19.9.1 Boundaries of the compartment / sub-compartments have been delineated on ground. Following maps have been prepared and are being submitted with the Draft Plan.

a. Working Plan Maps:- Three working plan maps, one each for each range, has been prepared on 1:50,000 scale showing boundaries of compartments, sub-compartments, ranges, divisions as well as various physical features like nallas, towns, rest houses etc. Three copies of working plan map of each range (one master copy and two duplicate copies) are being submitted with draft working plan.

b. Stock Maps:- Two types of stock maps have been prepared (I) individual compartments wise (II) Consolidated range wise stock maps have been prepared using LISS-III satellite

imageries supported by intensive ground truthing showing species and density of crop in the area.

i) Individual – Compartment wise stock maps have been prepared on 1:50,000 scale and are submitted in range wise sets. Master copies of individual compartment wise maps have been prepared on transparent sheet and got laminated whereas two duplicate copies of each map have been prepared on paper and got bounded range wise. Hence, three sets (one master copy and two duplicate copies) of individual compartment wise stock maps of each range are being submitted with the draft working plan.

ii) Consolidated Range wise stock maps have been prepared on transparent sheet and got laminated lateron. These maps have been prepared on 1:50,00 scale. Three such maps one for each range is also being submitted with the draft working plan.

c. **Management Maps:-** These maps have been prepared range wise on 1:50,000 scale showing allotment of compartments to the various working circles. Master copy has been got laminated while two duplicate copies of each have been prepared on paper and got mounted on cloth. So three copies of each range wise management maps are being submitted with draft plan.

19.10. Compartment Descriptions

19.10.1 Fresh compartment description has been written for each compartment/ sub-compartment separately. Three copies of each compartment description arranged/filed range –wise are being submitted with draft working plan.

19.11. Draft Plan

19.11.1 The draft working plan is being submitted in duplicate.

CHAPTER-XX
STAFF AND LABOUR SUPPLY

20.1. Establishment

20.1.1 The present staff strength of the present Rajouri Territorial Forest division is given in Chapter –V and is considered insufficient to cope up with existing work load.

20.1.2 In view of the multifarious activities of the department, modernization of infrastructure is required to be done in this division. It includes of good communication network i.e. Telephones and Wireless, connecting divisional office with range offices and check posts.

20.2. Ranges, Blocks and Beats

20.2.1 As already mentioned, the present Rajouri Forest Division has emerged from the bifurcation of erstwhile Rajouri Forest Division into Nowshera Forest Division and Rajouri Forest Division during the re-organisation of Forest Department in 1984.

20.2.2 Compartments 1 to 151 of the then Rajouri Range constitute the present Rajouri Range. Compartments 66 to 199 of then Kalakote Range constitute the present Kalakote Range. However, compartments 102, 103 and 104 of the Kalakote Range have been later on transferred to the Nowshera Forest Division. Compartments 152 to 227 of then Rajouri Range and compartments 1 to 65 of then Kalakote Range have been clubbed to form a new range called “Kandi Range”. Numbering of the compartments as done during the revision of previous plan by Sh. D. K. Ved has been retained in too. During layout the names of ranges have been carved as ‘RJR for Rajouri, “KKR” for Kalakote and “KDR” of Kandi respectively. Compartment 1/Rjr to 151/Rjr denote the compartments of Rajouri Range. Compartments 1/KDR to 65/KDR and 152/KDR to 227/KDR denote compartments of Kandi range. Similarly compartment 66/KKR to 101/KKR and 105/KKR to 199/KKR denote the compartments of Kalakote Range. Field staff and local people are well versed with compartment numbers of nearby forests and hence for the sake of convenience of their working in the area and to avoid confusion the previous numbering of the compartments has been retained.

20.2.3 The detail of existing blocks, beats and compartments is given in Annexure-IV. The blocks and beats are needed to be reorganized to meet the modern day requirements which is enclosed as Annexure-XVI.

20.3. Labour and Supply

20.3.1 Availability of labour for forestry works is not a problem in this area except during the periods when local people get busy in agricultural works like hoeing, sowing, cutting, harvesting etc. In additional to the local labour, adequate force of labour comes from other areas like Poonch and Doda District.

20.3.2 Labour engaged in various forestry operations especially in resin tapping should be trained properly.

CHAPTER-XXI

CONTROL

21.1. Control Forms

21.1.1 According to standard procedure, following control forms are prescribed to be maintained.

a) Control Form "A"

It is maintained in standard form for recording major markings and other subsidiary markings done in Chir Working Circle and the Fir Working Circle, separately for each of the two working circles. In this form volume marked and prescribed yield is noted and plus minus account shown in annual abstract. The balance is carried to the next year.

b) Control Form "B"

It is to be maintained in the standard form for yield realised from the unallotted area of the Chir Working Circle.

c) Control Form "C"

It is to be maintained to record the progress of regeneration works in respect of areas taken up for artificial regeneration. Only when such an area is adequately regenerated, it is to be written off from this form.

d) Control Form "D"

This control form indicates territorial DFOs proposal for marking during next three years. It is submitted to the Conservator of Forests, Working Plan and Research Circle, through CF (Territorial), every year in January who will convey his approval after consultation with the Chief Conservator of Forests by March of the same year.

21.2. Compartment Histories

21.2.1 The compartment history book shall contain complete record of all the major events that happen in the compartment e.g. volume marked and out turn obtained, details of cultural operations, status of regeneration, damage due to fire, insect-pest attack, encroachment etc. An officer, not below the rank of Range Forest Officer should make an entry summarising the details of operations and other events in the compartment history book at the close of every year and send a copy to the DFO. The DFO should maintain the compartment histories on the basis of information given by Range Officers and a copy of same should be sent to the Conservator of Forests, Working Plan & research. It is unfortunate that such an important record is not being maintained in the territorial divisions. In Rajouri Forest Division, scanty record on the name of compartment histories is being maintained giving certain details of development works only in some ranges. Copy of such compartment histories, as provided by territorial division, is being submitted with draft plan.

21.3. Divisional Journal

21.3.1 It is very important document. It should be maintained in the division and update regularly. It should contain the detailed records of important information of all kinds like regeneration, plantation, soil conservation works, their success of failure and reasons thereof, seed years, disease, Insect –pest attack, statistics of timber and fuel wood out turn, contracts, bridges, roads, buildings, meteorological data etc. On the analogy of Divisional Journal, records must be maintained at range and block levels.

21.4. Guard Books

21.4.1 Maintenance of guard books have by and large remained neglected. Each guard book must contain an enlarged working plan map of respective beat. The number of chaks and number of boundary pillars on the outer line as well as that in chak boundaries should be clearly marked, numbered and entered in the guard book. These guard books must be checked by concerned Range Officer, at least once a month

CHAPTER-XXII

FINANCIAL FORECAST AND COST OF THE PLAN

22.1. Revenue

22.1.1 The annual yield as prescribed in the plan is expected to give the following revenue at the existing rates.

(a) Timber

Table 22.1. Expected Revenue from Timber Extraction

Species	Annual Yield in cum	Royalty (as per 1991 tentative rates) Rs/Cum	Revenue in Rs. lac
Fir	1500	1236.56	18.55
Chir	3200	1306.12	41.80
Total			**60.35**

(b) N.T.F.P

i) Annual prescription of one lacs blazes shall yield 3.00 lacs Kg of resin @ 3Kg per blaze out put. At the rate of Rs. 65.00 per Kg the total annual revenue from resin shall be Rs. 195.00 lacs.

ii) Revenue of other NTFP (at 2013-14 level) = 3.00 lacs.

iii) Miscellaneous: (Grazing, Grass, Fooder, fines, concessions, firewood and compensation) = 10.00 lacs.

GRAND TOTAL Rs. 268.35 lacs

22.2. Cost of the Plan

22.2.1 The total expenditure incurred on the revision of this working plan works out as under:-

Table 22.2. Statement of allocation made

S.No	Budget Sub- Head	Amount (Rs.)
	13th Finance Commission	
1	2010-11	1017824
2	2011-12	0
3	2012-13	700000
4	2013-14	150000
5	2014-15 (liability)	1100000
	Total	**2967824**

22.2.2 The total expenditure in the revision of the plan was **29.68 lacs** for an area of 72069 ha. It works out to Rs. 41.18 per Ha.

22.3 FUTURE EXPENDITURE

22.3.1 Non Plan Expenditure

22.3.1.1 The estimated expenditure of Rajouri Forest Division under Non-Plan head, for next 10 years (keeping in concentration the escalation involved) is worked out as under:

Items	Amount (in Lacs)
Salary, TE, OE, POL, Buildings, Firewood, Timber, Miscellaneous etc.	**10,000**

Annual expenditure = Rs. 1000 lakhs.

Expenditure according to working circle wise Forestry development schemes as per objects of management and treatment prescribed.

22.3.2. Plan Expenditure

Future Expenditures over next 20 years for forestry development schemes

a. Chir Working Circle (60% of the total area of 14120 ha.is to be treated in next 20 years.)

Component	Area in hectares	Average expenditure per hectare (in Lacs)	Amount required (in Lacs)
Artificial Regeneration (AR) @ 20% of the working circle's area	2800	1.00	2800
Aided Natural Regeneration (ANR) @ 20% of the working circle's area	2800	0.45	1260
Silvicultural Operation @ 20% of the working circle's area	2800	0.25	700
Total (60% of the total area)	**8400**		**4760**

b. Fir Working Circle (60% of the total area of 5795 ha.is to be treated in next 20 years.)

Component	Area in hectares	Average expenditure per hectare (in Lacs)	Amount required (in Lacs)
Artificial Regeneration (AR) @ 20% of the working circle's area	1150	1.00	1150.00
Aided Natural Regeneration (ANR) @ 20% of the working circle's area	1150	0.45	517.50
Silvicultural Operation @ 20% of the working circle's area	1150	0.25	287.50
Total (60% of the total area)	**3450**		**1955.00**

c. Rehabilitation Cum Protection Working Circle (60% of the total area of 52154 ha.is to be treated for next 20 years)

Component	Area in hectares	Average expenditure per hectare (in Lacs)	Amount required (in Lacs)
Artificial Regeneration (AR) @ 20% of the working circle's area	10400	1.00	10400
Aided Natural Regeneration (ANR) @ 20% of the working circle's area	10400	0.45	4680
Silvicultural Operation @ 20% of the working circle's area	10400	0.25	2600
Total (60% of the total area)	**31200**		**17680**

Total Plan expenditure = Rs. 24395 lakhs for next 20 years and

Annual Plan expenditure = Rs. 1219.75 lakhs

Hence total Annual expenditure = Rs. 2219.75 lakhs

22.3.2 As already mentioned is proceeding chapters, all the departments/ wings involved in forestry and soil conservation works should work in tandem to achieve the desired physical as well as financial targets. Further in order to achieve the said physical and financial targets, more centrally sponsored schemes and World Bank aided projects are to be launched since the most of the investment has to be made for the rehabilitation of the degraded areas which are quite abundant in this forest division. Moreover, demarcation work has to be done on highest priority.

CHAPTER-XXIII

SUMMARY OF THE PRESCRIPTIONS

23.1.1 The following is the summary of important prescriptions of the plan:

(i) Period of Plan -10 years (2014-15 to 2023-24)

23.1.2 (ii) ***Chir Working Circle (Interim Management)***

a)	Exploitable size	:	70 cms (dbh ob)
b)	Rotation	:	150 years
c)	Felling cycle	:	30 years
d)	Felling series	:	One (Identical to W.C)
e)	Annual yield	:	3200 M^3
f)	Annual coupe	:	333.77 ha.

23.1.3 (iii) ***Fir Selection Working Circle***

a)	Exploitable size	:	80 cms (dbh ob)
b)	Rotation	:	240 years
c)	Felling cycle	:	30 years
d)	Felling series	:	Indian Selection system
e)	Annual yield	:	1500 M^3
f)	Annual coupe	:	136.30 ha.

23.1.4 (iv) ***Rehabilitation cum Protection Working Circle***

a) Protection of forests and plantations from grazing fires and degradation
b) Rehabilitation of 1000 ha of degraded forest areas annually.

23.1.5 (v) ***Plantation Working Circle***

A mixture of multiuse, local and fast growing species is to be planted in degraded areas near habitations to meet the demands of local people and to reduce pressure on natural forests.

23.1.6 (vi) ***NTFP Working Circle***

(A) ***RESIN TAPPING***

The resin tapping activity is recommended to be stopped immediately.

ANNEXURE –I

STATEMENT OF BERUNE LINE FORESTS OF RAJOURI FOREST DIVISION

S.No	Range	Name of Village	Khasra No.	Area		S.No	Range	Name of Village	Khasra No.	Area	
				Kanal	Marla					Kanal	Marla
01	Kalakote	Kalakote	02	1766	12	30	Kalakote	Bhali Bramthal	09	776	01
02	Kalakote	Chainpur	01	2669	12	31	Kalakote	Garan Bala	17	2249	12
03	Kalakote	Badhog	01	1265	00	32	Kalakote	Garan Bala	09	4507	02
04	Kalakote	Sehr	02	2469	05	33	Kalakote	Darangar	11	2184	14
05	Kalakote	Dhelote	01	1501	02	34	Kalakote	Gyora	28	1933	09
06	Kalakote	Dhnorah	01	3400	00	35	Kalakote	Panhar	05	1585	15
07	Kalakote	Bhali Bhaora	02	120	08	36	Kalakote	Padi	04	910	08
08	Kalakote	Syalsui	24	7324	06	37	Kalakote	Panja	02	5866	19
09	Kalakote	Khadarian	18	1308	06	38	Kalakote	Kharak	03	1464	17
10	Kalakote	Jigni	05	552	12	39	Kalakote	Dyolian	02	471	03
11	Kalakote	Nafgote	01	654	04	40	Kalakote	Kurlian	02	3016	06
12	Kalakote	Som	27	956	17	41	Kalakote	Kori	01	351	07
13	Kalakote	Bazoh	27	2006	00	42	Kalakote	Bathra	01	1549	10
14	Kalakote	Dhangote	15	2875	19	43	Kalakote	Panjnara	01	4890	00
15	Kalakote	Nagrot	09	3270	19	44	Kalakote	Andh	03	5546	05
16	Kalakote	Narsinghpura	11	369	13	45	Kalakote	Potha	05	1922	02
17	Kalakote	Danti	06	203	15	46	Kalakote	Dali	05	638	06
18	Kalakote	Saleri	01	268	04	47	Kalakote	Jongrian	03	1365	00
19	Kalakote	Jata Bramna	23	1712	03	48	Kalakote	Thos	01	365	10
20	Kalakote	Jata Halian	09	268	04	49	Kalakote	Malhorian	01	793	01
21	Kalakote	Honchal	15	481	16	50	Kalakote	Sarda	01	53	06
22	Kalakote	Gharat	14	2309	04	**TOTAL OF KALAKOTE RANGE**				**85587**	**0**
23	Kalakote	Pondel	04	1026	19	01	Rajouri	Nayali	01	14	07
24	Kalakote	Marhot	03	221	13	02	Rajouri	Hasplote	01	228	18
25	Kalakote	Brandal Keri	06	418	06	03	Rajouri	Hana	01	56	03
26	Kalakote	Kuhda	14	1649	14	**TOTAL OF RAJOURI RANGE**				**299**	**08**
27	Kalakote	Odami	08	224	17	01	Kandi	Tral Gokhral	01	572	01
28	Kalakote	Kothian	09	1203	02	02	Kandi	Hubi	01	1394	10
29	Kalakote	Naroth	04	647	15	**TOTAL OF KANDI RANGE**				**1966**	**11**
			GRAND TOTAL OF RAJOURI FOREST DIVISION							**87852**	**19**

ANNEXURE –II

ESTATE AREA STATEMENT OF RAJOURI FOREST DIVISION

Rajouri Range

Co. No	Chir	Fir	Kail	S. total	B/L	Scrub	Blanks	Alpine	S. total	Total	Working circle
1/Rjr	185	0	0	185	0	52	62	0	114	299	Chir working circle
2/Rjr	67	0	0	67	0	17	24	0	41	108	Chir working circle
3/Rjr	67	0	0	67	0	3	3	0	6	73	Chir working circle
4/Rjr	33	0	0	33	0	2	10	0	12	45	Chir working circle
5/Rjr	73	0	0	73	0	0	7	0	7	80	Chir working circle
6/Rjr	140	0	0	140	0	26	13	0	39	179	Chir working circle
7/Rjr	96	0	0	96	0	7	13	0	20	116	Chir working circle
8/Rjr	45	0	0	45	0	32	74	0	106	151	Chir working circle
9/Rjr	70	0	0	70	0	22	11	0	33	103	Chir working circle
10/Rjr	43	0	0	43	0	0	12	0	12	55	Chir working circle
11/Rjr	64	0	0	64	0	8	11	0	19	83	Chir working circle
12/Rjr	122	0	0	122	0	15	29	0	44	166	Chir working circle
13/Rjr	51	0	0	51	0	8	16	0	24	75	Rehabilitation cum Protection Working Circle
14/Rjr	37	0	0	37	0	17	41	0	58	95	Rehabilitation cum Protection Working Circle
15/Rjr	99	0	0	99	0	25	19	0	44	143	Chir working circle
16/Rjr	95	0	0	95	0	2	19	0	21	116	Chir working circle
17/Rjr	133	0	0	133	0	4	14	0	18	151	Chir working circle
18/Rjr	83	0	0	83	0	23	53	0	76	159	Rehabilitation cum Protection Working Circle
19/Rjr	67	0	0	67	0	6	7	0	13	80	Rehabilitation cum Protection Working Circle
20/Rjr	110	0	0	110	0	30	56	0	86	196	Rehabilitation cum Protection Working Circle
21/Rjr	32	0	0	32	0	6	22	0	28	60	Chir working circle
22/Rjr	61	0	0	61	0	20	19	0	39	100	Chir working circle
23/Rjr	75	0	0	75	0	7	44	0	51	126	Chir working circle
24/Rjr	64	0	0	64	0	31	56	0	87	151	Chir working circle
25/Rjr	110	0	0	110	0	10	38	0	48	158	Chir working circle
26/Rjr	132	0	0	132	0	18	26	0	44	176	Chir working circle
27/Rjr	194	0	0	194	0	11	24	0	35	229	Chir working circle
28/Rjr	74	0	0	74	0	3	8	0	11	85	Chir working circle
29/Rjr	100	0	0	100	0	6	20	0	26	126	Chir working circle
30/Rjr	83	0	0	83	0	7	8	0	15	98	Chir working circle
31/Rjr	50	0	0	50	0	79	29	0	108	158	Rehabilitation cum Protection Working Circle

