Part II

Future management discussed and prescribed

Chapter – VIII

Basis of proposals

8.1. General: The principal object of management of the forests is to wok according to establishment and proven scientific method of management. To prevent further denudation of the hills by creating more forests in the open and fragile areas. To harvest immediate forest produces in a sustainable basis. With the paradigm shift in the concept of forest management to seek the active participation of the stake holders in the forest management. The following important facts have to be kept in mind in deciding the management of the forests of Poonch Forest Division.

1. The economy of the locals is very dependent on the forests, from that they get timber, fodder, fuel, medicinal plants and other necessities.
2. The lesser Himalayas where the Division is situated is very fragile and as such erosion, landslides are very common.
3. There is heavy biotic pressure in the Division from animals of the local villagers and migratory Gujjars. Some of the areas are quite vulnerable to fire as well as a result of these and many other factors, there is generally poor regeneration.
4. Although local people get rights and other necessities from the forests, yet they are not very cooperative when it comes to protection and conservation. For them forests are open treasures from where anybody can get whatever is needed.

8.1.1. Keeping in view the basis objectives of the Jammu and Kashmir Forest Policy 2011, the general objects of management of the forests are as follows:

1. To maintain environmental stability through preservation and restoration of the ecological balance that has been adversely distributed by serious depletion of the forests.
2. To conserve the natural heritage of the area by preserving the remaining natural forests with the vast variety of flora and fauna, to protect, preserve and develop bio-diversity.
3. To meet legitimate rights of fuel wood, fodder, timber and minor forests produces of the local people.
4. To take adequate measures to promote natural regeneration of Chir and socially useful species in regeneration deficient area and to supplement it with artificial regeneration where ever necessary.
5. To reduce soil erosion and conserve moisture by treating such prone areas by soil and moisture conservation measures.
6. To provide means to improve upon the general health and carrying capacity of the grazing areas and to improve upon the trans humane activity of migratory grazers.
7. Sustainable nature resource management to posterity for future generations.
8. To provide the means for people's participation in forest management.
9. To regenerate employment for the local people of the area.
10. To conserve, preserve, protect and improve upon the wildlife or the area.
11. To promote the Eco-Tourism potential of the area.

12. To prevent forest fire where it is injurious and use it as management tool where it is required.

8.2. Methods of Treatment:

Taking into consideration the above mentioned objectives of management following methods of treatment are proposed.

1. Chir and Fir forests shall be managed with required interventions for further improvement of condition of crop and to promote regeneration naturally and artificially in regeneration deficient areas.
2. All forest areas which are poorly stocked and close to habitations shall be taken up for rehabilitation by planting of species that meet the livelihood requirements of local people.
3. All areas which are prone to soil erosion and have been degraded shall be stabilized by soil and water conservation measures to recharge the ground water.
4. Areas infested with alien invasive species shall be improved by replacing them with indigenous species through intensive management.
5. The areas subject to excessive grazing shall be managed to increase their productivity by introduction of suitable fodder species, weed control, and regulating grazing.
6. Wildlife rich areas shall be managed for protection, preservation and improvement of biodiversity of the area.
7. Areas having tourism potential shall be identified and developed from the point of view of ecotourism.
8. Strict fire control measures on scientific lines shall be taken to prevent damage due to fire.

8.3. Constitution of Working Circles:

Consistent with the above mentioned objectives of management and prescribed methods of treatment the following working circles are proposed.

- Chir Working Circle
- Fir Working Circle
- Protection Working Circle
- Rehabilitation Working Circle.
- Oak Working Circle
- Eco Tourism (Overlapping) Working Circle
- Wildlife Management (Overlapping) Working Circle.
- Forest Protection(Overlapping) Working Circle.
- Joint Forest Management (Overlapping) Working Circle.
- Non-timber forest produce (Overlapping) Working Circle

- Grazing (Overlapping) Working Circle.

8.3.1. Chir Working Circle:

This working circle includes all Chir areas of the Division relatively better stocked Chir areas and areas which have low level of miscellaneous forest which cannot be separated or also included in the working circle. In the last plan it was suggested that no silviculture operation need to be carried out for this working circle. Since in the area regeneration is poor because of highly prone for biotic pressure, frequent fires improvement is proposed by massive plantation

8.3.2. Fir Protection cum Rehabilitation Working Circle:

These Fir Forests cover extensive, steep to precipitous, mountains area in the upper catchment of the Poonch river which are to be managed in consonance with the Soil, Water and Environmental Conservations. A continuous vegetative cover, therefore is desirable in those forests.

8.3.3. Protection working circle:

This working circle is constituted to take care of diseases and fire prone areas in the Division; fire is the major cause of damage to the forest. All new regenerations can be destroyed in a single fire. Poor maintenance of fire line has also contributed to damages of the forests and the forest areas allotted to this working circle are located in close proximity of line of control. Therefore rendered commercially un-exploitable and un-approachable for any treatment, because of presence and activities of defence forces.

8.3.4. Rehabilitation working circle:

The forest areas which are included in this working circle are the forest areas chiefly under broad leaved species excluding oaks are completely blank or bearing only scattered growth and degraded forest areas which are potentially productive but become under stock and without adequate recover due to illicit damage, excessive tapping, fires and grazing. Where the growth is either in the form of low density crop or in the form of small patches. This circle also includes areas near the habitations Emphasis shall be given to large scale plantations in these areas during the plan period. So that the people living near these forests can fulfil their demands of fuel, fodder, timber etc. easily without harming the rest of forest.

8.3.5. Oak working circle:

The area chiefly has oak trees. Since the oak has very high calorific and fodder value, it is prone to more damage. Further it is a slow growing species and plays appreciable role in moisture retention and conservation. In view of large scale destruction in forests due to construction of Mughal road, a special conservation of Oak forest in this area is need of hour. Since Oak is a very slow growing species, it is right time to raise a large nursery of different kinds of Oaks spp. in the foot hills of Pir Panchal mountains i.e. somewhere in the forest land of Bufliaz and Samote blocks. It may take another one to two years in the completion of Mughal road, settlement and zeroing of moving slopes, these barren slopes

and gaps can be supplemented with this nursery planting material over the time. In view of foregoing importance of species a separate Working Circle has been proposed to pay focused attention to its conservation.

8.3.6. Eco-Tourism (overlapping) working circle:

The many areas of Poonch Forest Division are having very good potential of Eco-Tourism and religious tourism. The example of Eco-Tourism is established by constructing a tourist hub last year in the name of Eco-Tourism Society Dehra-Ki-Gali is most prestigious project constructed in the Division. There are abundance scopes of promoting Eco-Tourism in the Division on the different locations at Noor-Cham, Dhargloon, Danna Shah Sitar, Dehra-Ki-Gali and throughout most charming and beautiful tourist sites along with Mughal Road right from Buffliaz to Peer-Ki-Gali in Surankote Range. In Haveli Range the most suited locations in Danna, Nandichool, Gali Maidan, Battalkote, Jamianwali Gali of Loran, Mandi and Sawjian where ample scope of promotion of Eco-Tourism has been not explored yet. In eco-religious tourism a combined track involving Budha-Amarnath, Nangali Sahib and Ziarat Sain Miran can be a successful project.

8.3.7. Wild Life (Overlapping) working circle:

In this division the areas which are identified and recorded for having wild animals are included in this circle. Main Wildlife area identified as 5638 ha. Tatta Kutti Wildlife Reserve and 1845 ha. Khera Wildlife Reserve falling in the Haveli Range having total area of 7483 ha. which are handed over to Wildlife wing of Department needs special attention in respect of creating buffer zone to reduce man-animal conflict.Awareness among people living in these areas in general, administrative and legal measures to stop rehabilitation and ensure zero encroachments in protected areas and buffer zone will be main priorities. In addition to this very rare and endangered species of Pheasants like Monal, Tragopan, Cheer Pheasant whose population drastically declined in the past, needs special attention for their conservation in both ways of protection of their natural niche and by adopting scientific approach.

8.3.7. Forest Protection (Overlapping) working circle:

The Forests are prone to damage by fire, illicit felling, encroachment, etc. The protection aspects of the forests are dealt under this working circle.

8.3.8. Joint Forest Management (Overlapping) working circle:

This working circle is introduced first time in this plan which is in consonance with national forest policy 1988 and recent approaches regarding decentralization and participatory approached to forest management.

The areas which are naturally rich in medicinal plants and approachable to local people are included in the working circle.

8.3.9. Non-timber forest produce (Overlapping) working circle:

The areas which are naturally rich in NTFP's (Resin) and medicinal plants and approachable to local people are included in the working circle.

8.3.10. Grazing (Overlapping) Working Circle:

The forest areas rich in pastures are included in this working circle and overlap all the other working circles and aims at pasture management and rotational grazing in order to maintain the carrying capacity of the forests. Alpine pasture management prescriptions shall be emphasized under innovative management practices in the interest of nomadic welfare with special focus on establishment of seed farms of important fodder species so as to increase the productivity of pasture lands and prescriptions on grass land managed inside the forest also shall be given due care.