Co. No	Chir	Fir	Kail	S. total	B/L	Scrub	Blanks	Alpine	S. total	Total	Working circle
32/Rjr	48	0	0	48	0	12	36	0	48	96	Rehabilitation cum Protection Working Circle
33/Rjr	110	0	0	110	0	9	32	0	41	151	Chir working circle
34/Rjr	77	0	0	77	0	8	10	0	18	95	Chir working circle
35/Rjr	72	0	0	72	0	3	0	0	3	75	Chir working circle
36/Rjr	106	0	0	106	0	9	41	0	50	156	Chir working circle
37/Rjr	60	0	0	60	0	0	58	0	58	118	Chir working circle
38/Rjr	52	0	0	52	0	34	15	0	49	101	Rehabilitation cum Protection Working Circle
39/Rjr	80	0	0	80	0	3	45	0	48	128	Chir working circle
40/Rjr	91	0	0	91	0	17	35	0	52	143	Chir working circle
41/Rjr	70	0	0	70	0	18	0	0	18	88	Chir working circle
42/Rjr	90	0	0	90	0	0	11	0	11	101	Chir working circle
43/Rjr	69	0	0	69	0	11	18	0	29	98	Chir working circle
44/Rjr	100	0	0	100	0	19	22	0	41	141	Chir working circle
45/Rjr	203	0	0	203	0	104	116	0	220	423	Rehabilitation cum Protection Working Circle
46/Rjr	0	0	0	0	63	17	0	0	80	80	Rehabilitation cum Protection Working Circle
47/Rjr	0	0	0	0	41	22	0	0	63	63	Rehabilitation cum Protection Working Circle
48/Rjr	77	0	0	77	0	18	11	0	29	106	Chir working circle
49/Rjr	52	0	0	52	0	7	37	0	44	96	Rehabilitation cum Protection Working Circle
50/Rjr	70	0	0	70	0	6	12	0	18	88	Chir working circle
51/Rjr	27	0	0	27	0	18	25	0	43	70	Chir working circle
52/Rjr	36	0	0	36	0	20	8	0	28	64	Rehabilitation cum Protection Working Circle
53/Rjr	22	0	0	22	0	3	3	0	6	28	Rehabilitation cum Protection Working Circle
54/Rjr	39	0	0	39	0	0	9	0	9	48	Chir working circle
55/Rjr	15	0	0	15	0	6	22	0	28	43	Rehabilitation cum Protection Working Circle
56/Rjr	50	0	0	50	0	4	9	0	13	63	Rehabilitation cum Protection Working Circle
57/Rjr	41	0	0	41	0	7	7	0	14	55	Chir working circle
58/Rjr	67	0	0	67	0	18	6	0	24	91	Chir working circle
59/Rjr	123	0	0	123	0	57	39	0	96	219	Rehabilitation cum Protection Working Circle
60/Rjr	39	0	0	39	0	14	12	0	26	65	Rehabilitation cum Protection Working Circle
61/Rjr	65	0	0	65	0	52	30	0	82	147	Rehabilitation cum Protection Working Circle
62/Rjr	66	0	0	66	0	13	4	0	17	83	Chir working circle
63/Rjr	140	0	0	140	0	25	28	0	53	193	Chir working circle
64/Rjr	86	0	0	86	0	22	66	0	88	174	Chir working circle
65/Rjr	77	0	0	77	0	10	36	0	46	123	Rehabilitation cum Protection Working Circle
66/Rjr	56	0	0	56	0	8	19	0	27	83	Rehabilitation cum Protection Working Circle

Co. No	Chir	Fir	Kail	S. total	B/L	Scrub	Blanks	Alpine	S. total	Total	Working circle
67/Rjr	85	0	0	85	0	7	59	0	66	151	Chir working circle
68/Rjr	135	0	0	135	0	28	61	0	89	224	Chir working circle
69/Rjr	108	0	0	108	0	9	11	0	20	128	Chir working circle
70/Rjr	97	0	0	97	0	36	60	0	96	193	Rehabilitation cum Protection Working Circle
71/Rjr	69	0	0	69	0	27	29	0	56	125	Rehabilitation cum Protection Working Circle
72/Rjr	7	0	0	7	0	105	202	0	307	314	Rehabilitation cum Protection Working Circle
73/Rjr	0	0	0	0	0	84	157	0	241	241	Rehabilitation cum Protection Working Circle
74/Rjr	16	0	0	16	44	70	134	0	248	264	Rehabilitation cum Protection Working Circle
75/Rjr	37	0	0	37	59	107	140	0	306	343	Rehabilitation cum Protection Working Circle
76/Rjr	61	0	0	61	58	109	180	0	347	408	Rehabilitation cum Protection Working Circle
77/Rjr	78	0	0	78	0	0	5	0	5	83	Rehabilitation cum Protection Working Circle
78/Rjr	88	0	0	88	0	0	13	0	13	101	Rehabilitation cum Protection Working Circle
79/Rjr	143	0	0	143	0	9	26	0	35	178	Chir working circle
80/Rjr	277	0	0	277	0	3	40	0	43	320	Chir working circle
81(a)/Rjr	21	0	0	21	47	20	48	0	115	136	Rehabilitation cum Protection Working Circle
81(b)/Rjr	39	0	0	39	29	10	50	0	89	128	Rehabilitation cum Protection Working Circle
82/Rjr	0	0	0	0	35	45	74	0	154	154	Rehabilitation cum Protection Working Circle
83/Rjr	0	0	0	0	75	110	24	0	209	209	Rehabilitation cum Protection Working Circle
84/Rjr	0	0	0	0	88	45	14	0	147	147	Rehabilitation cum Protection Working Circle
85/Rjr	34	0	0	34	27	20	50	0	97	131	Rehabilitation cum Protection Working Circle
86/Rjr	113	0	0	113	0	0	8	0	8	121	Chir working circle
87/Rjr	79	0	0	79	0	0	9	0	9	88	Chir working circle
88/Rjr	0	0	0	0	115	12	74	0	201	201	Rehabilitation cum Protection Working Circle
89/Rjr	113	0	0	113	9	8	8	0	25	138	Rehabilitation cum Protection Working Circle
90/Rjr	8	0	0	8	36	28	16	0	80	88	Rehabilitation cum Protection Working Circle
91/Rjr	37	0	0	37	53	29	38	0	120	157	Rehabilitation cum Protection Working Circle
92/Rjr	0	0	0	0	75	40	16	0	131	131	Rehabilitation cum Protection Working Circle
93/Rjr	122	0	0	122	73	25	90	0	188	310	Rehabilitation cum Protection Working Circle
94/Rjr	78	0	0	78	39	63	92	0	194	272	Rehabilitation cum Protection Working Circle
95/Rjr	93	0	0	93	56	32	88	0	176	269	Rehabilitation cum Protection Working Circle
96/Rjr	61	0	0	61	4	38	121	0	163	224	Rehabilitation cum Protection Working Circle
97/Rjr	113	0	0	113	1	27	126	0	154	267	Rehabilitation cum Protection Working Circle
98/Rjr	81	0	0	81	0	49	79	0	128	209	Chir working circle
99/Rjr	77	0	0	77	0	23	18	0	41	118	Rehabilitation cum Protection Working Circle
100/Rjr	87	0	0	87	0	32	54	0	86	173	Rehabilitation cum Protection Working Circle

Co. No	Chir	Fir	Kail	S. total	B/L	Scrub	Blanks	Alpine	S. total	Total	Working circle
101/Rjr	71	0	0	71	41	107	189	0	337	408	Rehabilitation cum Protection Working Circle
102/Rjr	0	0	0	0	46	25	144	0	215	215	Rehabilitation cum Protection Working Circle
103/Rjr	0	0	0	0	68	52	111	0	231	231	Rehabilitation cum Protection Working Circle
104/Rjr	0	0	0	0	81	17	18	0	116	116	Rehabilitation cum Protection Working Circle
105/Rjr	0	0	0	0	142	32	37	0	211	211	Rehabilitation cum Protection Working Circle
106/Rjr	0	0	0	0	128	80	253	0	461	461	Rehabilitation cum Protection Working Circle
107/Rjr	0	0	56	56	31	33	129	0	193	249	Rehabilitation cum Protection Working Circle
108/Rjr	0	0	84	84	135	28	7	0	170	254	Rehabilitation cum Protection Working Circle
109/Rjr	0	0	4	4	62	26	84	0	172	176	Rehabilitation cum Protection Working Circle
110/Rjr	0	66	0	66	12	32	165	0	209	275	Rehabilitation cum Protection Working Circle
111/Rjr	0	85	0	85	0	69	156	0	225	310	Rehabilitation cum Protection Working Circle
112/Rjr	0	203	0	203	20	72	168	0	260	463	Rehabilitation cum Protection Working Circle
113/Rjr	0	36	0	36	95	30	78	0	203	239	Rehabilitation cum Protection Working Circle
114/Rjr	0	0	0	0	20	85	117	0	222	222	Rehabilitation cum Protection Working Circle
115/Rjr	0	141	0	141	10	75	129	0	214	355	Rehabilitation cum Protection Working Circle
116/Rjr	0	19	0	19	132	81	15	0	228	247	Rehabilitation cum Protection Working Circle
117/Rjr	0	0	0	0	61	30	63	0	154	154	Rehabilitation cum Protection Working Circle
118/Rjr	0	0	0	0	83	35	139	0	257	257	Rehabilitation cum Protection Working Circle
119/Rjr	0	0	0	0	20	16	123	0	159	159	Rehabilitation cum Protection Working Circle
120/Rjr	0	0	0	0	82	65	133	0	280	280	Rehabilitation cum Protection Working Circle
121/Rjr	0	0	0	0	44	44	181	0	269	269	Rehabilitation cum Protection Working Circle
122/Rjr	0	49	0	49	0	36	126	0	162	211	Rehabilitation cum Protection Working Circle
123/Rjr	0	30	0	30	11	18	115	0	144	174	Rehabilitation cum Protection Working Circle
124/Rjr	0	47	0	47	11	0	75	0	86	133	Rehabilitation cum Protection Working Circle
125/Rjr	0	34	0	34	32	38	65	0	135	169	Rehabilitation cum Protection Working Circle
126/Rjr	0	23	0	23	97	53	84	0	234	257	Rehabilitation cum Protection Working Circle
127/Rjr	0	84	0	84	0	18	79	0	97	181	Rehabilitation cum Protection Working Circle
128/Rjr	0	26	0	26	10	59	59	0	128	154	Rehabilitation cum Protection Working Circle
129/Rjr	0	73	0	73	0	34	14	0	48	121	Rehabilitation cum Protection Working Circle
130/Rjr	0	86	0	86	0	38	108	0	146	232	Rehabilitation cum Protection Working Circle
131/Rjr	0	113	0	113	0	15	43	0	58	171	Rehabilitation cum Protection Working Circle
132/Rjr	0	141	0	141	0	28	25	0	53	194	Rehabilitation cum Protection Working Circle
133/Rjr	0	132	0	132	0	45	64	0	109	241	Rehabilitation cum Protection Working Circle
134/Rjr	0	54	0	54	0	29	15	0	44	98	Rehabilitation cum Protection Working Circle
135/Rjr	0	106	0	106	0	35	108	0	143	249	Rehabilitation cum Protection Working Circle

Co. No	Chir	Fir	Kail	S. total	B/L	Scrub	Blanks	Alpine	S. total	Total	Working circle
136/Rjr	0	83	0	83	0	95	91	0	186	269	Rehabilitation cum Protection Working Circle
137/Rjr	0	80	0	80	9	10	39	0	58	138	Rehabilitation cum Protection Working Circle
138/Rjr	0	128	0	128	3	0	20	0	23	151	Fir working circle
139/Rjr	0	249	0	249	0	72	26	273	371	620	Fir working circle
140/Rjr	0	306	0	306	0	175	13	111	299	605	Fir working circle
141/Rjr	0	172	0	172	0	12	30	0	42	214	Fir working circle
142/Rjr	0	130	0	130	0	8	23	0	31	161	Fir working circle
143/Rjr	0	94	0	94	0	37	25	0	62	156	Rehabilitation cum Protection Working Circle
144/Rjr	0	200	0	200	23	12	17	0	52	252	Rehabilitation cum Protection Working Circle
145/Rjr	0	22	0	22	42	17	62	0	121	143	Rehabilitation cum Protection Working Circle
146/Rjr	0	10	0	10	45	15	53	0	113	123	Rehabilitation cum Protection Working Circle
147/Rjr	0	13	0	13	29	22	42	0	93	106	Rehabilitation cum Protection Working Circle
148/Rjr	0	0	0	0	18	19	76	0	113	113	Rehabilitation cum Protection Working Circle
149/Rjr	0	0	0	0	14	24	70	0	108	108	Rehabilitation cum Protection Working Circle
150/Rjr	0	0	0	0	18	35	60	0	113	113	Rehabilitation cum Protection Working Circle
151/Rjr	0	0	0	0	0	28	25	0	53	53	Rehabilitation cum Protection Working Circle
Range Total	**7459**	**3035**	**144**	**10638**	**2702**	**4402**	**7915**	**384**	**15403**	**26041**	

Kandi Range

Co. No	Chir	Fir	Kail	S total	B/L	Scrub	Blanks	Alpine	S total	Total	Working circle
152/Kdr	0	0	0	0	15	32	91	0	138	138	Rehabilitation cum Protection Working Circle
153/Kdr	0	0	0	0	18	60	90	0	168	168	Rehabilitation cum Protection Working Circle
154/Kdr	0	0	0	0	35	45	96	0	176	176	Rehabilitation cum Protection Working Circle
155/Kdr	0	16	0	16	54	58	149	0	261	277	Rehabilitation cum Protection Working Circle
156/Kdr	0	28	0	28	80	46	131	0	257	285	Rehabilitation cum Protection Working Circle
157/Kdr	0	4	0	4	38	52	75	0	165	169	Rehabilitation cum Protection Working Circle
158/Kdr	0	33	0	33	64	155	143	0	362	395	Rehabilitation cum Protection Working Circle
159/Kdr	0	20	0	20	75	112	108	0	295	315	Rehabilitation cum Protection Working Circle
160/Kdr	0	7	0	7	108	85	120	0	313	320	Rehabilitation cum Protection Working Circle
161/Kdr	0	0	0	0	31	13	24	0	68	68	Rehabilitation cum Protection Working Circle
162/Kdr	0	0	0	0	11	12	58	0	81	81	Rehabilitation cum Protection Working Circle
163/Kdr	0	0	0	0	45	12	69	0	126	126	Rehabilitation cum Protection Working Circle
164/Kdr	0	0	0	0	14	40	33	0	87	87	Rehabilitation cum Protection Working Circle
165/Kdr	0	0	0	0	16	20	95	0	131	131	Rehabilitation cum Protection Working Circle
166/Kdr	26	0	0	26	0	5	34	0	39	65	Rehabilitation cum Protection Working Circle
167/Kdr	15	0	0	15	0	9	77	0	86	101	Rehabilitation cum Protection Working Circle
168/Kdr	18	0	0	18	0	18	37	0	55	73	Rehabilitation cum Protection Working Circle
169/Kdr	0	0	0	0	29	39	133	0	201	201	Rehabilitation cum Protection Working Circle
170/Kdr	0	0	0	0	0	150	77	0	227	227	Rehabilitation cum Protection Working Circle
171/Kdr	0	0	0	0	0	95	137	0	232	232	Rehabilitation cum Protection Working Circle
172/Kdr	98	0	0	98	0	11	50	0	61	159	Chir working circle
173/Kdr	0	0	0	0	0	106	50	0	156	156	Rehabilitation cum Protection Working Circle
174/Kdr	112	0	0	112	0	8	31	0	39	151	Chir working circle
175/Kdr	84	0	0	84	0	17	48	0	65	149	Chir working circle
176/Kdr	46	0	0	46	0	0	39	0	39	85	Chir working circle
177/Kdr	62	0	0	62	0	6	35	0	41	103	Chir working circle
178/Kdr	9	0	0	9	58	10	16	0	84	93	Rehabilitation cum Protection Working Circle
179/Kdr	54	0	0	54	0	0	42	0	42	96	Chir working circle
180/Kdr	32	0	0	32	0	0	23	0	23	55	Rehabilitation cum Protection Working Circle
181/Kdr	73	0	0	73	0	6	16	0	22	95	Rehabilitation cum Protection Working Circle
182/Kdr	63	0	0	63	0	8	17	0	25	88	Rehabilitation cum Protection Working Circle
183/Kdr	18	0	0	18	27	7	11	0	45	63	Rehabilitation cum Protection Working Circle
184/Kdr	3	0	0	3	36	19	33	0	88	91	Rehabilitation cum Protection Working Circle