8.4. Ranges and compartments:

S.No.	Range	Compartment No.		Total No. of Compartments including Sub-Compartments
		From	To	
1	Haveli	1a/H	141/H	185
2	Mendhar	1/M	81/M	107
3	Surankote	1/S	116/S	128
Total				420

Table 8.1: Table showing Range wise distribution of newly constituted Working Circle:

Name of working circle	Range	Compartments	Total number of Compartments	Area in ha.
Fir Protection cum Rehabilitation Working Circle	Haveli	7/H , 8/H, 9/H, 10/H, 14/H, 16a/H, 19/H, 20/H, 21/H, 22/H, 23/H, 24/H, 25/H, 26/H, 27/H, 28/H, 30/H, 31/H, 32/H, 33/H, 34/H, 35/H, 39/H, 40/H, 41/H, 42/H, 43/H, 44/H, 45/H, 46/H, 48/H, 49/H, 51/H, 54/H, 55/H, 56/H, 57/H, 59b/H, 60/H, 61/H, 62/H, 63/H, 65/H, 67/H, 68/H, 70/H, 77/H, 82/H, 83/H	49	10383
	Mendhar	-	0	0
	Surankote	6/S,7/S,8/S,10a/S,10b/S,11a/S,11b/S, 16/S,17/S,18/S,19/S,20a/S,21/S,22/S,23/S,24/S,26/S,27/S,28/S,30/S,31/S,32a/S,32b/S,33a/S,33b/S,34/S,35/S.37/S,38/S,79/S,81/S,82/S,83/S,97/S,98/S,99/S,100/S,101/S,104/S,107/S,108/S,109/S,110/S, 111/S,112/S	45	14424
Total			94	24807
Chir Selection Working Circle	Haveli	121b/H	01	85
	Mendhar	3a/M,7/M,9a/M,9b/M,10/M,12/M,13/M,14/M,18/M,23/M,24/M,25/M, 29/M, 39/M,41a/M, 52/M,57/M,58/M, 62/M, 65c/M,69/M,70/M,71/M, 73a/M,73b/M,75/M,76a/M,76b/M	28	3352
	Surankote	-	-	0
Total			29	3437

Name of working circle	Range	Compartments	Total number of Compartments	Area in ha.
Protection Working Circle	Haveli	13/H,15/H,36/H,37/H,38/H,47/H, 52/H, 53/H,58/H, 64a/H, 64b/H,64c/H,66/H,69/H,71/H,72/H,73 /H,74/H,78/H,84/H,85/H,86a/H,86b/H ,86c/H,87a/H,87b/H,87c/H,88a/H,88b/ H,88c/H,91/H,92/H,94a/H,94b/H,95a/ H,95b/H,97a/H,98/H,99/H,101a/H,101 b/H,107a/H, 109a/H,110/H,111a/H,111b/H,122/H,1 23/H,127/H,130/H,132/H,134b/H,137/ H,140a/H,140b/H,140c/H	56	13816
	Mendhar	2a/M,2b/M,5a/M,5b/M,6a/M,6b/M,8/ M,19a/M,19b/M,28/M,43/M,60/M,78/ M,81/M	14	1132
	Surankote	1/S,9/S,12/S,13/S,29/S,60/S,65/S,66/S, 67/S,68/S,70/S,75/S,78/S,84/S,85/S,86 /S,87/S,88/S,89/S,90/S,91/S,92/S,93/S, 94/S,95/S,96/S,102/S,103/S,113/S,114 /S,115/S,116/S	32	12541
Total			102	27489
Rehabilitation Working Circle	Haveli	2/H,4b/H,5/H,6/H,11a/H,11b/H,16b/H ,17/H,18/H,50/H, 59a/H,75/H,76/H,79/H,80/H,81/H,,86 d/H,89a/H,89b/H,93b/H,94c/H,,103a/ H,103b/H,104a/H,104b/H,104c/H,105 a/H,106a/H,106c/H,,113b/H, 115a/H,115b/H,115d/H,117/H, 124a/H,124b/H,126/H,133/H,134a/H,1 36/H,138a/H,138b/H,139a/H,139b/H,	44	5001
	Mendhar	1/M,3b/M,4/M,11/M,15/M,16/M,17a/ M,17b/M,19c/M,19d/M,20/M,21a/M,2 1b/M,22/M,26/M,27/M,30/M,31/M,32 /M,33/M,34a/M,34b/M,35/M,36/M,37 /M,38/M,40a/M,40b/M,40c/M,41b/M, 42/M,44/M,45a/M,45b/M,46/M,47a/M ,47b/M,48/M,49/M,50a/M,50b/M,51a/ M,51b/M,53a/M,53b/M,53c/M,54/M,5 5a/M,55b/M,56/M,61/M,63/M,64/M,6 5a/M,65b/M,66/M,67a/M,67b/M,68/M , 72/M,74/M, 79/M,80/M	63	5630
	Surankote	2/S,3a/S,3b/S,4/S,5a/S,5b/S,14/S,15/S, 25/S,36/S,39/S,40/S,41/S,42/S,43/S,44 a/S,44b/S,44c/S,45/S,46/S,47/S,48/S,4 9/S,50/S,51a/S,51b/S,51c/S,52/S,53/S, 54/S,55/S,56/S,57/S,58/S,59a/S,61/S,6 2/S,63/S,64/S,69/S,71/S,74/S,76/S, 80/S, 105/S,106/S	46	11666
Total			153	22297

Name of working circle	Range	Compartments	Total number of Compartments	Area in ha.
Oak Working Circle	Haveli	1a/H,1b/H,3/H, 4a/H, 12/H,29/H,90/H, 96a/H,96b/H,96c/H,97b/H, 93a/H, 100/H,102/H, 105b/H, 106b/H,107b/H,108/H, 109b/H, 112/H,113a/H, 114a/H,114b/H, 115c/H, 116/H, 118/H,119/H,120/H, 121a/H, 125/H, 128/H,129/H, 131/H,135/H, 141/H	35	5157
	Mendhar	59/M,77/M	2	292
	Surankote	20b/S,59b/S,73/S,72/S, 77/S	5	968
Total			42	6417
Grand Total			420	84447

Table 8.2: Table showing Crop wise distribution of area of all working circles:

Working Circle	Commercial Area					Uncommercial Area			Grand Total
	Chir	Deodar	Kail	Fir/ Spruce	Total	Broad Leaved	Blanks	Total	
Fir Protection cum Rehabilitation Working Circle	0	19	3316	13977	17312	2573	4922	7495	24807
Chir Selection Working Circle	1735	0	0	0	1735	768	934	1702	3437
Protection Working Circle	1607	9	1742	4012	7370	1613	18506	20119	27489
Rehabilitation Working Circle	2257	44	3738	3649	9688	2205	10404	12609	22297
Oak Working Circle	225	5	673	338	1241	3575	1601	5176	6417
Total	5824	77	9469	21976	37346	10734	36367	47101	84447

8.5. Period of the Plan and Necessity for Revision:

This plan shall remain in force for a period of 10 years. The period of this plan shall be from 2017-18 to 2026-27 A.D. There is no necessity for intermediate revision during the above plan period.

Chapter IX

Working plan for Chir Selection Working Circle

9.1. General constitution of working circle and general character of vegetation:

9.1.1. This Working circle consists of comparatively better stocked Chir forests in all the three territorial ranges viz. Haveli, Surankot and Mendhar range of this Division. Some good stocked Chir forests could not be included in this Working Circle because of their closeness to the LoC. Due to which working here is a difficult task. For example, Forests of Chir just above Mankot are adjoining to LoC and hence do not give workable conditions.

9.1.2. Mostly, Chir forests in this working circle found to be pure except in higher reaches where it is found to be mixed with Quercus spp.. Almost all age classes can be found mixed all over area but more younger trees are seen in lower areas of Haveli, Krishna Ghati and adjoining area. Also, most of the crop of Chir in Mendhar Range is either consisting of younger trees or middle aged trees; although mature trees can be found intermixed in few numbers. The Chir found in Bhimber Gali, Surankot and Bufliaz area is of more mature type.

9.1.3. Regeneration in Chir crop, on an average is very good. Although there is no uniformity in the regeneration pattern. In Haveli and Mendhar ranges regeneration is found to be moderate or even good. In some portions of Haveli and Surankote regeneration is fair. Overall condition of regeneration is still not adequate. The natural regeneration is good inside the protected patches of forest. In unprotected areas the establishment is poor.

9.2. Area statement:

9.2.1. The species wise detail of compartments allotted to this working circle is given in **Appendix V**. The Range wise abstract of the area under different species in this working circle is given below in the table No. 9.1

Table No. 9.1

Range wise/Block wise distribution of area (in hectares) allotted to Chir working circle in Poonch forest division

S.No.	Range	Block	New	Commercial Area	Uncommercial Area	Grand Total
1	Haveli	Jhalas	121b/H	24	61	85
Sub-total			No. of Comptt :1	24	61	85
2	Mendhar	Dharamsal	3a/M,7/M,9a/M,9b/M, 10/M,12/M,13/M,14/M ,18/M	503	396	899
3	Mendhar	Nar	23/M,24/M,25/M,29/M	400	219	619
4	Mendhar	Gursain	39/M	40	108	148
5	Mendhar	Salwan	41a/M	42	71	113
6	Mendhar	Ramkund	52/M,57/M,58/M	174	211	385
7	Mendhar	Ghani	62/M,65c/M,69/M,70/ M,71/M,73a/M,73b/M, 75/M,76a/M,76b/M	552	636	1188
Sub-total			No. of Comptt :28	1711	1641	3352
Total			No. of Comptt :29	1735	1702	3437

9.3. Special objectives of management:

- To remove mature and over mature trees interfering with the establishment of advance growth.
- To promote natural regeneration of Chir.
- To supplement natural regeneration with artificial restocking by Patch Sowing and planting of poly bagged nursery raised plants of Chir in blanks.
- To obtained yield of timber and resin on sustained basis.

9.4. Silvicultural system adopted:

9.4.1. Working Plan officers (50 years) before Shri Vinod Ranjan had adopted the Selection system. Shri Vinod Ranjan found the crop to be irregular as there was conspicuous reduction in number of stems in the diameter class 20-30 over that of diameter class 30-40 and similarly in the number of stems in the diameter class 10-20 over that of diameter class 20-30. This necessitated the introduction of a Silvicultural system modified to suit the forest crop under prevailing conditions and limitations for the management of these forests. It was therefore decided that the conversion from irregular to even aged forest will be taken up under the Modified Shelterwood Uniform System. In this system complete protection of the advance growth (Regeneration) needs to be done by keeping back some mature trees as Shelter to them. The Shelter is maintained till the advance growth gets established. However, only a small fraction of the area under this working circle has been converted to uniform crop. In other words, actually no conversion to uniform crop has taken place. So, keeping in view the irregularity of the crop it is not feasible to continue with the Modified Shelterwood Uniform System. Also, after the Hon'ble Supreme Court's ban on green fellings only the removal of dead, dying and diseased trees is permitted. Thus in this scenario Indian Selection system is fit to be adopted for this working circle.