Co. No	Chir	Fir	Kail	S total	B/L	Scrub	Blanks	Alpine	S total	Total	Working circle
185/Kdr	10	0	0	10	35	10	10	0	55	65	Rehabilitation cum Protection Working Circle
186/Kdr	0	0	0	0	18	30	45	0	93	93	Rehabilitation cum Protection Working Circle
187/Kdr	42	0	0	42	0	22	42	0	64	106	Rehabilitation cum Protection Working Circle
188/Kdr	5	0	0	5	0	28	70	0	98	103	Rehabilitation cum Protection Working Circle
189/Kdr	0	0	0	0	43	26	27	0	96	96	Rehabilitation cum Protection Working Circle
190/Kdr	82	0	0	82	24	0	12	0	36	118	Rehabilitation cum Protection Working Circle
191/Kdr	101	0	0	101	0	10	15	0	25	126	Rehabilitation cum Protection Working Circle
192/Kdr	30	0	0	30	0	24	36	0	60	90	Rehabilitation cum Protection Working Circle
193/Kdr	13	0	0	13	16	12	54	0	82	95	Rehabilitation cum Protection Working Circle
194/Kdr	36	0	0	36	0	0	0	0	0	36	Rehabilitation cum Protection Working Circle
195/Kdr	82	0	0	82	0	13	17	0	30	112	Rehabilitation cum Protection Working Circle
196/Kdr	78	0	0	78	0	0	35	0	35	113	Rehabilitation cum Protection Working Circle
197/Kdr	18	0	0	18	9	0	11	0	20	38	Rehabilitation cum Protection Working Circle
198/Kdr	20	0	0	20	12	4	4	0	20	40	Rehabilitation cum Protection Working Circle
199/Kdr	0	0	0	0	52	3	5	0	60	60	Rehabilitation cum Protection Working Circle
200/Kdr	40	0	0	40	15	0	3	0	18	58	Chir working circle
201/Kdr	37	0	0	37	0	0	8	0	8	45	Chir working circle
202/Kdr	42	0	0	42	0	10	8	0	18	60	Rehabilitation cum Protection Working Circle
203/Kdr	30	0	0	30	0	5	5	0	10	40	Chir working circle
204/Kdr	25	0	0	25	0	15	15	0	30	55	Rehabilitation cum Protection Working Circle
205/Kdr	0	0	0	0	60	12	13	0	85	85	Rehabilitation cum Protection Working Circle
206/Kdr	68	0	0	68	0	0	7	0	7	75	Chir working circle
207/Kdr	40	0	0	40	0	0	3	0	3	43	Chir working circle
208/Kdr	56	0	0	56	12	21	76	0	109	165	Rehabilitation cum Protection Working Circle
209/Kdr	43	0	0	43	0	5	17	0	22	65	Rehabilitation cum Protection Working Circle
210/Kdr	40	0	0	40	18	6	14	0	38	78	Rehabilitation cum Protection Working Circle
211/Kdr	29	0	0	29	0	0	11	0	11	40	Rehabilitation cum Protection Working Circle
212/Kdr	0	0	0	0	18	13	12	0	43	43	Rehabilitation cum Protection Working Circle
213/Kdr	45	0	0	45	0	16	9	0	25	70	Rehabilitation cum Protection Working Circle
214/Kdr	68	0	0	68	0	9	26	0	35	103	Chir working circle
215/Kdr	38	0	0	38	0	3	7	0	10	48	Chir working circle
216/Kdr	45	0	0	45	0	0	8	0	8	53	Rehabilitation cum Protection Working Circle
217/Kdr	55	0	0	55	0	4	11	0	15	70	Rehabilitation cum Protection Working Circle
218/Kdr	45	0	0	45	0	3	10	0	13	58	Rehabilitation cum Protection Working Circle
219/Kdr	73	0	0	73	0	3	7	0	10	83	Rehabilitation cum Protection Working Circle

Co. No	Chir	Fir	Kail	S total	B/L	Scrub	Blanks	Alpine	S total	Total	Working circle
220/Kdr	76	0	0	76	0	5	22	0	27	103	Chir working circle
221/Kdr	34	0	0	34	0	3	13	0	16	50	Rehabilitation cum Protection Working Circle
222/Kdr	0	0	0	0	24	7	9	0	40	40	Rehabilitation cum Protection Working Circle
223/Kdr	18	0	0	18	45	3	17	0	65	83	Rehabilitation cum Protection Working Circle
224/Kdr	64	0	0	64	15	8	24	0	47	111	Rehabilitation cum Protection Working Circle
225/Kdr	42	0	0	42	0	26	25	0	51	93	Rehabilitation cum Protection Working Circle
226/Kdr	42	0	0	42	0	35	26	0	61	103	Rehabilitation cum Protection Working Circle
227/Kdr	31	0	0	31	52	0	5	0	57	88	Rehabilitation cum Protection Working Circle
1/Kdr	0	0	0	0	63	138	139	0	340	340	Rehabilitation cum Protection Working Circle
2/Kdr	0	11	0	11	60	23	155	0	238	249	Rehabilitation cum Protection Working Circle
3/Kdr	0	165	0	165	9	8	32	0	49	214	Fir working circle
4/Kdr	0	192	0	192	0	0	35	0	35	227	Fir working circle
5/Kdr	0	200	0	200	0	0	14	0	14	214	Fir working circle
6/Kdr	0	159	0	159	0	0	17	0	17	176	Fir working circle
7/Kdr	0	163	0	163	45	0	0	54	99	262	Rehabilitation cum Protection Working Circle
8/Kdr	0	129	0	129	0	8	17	118	143	272	Fir working circle
9/Kdr	0	32	0	32	36	45	63	0	144	176	Rehabilitation cum Protection Working Circle
10/Kdr	0	123	0	123	0	13	20	0	33	156	Fir working circle
11/Kdr	0	156	0	156	0	14	32	0	46	202	Fir working circle
12/Kdr	0	81	0	81	0	2	38	0	40	121	Fir working circle
13/Kdr	0	228	0	228	15	8	14	0	37	265	Fir working circle
14/Kdr	0	187	0	187	0	0	10	80	90	277	Rehabilitation cum Protection Working Circle
15/Kdr	0	165	0	165	0	0	100	315	415	580	Rehabilitation cum Protection Working Circle
16/Kdr	0	186	0	186	93	42	65	597	797	983	Rehabilitation cum Protection Working Circle
17/Kdr	0	426	0	426	0	0	28	1640	1668	2094	Rehabilitation cum Protection Working Circle
18/Kdr	0	343	0	343	0	0	60	0	60	403	Fir working circle
19/Kdr	0	338	0	338	0	0	40	0	40	378	Fir working circle
20/Kdr	0	210	0	210	45	3	32	0	80	290	Fir working circle
21/Kdr	0	180	0	180	80	9	16	0	105	285	Rehabilitation cum Protection Working Circle
22/Kdr	0	41	0	41	141	6	39	0	186	227	Rehabilitation cum Protection Working Circle
23/Kdr	0	48	0	48	34	64	207	0	305	353	Rehabilitation cum Protection Working Circle
24/Kdr	0	101	0	101	24	47	93	0	164	265	Rehabilitation cum Protection Working Circle
25/Kdr	0	0	0	0	90	90	122	0	302	302	Rehabilitation cum Protection Working Circle
26/Kdr	0	119	0	119	7	46	17	0	70	189	Fir working circle
27/Kdr	0	91	0	91	0	14	21	0	35	126	Fir working circle

Co. No	Chir	Fir	Kail	S total	B/L	Scrub	Blanks	Alpine	S total	Total	Working circle
28/Kdr	0	0	0	0	0	39	79	0	118	118	Rehabilitation cum Protection Working Circle
29/Kdr	0	114	0	114	0	21	44	0	65	179	Fir working circle
30/Kdr	0	84	0	84	0	30	50	0	80	164	Fir working circle
31/Kdr	0	131	0	131	0	35	0	0	35	166	Fir working circle
32/Kdr	0	52	0	52	18	41	71	120	250	302	Rehabilitation cum Protection Working Circle
33/Kdr	0	78	0	78	38	3	38	120	199	277	Rehabilitation cum Protection Working Circle
34/Kdr	0	56	0	56	0	13	60	0	73	129	Rehabilitation cum Protection Working Circle
35/Kdr	0	38	0	38	0	15	73	0	88	126	Rehabilitation cum Protection Working Circle
36/Kdr	0	141	0	141	0	16	14	0	30	171	Fir working circle
37/Kdr	0	100	0	100	0	0	31	0	31	131	Fir working circle
38/Kdr	0	106	0	106	0	16	19	0	35	141	Rehabilitation cum Protection Working Circle
39/Kdr	0	191	0	191	0	54	98	0	152	343	Rehabilitation cum Protection Working Circle
40/Kdr	0	21	0	21	0	42	33	0	75	96	Rehabilitation cum Protection Working Circle
41/Kdr	0	49	0	49	0	33	19	0	52	101	Rehabilitation cum Protection Working Circle
42/Kdr	0	160	0	160	72	25	33	0	130	290	Rehabilitation cum Protection Working Circle
43/Kdr	0	124	0	124	50	10	30	0	90	214	Rehabilitation cum Protection Working Circle
44/Kdr	0	81	0	81	20	13	22	0	55	136	Rehabilitation cum Protection Working Circle
45/Kdr	0	78	0	78	0	26	18	24	68	146	Rehabilitation cum Protection Working Circle
46/Kdr	0	70	0	70	95	0	44	0	139	209	Rehabilitation cum Protection Working Circle
47/Kdr	0	56	0	56	72	0	25	0	97	153	Rehabilitation cum Protection Working Circle
48(a)/Kdr	0	90	0	90	30	21	58	0	109	199	Rehabilitation cum Protection Working Circle
48(b)/Kdr	0	0	0	0	0	68	20	0	88	88	Rehabilitation cum Protection Working Circle
49/Kdr	0	0	0	0	25	45	43	0	113	113	Rehabilitation cum Protection Working Circle
50/Kdr	0	0	0	0	27	62	75	0	164	164	Rehabilitation cum Protection Working Circle
51/Kdr	0	0	0	0	40	33	88	0	161	161	Rehabilitation cum Protection Working Circle
52/Kdr	0	0	0	0	54	20	55	0	129	129	Rehabilitation cum Protection Working Circle
53/Kdr	0	0	0	0	58	25	59	0	142	142	Rehabilitation cum Protection Working Circle
54/Kdr	0	0	0	0	40	35	41	0	116	116	Rehabilitation cum Protection Working Circle
55/Kdr	0	0	0	0	80	7	37	0	124	124	Rehabilitation cum Protection Working Circle
56/Kdr	0	0	0	0	58	24	29	0	111	111	Rehabilitation cum Protection Working Circle
57/Kdr	0	0	0	0	50	12	16	0	78	78	Rehabilitation cum Protection Working Circle
58/Kdr	0	0	0	0	60	6	5	0	71	71	Rehabilitation cum Protection Working Circle
59/Kdr	0	0	0	0	90	17	6	0	113	113	Rehabilitation cum Protection Working Circle
60/Kdr	0	0	0	0	717	24	11	0	752	752	Rehabilitation cum Protection Working Circle
61/Kdr	0	0	0	0	101	20	15	0	136	136	Rehabilitation cum Protection Working Circle

Co. No	Chir	Fir	Kail	S total	B/L	Scrub	Blanks	Alpine	S total	Total	Working circle
62/Kdr	0	0	0	0	118	13	7	0	138	138	Rehabilitation cum Protection Working Circle
63/Kdr	0	0	0	0	107	18	29	0	154	154	Rehabilitation cum Protection Working Circle
64/Kdr	0	0	0	0	105	12	19	0	136	136	Rehabilitation cum Protection Working Circle
65/Kdr	0	0	0	0	91	10	10	0	111	111	Rehabilitation cum Protection Working Circle
Range Total	**2356**	**6002**	**0**	**8358**	**4180**	**3134**	**5832**	**3068**	**16214**	**24572**	

Kalakote Range

Co. No	Chir	Fir	Kail	S total	B/L	Scrub	Blanks	Alpine	S total	Total	Working circle
66/Kkr	0	0	0	0	70	4	17	0	91	91	Rehabilitation cum Protection Working Circle
67/Kkr	12	0	0	12	73	11	37	0	121	133	Rehabilitation cum Protection Working Circle
68/Kkr	0	0	0	0	25	4	31	0	60	60	Rehabilitation cum Protection Working Circle
69/Kkr	34	0	0	34	14	0	7	0	21	55	Rehabilitation cum Protection Working Circle
70/Kkr	0	0	0	0	109	12	15	0	136	136	Rehabilitation cum Protection Working Circle
71/Kkr	0	0	0	0	61	5	9	0	75	75	Rehabilitation cum Protection Working Circle
72/Kkr	48	0	0	48	21	0	9	0	30	78	Rehabilitation cum Protection Working Circle
73/Kkr	62	0	0	62	0	0	3	0	3	65	Chir working circle
74/Kkr	73	0	0	73	0	0	7	0	7	80	Chir working circle
75/Kkr	52	0	0	52	0	7	11	0	18	70	Chir working circle
76/Kkr	85	0	0	85	0	10	18	0	28	113	Chir working circle
77/Kkr	98	0	0	98	0	0	3	0	3	101	Chir working circle
78/Kkr	113	0	0	113	0	26	12	0	38	151	Chir working circle
79/Kkr	68	0	0	68	0	54	16	0	70	138	Chir working circle
80/Kkr	121	0	0	121	0	45	3	0	48	169	Chir working circle
81/Kkr	141	0	0	141	0	22	19	0	41	182	Chir working circle
82/Kkr	0	0	0	0	0	153	83	0	236	236	Rehabilitation cum Protection Working Circle
83/Kkr	50	0	0	50	0	28	58	0	86	136	Rehabilitation cum Protection Working Circle
84/Kkr	0	0	0	0	0	115	66	0	181	181	Rehabilitation cum Protection Working Circle
85/Kkr	40	0	0	40	0	41	32	0	73	113	Rehabilitation cum Protection Working Circle
86/Kkr	83	0	0	83	13	25	20	0	58	141	Chir working circle
87/Kkr	58	0	0	58	0	21	19	0	40	98	Chir working circle
88/Kkr	93	0	0	93	0	3	7	0	10	103	Chir working circle
89/Kkr	102	0	0	102	0	14	7	0	21	123	Chir working circle

Co. No	Chir	Fir	Kail	S total	B/L	Scrub	Blanks	Alpine	S total	Total	Working circle
90/Kkr	97	0	0	97	0	18	18	0	36	133	Chir working circle
91/Kkr	134	0	0	134	0	0	9	0	9	143	Chir working circle
92/Kkr	115	0	0	115	0	4	34	0	38	153	Chir working circle
93/Kkr	173	0	0	173	0	24	27	0	51	224	Chir working circle
94/Kkr	30	0	0	30	0	59	64	0	123	153	Rehabilitation cum Protection Working Circle
95/Kkr	0	0	0	0	0	47	54	0	101	101	Rehabilitation cum Protection Working Circle
96/Kkr	122	0	0	122	0	50	75	0	125	247	Chir working circle
97/Kkr	109	0	0	109	0	29	46	0	75	184	Chir working circle
98/Kkr	149	0	0	149	0	14	18	0	32	181	Chir working circle
99/Kkr	169	0	0	169	0	34	26	0	60	229	Chir working circle
100/Kkr	135	0	0	135	0	4	40	0	44	179	Chir working circle
101/Kkr	150	0	0	150	0	0	11	0	11	161	Chir working circle
105/Kkr	105	0	0	105	0	10	26	0	36	141	Chir working circle
106/Kkr	135	0	0	135	0	0	24	0	24	159	Chir working circle
107/Kkr	149	0	0	149	0	12	3	0	15	164	Chir working circle
108/Kkr	62	0	0	62	0	0	26	0	26	88	Rehabilitation cum Protection Working Circle
109/Kkr	38	0	0	38	0	0	12	0	12	50	Chir working circle
110(a)/Kkr	83	0	0	83	0	15	33	0	48	131	Chir working circle
110(b)/Kkr	90	0	0	90	0	142	74	0	216	306	Rehabilitation cum Protection Working Circle
111/Kkr	209	0	0	209	0	66	73	0	139	348	Rehabilitation cum Protection Working Circle
112/Kkr	72	0	0	72	0	96	43	0	139	211	Rehabilitation cum Protection Working Circle
113/Kkr	102	0	0	102	0	13	26	0	39	141	Chir working circle
114/Kkr	37	0	0	37	0	15	26	0	41	78	Rehabilitation cum Protection Working Circle
115/Kkr	22	0	0	22	0	62	29	0	91	113	Rehabilitation cum Protection Working Circle
116/Kkr	15	0	0	15	0	70	91	0	161	176	Rehabilitation cum Protection Working Circle
117/Kkr	56	0	0	56	0	76	236	0	312	368	Rehabilitation cum Protection Working Circle
118/Kkr	27	0	0	27	8	148	107	0	263	290	Rehabilitation cum Protection Working Circle
119/Kkr	53	0	0	53	22	38	139	0	199	252	Chir working circle
120/Kkr	116	0	0	116	0	0	10	0	10	126	Chir working circle
121/Kkr	110	0	0	110	59	0	5	0	64	174	Chir working circle
122/Kkr	161	0	0	161	38	0	10	0	48	209	Chir working circle
123/Kkr	34	0	0	34	40	6	13	0	59	93	Rehabilitation cum Protection Working Circle
124/Kkr	46	0	0	46	36	0	6	0	42	88	Chir working circle
125/Kkr	31	0	0	31	88	23	29	0	140	171	Rehabilitation cum Protection Working Circle
126/Kkr	65	0	0	65	26	0	20	0	46	111	Rehabilitation cum Protection Working Circle