9.4.2. The Chir crop is of poor density in many areas where the density of mature trees is very less and that of middle and young age trees is more. Here, we need to work these forests with Selection system. In this system only selected mature and over mature trees are removed besides some dead dying, diseased and moribund trees. Here, we have to induce natural regeneration by opening the closed areas. Artificial regeneration also needs to be supplemented in certain areas where natural regeneration is not coming properly.

9.4.3. However, the felling have to be done of very light type where only few mature and over mature trees have to be removed and rest of crop is treated under improvement fellings and thinning. This method was adopted in Dulloo's plan as well as in Vinod Ranjan's plan. This method re-affirms its relevance in Hilly tracts.

9.4.4. Instead of Timber production, the main focus of our Chir crop is resin production. Hence, here we do not try to maximise the yield of timber but to induce regeneration whereas it is required. This will ultimately help in fulfilling resin tapping.

9.5. Exploitable size and Rotation:

9.4.1. As prescribed by Vinod Ranjan's plan, an exploitable diameter of 70 cm is considered relevant. Although the concept of rotation is not of much relevance in Selection system. The average age at which Chir, Deodar , Kail attains exploitable diameter of 70 cms are 120,150,150 respectively. For Fir it stands at 240 years.

9.6. Felling cycle:

9.5.1. As we see there is abundance of younger and middle aged trees, the majority of Chir crop comprises of Dia classes 30-40 cm. A thirty years felling cycle is considered suitable because in this time forest can make good the loss of mature size trees that is 70 cm d.b.h.

9.7. Felling series:

9.7.1. It is preferable to have only one felling series comprising all the compartments of this working cycle.

9.8. Analysis and valuation of crop:

The point sampling technique has been adopted for assessment of growing stock. The field data was collected from 91 sample points. Mean value of two variables viz. number of stems per hectare, volume of conifers 30 cm. dbh (ob) above and basal area per hectare have been computed species wise and diameter class wise. The result of statistical analysis and further interpretation of the crop is done with the help of following tables:

S.No.	Name of the Table	Table No.
1.	Result of statistical analysis.	Table 9.2.
2.	Summary of Species wise stem Distribution per hectare in Chir selection working Circle.	Table 9.3.
3.	Summary of specieswise stem Distribution in the Chir selection working circle.	Table 9.4.
4.	Summary of species wise minimum available stem Distribution in Chir selection working circle.	Table 9.5.
5.	Summary of species wise percentage of stem Distribution in the working circle in Chir selection working circle.	Table 9.6.
6.	Summary of species wise volume (m^3) distribution per hectare in the Chir selection working circle.	Table 9.7.
7.	Summary of species wise volume (m^3) distribution in the Chir selection working circle.	Table 9.8.
8.	Summary of specieswise minimum available volume (m^3) in the Chir selection working circle.	Table 9.9.
9.	Summary of species wise percentage of minimum available volume (m^3) in the Chir selection working circle.	Table 9.10.

Table 9.2: Results of Statistical Analysis for Chir selection Working Circle.											
Working Circle	**Variable (Per Ha)**	**Sample Plots (n)**	**Mean (X)**	**Variance (S^2)**	**Standard Deviation (S)**	**Standard Error (S.E)**	**Coefficient of Variation (%)**	**Confidence limits (95%) (X± t x S.E)**		**Confidence interval (C.I)**	**Lower limits as % of mean (%)**
								Lower limit	**Upper limit**		
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Chir Selection Working Circle	**No. of stems**	57	61.05	3559.59	59.66	7.90	97.72	45.22	76.88	31.66	74.07%
	Volume	57	100.76	5365.83	73.25	9.70	72.70	81.33	120.19	38.86	80.72%

Column 7: S.E. = S/ square root (n)

Column 8: C.O.V (%) = (S/X) x 100

Column 9: Lower limit = X- (Student t test value for n-1 degrees of freedom * SE)

Column 10: Upper Limit = X + (Student t test value for n-1 degrees of freedom * SE)

Column 11: C.I. = Upper limit - Lower limit

Table 9.3: Summary of Specieswise stems distribution per hectare in Chir Selection Working Circle

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	4.21	4.39	5.96	4.91	2.81	3.68	3.16	3.16	2.11	2.98	37.37
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BL	12.28	4.39	2.98	1.23	1.58	0.53	0.18	0.00	0.18	0.35	23.7
Total	16.49	8.78	8.94	6.14	4.39	4.21	3.34	3.16	2.29	3.33	61.07

Table 9.4: Summary of specieswise stems distribution in the Chir selection working circle. (Commercial Area= 1735 Ha)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	7304.35	7616.65	10340.60	8518.85	4875.35	6384.80	5482.60	5482.60	3660.85	5170.30	64836.95
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BL	21305.80	7616.65	5170.30	2134.05	2741.30	919.55	312.30	0.00	312.30	607.25	41119.5
Total	28610.15	15233.30	15510.90	10652.90	7616.65	7304.35	5794.90	5482.60	3973.15	5777.55	105956.45

Table 9.5: Summary of specieswise minimum available stems distribution in Chir selection working circle. (Lower confidence limit = 74.07 %)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	5410.33	5641.65	7659.28	6309.91	3611.17	4729.22	4060.96	4060.96	2711.59	3829.64	48024.71
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BL	15781.21	5641.65	3829.64	1580.69	2030.48	681.11	231.32	0.00	231.32	449.79	30457.21
Total	21191.54	11283.30	11488.92	7890.60	5641.65	5410.33	4292.28	4060.96	2942.91	4279.43	78481.92

Table 9.6: Summary of specieswise percentage of stems distribution in the working circle in Chir selection working circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	6.89	7.19	9.77	8.04	4.60	6.03	5.17	5.17	3.46	4.88	61.2
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Fir/Spruce	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Kail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
BL	20.11	7.19	4.88	2.01	2.59	0.87	0.29	0.00	0.29	0.57	38.8
Total	27.00	14.38	14.65	10.05	7.19	6.90	5.46	5.17	3.75	5.45	100.00

Table 9.7: Summary of specieswise volume (m ^{3}) distribution per hectare in the Chir selection working circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.55	0.57	2.86	5.55	6.20	13.04	15.38	19.58	14.72	22.31	100.76
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.55	0.57	2.86	5.55	6.20	13.04	15.38	19.58	14.72	22.31	100.76

Table 9.8: Summary of specieswise volume (m ^{3}) distribution in the Chir selection working circle. (Commercial Area= 1735 Ha)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	954.25	988.95	4962.10	9629.25	10757	22624.40	26684.30	33971.30	25539.20	38707.85	174818.60
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	954.25	988.95	4962.10	9629.25	10757	22624.40	26684.30	33971.30	25539.20	38707.85	174818.60

Table 9.9: Summary of specieswise minimum available volume (m ^{3}) in the Chir selection working circle. (Lower confidence limit = 80.72 %)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	770.27	798.28	4005.41	7772.73	8683.05	18262.42	21539.57	27421.63	20615.24	31244.98	141113.58
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	770.27	798.28	4005.41	7772.73	8683.05	18262.42	21539.57	27421.63	20615.24	31244.98	141113.58

Table 9.10: Summary of specieswise percentage of minimum available volume (m ^{3}) in the Chir selection working circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.55	0.57	2.84	5.51	6.15	12.94	15.26	19.43	14.61	22.14	100.00
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.55	0.57	2.84	5.51	6.15	12.94	15.26	19.43	14.61	22.14	100.00

9.9. Calculation of yield:

9.9.1. The yield will be calculated in terms of number of trees and volume, which in turn shall be controlled by area check by working out the size of the annual coupe. Modified Brandis diameter class method and Von Mantle's formula have been applied for calculation of the yield. The following presumptions have been made in this regard:

1. Only commercial area and its growing stock have been taken into account for the purpose of yield calculation.
2. The growing stock over commercial area of this working circle has been fixed in 10 cm diameter classes indicated by Symbols, I, II, III, IV, V & VI. Class I stands for trees above the exploitable diameter and the other successively below it, to the youngest.
3. The number of trees in all those classes being considered for the purposes of yield calculation have been reduced to the lower limit of confidence interval.
4. It takes 120,135, 115 and 194 years, on an average for trees of Chir, Deodar, Kail and Fir respectively to attain exploitable diameter of 70 cm d.b.h. in case of Chir, Deodar and Kail, and 80 cm d.b.h. in case of Fir/Spruce.
5. It takes 25,25, 24 and 30 years respectively for an average Chir,Deodar, Kail and Fir tree to pass from approach class (60-70 cm d.b.h. in the case of Chir, Deodar and Kail, 70-80 cm d.b.h. in the case of Fir) to the exploitable class.
6. To account for possible mortality, rot etc., the yield finally arrived at shall be reduced by 50%.
7. The following survival coefficient percent based on the All India volume tables in respects of Deodar, Kail and Fir have been used in yield calculation.

Table 9.11

Diameter-Class d.b.h. (cm)	Survival percentage of species			
	Chir	Deodar	Kail	Fir
30-40	35%	30%	45%	20%
40-50	60%	60%	60%	40%
50-60	80%	80%	80%	50%
60-70	905	90%	90%	60%
70-80	95%	95%	95%	85%
80 & above		-	-	95%

9.9.2. 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 30 percent.

9.9.3. Based on these assumptions, the number of total potentially available trees, over the commercial area of this working circle, calculated at lower confidence limit of mean value after due deduction on account of mortality is tabulated under Table 9.13.

Table 9.12: Species and diameter-class wise potential availability of trees from the commercial area of Chir Selection Working Circle

Chir							
Class	**VI**	**V**	**IV**	**III**	**II**	**I**	**Total**
Diameter-class	below 30	30-40	40-50	50-60	60-70	above 70	
Total No. of trees assessed at mean value	14921	10341	8519	4875	6385	19796	64837
Total No. of trees assessed at lower limit of confidence interval	11052	7660	6310	3611	4729	14663	48025
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		2681	3786	2889	4256	13930	27542

9.9.4. The stepwise calculation of yield in Chir Working Circle on the basis of modified Brandis Diameter Class Method is detailed in Table 9.16

Table 9.13

		Chir
a.	Total number of trees in class I	13930
b.	Total number of trees likely to pass on to class I in the first felling cycle from	
	Class II	4256
	Class III	2889*(6/22)
	=	788
c.	Total recruitment in class I from class II and III during first felling cycle	5044
d.	Annual recruitment from class II and III during the first felling cycle (c /30)	168
e.	Stock required to be kept as reserve i.e. half of the total recruitment in 'c' above	2522
f.	Surplus stock of class I (a - e)	11408
g.	Total possibility of yield in first felling cycle if all surplus stock in 'f' above is removed in 2 cycles (c + f)	16452
h.	Annual yield (g / 30)	548
i.	Total possibility of yield if all surplus stock in 'f' above is removed in two felling cycles (c + f/2) (refer note below)	10748
j.	Annual yield (i / 30)	358
k.	Weighted average volume of trees above exploitable diameter as per Kullu Volume Tables in cubic metres	6.876
l.	Total annual volume yield (m^3)	2462
m.	Deduct fifty percent from 'l' above to account for mortality	1231
n.	Rounded off to lower multiple of hundred	1200
	Total annual yield from the working circle	1200 m^3

9.10. Calculation of yield using Von Mantle's formula:

Von Montel yield		2*GS/R	(GS- Minimum available GS)	
Species	Rotation	Min GS	Yield	Corrected Yield
Chir	150	141113.58	(2 x 141113.58)/150= 1881.51	1800
Total		141113.58	1881.51	1800

After comparing the yield by both the methods the yield calculated by Brandis Diameter class method is less than the yield obtained by using Von Mantle's Method. From conservative point of view therefore the yield obtained by Brandis Diameter class Method is adopted and prescribed as under:

Chir	1200 m^3
Total	1200 m^3

9.11. Size of annual coupe:

The size of annual coupe is calculated by formula

Annual Coupe (ha) = (Total commercial area of working circle/Felling cycle)

Commerical Area	Felling Cycle	Area of Annual coupe (ha)
1735	30	57.83

9.12. Allowable cut per hectare:

9.12.1. Given the annual yield and the size of annual coupe, the allowable cut is computed by dividing Annual Yield of the Working Circle with the area of annual Coupe.

Annual cut per hectare = (Annual yield/Area of annual coupe)

Annual yield	Area of annual coupe	Allowable cut per heactare
1200	57.83	20.75

9.12.2. The minimum Growing stock available = (minimum available volume (m^3) /Commercial area:

Minimum available volume (m^3)	Commercial area	Minimum available growing stock/Ha
141113.58	1735	81.33

9.12.3. Allowable cut as % ge of Minimum Growing stock= (Allowable cut per heactare / Minimum available growing stock):

Allowable cut per heactare	Minimum available growing stock	Allowable cut as % ge of Minimum Growing stock
20.75	81.33	25.51

9.12.4. If yield is reduced by 30% then above calculated parameters can be stated as :

Annual Yield	Annual Coupe	Allowable cut per heactare	Minimum available growing stock	Allowable cut as % ge of Minimum Growing stock
840	57.83	14.53	81.33	17.87

9.13. Suggestions for marking officer:

9.13.1. 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:

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

2. All trees of exploitable size (70 cms (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).

3. 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.

4. No healthy, fir 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 out among poles of less than 30 cms (ob), they should be removed in order to ensure the uniformity of the groups.

5. 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.

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

7. 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.

8. Thinnings 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.

9.14. 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.

9.15. Subsidiary silvicultural operations:

9.16.1. Fire Protection: 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.

9.15.1.1. Fire lines:

1. 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 traversing into Oak areas will badly damage the Oak forests which are vital for conservation and regulation of Soil moisture.

2. 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.

3. 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.

9.15.1.2. 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.

i. It should be done during the period December to February.
ii. 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).
iii. In areas under resin tapping is progressing it should be ensured that on area upto 1.5 m radius around each tree (under tapping) is cleared of chips and other inflammable material before the control burning begins.
iv. Small patches of un-established regeneration should be strictly protected against any damage during the operation of control burning.
v. Control burning in no case should begin before a thorough disposal of the slash/debris in a worked area.

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

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

9.16. Disposal of debris:

9.16.1. 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 undisputed debris should be burnt off in heaps, far removed from the crop , particularly advance growth and young regeneration.

9.17. Tending:

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

9.18. Grazing control:

9.18.1. 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 un established regeneration and areas taken up for artificial regeneration should be closed for grazing.

9.19. Realization of the yield:

9.19.1. All fit trees above 30 cm d.b.h. (ob) marked for whatever purpose will count towards yield. Since majority of crop of Deodar, Kail and Fir are not present uniformly, so it may not be possible to realize species wise yield. Thus, yield prescribed should be regulated in totality. However, a deviation of 20% from the prescribed yield is permitted.

9.19.2. 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.)

9.19.2. 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.

9.20. Regeneration survey:

9.20.1. The regeneration survey was carried out along with Sample Plots (0.1 Ha) during the conducting of the sample plots, 10 plots of 2 m × 2 m size were laid along two lines. These lines were taken parallel to one of the boundaries of enumeration plot at a distance of 10 m and 20 m. The 2m x 2m plots can be laid perpendicular to each of these lines and in an alternate fashion along both sides of the lines at a distance of 6 m. This makes 4% survey for the 0.1 ha enumeration plot surveyed. With the help of MS Excel package weightage in terms of various categories of regeneration (that was assigned to each quadrant of 2m x 2m dimension plot) was analysed for working circles. Various categories of regeneration were assigned symbol and weightage (as indicated below) as per PWPR guidelines.

Symbol & weightage	Category of Regeneration	Remarks
e = 5.00	Woody shoots of establishment height (2.5 m) or over upto 10 cms. dbh	Symbol 'e' indicates that at least one such plant is present which is considered sufficient to stock the quadrant completely
w = 4.00	Woody shoots less than establishment height but healthy and vigorous and expected to become established	In absence of (1) symbol 'w' indicates at least one such plant which is considered sufficient to stock the quadrant completely.
u^{+} = 2.00	Non-woody (whippy) old unestablished regeneration. 50 cms. or more in height.	In absence of (1) and (2) symbol 'u+' indicates that there are more than one such plant in the quadrant.
u = 1.00	Non-woody (whippy) old unestablished regeneration. 50 cms. or more in height.	In absence, of (1), (2) and (3) symbol 'u' indicates that there is only one such plant in the quadrant
s+ = 0.50	Sub-whippy old seedling less than 50 cms. in height	In absence of (1), (2), (3), (4) and (5) symbol 's' indicates that there are more than one such plant in the quadrant
s = 0.25	Sub-whippy old seedling less than 50 cms. in height	In absence of (1), (2), (3), (4) and (5) symbol 's' indicates that there is only one such plant in the quadrant
r = 0.00	Current years seedlings or recruitment	In absence of categories (1) (6), symbol 'r' indicates that un-established old whippy and sub-whippy seedlings are absent but current year's seedlings, i.e., recruitment is present.
o	Blank	All categories of regeneration are absent

Regeneration survey was carried out along with a total of 89 plots in Chir Selection Working Circle

9.20.2. Results of regeneration survey w.r.t. Chir Selection Working Circle:

	Total	%ge (Total*100/Grand Total)
Total No of 5's (e)	199	22.24
Total No of 4's (w)	79	8.87
Total No of 2's (u+)	276	31.01
Total No of 1's (u)	31	3.48
Total No of 0.5's (s+)	34	3.82
Total No of 0.25's (s)	17	1.91
Total No of 0.00's (r)	8	0.89
Total No of 0's (o)	246	27.78
Grand Total	890	100

9.20.3. From the above table it can be said that in 72.22 % area of Chir working circle has atleast some regeneration.On the same line more number of "o" cannot be considered good and it can be stated that 27.78% is devoid of any regeneration.

9.21. Artificial regeneration (Nursery and plantation technique):

9.21.1. In areas where regeneration has failed to come up on its own, artificial measures shall be initiated. Patch sowing of Chir should be carried out where a favourable soil-moisture condition exists. In blanks close to habitations planting is to be carried out after fencing the area. An area of 156 hectares is proposed for reforestation and rehabilitation annually which is equal to area of annual coupe.

Nursery and plantation technique of Pinus roxburghii (Chir):

Occurrence: The Chir grows at an altitude ranging from 500 meters to 2300 meters height. It is light demander species. It is a frost and drought hardy and fire resistant species.

Seed collection: During March and April.

Seed weight: Approximately 10,000 seeds per kg. Seed can be stored in sealed tin upto 4 years.

Germination percentage: more than 70%.

Nursery Technique: Dibbling or broad cast sowing of seed is done in shaded nursery beds during March and April. The nursery soil is mixed with soil collected around large pine trees in the adjoining forests. The nursery is properly watered during summer and seedlings are pricked out during June and July.

Planting Technique: The naked rooted seedlings , when they attain a height of 10-15 cm are transplanted with or without ball of earth at 2m*2m spacing in pits of size 45cm*45cm*45cm during monsoon. Young seedlings are damaged by porcupines.

9.22. Chir development programme:

9.22.1. Various Chir development measures have already been described in the preceding paras of this chapter e.g. Fire control, grazing control, tending, 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.

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

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

9.22.4. 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.

9.22.5. The direct sowing of the Chir is done by way of the following methods:

1. 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.
2. In contour lines 30 cm wide and spaced 2 to 3 cm 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.
3. Contour trenches, preferably broken. This is useful on dry and hot aspects.

9.22.6. Chir can be very well raised in 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.

9.22.7. 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 Miscellaneous Working circle, will also help in the development of Chir crop.