Co. No	Chir	Fir	Kail	S total	B/L	Scrub	Blanks	Alpine	S total	Total	Working circle
127/Kkr	63	0	0	63	47	10	6	0	63	126	Rehabilitation cum Protection Working Circle
128/Kkr	42	0	0	42	35	14	10	0	59	101	Rehabilitation cum Protection Working Circle
129/Kkr	33	0	0	33	22	4	14	0	40	73	Rehabilitation cum Protection Working Circle
130/Kkr	45	0	0	45	0	3	35	0	38	83	Chir working circle
131/Kkr	52	0	0	52	0	24	52	0	76	128	Rehabilitation cum Protection Working Circle
132/Kkr	115	0	0	115	0	17	27	0	44	159	Chir working circle
133/Kkr	51	0	0	51	11	45	64	0	120	171	Rehabilitation cum Protection Working Circle
134/Kkr	85	0	0	85	48	30	43	0	121	206	Rehabilitation cum Protection Working Circle
135/Kkr	11	0	0	11	58	39	71	0	168	179	Rehabilitation cum Protection Working Circle
136/Kkr	30	0	0	30	0	18	7	0	25	55	Rehabilitation cum Protection Working Circle
137/Kkr	0	0	0	0	100	42	24	0	166	166	Rehabilitation cum Protection Working Circle
138/Kkr	0	0	0	0	9	14	20	0	43	43	Rehabilitation cum Protection Working Circle
139/Kkr	0	0	0	0	115	0	3	0	118	118	Rehabilitation cum Protection Working Circle
140/Kkr	0	0	0	0	68	10	5	0	83	83	Rehabilitation cum Protection Working Circle
141/Kkr	0	0	0	0	70	5	3	0	78	78	Rehabilitation cum Protection Working Circle
142/Kkr	0	0	0	0	87	10	16	0	113	113	Rehabilitation cum Protection Working Circle
143/Kkr	0	0	0	0	51	5	4	0	60	60	Rehabilitation cum Protection Working Circle
144/Kkr	78	0	0	78	35	6	27	0	68	146	Rehabilitation cum Protection Working Circle
145/Kkr	85	0	0	85	31	0	17	0	48	133	Rehabilitation cum Protection Working Circle
146/Kkr	82	0	0	82	47	11	11	0	69	151	Rehabilitation cum Protection Working Circle
147/Kkr	130	0	0	130	0	5	22	0	27	157	Chir working circle
148/Kkr	105	0	0	105	35	14	32	0	81	186	Rehabilitation cum Protection Working Circle
149/Kkr	120	0	0	120	0	10	13	0	23	143	Rehabilitation cum Protection Working Circle
150/Kkr	66	0	0	66	35	15	15	0	65	131	Rehabilitation cum Protection Working Circle
151/Kkr	60	0	0	60	0	222	11	0	233	293	Rehabilitation cum Protection Working Circle
152/Kkr	155	0	0	155	0	7	14	0	21	176	Chir working circle
153/Kkr	119	0	0	119	0	65	70	0	135	254	Chir working circle
154/Kkr	86	0	0	86	29	72	45	0	146	232	Rehabilitation cum Protection Working Circle
155/Kkr	52	0	0	52	0	50	64	0	114	166	Rehabilitation cum Protection Working Circle
156/Kkr	8	0	0	8	0	104	97	0	201	209	Rehabilitation cum Protection Working Circle
157/Kkr	16	0	0	16	0	153	216	0	369	385	Rehabilitation cum Protection Working Circle
158/Kkr	40	0	0	40	0	52	208	0	260	300	Rehabilitation cum Protection Working Circle
159/Kkr	180	0	0	180	0	19	33	0	52	232	Chir working circle
160/Kkr	35	0	0	35	88	54	9	0	151	186	Rehabilitation cum Protection Working Circle
161/Kkr	0	0	0	0	0	98	15	0	113	113	Rehabilitation cum Protection Working Circle

Co. No	Chir	Fir	Kail	S total	B/L	Scrub	Blanks	Alpine	S total	Total	Working circle
162/Kkr	0	0	0	0	0	121	106	0	227	227	Rehabilitation cum Protection Working Circle
163/Kkr	17	0	0	17	0	142	166	0	308	325	Rehabilitation cum Protection Working Circle
164/Kkr	30	0	0	30	0	64	175	0	239	269	Rehabilitation cum Protection Working Circle
165/Kkr	101	0	0	101	0	35	27	0	62	163	Rehabilitation cum Protection Working Circle
166/Kkr	0	0	0	0	0	115	49	0	164	164	Rehabilitation cum Protection Working Circle
167/Kkr	0	0	0	0	0	72	66	0	138	138	Rehabilitation cum Protection Working Circle
168/Kkr	0	0	0	0	0	105	89	0	194	194	Rehabilitation cum Protection Working Circle
169/Kkr	0	0	0	0	0	60	99	0	159	159	Rehabilitation cum Protection Working Circle
170/Kkr	72	0	0	72	0	62	30	0	92	164	Rehabilitation cum Protection Working Circle
171/Kkr	92	0	0	92	0	72	32	0	104	196	Rehabilitation cum Protection Working Circle
172/Kkr	83	0	0	83	0	38	58	0	96	179	Rehabilitation cum Protection Working Circle
173/Kkr	99	0	0	99	0	23	21	0	44	143	Rehabilitation cum Protection Working Circle
174/Kkr	85	0	0	85	0	10	16	0	26	111	Rehabilitation cum Protection Working Circle
175/Kkr	123	0	0	123	0	26	49	0	75	198	Rehabilitation cum Protection Working Circle
176/Kkr	67	0	0	67	0	45	108	0	153	220	Rehabilitation cum Protection Working Circle
177/Kkr	102	0	0	102	0	57	58	0	115	217	Rehabilitation cum Protection Working Circle
178/Kkr	56	0	0	56	51	79	20	0	150	206	Rehabilitation cum Protection Working Circle
179/Kkr	137	0	0	137	78	25	17	0	120	257	Rehabilitation cum Protection Working Circle
180/Kkr	45	0	0	45	50	0	21	0	71	116	Rehabilitation cum Protection Working Circle
181/Kkr	36	0	0	36	78	35	17	0	130	166	Rehabilitation cum Protection Working Circle
182/Kkr	0	0	0	0	81	83	81	0	245	245	Rehabilitation cum Protection Working Circle
183/Kkr	0	0	0	0	0	46	75	0	121	121	Rehabilitation cum Protection Working Circle
184/Kkr	0	0	0	0	104	51	21	0	176	176	Rehabilitation cum Protection Working Circle
185/Kkr	0	0	0	0	0	71	98	0	169	169	Rehabilitation cum Protection Working Circle
186/Kkr	0	0	0	0	66	42	59	0	167	167	Rehabilitation cum Protection Working Circle
187/Kkr	0	0	0	0	89	0	52	0	141	141	Rehabilitation cum Protection Working Circle
188/Kkr	0	0	0	0	62	51	101	0	214	214	Rehabilitation cum Protection Working Circle
189/Kkr	0	0	0	0	20	49	160	0	229	229	Rehabilitation cum Protection Working Circle
190/Kkr	0	0	0	0	9	34	174	0	217	217	Rehabilitation cum Protection Working Circle
191/Kkr	0	0	0	0	14	42	125	0	181	181	Rehabilitation cum Protection Working Circle
192/Kkr	0	0	0	0	43	51	108	0	202	202	Rehabilitation cum Protection Working Circle
193/Kkr	0	0	0	0	65	58	86	0	209	209	Rehabilitation cum Protection Working Circle
194/Kkr	0	0	0	0	166	41	24	0	231	231	Rehabilitation cum Protection Working Circle
195/Kkr	0	0	0	0	19	13	42	0	74	74	Rehabilitation cum Protection Working Circle
196/Kkr	0	0	0	0	179	10	22	0	211	211	Rehabilitation cum Protection Working Circle

Co. No	Chir	Fir	Kail	S total	B/L	Scrub	Blanks	Alpine	S total	Total	Working circle
197/Kkr	0	0	0	0	119	28	24	0	171	171	Rehabilitation cum Protection Working Circle
198/Kkr	0	0	0	0	134	3	22	0	159	159	Rehabilitation cum Protection Working Circle
199/Kkr	41	0	0	41	26	19	2	0	47	88	Rehabilitation cum Protection Working Circle
Range	**7664**	**0**	**0**	**7664**	**3177**	**4800**	**5815**	**0**	**13792**	**21456**	
Division	**17479**	**9037**	**144**	**26660**	**10059**	**12336**	**19562**	**3452**	**45409**	**72069**	

ANNEXURE –III

STATEMENT OF CLOSURES MADE BY RAJOURI FOREST DIVISION

Year	Scheme	Constituency	Co. No	Area Covered	No. of Plants Planted	Fin. In Lac
2007-08	Distt Sector	Kalakote	87/K	21 Ha	15000	3.569
		Darhal	60/R	21 Ha	15000	3.252
		Rajouri	121/R	21 Ha	15000	3.179
Total:				**63 Ha**	**45000**	**10.00 Lac**
2007-08	State Sector	Rajouri	120/R	22 Ha	22000	4.00
		Kalakote	151/K	22 Ha	15000	3.75
Total:				44 Ha	37000	7.75 Lac
2008-09	Distt Sector	Rajouri	33/R	20 Ha	9000	3.333
		Kalakote	114/K	20 Ha	9000	3.333
		Darhal	1/K	20 Ha	9000	3.334
Total:				**60 Ha**	**27000**	**10.00 Lac**
2008-09	State Sector	Kalakote	119/K 106/R 107/R	37 Ha	10000	6.56
		Rajouri	104/R	16 Ha	5000	2.56
Total:				**53 Ha**	**15000**	**9.12 Lac**
2008-09	FDA	Rajouri	74/R, 104/R, 106/R, 109/R, 26/R, 121/R, 119/R, 1020103/R	100 Ha	42000	17.85 Lac
		Kalakote	149/K, 165/K, 90/K, 88/K, 112/K, 110/K, 123/K	70 Ha	22000	14.56
		Darhal	152/R, 61/K, 28/K, 202/K, 189/R, 56/K, 33/K, 215/R	80 Ha	56000	22.57
Total:				250 Ha	120000	54.98 Lac
2009-10	Distt Sector	Rajouri	110/R	17 Ha	8000	3.286
		Darhal	59/R	19 Ha	8000	3.615
		Kalakote	111/K	24 Ha	10000	4.599
Total:				**60 Ha**	**26000**	**11.50 Lac**
2009-10	State Sector	Rajouri	101/R	15 Ha	4000	2.333
		Darhal	211/R	15 Ha	4000	2.333
		Kalakote	107/K	15 Ha	4000	2.334
Total:				**45 Ha**	**12000**	**7.00 Lac**
2009-10	CM. Participatory	Rajouri	30/R, 31/R	25 Ha	4000	4.00
Total:				**25 Ha**	**4000**	**4.00 Lac**
2009-10	Bamboo Mission	Kalakote	111/K	10 Ha	3000	1.072
Total:				**10 Ha**	**3000**	**1.072 Lac**
2010-11	Distt Sector	Rajouri	100/R	20 Ha	8000	3.833 Lac
		Darhal	117/K	20 Ha	8000	3.833 Lac
		Kalakote	191/K	20 Ha	8000	3.834 Lac
Total:				**60 Ha**	**24000**	**11.50 Lac**
2010-11	State sector	Rajouri	31/R	15 Ha	5000	2.11
		Darhal	211/R	15 Ha	5000	2.11
		Kalakote	80/K 081/K	15 Ha	5000	2.10

Year	Scheme	Constituency	Co. No	Area Covered	No. of Plants Planted	Fin. In Lac
Total:				**45 Ha**	**15000**	6.32 Lac
2010-11	CM Participatory	Rajouri	31/R ï 32/R	24 Ha	5000	3.789
Total:				**24 Ha**	**5000**	**3.789 Lac**
2010-11	13th FC Award	Rajouri	79/R , 79080/R, 100/R 1190120/R	100 Ha	25000	14.665
		Darhal	25/K, 21/K, 208/K, 69/K	80 Ha	20000	11.732
		Kalakote	1230124/K, 92/K, 112/K, 119/K, 120/K	120 Ha	30000	17.598
Total:				**300 Ha**	**75000**	**43.995 Lac**
2010-11	CAMPA	Rajouri	13014/R, 18/R	30 Ha	20000	6.845
		Darhal	74075/K, 172/K, 204/K	52 Ha	34000	12.111
		Kalakote	110/K, 149/K, 1630164/K	76 Ha	53200	16.861
Total:				**158 Ha**	**107200**	**37.817 Lac**
2010-11	FDA	Darhal	28/K, 202/R, 189/R, 56/K, 33/K, 215/K, 152/K, 61/K	170 Ha	136000	8.667
		Kalakote	1650166/K, 88089/K, 1230124/K	85 Ha	24690	4.492
Total:				**255 Ha**	**160690**	**13.159 Lac**
2011-12	Distt Sector	Rajouri	78/R	20 Ha	8000	3.833
		Darhal	213/K	20 Ha	8000	3.833
		Kalakote	123/K	20 Ha	8000	3.834
Total:				**60 Ha**	**24000**	**11.50 Lac**
2011-12	State Sector	Rajouri	92/R	15 Ha	5000	2.40
		Darhal	210/K	15 Ha	2000	2.40
		Kalakote	119/K	15 Ha	4000	2.40
Total:				**45 Ha**	**11000**	**7.20 Lac**
2011-12	CM Participatory	Rajouri	33/R	20 Ha	1860	2.739
Total:				**20 Ha**	**1860**	**2.739 Lac**
2011-12	13 FC	Rajouri	1/R	20 Ha	3000	3.333
		Darhal	39/K	20 Ha	3000	3.333
		Kalakote	122/K	20 Ha	3000	3.334
Total:				**60 Ha**	**9000**	**10.00 Lac**
2011-12	CAMPA	Rajouri	63/R, 12/R, 118/R, 121/R, 100/R	120 Ha	54000	23.00
		Darhal	74075/K, 204/K, 1720173/K	60 Ha	32000	12.33
		Kalakote	1630164/K, 110/K, 149/K	60 Ha	54000	12.78
Total:				**240 Ha**	**120000**	**48.11 Lac**
2012-13	Distt. Sector	Rajouri	69/R	20 Ha	8000	0.62
		Darhal	182/R	20 Ha	8000	0.62
		Kalakote	162/K	20 Ha	6000	0.57
Total:				**60 Ha**	**22000**	**1.81 Lac**
2012-13	State	Rajouri	51052/R	12 Ha	5500	0.426
		Darhal	211/K	12 Ha	6000	0.465
		Kalakote	95/K	12 Ha	5500	0.526

Year	Scheme	Constituency	Co. No	Area Covered	No. of Plants Planted	Fin. In Lac
Total:				**36 Ha**	**17500**	**1.417 Lac**
2012-13	C.M. Participatory	Rajouri	33/R	13 Ha	2190	0.209
Total:				**13 Ha**	**2190**	**0.209 Lac**
2012-13	District Sector	Rajouri	69/R	12 Ha	5000	0.528
		Darhal	61/K	12 Ha	5000	0.528
		Kalakote	97/K	14 Ha	7000	0.922
Total:				**38 Ha**	**17000**	**1.978 Lac**
2013-14	State Sector	Rajouri	70/R	5 Ha	1000	0.1056
		Darhal	170/K	5 Ha	1000	0.1056
		Kalakote	110a/K	6 Ha	5000	0.659
Total:				**16 Ha**	**7000**	**0.8702 Lac**
2013-14	C.M Participatory	Rajouri	33/R	9 Ha	0	0
Total:				**9 Ha**	**0**	**0**
2013-14	13th FC	Kalakote	164/K	22 Ha	4000	0.5268
Total:				**22 Ha**	**4000**	**0.5268 Lac**
2013-14	Bamboo Mission	Kalakote	161/K	40 Ha	12000	1.58
Total:				**40 Ha**	**12000**	**1.58 Lac**

Detail of Closures created under CAMPA in Rajouri Forest Division during 2012-13

Co. No.	Area Treated	Fencing	Plants Planted	Patch Sowing	Pasture Development	WHS	DRSM Works	Fin
Kalakote Range								
163/KK	20	6000	10000	6000	6000	1	59	4.848
110/KK	20	6000	10000	6000	6000	1	59	4.848
113/KK	20	6000	10000	6000	6000	0	59	4.098
157/KK	20	6000	10000	6000	6000	0	59	8.196
94/KK	20	6000	10000	6000	6000	0	59	4.098
165/KK	20	6000	10000	6000	6000	0	59	4.098
79/KK	20	6000	10000	6000	6000	0	59	4.098
148/KK	20	6000	10000	6000	6000	0	59	4.098
115/KK	20	6000	10000	6000	6000	0	59	4.098
Kandi Range								
204/K	20	6000	10000	6000	6000	0	59	3.917
210/K	20	6000	10000	6000	6000	0	59	3.917
169/K	20	6000	10000	6000	6000	1	59	4.667
175/K	20	6000	10000	6000	6000	0	59	3.917
40/K	20	6000	10000	6000	6000	0	59	3.917
172-173/K	20	6000	10000	6000	6000	0	59	3.917
Rajouri Range								
106/R	20	6000	10000	6000	6000	0	59	7.834
107/R	20	6000	10000	6000	6000	0	59	7.834
108/R	20	6000	10000	6000	6000	0	59	7.834
109/R	20	6000	10000	6000	6000	0	59	7.834
110/R	20	6000	10000	6000	6000	0	59	3.917
29-30/R	20	6000	10000	6000	6000	0	59	4.007
96/R	20	6000	10000	6000	6000	0	59	3.917
12/R	20	6000	10000	6000	6000	1	59	4.757
118/R	20	6000	10000	6000	6000	0	59	3.917
121/R	20	6000	10000	6000	6000	0	59	3.917
	500 ha	**150000**	**100000**	**150000**	**150000**	**4**	**1475**	