9.22.8. 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 Fir Protection cum Rehabilitation Working Circle

10.1. General constitution of working circle:

10.1.1. Fir Protection cum Rehabilitationworking circle comprises of compartments that are adequately stocked with Fir crop admixed with Spruce. The forests included in this Working Circle except those found in Mughal road range are located in the interior parts of the Division and these areas without exception are poor in connectivity, accessibility and characterized by harsh working conditions due to dry cold windy weather in the higher altitudes. The included compartments are however feasible operationally as well as economically for execution of forest working. The management prescriptions involve assignment of area across the division, the quantum and method of harvesting, the post harvest intervention for ensuring regeneration and other ancillary activities. In this working plan, the general constitution of Fir Working Circle has over all remained the same as in previous Working Plan.The market demand for Fir is reasonably good, especially for use in constructional works in the truss work of the buildings. As such it is conceived that the crop in the Circle would be managed in a manner to ensure a uniform supply of Fir timber throughout the year.

10.2. General character of the vegetation:

10.2.1. The forests in the Working Circle are rich in Fir stand intermixed with Spruce along high altitudes. Fir avoids damp as well as wet sites and such sites continue to be refractory and at times occupied by Broad Leaved species. At the lower limits of Fir are found Kail but deodar is rarely admixture like in some Loran area. Kail however is seen cohabiting with Fir along the southern aspects in higher altitudes, where the soil is disturbed

10.2.2. The distribution of species across the region as percentage of total crop stand as discernable from the table 10.1.It demonstrates that, Fir constitutes the maximum population in these forests with 18.2 %, followed by Ble pine at 18%, Spruce at 6% and Chir at 2.84%. The presence of Broad Leaved crop is negligible except for a few patches of *Betula utilis* found on cooler aspect forming an understory with Fir. Other Broad Leaved species found dotting the terrain are Walnut, Bird Cherry, Ash, Acer & Populus. In areas bordering alpine zone are usually seen *Rhododendron* and in areas with meagre soil depth are usually found *Juniper* species.

10.2.3. The crop consists of mature and over mature trees in relatively larger proportions with inadequate amount of young regeneration. However, the compartment worked out in the past have a large number of young to middle aged crop.

10.2.4. The Alpine meadows which are visited by nomads and locals inhabitants during summer months are also present in this working circle.

10.2.5. Regeneration: The regeneration in Fir is generally insufficient in many areas. However, along Pir Panjal Mountains, marvellous regeneration can be noticed in certain tracts. The graphical representation of stem dia-class distribution suggests that the tract is relatively well stocked showing healthy percentage of higher dia-class representation in the population and the density of crop canopy is also found high. Due to inaccessibility, these forests have often

escaped management interventions, which have resulted in more concentration of higher dia classes than what is desirable. Overcrowding of such dominant stems smother the establishment of regeneration. Grazing has also contributed to reduced establishment of regeneration by trampling of seedlings and soil hardening preventing seed germination. Non working of forests has resulted in thick deposition of raw humus. The presence of low temperature coupled with shading significantly slows down the decomposition of the humus. This physically excludes the seed from striking ground. All these factors in combination at varying proportion is the reason for poor germination.

10.3. Area statement:

10.3.1. The species wise detail of compartments allotted to this working circle is given in **Appendix IV**. The Range wise abstract of the area under different species in this working circle is given below in the table No. 10.1.

Table No. 10.1: Range/Block wise distribution of area (in hectares) allotted to Fir Protection cum Rehabilitation Working Circle of Poonch forest division:

S.No.	Range	Block	New	Commercial Area	Uncommercial Area	Grand Total
1	Haveli	Mandi	7/H,8/H,9/H,10/H,14/H,16a/H,19/H,20/H,21/H,22/H,23/H,24/H,25/H,26/H,27/H,28/H	2557	1063	3620
2	Haveli	Loran	30/H,31/H,32/H,33/H,34/H,35/H,39/H,40/H,41/H,42/H,43/H,44/H,45/H,46/H,48/H,49/H,51/H,54/H,55/H,56/H,57/H,59b/H,60/H	3561	1346	4907
3	Haveli	Sabzian	61/H,62/H,63/H,65/H,67/H,68/H,70/H,77/H,82/H,83/H	1195	661	1856
Sub-total			No. of Comptt:49	7313	3070	10383
4	Surankote	Murrah	6/S,7/S,8/S,10a/S,10b/S,11a/S,11b/S,16/S,17/S,18/S,19/S,20a/S,21/S,22/S,23/S,24/S,26/S,27/S,28/S,30/S,31/S,32a/S,32b/S,33a/S,33b/S,34/S,35/S,37/S,38/S	6525	3486	10011
5	Surankote	Behramgala	79/S,81/S,82/S,83/S,97/S,98/S,99/S,100/S,101/S,104/S,107/S,108/S,109/S,110/S,111/S,112/S	3474	939	4413
Sub-total			No. of Comptt:45	9999	4425	14424
Total			No. of Comptt:94	17312	7495	24807

10.4. Special objectives of management:

- To create congenial condition for the establishment of regeneration and conservation of soil and moisture.
- To obtain timber on a sustained basis.
- To supplement natural regeneration by plantation of nursery raised plants.
- To protect these forests for their aesthetic value.

10.5. Silvicultural system:

10.5.1. The tract forms a part of western Himalayan region and is as such ecologically very fragile. The treatment of forest thus has to be as non intrusive as possible. The interventions have to be a unique mix of operations enabling the maintenance of more than minimum critical cover to ensure the continuation of non-market ecological benefits, at the same time allowing utilization of the productive capacity of forests for alleviation of standard of living of people and satisfying demand for the produce. Selection Felling System is therefore applied to these forests for continuous derivation of the environmental, recreational, aesthetic as well as economic benefits without dramatic change in crop composition and structure. Also opening up of area in large patches would be ill advised due to the fragility of the ecosystem. Selection System primarily involves removal of over wood for securing regeneration and promoting undergrowth, nevertheless still maintaining the continuity of accrual of ecosystem services.

10.6. Exploitable size:

10.6.1. The exploitable diameter for Fir and Spruce is fixed at 80 cms. dbh (ob). Similarly, exploitable diameter for Deodar and Kail is fixed at 70 cms. dbh (ob). Keeping in view the overall deficiency of regeneration and higher proportion of mature and over mature trees in Fir, exploitable diameter has been raised from 70 cms. (technically exploitable size) to 80 cms. dbh (ob) in the plan under revision.

10.7. Rotation:

10.7.1. The rotation has no significance in selection system. However, for the academic purpose the rotation of 240,120, 150 and 150 years has been adopted for Fir,Chir, Deodar & Kail respectively, corresponding to exploitable diameter of 80 cms. dbh (ob) for Fir and 70 cms. dbh (ob) for Chir Deodar and Kail.

10.8. Felling cycle:

10.8.1. A felling cycle of 30 years is adopted which has been found to be convenient, based on our past experience.

10.9. Felling series and cutting section:

10.9.1. The entire Working Circle shall be treated as a single felling series and the operation shall be serially conducted from one end of division uniformly. However no cutting section is being prescribed. The area being relatively inaccessible the decision of choice of coupe is being left to the Divisional Forest Officer. The D.F.O shall in consultation with the Conservator of Forests (Territorial) get a plan of working prepared and get the same approved from

Conservator of Forests, Working Plan. The entire Working Circle would therefore, constitute one felling series.

10.10. Analysis and evaluation of the crop:

10.10.1. The sampling plot technique has been adopted for assessment of growing stock. The field data was collected from 219 sampling plots. Mean value of two variables viz number of stems per hectare and volume of conifers 30 cms. dbh (ob) above per hectare have been computed species and diameter class wise. The result of statistical analysis and further interpretation of the crop is done with the help of following tables:

S.No.	Name of the Table	Table No.
1.	Result of statistical analysis.	Table 10.2.
2.	Summary of Species wise stem Distribution per hectare in Fir Protection cum Rehabilitation working Circle.	Table 10.3.
3.	Summary of specieswise stem Distribution in the Fir Protection cum Rehabilitation working circle.	Table 10.4.
4.	Summary of species wise minimum available stem Distribution in Fir Protection cum Rehabilitation working circle.	Table 10.5.
5.	Summary of species wise percentage of stem Distribution in the working circle in Fir Protection cum Rehabilitation working circle.	Table 10.6.
6.	Summary of species wise volume (m^3) distribution per hectare in the Fir Protection cum Rehabilitation working circle.	Table 10.7.
7.	Summary of species wise volume (m^3) distribution in the Fir Protection cum Rehabilitation working circle.	Table 10.8.
8.	Summary of specieswise minimum available volume (m^3) in the Fir Protection cum Rehabilitation working circle.	Table 10.9.
9.	Summary of species wise percentage of minimum available volume (m^3) in the Fir Protection cum Rehabilitation working circle.	Table 10.10.

Table No. 10.2: Results of Statistical Analysis for Fir Protection cum Rehabilitation working circle.											
Working Circle	**Variable (Per Ha)**	**Sample Points (n)**	**Mean (X)**	**Variance (S^2)**	**Standard Deviation (S)**	**Standard Error (S.E)**	**Coefficient of Variation (%)**	**Confidence limits (95%) (X± t x S.E)**		**Confidence interval (C.I)**	**Lower limits as % of mean (%)**
								Lower limit	**Upper limit**		
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Fir Selection Working Circle	No. of stems	219	12.56	419.12	20.47	1.38	162.98	9.84	15.28	5.44	78.34 %
	Volume	219	78.63	19346.30	139.09	9.40	176.89	60.10	97.16	37.06	76.43 %

Column 7: S.E. = S/ square root (n)

Column 8: C.O.V (%) = (S/X) x 100

Column 9: Lower limit = X- (Student t test value for n-1 degrees of freedom * SE)

Column 10: Upper Limit = X + (Student t test value for n-1 degrees of freedom * SE)

Column 11: C.I. = Upper limit - Lower limit

Table 10.3: Summary of Specieswise stems distribution per hectare in Fir Protection cum Rehabilitation Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.09	0.14
Fir/Spruce	0.00	0.27	0.23	0.18	1.00	0.27	1.74	1.23	0.91	3.15	8.98
Kail	0.00	0.05	0.00	0.23	0.18	0.18	0.27	0.46	0.18	0.55	2.10
BL	0.00	0.14	0.00	0.23	0.14	0.14	0.18	0.05	0.00	0.41	1.29
Total	0.00	0.46	0.23	0.64	1.32	0.59	2.24	1.79	1.09	4.20	12.56

Table 10.4: Summary of specieswise stems distribution in the Fir Protection cum Rehabilitation Working Circle. (Commercial Area= 17312 Ha)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.00	0.00	0.00	0.00	0.00	0.00	865.60	0.00	0.00	0.00	865.60
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	865.60	0.00	1558.08	2423.68
Fir/Spruce	0.00	4674.24	3981.76	3116.16	17312.00	4674.24	30122.88	21293.76	15753.92	54532.80	155461.76
Kail	0.00	865.60	0.00	3981.76	3116.16	3116.16	4674.24	7963.52	3116.16	9521.60	36355.20
BL	0.00	2423.68	0.00	3981.76	2423.68	2423.68	3116.16	865.60	0.00	7097.92	22332.48
Total	0.00	7963.52	3981.76	11079.68	22851.84	10214.08	38778.88	30988.48	18870.08	72710.40	217438.72

Table 10.5: Summary of specieswise minimum available stems distribution in Fir Protection cum Rehabilitation Working Circle. (Lower confidence limit = 78.34 %)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.00	0.00	0.00	0.00	0.00	0.00	678.11	0.00	0.00	0.00	678.11
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	678.11	0.00	1220.60	1898.71
Fir/Spruce	0.00	3661.80	3119.31	2441.20	13562.22	3661.80	23598.26	16681.53	12341.62	42721.00	121788.74
Kail	0.00	678.11	0.00	3119.31	2441.20	2441.20	3661.80	6238.62	2441.20	7459.22	28480.66
BL	0.00	1898.71	0.00	3119.31	1898.71	1898.71	2441.20	678.11	0.00	5560.51	17495.26
Total	0.00	6238.62	3119.31	8679.82	17902.13	8001.71	30379.37	24276.37	14782.82	56961.33	170341.48

Table 10.6: Summary of specieswise percentage of stems distribution in the working circle in Fir Protection cum Rehabilitation Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.40
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.72	1.12
Fir/Spruce	0.00	2.15	1.83	1.43	7.96	2.15	13.86	9.79	7.25	25.08	71.50
Kail	0.00	0.40	0.00	1.83	1.43	1.43	2.15	3.67	1.43	4.38	16.72
BL	0.00	1.11	0.00	1.83	1.11	1.11	1.44	0.40	0.00	3.26	10.26
Total	0.00	3.66	1.83	5.09	10.50	4.69	17.85	14.26	8.68	33.44	100.00

Table 10.7: Summary of specieswise volume (m ^{3}) distribution per hectare in the Fir Protection cum Rehabilitation Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.22
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.69	0.95
Fir/Spruce	0.00	0.04	0.19	0.28	2.98	1.34	11.89	10.23	8.58	32.11	67.64
Kail	0.00	0.01	0.00	0.31	0.41	0.61	1.21	2.44	1.12	3.69	9.80
Total	0.00	0.05	0.19	0.59	3.39	1.95	13.32	12.93	9.70	36.49	78.61

Table 10.8: Summary of specieswise volume (m ^{3}) distribution in the Fir Protection cum Rehabilitation Working Circle. (Commercial Area= 17312 Ha)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.00	0.00	0.00	0.00	0.00	0.00	3808.64	0.00	0.00	0.00	3808.64
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4501.12	0.00	11945.28	16446.40
Fir/Spruce	0.00	692.48	3289.28	4847.36	51589.76	23198.08	205839.68	177101.76	148536.96	555888.32	1170983.68
Kail	0.00	173.12	0.00	5366.72	7097.92	10560.32	20947.52	42241.28	19389.44	63881.28	169657.60
Total	0.00	865.60	3289.28	10214.08	58687.68	33758.40	230595.84	223844.16	167926.40	631714.88	1360896.32

Table 10.9: Summary of specieswise minimum available volume (m ^{3}) in the Fir Protection cum Rehabilitation Working Circle. (Lower confidence limit = 76.43 %)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.00	0.00	0.00	0.00	0.00	0.00	2910.94	0.00	0.00	0.00	2910.94
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3440.21	0.00	9129.78	12569.99
Fir/Spruce	0.00	529.26	2514	3704.84	39430.05	17730.29	157323.27	135358.88	113526.80	424865.44	894982.83
Kail	0.00	132.32	0.00	4101.78	5424.94	8071.25	16010.19	32285.01	14819.35	48824.46	129669.30
Total	0.00	661.58	2514	7806.62	44854.99	25801.54	176244.40	171084.10	128346.15	482819.68	1040133.06

Table 10.10: Summary of specieswise percentage of minimum available volume (m ^{3}) in the Fir Protection cum Rehabilitation Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.28
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.88	1.21
Fir/Spruce	0.00	0.05	0.24	0.36	3.79	1.71	15.13	13.01	10.91	40.85	86.05
Kail	0.00	0.01	0.00	0.39	0.52	0.79	1.54	3.10	1.42	4.69	12.46
Total	0.00	0.06	0.24	0.75	4.31	2.50	16.95	16.44	12.33	46.42	100.00

10.11. Calculation of yield:

10.11.1. Since the no. of stems per hectare in Fir crop has come out to be very low and hence the total growing stock. In this scenario if the extraction is carried out in the working circle then it may further result into the further thinning of crop. Therefore, considering these facts it is recommended to not to remove any overwood on commercial scale.

10.12. Regeneration survey:

10.12.1. The regeneration survey was carried out along with Sample Plots (0.1 Ha) during the conducting of the sample plots, 10 plots of 2 m × 2 m size were laid along two lines. These lines were taken parallel to one of the boundaries of enumeration plot at a distance of 10 m and 20 m. The 2m x 2m plots can be laid perpendicular to each of these lines and in an alternate fashion along both sides of the lines at a distance of 6 m. This makes 4% survey for the 0.1 ha enumeration plot surveyed. With the help of MS Excel package weightage in terms of various categories of regeneration (that was assigned to each quadrant of 2m x 2m dimension plot) was analysed for working circles. Various categories of regeneration were assigned symbol and weightage (as indicated below) as per PWPR guidelines.

Symbol & weightage	Category of Regeneration	Remarks
e = 5.00	Woody shoots of establishment height (2.5 m) or over upto 10 cms. dbh	Symbol 'e' indicates that at least one such plant is present which is considered sufficient to stock the quadrant completely
w = 4.00	Woody shoots less than establishment height but healthy and vigorous and expected to become established	In absence of (1) symbol 'w' indicates at least one such plant which is considered sufficient to stock the quadrant completely.
u^{+} = 2.00	Non-woody (whippy) old unestablished regeneration. 50 cms. or more in height.	In absence of (1) and (2) symbol 'u+' indicates that there are more than one such plant in the quadrant.
u = 1.00	Non-woody (whippy) old unestablished regeneration. 50 cms. or more in height.	In absence, of (1), (2) and (3) symbol 'u' indicates that there is only one such plant in the quadrant
s+ = 0.50	Sub-whippy old seedling less than 50 cms. in height	In absence of (1), (2), (3), (4) and (5) symbol 's' indicates that there are more than one such plant in the quadrant
s = 0.25	Sub-whippy old seedling less than 50 cms. in height	In absence of (1), (2), (3), (4) and (5) symbol 's' indicates that there is only one such plant in the quadrant
r = 0.00	Current years seedlings or recruitment	In absence of categories (1) (6), symbol 'r' indicates that un-established old whippy and sub-whippy seedlings are absent but current year's seedlings, i.e., recruitment is present.
o	Blank	All categories of regeneration are absent

Regeneration survey was carried out along with a total of 268 plots in Fir Protection cum Rehabilitation Working Circle.

10.12.2. Results of regeneration survey w.r.t. Fir Protection cum Rehabilitation Working Circle:

	Total	%ge (Total*100/Grand Total)
Total No of 5's (e)	4	0.15
Total No of 4's (w)	100	3.73
Total No of 2's (u+)	604	22.53
Total No of 1's (u)	670	25
Total No of 0.5's (s+)	67	2.5
Total No of 0.25's (s)	709	26.45
Total No of 0.00's (r)	76	2.83
Total No of 0's (o)	450	16.81
Grand Total	2680	100

10.12.3. From the above table it can be said that in 83.19% area of Fir Protection cum Rehabilitation Working Circle has atleast some regeneration. On the same line more number of "o" cannot be considered good and it can be stated that 16.81% is devoid of any regeneration.

10.13. Regeneration programme:

10.13.1. The success or failure of any silvicultural system adopted and treatment given to crop depends upon the success or failure of natural regeneration. All the factors responsible for successful establishment of natural regeneration are favourable except one i.e. biotic interference. The biotic interference in the form of grazing is to such an extent that it does not allow the natural regeneration to come up and get established the extent of area deficient of natural regeneration is increasing by every passing year. It is therefore, suggested that total area requiring regeneration (equal to the size of annual coupe, evenly distributed over the total area of the working circle), and should be closed to grazing every year. All efforts should be made to induce natural regeneration and assist the establishment of natural regeneration. This involves removal of weeds, raking up of humus and closure of such areas for grazing. In case Forest does not regenerate naturally the artificial regeneration by way of sowing and planting of nursery raised seedlings should be resorted to.

10.13.2. The areas that may be considered for afforestation of Fir forests by means of artificial regeneration and aided natural regeneration falls in Haveli and Surankote range. The Blocks in Haveli are Mandi, Loran and Sawjian. The Compartments recommend under these blocks 8/H,9/H,10/H,15/H,18/H,20/H,21/H,22/H,32/H,33/H,34/H,56/H,57/H,62/H,64a/H,64b/H,64c/H,86b/H,86c/H,90/H. The areas in Surankote are both sides of Mughal road (Sawjian block).The Compartments identified are 31/S, 32a/S, 32b/S, 33a/S, 33b/S, 34/S, 35/S, 36/S, 37/S, 79/S, 80/S, 85/S.