Detail of Closures created under CAMPA in Rajouri Forest Division during 2013-14

Co. No	Area treated	Fencing	Plants Planted	Pasture Development	Grass Slips	DRSM	Total Financial (Lakhs)
Rajouri Range							
120/R	20	6000	10000	6000	6000	60	4.7574
111/R	20	6000	10000	6000	6000	60	4.7574
128/R	20	6000	10000	6000	6000	60	4.7574
8/R	20	6000	10000	6000	6000	60	4.8879
101/R	20	6000	10000	6000	6000	60	4.7574
149/R	20	6000	10000	6000	6000	60	4.7574
30/R	20	6000	10000	6000	6000	60	4.9662
65/R	20	6000	10000	6000	6000	60	4.8614
86/R	20	6000	10000	6000	6000	60	4.8096
87/R	20	6000	10000	6000	6000	60	4.8096
Kalalkote Range							
94/KK	20	6000	10000	6000	6000	60	5.0184
137/KK	20	6000	10000	6000	6000	60	5.0184
163/KK	20	6000	10000	6000	6000	60	5.0184
118/KK	20	6000	10000	6000	6000	60	5.0184
169/KK	20	6000	10000	6000	6000	60	5.0184
152/KK	20	6000	10000	6000	6000	60	5.0184
172/KK	20	6000	10000	6000	6000	60	5.0184
119/KK	20	6000	10000	6000	6000	60	5.0184
115/KK	20	6000	10000	6000	6000	60	5.0184
105/KK	20	6000	10000	6000	6000	60	5.0184
Kandi Range							
214/R	20	6000	10000	6000	6000	60	5.0184
22/K	20	6000	10000	6000	6000	60	4.7574
61/K	20	6000	10000	6000	6000	60	4.7574
167/R	20	6000	10000	6000	6000	60	4.7574
37/K	20	6000	10000	6000	6000	60	4.7574
183/R	20	6000	10000	6000	6000	60	4.7574
154/R	20	6000	10000	6000	6000	60	4.7574
168/R	20	6000	10000	6000	6000	60	4.7574
155/R	20	6000	10000	6000	6000	60	4.7574
65/K	20	6000	10000	6000	6000	60	4.7574
Total	**600**	**180000**	**300000**	**180000**	**180000**	**1800**	

ANNEXURE IV

STATEMENT OF BLOCKS, BEATS &COMPARTMENTS OF RAJOURI FOREST DIVISION

Name of Range	Name of Block	Name of Beat	Compartment Nos.	Area (in Ha.)
Rajouri	Doongi	Agrati (A)	1/R to 4/R	525
		Agrati (B)	5/R to 8/R	526
		Shahpur (A)	9/R to 13/R	482
		Shahpur (B)	14/R to 19/R	744
		Doongi (A)	20/R to 23/R	482
		Doongi (B)	24/R to 27/R	714
	Bathuni	Sawani (A)	28/R to 33/R	714
		Sawani (B)	34/R to 38/R	545
		Bathuni (A)	39/R to 43/R	558
		Bathuni (B)	44/R to 47/R	707
	Rajouri	Dassal (A)	48/R to 51/R	360
		Dassal (B)	52/R to 58/R	392
		Naika	59/R to 63/R	707
		Panjgrain	64/R to 68/R	755
	Kotli Kalaban	Rajdhani	69/R to 75/R	1608
		Sangote	76/R to 81/R	1354
		Kaotli Kalaban	82/R to 87/R	850
	Ghambir	Ghambir	88/R to 93/R	1025
		Manjakote	94/R to 96/R	765
		Katarmal	97/R to 101/R	1175
	Thanamandi	Behrote (A)	102/R to 106/R	1234
		Behrote (B)	107/R to 110/R	954
		Nerian	111/R to 114/R	1234
		Mangota (A)	115/R to 117/R	756
		Mangota (B)	118/R to 120/R	696
	Darhal	Darhal	121/R to 125/R	956
		Budh Khanari	126/R to 132/R	1310
		Chhund	133/R to 138/R	1146
		Jallamang	139/R to 143/R	1756
		Dodage	144/R to 151/R	1011
Kandi	Budhal	Kandi (A)	1/K to 6/K	1420
		Kandi (B)	7/K to 12/K	1189
		Dodanar (A)	13/K to 16/K	2105
		Dodanar (B)	17/K to 19/K	2875
		Jaglanoo	20/K to 22/K	802
		Samote (A)	23/K to 27/K	1235
		Samote (B)	28/K to 32/K	929
		Targain (A)	33/K to 36/K	703
		Targain (B)	37/K to 41/K	812
		Budhal (A)	42/K to 45/K	786
		Budhal (B)	46/K to 50/K	926
	Bakori	Kangota	51/K to 55/K	672
		Larkuti	56/K to 60/K	1125

Name of Range	Name of Block	Name of Beat	Compartment Nos.	Area (in Ha.)
Kandi (Contd.)		Bakori	61/K to 65/K	675
	Nagrota	Sakri	152/K to 156/K	1044
		Peeri	157/K to 160/K	1199
		Panjnara	161/K to 165/K	493
		Nagrota	166/K to 169/K	440
	Kalakote/Kalalkass	Kalalkass (A)	170/K to 174/K	925
		Kalalkass (B)	175/K to 178/K	430
		Sawari (A)	179/K to 183/K	397
		Sawari (B)	184/K to 188/K	458
		Naghan	189/K to 193/K	525
		Jamola (A)	194/K to 198/K	339
		Jamola (B)	199/K to 201/K	163
		Lankabain (A)	202/K to 204/K	155
		Lankabain (B)	205/K to 208/K	368
	Dhangri	Dhangri	209/K to 214/K	399
		Argi	215/K to 219/K	312
		Dalhori	220/K to 227/K	671
Kalakote	Potha	Dhanti	66/KK to 75/KK	843
		Saranoo	76/KK to 81/KK	854
		Potha	82/KK to 89/KK	1131
	Sial Sui	Khadarian (A)	90/KK to 93/KK	653
		Sialsui	94/KK to 98/KK	866
		Khadarian (B)	99/KK to 101/KK	569
		Deolian	105/KK to 109/KK	602
		Phalli	110/KK to 114/KK	1215
	Kalakote	Tatapani	115/KK to 122/KK	1708
		Baroh	123/KK to 129/KK	763
		Kanthole	130/KK to 135/KK	926
		Bahi0 Nambal	136/KK to 141/KK	543
		Sada (A)	142/KK to 145/KK	452
		Sada (B)	146/KK to 148/KK	494
		Kalakote	149/KK to 155/KK	1395
		Kharak Panjah	156/KK to 159/KK	1126
	Dhaleri	Solki	160/KK to 163/KK	851
		Metka	164/KK to 174/KK	1880
		Dhaleri	175/KK to 181/KK	1380
		Badhal	182/KK to 186/KK	878
		Gundi	187/KK to 192/KK	1184
		Khawas	193/KK to 199/KK	1143
Soil Conservation Range		2 Blocks		

ANNEXURE –V
AREA STATEMENT OF CHIR WORKING CIRCLE OF RAJOURI FOREST DIVISION

RANGE : RAJOURI

Co. No	Area in Hectares							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Alpine	
01	185	0	0	0	52	62	0	299
02	67	0	0	0	17	24	0	108
03	67	0	0	0	03	03	0	73
04	33	0	0	0	02	10	0	45
05	73	0	0	0	0	07	0	80
06	140	0	0	0	26	13	0	179
07	96	0	0	0	07	13	0	116
08	45	0	0	0	32	74	0	151
09	70	0	0	0	22	11	0	103
10	43	0	0	0	0	12	0	55
11	64	0	0	0	08	11	0	83
12	122	0	0	0	15	29	0	166
15	99	0	0	0	25	19	0	143
16	95	0	0	0	02	19	0	116
17	133	0	0	0	04	14	0	151
21	32	0	0	0	06	22	0	60
22	61	0	0	0	20	19	0	100
23	75	0	0	0	07	44	0	126
24	64	0	0	0	31	56	0	151
25	110	0	0	0	10	38	0	158
26	132	0	0	0	18	26	0	176
27	194	0	0	0	11	24	0	229
28	74	0	0	0	03	08	0	85
29	100	0	0	0	06	20	0	126
30	83	0	0	0	07	08	0	98
33	110	0	0	0	09	32	0	151
34	77	0	0	0	08	10	0	95
35	72	0	0	0	03	0	0	75
36	106	0	0	0	09	41	0	156
37	60	0	0	0	0	58	0	118
39	80	0	0	0	03	45	0	128
40	91	0	0	0	17	35	0	143
41	70	0	0	0	18	0	0	88
42	90	0	0	0	0	11	0	101
43	69	0	0	0	11	18	0	98
44	100	0	0	0	19	22	0	141
48	77	0	0	0	18	11	0	106
50	70	0	0	0	06	12	0	88
51	27	0	0	0	18	25	0	70
54	39	0	0	0	0	09	0	48
57	41	0	0	0	07	07	0	55
58	67	0	0	0	18	06	0	91
62	66	0	0	0	13	04	0	83
63	140	0	0	0	25	28	0	193
64	86	0	0	0	22	66	0	174
67	85	0	0	0	07	59	0	151
68	135	0	0	0	28	61	0	224
69	108	0	0	0	09	11	0	128
79	143	0	0	0	09	26	0	178

Co. No	Area in Hectares							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Alpine	
80	277	0	0	0	03	40	0	320
86	113	0	0	0	0	08	0	121
87	79	0	0	0	0	09	0	88
98	81	0	0	0	49	79	0	209
Total:	**4816**	**0**	**0**	**0**	**663**	**1319**	**0**	**6798**

RANGE KALAKOTE

Co. No	Area in Hectares							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Apine	
73	62	0	0	0	0	03	0	65
74	73	0	0	0	0	07	0	80
75	52	0	0	0	07	11	0	70
76	85	0	0	0	10	18	0	113
77	98	0	0	0	0	03	0	101
78	113	0	0	0	26	12	0	151
79	68	0	0	0	54	16	0	138
80	121	0	0	0	45	03	0	169
81	141	0	0	0	22	19	0	182
86	83	0	0	13	25	20	0	141
87	58	0	0	0	21	19	0	98
88	93	0	0	0	03	07	0	103
89	102	0	0	0	14	07	0	123
90	97	0	0	0	18	18	0	133
91	134	0	0	0	0	09	0	143
92	115	0	0	0	04	34	0	153
93	173	0	0	0	24	27	0	224
96	122	0	0	0	50	75	0	247
97	109	0	0	0	29	46	0	184
98	149	0	0	0	14	18	0	181
99	169	0	0	0	34	26	0	229
100	135	0	0	0	04	40	0	179
101	150	0	0	0	0	11	0	161
105	105	0	0	0	10	26	0	141
106	135	0	0	0	0	24	0	159
107	149	0	0	0	12	03	0	164
109	38	0	0	0	0	12	0	50
110(a)	83	0	0	0	15	33	0	131
113	102	0	0	0	13	26	0	141
119	53	0	0	22	38	139	0	252
120	116	0	0	0	0	10	0	126
121	110	0	0	59	0	05	0	174
122	161	0	0	38	0	10	0	209
124	46	0	0	36	0	06	0	88
130	45	0	0	0	03	35	0	83
132	115	0	0	0	17	27	0	159
147	130	0	0	0	05	22	0	157
152	155	0	0	0	07	14	0	176
153	119	0	0	0	65	70	0	254
159	180	0	0	0	19	33	0	232
Total	**4344**	**0**	**0**	**168**	**608**	**944**	**0**	**6064**

RANGE KANDI

Co. No	Area in Hectares							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Apine	
172	98	0	0	0	11	50	0	159
174	112	0	0	0	08	31	0	151
175	84	0	0	0	17	48	0	149
176	46	0	0	0	0	39	0	85
177	62	0	0	0	06	35	0	103
179	54	0	0	0	0	42	0	96
200	40	0	0	15	0	03	0	58
201	37	0	0	0	0	08	0	45
203	30	0	0	0	05	05	0	40
206	68	0	0	0	0	07	0	75
207	40	0	0	0	0	03	0	43
214	68	0	0	0	09	26	0	103
215	38	0	0	0	03	07	0	48
220	76	0	0	0	05	22	0	103
Total	**853**	**0**	**0**	**15**	**64**	**326**	**0**	**1258**
G0Total	**10013**	**0**	**0**	**183**	**1335**	**2589**	**0**	**14120**

ANNEXURE –VI

AREA STATEMENT OF FIR WORKING CIRCLE OF RAJOURI FOREST DIVISION

RANGE : RAJOURI

Co. No	Area in Hectares							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Apine	
138	0	128	0	03	0	20	0	151
139	0	249	0	0	72	26	273	620
140	0	306	0	0	175	13	111	605
141	0	172	0	0	12	30	0	214
142	0	130	0	0	08	23	0	161
Total	0	**985**	**0**	**03**	**267**	**112**	**384**	**1751**

RANGE KANDI

Co. No	Area in Hectares							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Apine	
03	0	165	0	9	8	32	0	214
04	0	192	0	0	0	35	0	227
05	0	200	0	0	0	14	0	214
06	0	159	0	0	0	17	0	176
08	0	129	0	0	8	17	118	272
10	0	123	0	0	13	20	0	156
11	0	156	0	0	14	32	0	202
12	0	81	0	0	2	38	0	121
13	0	228	0	15	8	14	0	265
18	0	343	0	0	0	60	0	403
19	0	338	0	0	0	40	0	378
20	0	210	0	45	03	32	0	290
26	0	119	0	07	46	17	0	189
27	0	91	0	0	14	21	0	126
29	0	114	0	0	21	44	0	179
30	0	84	0	0	30	50	0	164
31	0	131	0	0	35	0	0	166
36	0	141	0	0	16	14	0	171
37	0	100	0	0	0	31	0	131
Total	0	**3104**	0	**76**	**218**	**528**	**118**	**4044**
G0Total	0	**4089**	0	**79**	**485**	**640**	**502**	**5795**

ANNEXURE –VII

AREA STATEMENT OF REHABILITATION CUM-PROTECTION WORKING CIRCLE OF RAJOURI FOREST DIVISION

RAJOURI RANGE

Co. No	Area in Hectares							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Alpine	
13	51	0	0	0	8	16	0	75
14	37	0	0	0	17	41	0	95
18	83	0	0	0	23	53	0	159
19	67	0	0	0	6	7	0	80
20	110	0	0	0	30	56	0	196
31	50	0	0	0	79	29	0	158
32	48	0	0	0	12	36	0	96
38	52	0	0	0	34	15	0	101
45	203	0	0	0	104	116	0	423
46	0	0	0	63	17	0	0	80
47	0	0	0	41	22	0	0	63
49	52	0	0	0	7	37	0	96
52	36	0	0	0	20	8	0	64
53	22	0	0	0	3	3	0	28
55	15	0	0	0	6	22	0	43
56	50	0	0	0	4	9	0	63
59	123	0	0	0	57	39	0	219
60	39	0	0	0	14	12	0	65
61	65	0	0	0	52	30	0	147
65	77	0	0	0	10	36	0	123
66	56	0	0	0	8	19	0	83
70	97	0	0	0	36	60	0	193
71	69	0	0	0	27	29	0	125
72	7	0	0	0	105	202	0	314
73	0	0	0	0	84	157	0	241
74	16	0	0	44	70	134	0	264
75	37	0	0	59	107	140	0	343
76	61	0	0	58	109	180	0	408
77	78	0	0	0	0	5	0	83
78	88	0	0	0	0	13	0	101
81(a)	21	0	0	47	20	48	0	136
81(b)	39	0	0	29	10	50	0	128
82	0	0	0	35	45	74	0	154
83	0	0	0	75	110	24	0	209
84	0	0	0	88	45	14	0	147
85	34	0	0	27	20	50	0	131
88	0	0	0	115	12	74	0	201
89	113	0	0	9	8	8	0	138
90	8	0	0	36	28	16	0	88
91	37	0	0	53	29	38	0	157
92	0	0	0	75	40	16	0	131
93	122	0	0	73	25	90	0	310
94	78	0	0	39	63	92	0	272
95	93	0	0	56	32	88	0	269
96	61	0	0	4	38	121	0	224
97	113	0	0	1	27	126	0	267
99	77	0	0	0	23	18	0	118