10.14. Artificial Regeneration (Nursery and plantation techniques)

Abies pindrow (Fir):

It is a slow growing species which require cool and moist climate. It occurs at an altitude ranging from 2200 to 3300 meters, but sometimes extends to 2000 to 3300 meters.

Seed: Good seed year normally occur in 6-7 years. Seed ripen in the month of October-November.

Seed weight: It weighs about 2500 seeds per Kilogram.

Germination Percent: It normally ranges from 40 to 65. The germination starts after 4-5 months and completes in about one and a half months.

Nursery Technique**:** Seeds are sown in nursery beds in November-December i.e. before snowfall and the germination starts in April. The seedlings remain in nursery for one and a half years.

Planting Technique: The planting out is usually done during the month of March / April when the snow starts melting. It is done in pits of size 45cm x 45cm x 45cm at a spacing of 2m x 2m and cleaning is to be done twice a year.

10.15. Regulation of grazing:

10.15.1. Open grazing is allowed in the coupes however, the conifer patches may be selectively protected by individual patch guards and later tree guards. It would be impractical to imagine affecting a closure of the complete coupe area and is bound to fail due to relentless biotic pressure. Such a move would also face stiff resistance from the local population and accentuate the alienation that already persists. The acceptable minimum stems per hectare should be worked out and based on which certain patches established per hectare should be selectively protected. In the unprotected areas sowing of grass seeds or slips can be practised.

Chapter – XI

Working plan for Protection Working Circle

11.1. General constitution of the working circle:

11.1.1. This working Circle includes such forest which are (a) situated on highly precipitous ground forming the upper catchments of the stems, (b) situated in the close proximity of the Line of Control, (c) Otherwise commercial forests not included in the productive working circles due to heavy biotic pressure land (d) few well stocked broad leaved forests no small in extent that a separate working circle for item is not desirable.

11.2. Area statement:

11.2.1. The species wise detail of compartments allotted to this working circle is given in Appendix VI. The Range wise abstract of the area under different species in this working circle is given below in the table No. 11.1.

Table No. 11.1: Range wise distribution of area (in hectares) allotted to Protection Working Circle of Poonch forest division

S.No.	Range	Block	New	Commercial Area	Uncommercial Area	Grand Total
1	Haveli	Mandi	13/H,15/H	285	47	332
2	Haveli	Loran	36/H,37/H,38/H,47/H,52/H,53/H,58/H	656	2857	3513
3	Haveli	Sabzian	64a/H,64b/H,64c/H,66/H,69/H,71/H,72/H,73/H,74/H,78/H,84/H,85/H,86a/H,86b/H,86c/H,87a/H,87b/H,87c/H,88a/H,88b/H,88c/H,91/H	2228	5321	7549
4	Haveli	Poonch	92/H,94a/H,94b/H,95a/H,95b/H,97a/H,98/H,99/H,101a/H,101b/H,107a/H	18	1222	1234
5	Haveli	Jhalas	109a/H,110/H,111a/H,111b/H,122/H,123/H	205	253	458
6	Haveli	Khanetar	127/H,130/H,132/H,134b/H,137/H	151	368	519
7	Haveli	Poonch	140a/H,140b/H,140c/H	73	132	205
Sub-total			No. of Comptt:56	3610	10200	13810
8	Surankote	Murrah	1/S,9/S,12/S,13/S,29/S	535	1381	1916
9	Surankote	Samote	60/S	29	40	69
10	Surankote	Bufliaz	65/S,66/S,67/S,68/S,70/S,75/S	1018	430	1448

11	Surankote	Behramgala	78/S,84/S,85/S,86/S,87/S,88/S,89/S,90/S,91/S,92/S,93/S,94/S,95/S,96/S,102/S,103/S,113/S,114/S,115/S,116/S	1515	7593	9108
Sub-total			No. of Comptt:32	3097	9444	12541
12	Mendhar	Dharamsal	2a/M,2b/M,5a/M,5b/M,6a/M,6b/M,8/M,19a/M,19b/M	290	230	520
13	Mendhar	Nar	28/M	188	22	210
14	Mendhar	Salwan	43/M	21	60	81
15	Mendhar	Ramkund	60/M	21	77	98
16	Mendhar	Ghani	78/M,81/M	137	86	223
Sub-total			No. of Comptt:14	657	475	1132
Total			No. of Comptt:102	7370	20119	27489

11.3. Objects of management:

- The main object is to protect these forests from illicit damages.
- To check the smuggling of Forest Produce.
- To check the encroachment upon the Forest land.
- To prevent Forest fires.
- To protect forest crop against pests and diseases.

11.4. Analysis and evaluation of the crop:

11.4.1. The sampling plot technique has been adopted for assessment of growing stock. The field data was collected from 428 sampling plots. Mean value of two variables viz number of stems per hectare and volume of conifers 30 cms. dbh (ob) above per hectare have been computed species and diameter class wise. The result of statistical analysis and further interpretation of the crop is done with the help of following tables:

S.No.	Name of the Table	Table No.
1.	Result of statistical analysis.	Table 11.2.
2.	Summary of Species wise stem Distribution per hectare in Protection working Circle.	Table 11.3.
3.	Summary of specieswise stem Distribution in the Protection working circle.	Table 11.4.
4.	Summary of species wise minimum available stem Distribution in Protection working circle.	Table 11.5.
5.	Summary of species wise percentage of stem Distribution in the working circle in Protection working circle.	Table 11.6.
6.	Summary of species wise volume (m^3) distribution per hectare in the Protection working circle.	Table 11.7.
7.	Summary of species wise volume (m^3) distribution in the Protection working circle.	Table 11.8.
8.	Summary of specieswise minimum available volume (m^3) in the Protection working circle.	Table 11.9.
9.	Summary of species wise percentage of minimum available volume (m^3) in the Protection working circle.	Table 11.10.

Table 11.2 Results of statistical analysis for Protection Working Circle.											
Working Circle	**Variable (Per Ha)**	**Sample Points (n)**	**Mean (X)**	**Variance (S^2)**	**Standard Deviation (S)**	**Standard Error (S.E)**	**Coefficient of Variation (%)**	**Confidence limits (95%) (X± t x S.E)**		**Confidence interval (C.I)**	**Lower limits as % of mean (%)**
								Lower limit	**Upper limit**		
1	2	3	4	5	6	7	8	9	10	11	12
Protection Working Circle	No: of stems	414	14.13	1403.96	37.47	1.84	265.18	10.51	17.75	7.24	74.38 %
	Volume	414	21.21	3738.68	61.14	3.00	288.26	15.31	27.11	11.80	72.18 %

Column 7: S.E. = S/ square root (n)

Column 8: C.O.V (%) = (S/X) x 100

Column 9: Lower limit = X- (Student t test value for n-1 degrees of freedom * SE)

Column 10: Upper Limit = X + (Student t test value for n-1 degrees of freedom * SE)

Column 11: C.I. = Upper limit - Lower limit

Table 11.3: Summary of Specieswise stems distribution per hectare in Protection Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.77	0.46	0.31	0.17	0.19	0.02	0.27	0.10	0.05	0.02	2.36
Deodar	0.00	0.02	0.02	0.05	0.12	0.07	0.10	0.00	0.00	0.00	0.38
Fir/Spruce	0.00	0.05	0.00	0.00	0.07	0.12	0.17	0.10	0.02	0.36	0.89
Kail	0.00	0.02	0.07	0.27	0.22	0.17	0.14	0.12	0.07	0.14	1.22
BL	3.04	2.68	1.93	0.80	0.39	0.19	0.14	0.02	0.00	0.05	9.24
Total	3.81	3.23	2.33	1.29	0.99	0.57	0.82	0.34	0.14	0.57	14.09

Table 11.4: Summary of specieswise stems distribution in the Protection Working Circle. (Commercial Area= 7370 Ha)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	5674.90	3390.20	2284.70	1252.90	1400.30	147.40	1989.90	737.00	368.50	147.40	17393.20
Deodar	0.00	147.40	147.40	368.50	884.40	515.90	737.00	0.00	0.00	0.00	2800.60
Fir/Spruce	0.00	368.50	0.00	0.00	515.90	884.40	1252.90	737.00	147.40	2653.20	6559.30
Kail	0.00	147.40	515.90	1989.90	1621.40	1252.90	1031.80	884.40	515.90	1031.80	8991.40
BL	22404.80	19751.60	14224.10	5896.00	2874.30	1400.30	1031.80	147.40	0.00	368.50	68098.80
Total	28079.70	23805.10	17172.10	9507.30	7296.30	4200.90	6043.40	2505.80	1031.80	4200.90	103843.30

Table 11.5: Summary of specieswise minimum available stems distribution in Protection Working Circle. (Lower confidence limit = 74.38 %)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	4220.99	2521.63	1699.36	931.91	1041.54	109.64	1480.09	548.18	274.09	109.64	12937.07
Deodar	0.00	109.64	109.64	274.09	657.82	383.73	548.18	0.00	0.00	0.00	2083.10
Fir/Spruce	0.00	274.09	0.00	0.00	383.73	657.82	931.91	548.18	109.64	1973.45	4878.82
Kail	0.00	109.64	383.73	1480.09	1206.00	931.91	767.45	657.82	383.73	767.45	6687.82
BL	16664.69	14691.24	10579.89	4385.44	2137.90	1041.54	767.45	109.64	0.00	274.09	50651.88
Total	20885.68	17706.24	12772.62	7071.53	5426.99	3124.64	4495.08	1863.82	767.46	3124.63	77238.69

Table 11.6: Summary of specieswise percentage of stems distribution in the working circle in Protection Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	5.46	3.26	2.2	1.21	1.35	0.14	1.92	0.71	0.35	0.14	16.74
Deodar	0	0.13	0.12	0.35	0.81	0.4	0.61	0	0	0	2.42
Fir/Spruce	0	0.32	0	0	0.5	0.85	1.21	0.71	0.14	2.46	6.19
Kail	0	0.14	0.5	1.92	1.56	1.11	0.99	0.71	0.44	0.97	8.34
BL	21.58	19	13.6	6.88	2.47	1.35	0.94	0.14	0	0.35	66.31
Total	27.04	22.85	16.42	10.36	6.69	3.85	5.67	2.27	0.93	3.92	100