Co. No	Area in Hectares							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Alpine	
100	87	0	0	0	32	54	0	173
101	71	0	0	41	107	189	0	408
102	0	0	0	46	25	144	0	215
103	0	0	0	68	52	111	0	231
104	0	0	0	81	17	18	0	116
105	0	0	0	142	32	37	0	211
106	0	0	0	128	80	253	0	461
107	0	0	56	31	33	129	0	249
108	0	0	84	135	28	7	0	254
109	0	0	4	62	26	84	0	176
110	0	66	0	12	32	165	0	275
111	0	85	0	0	69	156	0	310
112	0	203	0	20	72	168	0	463
113	0	36	0	95	30	78	0	239
114	0	0	0	20	85	117	0	222
115	0	141	0	10	75	129	0	355
116	0	19	0	132	81	15	0	247
117	0	0	0	61	30	63	0	154
118	0	0	0	83	35	139	0	257
119	0	0	0	20	16	123	0	159
120	0	0	0	82	65	133	0	280
121	0	0	0	44	44	181	0	269
122	0	49	0	0	36	126	0	211
123	0	30	0	11	18	115	0	174
124	0	47	0	11	0	75	0	133
125	0	34	0	32	38	65	0	169
126	0	23	0	97	53	84	0	257
127	0	84	0	0	18	79	0	181
128	0	26	0	10	59	59	0	154
129	0	73	0	0	34	14	0	121
130	0	86	0	0	38	108	0	232
131	0	113	0	0	15	43	0	171
132	0	141	0	0	28	25	0	194
133	0	132	0	0	45	64	0	241
134	0	54	0	0	29	15	0	98
135	0	106	0	0	35	108	0	249
136	0	83	0	0	95	91	0	269
137	0	80	0	9	10	39	0	138
143	0	94	0	0	37	25	0	156
144	0	200	0	23	12	17	0	252
145	0	22	0	42	17	62	0	143
146	0	10	0	45	15	53	0	123
147	0	13	0	29	22	42	0	106
148	0	0	0	18	19	76	0	113
149	0	0	0	14	24	70	0	108
150	0	0	0	18	35	60	0	113
151	0	0	0	0	28	25	0	53
	2643	**2050**	**144**	**2699**	**3472**	**6484**	**0**	**17492**

KALAKOTE RANGE

Co. No	Area in Hectares							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Alpine	
66	0	0	0	70	4	17	0	91
67	12	0	0	73	11	37	0	133
68	0	0	0	25	4	31	0	60
69	34	0	0	14	0	7	0	55
70	0	0	0	109	12	15	0	136
71	0	0	0	61	5	9	0	75
72	48	0	0	21	0	9	0	78
82	0	0	0	0	153	83	0	236
83	50	0	0	0	28	58	0	136
84	0	0	0	0	115	66	0	181
85	40	0	0	0	41	32	0	113
94	30	0	0	0	59	64	0	153
95	0	0	0	0	47	54	0	101
108	62	0	0	0	0	26	0	88
110(b)	90	0	0	0	142	74	0	306
111	209	0	0	0	66	73	0	348
112	72	0	0	0	96	43	0	211
114	37	0	0	0	15	26	0	78
115	22	0	0	0	62	29	0	113
116	15	0	0	0	70	91	0	176
117	56	0	0	0	76	236	0	368
118	27	0	0	8	148	107	0	290
123	34	0	0	40	6	13	0	93
125	31	0	0	88	23	29	0	171
126	65	0	0	26	0	20	0	111
127	63	0	0	47	10	6	0	126
128	42	0	0	35	14	10	0	101
129	33	0	0	22	4	14	0	73
131	52	0	0	0	24	52	0	128
133	51	0	0	11	45	64	0	171
134	85	0	0	48	30	43	0	206
135	11	0	0	58	39	71	0	179
136	30	0	0	0	18	7	0	55
137	0	0	0	100	42	24	0	166
138	0	0	0	9	14	20	0	43
139	0	0	0	115	0	3	0	118
140	0	0	0	68	10	5	0	83
141	0	0	0	70	5	3	0	78
142	0	0	0	87	10	16	0	113
143	0	0	0	51	5	4	0	60
144	78	0	0	35	6	27	0	146
145	85	0	0	31	0	17	0	133
146	82	0	0	47	11	11	0	151
148	105	0	0	35	14	32	0	186
149	120	0	0	0	10	13	0	143
150	66	0	0	35	15	15	0	131
151	60	0	0	0	222	11	0	293
154	86	0	0	29	72	45	0	232
155	52	0	0	0	50	64	0	166
156	8	0	0	0	104	97	0	209
157	16	0	0	0	153	216	0	385
158	40	0	0	0	52	208	0	300

Co. No	Area in Hectares							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Alpine	
160	35	0	0	88	54	9	0	186
161	0	0	0	0	98	15	0	113
162	0	0	0	0	121	106	0	227
163	17	0	0	0	142	166	0	325
164	30	0	0	0	64	175	0	269
165	101	0	0	0	35	27	0	163
166	0	0	0	0	115	49	0	164
167	0	0	0	0	72	66	0	138
168	0	0	0	0	105	89	0	194
169	0	0	0	0	60	99	0	159
170	72	0	0	0	62	30	0	164
171	92	0	0	0	72	32	0	196
172	83	0	0	0	38	58	0	179
173	99	0	0	0	23	21	0	143
174	85	0	0	0	10	16	0	111
175	123	0	0	0	26	49	0	198
176	67	0	0	0	45	108	0	220
177	102	0	0	0	57	58	0	217
178	56	0	0	51	79	20	0	206
179	137	0	0	78	25	17	0	257
180	45	0	0	50	0	21	0	116
181	36	0	0	78	35	17	0	166
182	0	0	0	81	83	81	0	245
183	0	0	0	0	46	75	0	121
184	0	0	0	104	51	21	0	176
185	0	0	0	0	71	98	0	169
186	0	0	0	66	42	59	0	167
187	0	0	0	89	0	52	0	141
188	0	0	0	62	51	101	0	214
189	0	0	0	20	49	160	0	229
190	0	0	0	9	34	174	0	217
191	0	0	0	14	42	125	0	181
192	0	0	0	43	51	108	0	202
193	0	0	0	65	58	86	0	209
194	0	0	0	166	41	24	0	231
195	0	0	0	19	13	42	0	74
196	0	0	0	179	10	22	0	211
197	0	0	0	119	28	24	0	171
198	0	0	0	134	3	22	0	159
199	41	0	0	26	19	2	0	88
	3320	**0**	**0**	**3009**	**4192**	**4871**	**0**	**15392**

KANDI RANGE

Co. No	Area in Hectare							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Alpine	
1	0	0	0	63	138	139	0	340
2	0	11	0	60	23	155	0	249
7	0	163	0	45	0	0	54	262
9	0	32	0	36	45	63	0	176
14	0	187	0	0	0	10	80	277
15	0	165	0	0	0	100	315	580
16	0	186	0	93	42	65	597	983

Co. No	Area in Hectare							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Alpine	
17	0	426	0	0	0	28	1640	2094
21	0	180	0	80	9	16	0	285
22	0	41	0	141	6	39	0	227
23	0	48	0	34	64	207	0	353
24	0	101	0	24	47	93	0	265
25	0	0	0	90	90	122	0	302
28	0	0	0	0	39	79	0	118
32	0	52	0	18	41	71	120	302
33	0	78	0	38	3	38	120	277
34	0	56	0	0	13	60	0	129
35	0	38	0	0	15	73	0	126
38	0	106	0	0	16	19	0	141
39	0	191	0	0	54	98	0	343
40	0	21	0	0	42	33	0	96
41	0	49	0	0	33	19	0	101
42	0	160	0	72	25	33	0	290
43	0	124	0	50	10	30	0	214
44	0	81	0	20	13	22	0	136
45	0	78	0	0	26	18	24	146
46	0	70	0	95	0	44	0	209
47	0	56	0	72	0	25	0	153
48(a)	0	90	0	30	21	58	0	199
48(b)	0	0	0	0	68	20	0	88
49	0	0	0	25	45	43	0	113
50	0	0	0	27	62	75	0	164
51	0	0	0	40	33	88	0	161
52	0	0	0	54	20	55	0	129
53	0	0	0	58	25	59	0	142
54	0	0	0	40	35	41	0	116
55	0	0	0	80	7	37	0	124
56	0	0	0	58	24	29	0	111
57	0	0	0	50	12	16	0	78
58	0	0	0	60	6	5	0	71
59	0	0	0	90	17	6	0	113
60	0	0	0	717	24	11	0	752
61	0	0	0	101	20	15	0	136
62	0	0	0	118	13	7	0	138
63	0	0	0	107	18	29	0	154
64	0	0	0	105	12	19	0	136
65	0	0	0	91	10	10	0	111
152	0	0	0	15	32	91	0	138
153	0	0	0	18	60	90	0	168
154	0	0	0	35	45	96	0	176
155	0	16	0	54	58	149	0	277
156	0	28	0	80	46	131	0	285
157	0	4	0	38	52	75	0	169
158	0	33	0	64	155	143	0	395
159	0	20	0	75	112	108	0	315
160	0	7	0	108	85	120	0	320
161	0	0	0	31	13	24	0	68
162	0	0	0	11	12	58	0	81
163	0	0	0	45	12	69	0	126
164	0	0	0	14	40	33	0	87
165	0	0	0	16	20	95	0	131

Co. No	Area in Hectare							Total
	Chir	Fir	Kail	B/L	Scrub	Blanks	Alpine	
166	26	0	0	0	5	34	0	65
167	15	0	0	0	9	77	0	101
168	18	0	0	0	18	37	0	73
169	0	0	0	29	39	133	0	201
170	0	0	0	0	150	77	0	227
171	0	0	0	0	95	137	0	232
173	0	0	0	0	106	50	0	156
178	9	0	0	58	10	16	0	93
180	32	0	0	0	0	23	0	55
181	73	0	0	0	6	16	0	95
182	63	0	0	0	8	17	0	88
183	18	0	0	27	7	11	0	63
184	3	0	0	36	19	33	0	91
185	10	0	0	35	10	10	0	65
186	0	0	0	18	30	45	0	93
187	42	0	0	0	22	42	0	106
188	5	0	0	0	28	70	0	103
189	0	0	0	43	26	27	0	96
190	82	0	0	24	0	12	0	118
191	101	0	0	0	10	15	0	126
192	30	0	0	0	24	36	0	90
193	13	0	0	16	12	54	0	95
194	36	0	0	0	0	0	0	36
195	82	0	0	0	13	17	0	112
196	78	0	0	0	0	35	0	113
197	18	0	0	9	0	11	0	38
198	20	0	0	12	4	4	0	40
199	0	0	0	52	3	5	0	60
202	42	0	0	0	10	8	0	60
204	25	0	0	0	15	15	0	55
205	0	0	0	60	12	13	0	85
208	56	0	0	12	21	76	0	165
209	43	0	0	0	5	17	0	65
210	40	0	0	18	6	14	0	78
211	29	0	0	0	0	11	0	40
212	0	0	0	18	13	12	0	43
213	45	0	0	0	16	9	0	70
216	45	0	0	0	0	8	0	53
217	55	0	0	0	4	11	0	70
218	45	0	0	0	3	10	0	58
219	73	0	0	0	3	7	0	83
221	34	0	0	0	3	13	0	50
222	0	0	0	24	7	9	0	40
223	18	0	0	45	3	17	0	83
224	64	0	0	15	8	24	0	111
225	42	0	0	0	26	25	0	93
226	42	0	0	0	35	26	0	103
227	31	0	0	52	0	5	0	88
	1503	**2898**	**0**	**4089**	**2852**	**4978**	**2950**	**19270**

ANNEXURE –VIII

STATEMENT OF AREA UNDER VARIOUS WORKING CIRCLES OF RAJOURI FOREST DIVISION

Range	Working circle	Chir	Fir	Kail	B/L	Scrub	Blanks	Alpine	Total
Rajouri	Chir WC	4816	0	0	0	663	1319	0	**6798**
	Fir SWC	0	985	0	3	267	112	384	**1751**
	Rehabilitation ï Cum-Protection WC	2643	2050	144	2699	3472	6484	0	**17492**
	Sub-Total	**7459**	**3035**	**144**	**2702**	**4402**	**7915**	**384**	**26041**
Kalakote	Chir WC	4344	0	0	168	608	944	0	**6064**
	Fir SWC	0	0	0	0	0	0	0	**0**
	Rehabilitation ï Cum-Protection WC	3320	0	0	3009	4192	4871	0	**15392**
	Sub-Total	**7664**	**0**	**0**	**3177**	**4800**	**5815**	**0**	**21456**
Kandi	Chir WC	853	0	0	15	64	326	0	**1258**
	Fir SWC	0	3104	0	76	218	528	118	**4044**
	Rehabilitation ï Cum-Protection WC	1503	2898	0	4089	2852	4978	2950	**19270**
	Sub-Total	**2356**	**6002**	**0**	**4180**	**3134**	**5832**	**3068**	**24572**
Division	**Total**	**17479**	**9037**	**144**	**10059**	**12336**	**19562**	**3452**	**72069**

ANNEXURE –IX

STATEMENT OF FOREST CHECK POSTS IN RAJOURI FOREST DIVISION

S.NO	RANGE	NAME OF THE CHECK POST
1	Rajouri	Manyal Gali
2	Rajouri	Nerojail
3	Rajouri	Kallar
4	Rajouri	Dehri0Reylote
5	Kandi	Palma
6	Kandi	Bakori
7	Kalakote	Solki
8	Kalakote	Mogla

ANNEXURE –X

STATEMENT OF RESIN DEPOTS IN RAJOURI FOREST DIVISION

S.NO	NAME OF THE DEPOT.	S.NO	NAME OF THE DEPOT
(A) RAJOURI		**(B) KALAKOTE**	
1	Central depot Agrati	17	Dalhori
2	Agrath store	18	Kharkana
3	Sasalkote	19	Argi
4	Mehari	20	Potha
5	Shahpur	21	Balli
6	Chitibakri	22	Sailsui
7	Khajuria	23	Pathara
8	Samyan	24	Kothian
9	Ghai	25	Tatapani
10	Bathuni	26	Central Depot. Kharak Panja
11	Dassal	27	Padri Ghai
12	Thandi Kassi	28	Kaku gala
13	Ghambir Brahmana	29	Simble Ghai
14	Kakora	30	Traru
15	Kotli		
16	Ghambir Muglan		
(C) KANDI			
31	Palma	32	Manoor gala
33	Bindi	34	Dalhori
35	Bakori	36	Lanka bain
37	Argi		

ANNEXURE –XI

AREA DIVERTED FOR NON FORESTRY PURPOSES UNDER J&K FOREST (CONSERVATION) ACT, 1997

S. No	Name of Proposals	Area diverted (Ha)	Total due (in Rs)	No. of trees involved		
				B.L	Conifer	Total
	User Agency: PMGSY					
1	Bindi to Jamola	2.2900	2027850	0	71	71
2	Barmandal to Soom	1.3700	1680630	0	230	230
3	Manoor Gala to Sawari	1.7600	1641012	501	0	501
4	Khawas to Bhella	1.5000	975000	0	0	0
5	Manyal to Dhara	0.7500	867158	244	0	244
6	Hasplote to Mangota	1.5000	1742147	348	0	348
7	Sabji to Chalal Bagla	1.0800	932680	280	0	280
8	Balli to Khadarian	1.9500	2777741	21	40	61
9	Rajdhani to Panjgrain	1.2600	4523458	0	53	53
10	Sasalkote to Chalas	7.7200	8607780	0	222	222
11	Khandi Gali to Kanthol	1.8420	3456060	182	0	182
12	Charan to Kalalkass	6.3900	6238142	12	404	416
13	Badhal to Gundi	3.9900	4220061	339	0	339
14	Kandi to Kha	3.2250	3069348	0	147	147
15	Khawas to Gundha	4.2000	3805793	448	7	455
16	Km 19th TO1 to Muradpur	1.9000	1891638	173	12	185
17	Rajouri to Gurdhan wala	1.4600	1561260	43	30	73
18	TO1 Km 8th Kakora to Kanyal Gali	0.9750	900341	25	32	57
19	TO1 to Katarmal	0.5800	848490	0	136	136
20	Km 5th to Bari Darhal	2.2500	2002188	0	0	0
21	Doongi to Namla	1.7600	2338290	0	199	199
22	Ujhan to Leeran	0.1900	178830	0	0	0
23	Mubarak Pura to Sohana	1.9800	2091590	0	81	81
24	Rajdhani to Paryali	1.2600	1280400	0	53	53
25	Dassal Gujjra to Dassal Jattan	0.8300	851620	0	27	27
26	Km 9th LO 39 to Hattan Seri	2.0500	1899688	0	84	84
27	Pallulian to Tundi Trar	2.1000	2789930	0	121	121
28	Nagrota to Thati Badoon	1.4000	1901760	55	3	58
29	Dalhori to Gadyog	0.9800	1246200	182	0	182
30	14th Km road Badal to Bai nambal	2.1800	2812320	255	0	255
31	Hasplote to Panghai	1.8100	1857870	0	0	0
	Total	**64.5320**	**73017275**	**3108**	**1952**	**5060**
	User Agency: GREF					
1	Mogla Treru Dhaleri Khawas	7.5000	6779963	514	36	550
2	Kandi Budhal NHDL	4.9590	9224957	114	1646	1760
	Total	**12.4590**	**16004920**	**628**	**1682**	**2310**
	User Agency: PWD					
1	Agrati to Swani	0.8890	1107220	0	539	539
2	Bathuni to Mehari	1.3200	1392416	0	36	36
3	Kalali to Gulati	1.6500	246637	0	9	9
4	Dhangri to Gunni	1.0800	100600	0	0	0
5	Chamba to Paryali	0.3600	399380	0	15	15
6	Jambukote to Kotli Kalaban	0.4000	515020	11	33	44
7	Dalhori to Kanthol	2.1500	1718332	89	86	175
8	Nagrota to Panyal Dhara	2.4500	2685728	77	19	96
9	Khoremang to Leeran	0.9000	59130	0	0	0

S. No	Name of Proposals	Area diverted (Ha)	Total due (in Rs)	No. of trees involved		
				B.L	Conifer	Total
10	Panjnara to Phalli	0.9375	969189	0	30	30
11	Balli to Sangpur via Kha	1.8000	1857800	0	63	63
	Total	**13.9365**	**11051452**	**177**	**830**	**1007**
	User Agency: PDD					
1	Rajouri Daraba 132 Kv transmission line double Ckt	2.5000	2300657	43	42	85
2	Baran Siot Kalakote transmission line	3.3400	4136103	107	70	177
	Total	**5.8400**	**6436760**	**150**	**112**	**262**
	User Agency: RDD					
1	Eco Tourism Infrastructure at DKG	0.1100	63800	0	0	0
	Total	**0.1100**	**63800**	**0**	**0**	**0**
	G.Total	**96.8775**	**106574207**	**4063**	**4576**	**8639**

ANNEXURE –XII

STATEMENT OF BUILDINGS OF RAJOURI FOREST DIVISION

S. No	Name of the building	Location	Present Status
	Old DFO Office complex	**Rajouri**	
1	DFO Residence		Needs reconstruction
2	Old DFO Office		Declared unsafe. Needs demolition
3	Old Staff Quarter		Needs reconstruction
4	Office building of Range Officer Rajouri		Recently constructed.
5	Office building of Range Officer Soil Range		Recently constructed
6	Old Guest Hut		Needs complete renovation
	New Forest Complex	**Rajouri**	
1	Office building of Conservator of Forests, West Circle, Rajouri		Recently constructed
2	Residence of Conservator of Forests West Circle, Rajouri		Recently constructed
3	Staff Quarters		Recently constructed
4	Guest House		Recently constructed
5	Office building of DFO Rajouri		Recently constructed
6	Nature Interpretation Centre		Recently constructed
7	Chowkidar Hut		Recently constructed
	Old Staff Quarters in the Market Area	**Rajouri**	
1	There exists three quarters for the officials.		One encroached; one renovated and one need to be renovated.
	Rajouri Range		
1	Official Quarter	Agrati	Needs complete renovation
2	Block Officer Office Cum residence and Hut	Manjakote	Recently constructed
3	Guest House	Shahdara Sharief	Recently constructed
4	Eco Tourism Huts	Dera Ki0Gali	Recently constructed
5	Block Officer Hut	Darhal	Recently constructed
6	Block Officer Hut	Manyal	Recently constructed
7	Check Post Hut	Deri Relyote	Needs upgradation
8	Check Post Hut	Manyal	Needs repairing
9	Timber Sale Depot	Sheshara	One timber shed and chowkidar hut exiting which needs repair and renovation.
10	Timber sale depot	Darhal	Recently constructed
11	Nursery Hut	Tandwal	Recently renovated
	Kandi Range		
1	Range Office Complex	Kandi	Office and residence of the Range Officer and one Guest room are existing. Needs maintenance.
2	Block Officer Hut	Palma	Recently constructed
3	Check Post Hut	Palma	Recently renovated
4	Timber Sale Depot	Palma	Needs Maintenance

S. No	Name of the building	Location	Present Status
5	Forest Rest House	Kandi Nursery	Gutted. Needs reconstruction.
	Kalakote Range		
	Range Office Complex	Kalakote	
1	Office of the Range Officer		Recently constructed
2	Residence of the Range Officer		Recently constructed
3	Old Range office		Needs reconstruction.
4	Old Range Officers Residence		Needs demolition.
5	Inspection Hut		Needs repair and renovation
6	Block Officer Hut	Balli	Recently constructed
7	Guard Hut	Balli	Needs repair and renovation

ANNEXURE XIII

YEAR WISE AND COMPARTMENT WISE NUMBER OF BLAZES ASSIGNED FOR RESIN EXTRACTION

Co. No	Number of Blazes													Total
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	
Rajouri range														
1/R	6402	6402	0	6402	6402	6402	6402	6400	6400	6400	6400	6400	0	**70412**
2/R	3718	3718	0	3718	0	3718	3718	3000	3000	3000	3000	3000	0	**33590**
3/R	3530	3530	3530	3530	0	2280	2280	3000	0	0	0	0	0	**21680**
5/R	3012	3012	0	3012	0	0	0	0	0	0	0	0	0	**9036**
6/R	6129	6129	0	6129	6129	6129	6129	6129	6050	6050	6000	0	0	**61003**
7/R	5534	5534	5534	5534	0	5534	5534	5534	5400	5400	5000	0	0	**54538**
8/R	0	0	0	0	0	3787	3787	3787	0	0	0	0	0	**11361**
10/R	2919	2919	2919	2919	2919	2919	0	0	0	0	0	0	0	**17514**
11/R	3046	3046	3046	3046	3046	3046	3060	3060	3060	3060	3000	0	0	**33516**
13/R	0	0	0	0	0	0	0	0	3500	3500	3500	0	0	**10500**
15/R	2557	2557	2557	2557	0	2557	0	0	0	0	0	0	0	**12785**
16/R	2660	2660	2660	2660	2660	1985	0	0	0	0	0	0	0	**15285**
17/R	3300	3300	3300	3000	0	3043	0	0	0	0	0	0	0	**15943**
20/R	3933	3933	3933	3933	3933	3933	3000	3000	3000	3000	3000	0	0	**38598**
21/R	2166	2166	2166	2166	2166	2166	3220	3200	3200	3200	3200	0	0	**29016**
22/R	2938	2938	2938	2938	2938	3601	3500	3500	3500	3500	3500	0	0	**35791**
23/R	5220	5220	5220	5220	0	5220	5220	4000	4000	4000	4000	0	0	**47320**
24/R	4230	4230	4230	4230	0	2280	4480	3500	3500	3500	3500	0	0	**37680**
25/R	4870	4870	4870	4870	4870	4870	3500	3500	3500	3500	3500	0	0	**46720**
26/R	6340	6340	6340	6340	6340	5130	6500	6500	6500	6500	6500	0	0	**69330**
30/R	0	0	3900	3900	3900	3900	3900	3900	0	0	0	0	0	**23400**
33/R	0	0	0	0	0	0	0	0	0	0	1500	0	0	**1500**
34/R	1505	1505	1505	1505	1505	1506	1505	1505	2000	0	2000	0	0	**16041**
35/R	8890	8890	8890	8890	0	0	0	0	0	0	0	0	0	**35560**
36/R	0	0	4150	4150	3820	600	1000	1000	4000	0	4000	0	0	**22720**
40/R	1266	1266	1266	1266	1266	1374	0	0	0	0	0	0	0	**7704**

Co. No	Number of Blazes													Total
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	
41/R	5486	5486	5486	5486	5486	5486	0	0	0	0	0	0	0	**32916**
42/R	8723	8723	8723	8723	8723	8860	0	0	0	0	0	0	0	**52475**
43/R	2031	2031	2031	2031	0	0	2000	5000	5000	5000	0	0	0	**25124**
44/R	0	0	0	0	0	0	1000	7000	7000	7000	0	0	0	**22000**
45/R	13460	13460	13460	13460	13460	14600	14600	0	0	0	0	0	0	**96500**
48/R	4400	4400	4400	4400	0	4400	4400	4400	0	0	0	0	0	**30800**
49/R	3928	3732	3732	3732	0	3928	0	0	0	0	0	0	0	**19052**
50/R	3772	3968	3968	0	0	3872	0	0	0	0	0	0	0	**15580**
51/R	4470	4470	0	4470	4470	4470	4129	4470	4400	0	0	0	0	**35349**
52/R	4221	4221	0	4221	4221	4221	4221	3880	4150	0	0	0	0	**33356**
53/R	977	1000	1000	0	0	0	0	0	0	0	0	0	0	**2977**
54/R	1430	1407	1407	0	0	2359	3190	1430	0	0	0	0	0	**11223**
55/R	530	0	0	0	0	0	0	0	0	0	0	0	0	**530**
57/R	2900	2900	2900	2900	0	2900	2900	2900	3000	0	0	0	0	**23300**
58/R	5310	5310	5310	5310	5310	5310	5310	5310	6000	0	0	0	0	**48480**
59/R	5100	5100	5100	5100	5100	5790	5100	6860	0	0	0	0	0	**43250**
60/R	3710	3710	3710	3710	3710	3710	3710	0	0	0	0	0	0	**25970**
61/R	4027	4027	4027	4027	4027	4027	3377	0	0	0	0	0	0	**27539**
62/R	2563	1913	2563	2563	2563	1913	2563	0	0	0	0	0	0	**16641**
63/R	1700	2350	0	0	0	0	0	0	0	0	0	0	0	**4050**
64/R	2800	2800	2800	2800	0	2800	0	0	0	0	0	0	0	**14000**
65/R	2509	2509	2509	0	2509	2509	0	0	0	0	0	0	0	**12545**
66/R	2707	2016	2016	2707	0	0	0	0	0	0	0	0	0	**9446**
67/R	2000	2000	2000	2000	2000	2000	0	0	0	0	0	0	0	**12000**
68/R	1700	3691	3691	3000	3198	3691	0	0	0	0	0	0	0	**18971**
69/R	3156	3156	3156	3156	3156	3156	3156	3156	3100	3100	0	0	4000	**35448**
70/R	4677	4677	4677	4677	4677	4677	3540	3540	4750	4750	0	0	0	**44642**
71/R	2704	2704	2704	0	0	1567	2704	2704	0	0	0	0	0	**15087**
98/R	4871	4871	4871	4871	0	4871	0	0	0	0	0	0	3500	**27855**
99/R	2518	2618	2618	2518	0	2518	0	0	0	0	0	0	0	**12790**

Co. No	Number of Blazes													Total
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	
100/R	3011	2911	2911	0	0	2911	0	0	0	0	0	0	0	**11744**
Rajouri total	**195556**	**196326**	**174724**	**187777**	**124504**	**182526**	**132635**	**115165**	**98010**	**74460**	**61600**	**9400**	**7500**	**1560183**
Kalakote Range														
73/K	3405	3405	3405	3405	0	0	0	0	0	0	0	0	0	**13620**
74/K	3058	3058	3058	3058	0	3058	3058	3058	2500	0	0	0	0	**23906**
75/K	1500	1500	1500	1500	0	1500	1500	1500	1500	0	0	0	0	**12000**
76/K	4373	4373	4373	4373	0	4373	3746	3746	4500	0	0	0	0	**33857**
77/K	3196	3196	3196	3196	0	2569	3196	3196	3000	0	0	0	0	**24745**
78/K	7980	7980	7980	7950	7950	7950	6500	7980	0	0	0	0	0	**62270**
79/K	9060	9060	9060	9060	6020	6020	7500	6020	0	0	0	0	0	**61800**
80/K	7050	7050	7050	7050	0	7050	5000	7050	5000	5000	5000	5000	5000	**72300**
81/K	0	0	2000	2950	0	2950	5000	2950	5000	5000	5000	5000	4000	**39850**
82/K	807	807	807	807	0	0	0	0	0	0	0	0	0	**3228**
83/K	4050	4050	4050	4050	4050	4050	4050	4050	0	1500	0	0	0	**33900**
84/K	2704	2704	2704	2704	2704	2704	2004	1704	0	1500	0	0	0	**21432**
85/K	1650	1650	1650	1650	1650	1650	1650	1050	0	1000	0	0	0	**13600**
86/K	1555	1555	1555	1555	1555	1555	1596	1555	0	2000	0	0	0	**14481**
87/K	6000	6000	6000	6000	3951	4000	3910	3251	0	5000	0	0	0	**44112**
88/K	5790	5790	5790	5790	2140	2041	2790	4390	0	0	0	0	0	**34521**
90/K	7242	7242	7242	7242	0	7242	3000	3242	0	0	0	0	0	**42452**
91/K	6245	6245	6245	6245	0	2245	4000	2245	0	0	0	0	0	**33470**
92/K	3190	3190	3190	3190	0	1190	2500	2180	0	0	0	0	0	**18630**
93/K	3575	3575	3575	3575	0	1323	2500	4333	0	0	0	0	0	**22456**
94/K	1616	1816	1816	1816	0	1816	0	0	0	0	0	0	0	**8880**
96/K	0	4662	4662	4662	0	4662	4662	4662	0	0	0	0	0	**27972**
97/K	0	5333	5333	5333	0	5338	5338	5338	0	0	0	0	0	**32013**
98/K	0	8774	8774	8774	0	10000	10000	10000	0	0	0	0	0	**56322**
99/K	6436	7500	7500	7500	0	5184	0	0	0	0	0	0	0	**34120**

Co. No	Number of Blazes													Total
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	
100/K	6554	5490	0	6554	0	6554	6554	6554	0	0	0	0	0	**38260**
101/K	7420	7420	0	5446	0	2446	2446	2446	0	0	0	0	0	**27624**
105/K	6471	6471	0	6471	0	6471	5000	6471	0	0	0	0	0	**37355**
106/K	5779	5779	5779	5799	0	5799	4500	5799	0	0	0	0	0	**39234**
107/K	3427	3427	3427	3427	0	0	0	0	0	0	0	0	0	**13708**
108/K	5050	5050	5050	5050	0	2050	4500	2050	0	0	0	0	0	**28800**
109/K	0	0	0	0	0	3200	3500	3200	0	0	0	0	0	**9900**
110/K	0	0	3140	0	0	0	0	0	0	0	0	0	0	**3140**
110a/K	1868	1868	1868	1868	0	3040	1500	3040	0	0	0	0	0	**15052**
110b/K	0	0	0	3040	0	0	0	0	0	0	0	0	0	**3040**
112/K	0	0	4721	4721	0	4000	4500	4000	0	0	0	0	0	**21942**
113/K	1853	1853	1853	1853	0	1239	1500	1239	0	0	0	0	0	**11390**
114/K	870	870	870	870	0	721	1500	721	0	0	0	0	0	**6422**
115/K	2400	2400	2400	2400	0	0								**9600**
116/K	510	510	0	0	0	0								**1020**
118/K	0	0	2200	2200	0	2200	2200	0	0	0	0	0	0	**8800**
119/K	0	0	300	300	0	0	0	0	0	0	0	0	0	**600**
120/K	6741	6741	6741	6741	0	3646	3646	0	0	0	0	0	0	**34256**
121/K	3043	3042	3043	3042	0	3043	3043	0	0	0	0	0	0	**18256**
122/K	1611	1612	1611	1611	0	1611	1611	0	0	0	0	0	0	**9667**
123/K	1946	1946	0	1946	0	1946	2000	1946	0	0	0	0	0	**11730**
124/K	2184	2184	0	2184	0	2184	2000	2184	0	0	0	0	0	**12920**
126/K	1330	1330	0	1330	0	1330	1000	1330	0	0	0	0	0	**7650**
130/K	1200	1200	0	1200	0	525	1000	525	0	0	0	0	0	**5650**
131/K	2900	2900	0	2900	0	0	0	0	0	0	0	0	0	**8700**
132/K	3000	3000	3000	3000	0	2000	1000	2000	0	0	0	0	0	**17000**
133/K	2200	2200	2200	2200	0	1200	2000	1200	0	0	0	0	0	**13200**
134/K	2008	2008	2008	2008	0	1008	1000	1008	0	0	0	0	0	**11048**
135/K	2307	2307	0	2307	0	1307	1500	1307	0	0	0	0	0	**11035**
136/K	0	0	0	0	0	5000	0	0	0	0	0	0	0	**5000**

Co. No	Number of Blazes													Total
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	
137/K	0	0	0	0	0	2000	0	0	0	0	0	0	0	**2000**
144/K	6145	6145	4959	6145	6145	6145	6145	6145	0	0	0	0	0	**47974**
145/K	7000	7000	8186	4855	3855	3855	3855	3855	0	0	0	0	0	**42461**
146/K	4959	4959	0	4959	4959	0	0	0	0	0	0	0	0	**19836**
147/K	4643	4663	4000	4643	0	4000	4000	0	0	0	0	0	0	**25949**
148/K	2303	2303	2300	2303	0	2300	2300	0	0	0	0	0	0	**13809**
149/K	1700	1700	2346	1750	0	1700	1700	0	0	0	0	0	0	**10896**
150/K	2929	2929	0	2929	2041	0	0	0	0	0	0	0	0	**10828**
151/K	5900	5900	5900	5900	5900	5900	0	5900	0	0	0	0	0	**41300**
152/K	4100	4100	4100	4100	4100	3600	0	3600	0	0	0	0	0	**27700**
153/K	3035	3035	3035	3035	500	1000	0	1000	0	0	0	0	0	**14640**
159/K	8010	8010	4579	4579	0	8010	0	0	0	0	0	0	0	**33188**
160/K	3021	3021	3021	3021	0	990	0	0	0	0	0	0	0	**13074**
164/K	1252	1252	1252	1252	0	0	0	0	0	0	0	0	0	**5008**
165/K	757	757	757	757	0	757	757	0	0	0	0	0	0	**4542**
170/K	450	450	450	450	0	0	0	0	0	0	0	0	0	**1800**
171/K	2517	2517	2517	2517	0	2517	2517	0	0	0	0	0	0	**15102**
172/K	1613	1613	1613	1613	0	1613	1613	0	0	0	0	0	0	**9678**
173/K	1604	1604	1604	1604	0	1604	1603	0	0	0	0	0	0	**9623**
174/K	773	773	773	773	0	0	0	0	0	0	0	0	0	**3092**
175/K	5170	5170	5170	5170	5000	4509	4510	0	0	0	0	0	0	**34699**
176/K	3870	3870	3870	3870	0	3870	0	0	0	0	0	0	0	**19350**
177/K	6522	6522	6522	6522	0	5130	0	0	0	0	0	0	0	**31218**
178/K	5234	5234	5234	5234	0	5000	0	0	0	0	0	0	0	**25936**
179/K	6874	2630	2630	2630	0	6874	0	0	0	0	0	0	0	**21638**
180/K	3599	7744	7744	7744	0	2126	0	0	0	0	0	0	0	**28957**
Kalakote total	**257134**	**276024**	**245288**	**282258**	**62520**	**226490**	**170000**	**151020**	**21500**	**21000**	**10000**	**10000**	**9000**	**1742234**
Kandi Range														
172/R	6524	6524	6524	6524	6524	6524	2524	2524	3500	0	0	0	0	**47692**

Co. No	Number of Blazes													Total
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	
173/R	2632	2632	2632	2632	1632	2632	2632	1632	1200	0	0	0	0	**20256**
174/R	2358	0	773	2358	1358	558	1977	2358	1600	0	0	0	0	**13340**
175/R	5027	1514	0	0	1476	1476	2297	3772	0	0	0	0	0	**15562**
176/R	1514	5445	5445	1514	913	1013	2370	1514	1000	0	0	0	0	**20728**
177/R	3097	0	741	3087	1097	797	0	0	0	0	0	0	0	**8819**
179/R	2630	2630	2630	2630	0	0	0	0	0	0	0	0	0	**10520**
180/R	829	991	0	0	0	0	0	0	0	0	0	0	0	**1820**
181/R	2878	978	978	978	0	0	0	0	0	0	0	0	0	**5812**
182/R	2791	1700	2691	1700	0	0	0	0	0	0	0	0	0	**8882**
191/R	1310	1310	1310	1310	0	1310	1200	0	0	0	0	0	0	**7750**
192/R	1622	1622	1622	1622	0	1622	1400	0	0	0	0	0	0	**9510**
195/R	2597	2597	2597	2597	0	1068	1400	0	0	0	0	0	0	**12856**
196/R	1820	1820	1820	1820	1820	1820	2200	0	0	0	0	0	0	**13120**
197/R	830	1800	0	0	0	0	0	0	0	0	0	0	0	**2630**
198/R	730	730	730	730	2180	2180	1800	0	0	0	0	0	0	**9080**
200/R	2621	621	621	621	0	0	0	0	0	0	0	0	0	**4484**
201/R	3005	1905	3705	1905	0	0	0	0	0	0	0	0	0	**10520**
202/R	351	0	0	0	0	0	0	0	0	0	0	0	0	**351**
203/R	1770	1770	1770	1770	0	0	0	0	0	0	0	0	0	**7080**
204/R	1070	1070	1070	1070	0	1070	1600	1070	1300	1300	0	0	0	**10620**
206/R	748	748	0	748	0	748	1100	748	1045	1045	0	0	0	**6930**
207/R	2305	2305	0	2305	0	0	0	1639	1205	1205	0	0	0	**10964**
208/R	2543	2543	0	2543	0	3182	2300	1543	1450	1450	0	0	0	**17554**
210/R	2351	2351	2351	2351	0	2351	1500	2351	1400	1400	1400	0	0	**19806**
213/R	767	767	767	767	0	767	700	767	2000	2000	2000	0	0	**11302**
214/R	4307	2707	2707	2707	0	2307	2800	2307	1700	1700	1600	0	0	**24842**
215/R	3185	3185	3185	3185	0	1185	3000	1185	1500	1500	1800	0	0	**22910**
216/R	1761	1761	1761	1761	0	1761	1000	1701	1400	400	0	0	0	**13306**
217/R	3339	1589	1589	1589	0	1629	1000	1689	2000	1000	1700	0	0	**17124**
218/R	3408	3408	3408	3408	3408	3408	3200	3408	0	0	0	0	0	**27056**

Co. No	Number of Blazes													Total
	2000-01	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	
219/R	5562	4000	4000	4000	2592	2592	2800	5562	2800	0	0	0	0	**33908**
220/R	6200	6200	6200	6200	6000	6000	6000	3030	6000	0	0	0	0	**51830**
221/R	2580	2580	0	2580	2580	2580	0	0	0	0	0	0	0	**12900**
223/R	755	755	755	755	0	0	0	0	0	0	0	0	0	**3020**
224/R	1022	1022	1022	1022	1022	1022	0	0	0	0	0	0	0	**6132**
225/R	900	900	3480	900	900	900	0	0	0	0	0	0	0	**7980**
226/R	0	0	0	0	498	1498	0	0	0	0	0	0	0	**1996**
Kandi Total	**89739**	**74480**	**68884**	**71689**	**34000**	**54000**	**46800**	**38800**	**31100**	**13000**	**8500**	**0**	**0**	**530992**
Total	**542429**	**546830**	**488896**	**541724**	**221024**	**463016**	**349435**	**304985**	**150610**	**108460**	**80100**	**19400**	**16500**	**3833409**

ANNEXURE XIV

Statement of Locational details of Check dams and Water harvesting structures to be constructed

ANNEXURE XV

Statement of Compartment wise area (in Ha.) available for Plantation in Rajouri Forest Division

Co. No	Area (Ha.)	Co. No	Area (Ha.)	Co. No	Area (Ha.)	Co. No	Area (Ha.)
1/Rjr	80	**114/Rjr**	150	**172/Kdr**	40	**111/Kkr**	100
8/Rjr	80	**115/Rjr**	150	**173/Kdr**	110	**112/Kkr**	100
14/Rjr	40	**117/Rjr**	70	**175/Kdr**	50	**116/Kkr**	120
18/Rjr	50	**118/Rjr**	130	**179/Kdr**	30	**117/Kkr**	230
20/Rjr	60	**119/Rjr**	100	**186/Kdr**	50	**118/Kkr**	180
23/Rjr	40	**120/Rjr**	140	**187/Kdr**	50	**119/Kkr**	130
24/Rjr	60	**121/Rjr**	160	**188/Kdr**	70	**131/Kkr**	50
36/Rjr	40	**122/Rjr**	120	**193/Kdr**	50	**133/Kkr**	80
37/Rjr	40	**123/Rjr**	100	**208/Kdr**	70	**134/Kkr**	50
39/Rjr	30	**124/Rjr**	50	**1/Kdr**	200	**135/Kkr**	80
45/Rjr	160	**125/Rjr**	70	**2/Kdr**	130	**153/Kkr**	100
64/Rjr	60	**126/Rjr**	100	**9/Kdr**	80	**154/Kkr**	80
67/Rjr	50	**127/Rjr**	70	**15/Kdr**	70	**155/Kkr**	80
68/Rjr	60	**128/Rjr**	90	**16/Kdr**	80	**156/Kkr**	150
70/Rjr	70	**130/Rjr**	110	**18/Kdr**	40	**157/Kkr**	270
72/Rjr	220	**131/Rjr**	40	**23/Kdr**	200	**158/Kkr**	190
73/Rjr	170	**133/Rjr**	80	**24/Kdr**	100	**162/Kkr**	160
74/Rjr	150	**135/Rjr**	100	**25/Kdr**	150	**163/Kkr**	220
75/Rjr	180	**136/Rjr**	130	**28/Kdr**	90	**164/Kkr**	170
76/Rjr	210	**145/Rjr**	60	**29/Kdr**	50	**166/Kkr**	120
81(a)/Rjr	50	**146/Rjr**	50	**30/Kdr**	60	**167/Kkr**	100
81(b)/Rjr	40	**147/Rjr**	50	**32/Kdr**	80	**168/Kkr**	140
82/Rjr	90	**148/Rjr**	70	**34/Kdr**	50	**169/Kkr**	120
85/Rjr	50	**149/Rjr**	70	**35/Kdr**	60	**172/Kkr**	70
88/Rjr	60	**150/Rjr**	70	**39/Kdr**	110	**175/Kkr**	50
93/Rjr	80	**S. Total**	**6570**	**46/Kdr**	30	**176/Kkr**	110
94/Rjr	110	**152/Kdr**	90	**48(a)/Kdr**	60	**177/Kkr**	80
95/Rjr	90	**153/Kdr**	110	**49/Kdr**	60	**182/Kkr**	120
96/Rjr	120	**154/Kdr**	100	**50/Kdr**	100	**183/Kkr**	90
97/Rjr	110	**155/Kdr**	150	**51/Kdr**	90	**185/Kkr**	120
98/Rjr	90	**156/Kdr**	130	**52/Kdr**	50	**186/Kkr**	70
100/Rjr	60	**157/Kdr**	90	**53/Kdr**	60	**187/Kkr**	40
101/Rjr	210	**158/Kdr**	220	**54/Kdr**	50	**188/Kkr**	110

102/Rjr	120	**159/Kdr**	160	**S. Total**	**4470**	**189/Kkr**	150
103/Rjr	120	**160/Kdr**	150	**82/Kkr**	170	**190/Kkr**	150
106/Rjr	240	**162/Kdr**	50	**83/Kkr**	60	**191/Kkr**	120
107/Rjr	120	**163/Kdr**	60	**84/Kkr**	130	**192/Kkr**	120
109/Rjr	80	**165/Kdr**	80	**94/Kkr**	90	**193/Kkr**	100
110/Rjr	140	**167/Kdr**	60	**95/Kkr**	70	**195/Kkr**	40
111/Rjr	160	**169/Kdr**	120	**96/Kkr**	90	**S. Total**	**5380**
112/Rjr	170	**170/Kdr**	160	**97/Kkr**	50	**G.Total**	**16420**
113/Rjr	80	**171/Kdr**	170	**110(b)/Kkr**	160		

ANNEXURE XVI

Statement Showing the existing and proposed reorganisation of beats blocks of Rajouri Forest Division

Rajouri Range

S. No	Previous Blocks/ Beats			S. No	Proposed Blocks / Beats		
	Name of Block	**Name of Beat**	**Co. No**		**Name of Block**	**Name of Beat**	**Co. No**
1	**Doongi**	Agrati-A	1-4/R	1	**Doongi**	Agrati-A	1-4/R
		Agrati-B	5-8/R			Agrati-B	5-8/R
		Shahpur-A	9-13/R			Shahpur-A	9-11/R
		Shahpur-B	14-19/R			Shahpur-B	12-14/R
		Doongi-A	20-23/R			Shahpur-C	15-19/R
						Doongi-A	20-23/R
		Doongi-B	24-27/R			Doongi-B	24-27/R
2	**Bathuni**	Sawni-A	28-33/R	2	**Bathuni**	Sawni-A	28-30/R
		Sawni-B	34-38/R			Sawni-B	31-34/R
		Bathuni-A	39-43/R			Sawni-C	35-37/R
		Bathuni-B	44-47/R			Bathuni- A	38-40/R
						Bathuni ï B	41-43/R
						Bathuni-C	44-47/R
3	**Rajouri**	Dassal-A	48-51/R	3	**Rajouri**	Dassal-A	48-50/R
		Dassal-B	52-58/R			Dassal-B	51-54/R
		Naika	59-63/R			Dassal-C	55-58/R
		Panjgrain	64-68/R			Panjghrain	59-63/R
						Naika	64-67/R
4	**Kotli**	Rajdhani	69-75/R	4	**Kotli**	Rajdhani-A	68-71/R
		Sangote	76-81/R			Rajdhani-B	72-75/R
		Kotli Kalaban	82-87/R			Kotli Kalaban-A	76-78/R
						Kotli Kalaban-B	79-81/R
						Sangote-A	82-84/R
						Sangote-B	85-87/R

S. No	Previous Blocks/ Beats			S. No	Proposed Blocks / Beats		
	Name of Block	**Name of Beat**	**Co. No**		**Name of Block**	**Name of Beat**	**Co. No**
5	**Ghambir**	Ghambir-A	88-93/R	5	**Ghambir**	Ghambir-A	88-90/R
						Ghambir-B	91-93/R
		Manjakote	94-96/R			Manjakote	94-96/R
		Katarmal	97-101/R			Katarmal-A	97-101/R
6	**Thanamandi**	Bharote-A	102-106/R	6	**Thanamandi**	Bharote-A	102-106/R
		Bharote-B	107-110/R			Bharote-B	107 -110/R
		Narian	111-114/R			Narian	111-114/R
		Mangota-A	115-117/R			Mangota-A	115-117/R
		Mangota-B	118-120/R			Mangota-B	118-120/R
7	**Darhal**	Darhal	121-125/R	7	**Darhal-A**	Darhal-A	121-124/R
		Budhkhanari-A	126-132/R			Budhkhanari-A	125-128/R
						Budhkhanari-B	129-133/R
		Chund	133-138/R			Chund	134-137/R
		Jalalmang-A	139-143/R				
		Dodaj-A	144-151/R	8	**Darhal-B**	Jalalmang-A	138-140/R
						Jalalmang-B	141-143/R
						Dodaj-A	144-147/R
						Dodaj-B	148-151/R

Kalakote Range

S. No	Previous Blocks/ Beats			S. No	Proposed Blocks / Beats		
	Name of Block	**Name of Beat**	**Co. No**		**Name of Block**	**Name of Beat**	**Co. No**
1	**Potha**	Danti	66-75/K	1	**Potha**	Danti-A	66-70/K
						Danti-B	71-74/K
		Saranoo	76-81/K			Sagote	75-77/K
		Potha	82-89/K			Saranoo	78-80/K
						Potha-A	81-83/K
						Potha-B	84-86/K
2	**Sial Sui**	Khadarian-A	90-93/K	2	**Sial Sui**	Androlla	87-89/K
		Sial Sui	94-98/K			Khadarian-A	90-92/K
		Khadarian ï B	99-101/K			Balli	93-95/K
		Deolian	105-109/K			Sial Sui	96-98/K
		Phalli	110ï 114/K			Khadarian-B	99-101/K
						Deolian	105-107/K
						Phalli	108-110-B/K
3	**Kalakote**	Tata Pani	115-122/K	3	**Kharak Panjah**	Bhatera	111-114/K
		Broh	123-129/K			Dalyote	115-118/K
		Kanthol	130-135/K			Tata Pani	119-122/K
		Bainambal	136-141/K			Kharak Panjah	156-159/K
		Sadda-A	142-145/K			Solki	160-163/K
		Sadda-B	146-148/K	4	**Kalakote**	Broh-A	123-126/K
		Kalakote	149-155/K			Broh-B	127-130/K
		Kharak Panjah	156-159/K			Kanthol	131-135/K
						Sadda-A	143-146/K
						Sadda-B	147-150/K
						Kalakote	151-155/K
4	**Dhalari**	Solki	160-163/K	5	**Dhalari**		140-142/K
		Methka	164-174/K			Methka-A	164-168/K
		Dhalari	175-181/K			Methka-B	169-174/K
		Badhal	182-186/K			Dhalari	175-178/K
		Gundi	187-192/K			Gadyog	179-184/K

S. No	Previous Blocks/ Beats			S. No	Proposed Blocks / Beats		
	Name of Block	**Name of Beat**	**Co. No**		**Name of Block**	**Name of Beat**	**Co. No**
		Khawas	193-199/K	6	**Khawas**	Bai Nambal	136-139/K
						Badhal	185-189/K
						Gundi	190-193/K
						Khawas-A	194-196/K
						Khawas-B	197-199/K

Kandi Range

S. No	Previous Blocks/ Beats			S. No	Proposed Blocks / Beats		
	Name of Block	**Name of Beat**	**Co. No**		**Name of Block**	**Name of Beat**	**Co. No**
1	**Budhal**	Kandi-A	1- 6/K	1	**Kandi**	Kandi-A	1-6/K
		Kandi-B	7-12/K			Kandi-B	7-12/K
		Dodanar-A	13-16/K			Dodanar-A	13-16/K
		Dodanar-B	17-19/K			Dodanar-B	17-19/K
		Jaglanu	20-22/K			Jaglanu	20-22/K
		Samote-A	23-27/K			Samote-A	23-27/K
		Samote-B	28-32/K	2	**Budhal**	Samote-B	28-32/K
		Targain-A	33-36/K			Targain-A	33-36/K
		Targain-B	37-41/K			Targain-B	37-41/K
		Budhal-A	42-45/K			Budhal-A	42-45/K
		Budhal-B	46-50/K			Budhal-B	46-50/K
2	**Bakori**	Kangota	51-55/K	3	**Bakori**	Kangota	51-55/K
		Larkuti	56-60/K			Larkuti	56-60/K
		Bakori	61-65/K			Bakori	61-65/K
3	**Nagrota**	Sakari	152-156/R	4	**Nagrota**	Sakari	152-156/R
		Peeri	157-160/R			Peeri	157-160/R
		Panjnara	161-165/R			Panjnara	161-165/R
		Nagrota	166-169/R			Nagrota	166-169/R
4	**Kalalkass**	Kalalkass-A	170-174/R	5	**Kalalkass -A**	Kalalkass-A	170-174/R
		Kalalkass-B	175-178/R			Kalalkass-B	175-178/R
		Swari-A	179-183/R			Swari-A	179-183/R
		Swari-B	184-188/R			Swari-B	184-188/R
		Nagloon	189-193/R	6	**Kalalkass-B**	Nagloon	189-193/R
		Jamola-A	194-198/R			Jamola-A	194-198/R
		Jamola-B	199-201/R			Jamola-B	199-201/R

S. No	Previous Blocks/ Beats			S. No	Proposed Blocks / Beats		
	Name of Block	**Name of Beat**	**Co. No**		**Name of Block**	**Name of Beat**	**Co. No**
		Lankaban-A	202-204/R			Lankaban-A	202-204/R
		Lankaban-B	205-208/R			Lankaban-B	205-208/R
5	**Dhangri**	Dhangri	209-214/R	7	**Dhangri**	Dhangri	209-214/R
		Argi	215-219/R			Argi	215-219/R
		Dalhori	220-227/R			Dalhori	220-227/R