Table 11.7: Summary of specieswise volume (m ^{3}) distribution per hectare in the Protection Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.10	0.06	0.15	0.19	0.43	0.09	1.29	0.60	0.34	0.18	3.43
Deodar	0.00	0.00	0.02	0.06	0.25	0.23	0.42	0.00	0.00	0.00	0.98
Fir/Spruce	0.00	0.01	0.00	0.00	0.22	0.59	1.16	0.80	0.23	3.69	6.70
Kail	0.00	0.00	0.06	0.36	0.49	0.56	0.64	0.65	0.44	0.98	4.18
Total	0.10	0.07	0.23	0.61	1.39	1.47	3.51	2.05	1.01	4.85	15.29

Table 11.8: Summary of specieswise volume (m ^{3}) distribution in the Protection Working Circle. (Commercial Area= 7370 Ha)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	737.00	442.20	1105.50	1400.30	3169.10	663.30	9507.30	4422.00	2505.80	1326.60	25279.10
Deodar	0.00	0.00	147.40	442.20	1842.50	1695.10	3095.40	0.00	0.00	0.00	7222.60
Fir/Spruce	0.00	73.70	0.00	0.00	1621.40	4348.30	8549.20	5896.00	1695.10	27195.30	49379.00
Kail	0.00	0.00	442.20	2653.20	3611.30	4127.20	4716.80	4790.50	3242.80	7222.60	30806.60
Total	737.00	515.90	1695.10	4495.70	10244.30	10833.90	25868.70	15108.50	7443.70	35744.50	112687.30

Table 11.9: Summary of specieswise minimum available volume (m ^{3}) in the Protection Working Circle. (Lower confidence limit = 72.18 %)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	531.97	319.18	797.95	1010.74	2287.46	478.77	6862.37	3191.80	1808.69	957.54	18246.47
Deodar	0.00	0.00	106.39	319.18	1329.92	1223.52	2234.26	0.00	0.00	0.00	5213.27
Fir/Spruce	0.00	53.20	0.00	0.00	1170.33	3138.60	6170.81	4255.73	1223.52	19629.57	35641.76
Kail	0.00	0.00	319.18	1915.08	2606.64	2979.01	3404.59	3457.78	2340.65	5213.27	22236.20
Total	531.97	372.38	1223.52	3245.00	7394.35	7819.90	18672.03	10905.31	5372.86	25800.38	81337.70

Table 11.10: Summary of specieswise percentage of minimum available volume (m ^{3}) in the Protection Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.65	0.39	0.98	1.24	2.81	0.59	8.44	3.92	2.22	1.18	22.42
Deodar	0	0	0.13	0.39	1.64	1.5	2.75	0	0	0	6.41
Fir/Spruce	0	0.07	0	0	1.44	3.86	7.59	5.24	1.5	24.13	43.83
Kail	0	0	0.39	2.35	3.2	3.66	4.19	4.25	2.89	6.41	27.34
Total	0.65	0.46	1.5	3.98	9.09	9.61	22.97	13.41	6.61	31.72	100

11.5. Regeneration survey:

11.5.1. The regeneration survey was carried out along with Sample Plots (0.1 Ha) during the conducting of the sample plots, 10 plots of 2 m × 2 m size were laid along two lines. These lines were taken parallel to one of the boundaries of enumeration plot at a distance of 10 m and 20 m. The 2m x 2m plots can be laid perpendicular to each of these lines and in an alternate fashion along both sides of the lines at a distance of 6 m. This makes 4% survey for the 0.1 ha enumeration plot surveyed. With the help of MS Excel package weightage in terms of various categories of regeneration (that was assigned to each quadrant of 2m x 2m dimension plot) was analysed for working circles. Various categories of regeneration were assigned symbol and weightage (as indicated below) as per PWPR guidelines.

Symbol & weightage	Category of Regeneration	Remarks
e = 5.00	Woody shoots of establishment height (2.5 m) or over upto 10 cms. dbh	Symbol 'e' indicates that at least one such plant is present which is considered sufficient to stock the quadrant completely
w = 4.00	Woody shoots less than establishment height but healthy and vigorous and expected to become established	In absence of (1) symbol 'w' indicates at least one such plant which is considered sufficient to stock the quadrant completely.
u^{+} = 2.00	Non-woody (whippy) old unestablished regeneration. 50 cms. or more in height.	In absence of (1) and (2) symbol 'u+' indicates that there are more than one such plant in the quadrant.
u = 1.00	Non-woody (whippy) old unestablished regeneration. 50 cms. or more in height.	In absence, of (1), (2) and (3) symbol 'u' indicates that there is only one such plant in the quadrant
s+ = 0.50	Sub-whippy old seedling less than 50 cms. in height	In absence of (1), (2), (3), (4) and (5) symbol 's' indicates that there are more than one such plant in the quadrant
s = 0.25	Sub-whippy old seedling less than 50 cms. in height	In absence of (1), (2), (3), (4) and (5) symbol 's' indicates that there is only one such plant in the quadrant
r = 0.00	Current years seedlings or recruitment	In absence of categories (1) (6), symbol 'r' indicates that un-established old whippy and sub-whippy seedlings are absent but current year's seedlings, i.e., recruitment is present.
o	Blank	All categories of regeneration are absent

Regeneration survey was carried out along with a total of 327 plots in Protection Working Circle.

11.5.2. Results of regeneration survey w.r.t. Protection Working Circle:

	Total	**%ge (Total*100/Grand Total)**
Total No of 5's (e)	69	2.11
Total No of 4's (w)	109	3.33
Total No of 2's (u+)	386	11.80
Total No of 1's (u)	509	15.56
Total No of 0.5's (s+)	314	9.60
Total No of 0.25's (s)	588	17.98
Total No of 0.00's (r)	399	12.20
Total No of 0's (o)	896	27.42
Grand Total	3270	100

11.5.3. From the above table it can be said that in 72.58% area of Proection working circle has atleast some regeneration. On the same line more number of “o” cannot be considered good and it can be stated that 27.42% is devoid of any regeneration.

Chapter-XII

Working plan for Rehabilitation Working Circle:

12.1. General constitution of the working circle:

12.1.1. The forest areas which are included in this working circle are the forest areas chiefly under broad leaved species (excluding oaks), are completely blank or bearing only scattered growth and degraded forest areas which are potentially productive but become under stock and without adequate recover due to illicit damage, excessive tapping, fires and grazing or where the growth is either in the form of low density crop or in the form of small patches. This circle also include areas near the habitations. Emphasis shall be given to large scale plantations in these areas during the plan period. So that the people living near these forests can fulfil their demands of fuel, fodder, timber etc. easily without harming the rest of forest.

12.2. General character of the vegetation:

12.2.1. To this working circle are allotted the following categories of the forest areas.

Those of the potentially productive areas which have now been rendered degraded and under-stocked because of maltreatment in the past including excessive lopping, encroachment, over exploitation and biotic interference. These areas are being treated as degraded forests. The crop either has low density or is in the form of isolated trees, small patches or even without tree cover.

The forest areas where regeneration could not keep pace with the removal of the over-wood after seeding felling/main felling.

Those potentially productive forest areas that have deteriorated due to natural physical calamities.

Those compartments located on higher altitudinal zones which devoid of trees naturally.

12.2.2. The productive forests, though adequately stocked, yet are considered unfit for commercial ` exploitation, because of:

- Their proximity to the large human settlements rendering them more vulnerable to the excessive pressures of ever rising population and their demand for timber, firewood, grazing etc. and erosion in the forests and their surrounding areas.
- The forests occurring in and around the places of tourist interest.

The area allotted to this working circle is spread almost all over this division. The types of vegetation encountered varies from sub-tropical pine forests in the low lying areas to high level pasture lands at higher elevations. As such the forests of this working circle by and large conform to all the Champion and Seth's forest types as discussed in detail in Chapter II of Part I of this plan.

12.3. Area statement:

12.3.1. The detailed statement of species wise area of compartments/Sub-Compartment allotted to this working circle is given in Appendix-VII. However, range wise abstract of the distribution of the species wise area is provided in the below Table No.12.1.

Table 12.1. The abstract of Range/Block wise area under Rehabilitation Working Circle

S.No.	Range	Block	New	Commercial Area	Uncommercial Area	Grand Total
1	Haveli	Mandi	2/H,4b/H,5/H,6/H,11a/H,11b/H,16b/H,17/H,18/H	504	407	911
2	Haveli	Loran	50/H,59a/H	85	32	117
3	Haveli	Sabzian	75/H,76/H,79/H,80/H,81/H,86d/H,89a/H,89b/H	1339	951	2290
4	Haveli	Poonch	93b/H,94c/H,103a/H,103b/H,104a/H,104b/H,104c/H,105a/H, 106a/H, 106c/H	117	696	813
5	Haveli	Jhalas	113b/H,115a/H,115b/H,115d/H, 117/H,124a/H,124b/H	22	280	302
6	Haveli	Khanetar	126/H,133/H,134a/H,136/H	98	164	262
7	Haveli	Poonch	138a/H,138b/H,139a/H,139b/H	56	250	306
Sub-total			No. of Comptt:44	2221	2780	5001
8	Surankote	Murrah	2/S,3a/S,3b/S,4/S,5a/S,5b/S,14/S,15/S,25/S,36/S,39/S,40/S	1201	1939	3140
9	Surankote	Gundi	41/S,42/S,43/S,44a/S,44b/S,44c/S,45/S,46/S,47/S,48/S,49/S,50/S,51a/S,51b/S,51c/S	2867	2952	5819
10	Surankote	Samote	52/S,53/S,54/S,55/S,56/S,57/S,58/S,59a/S,61/S,62/S,63/S,64/S	522	666	1188
11	Surankote	Bufliaz	69/S,71/S,74/S,76/S	542	229	771
12	Surankote	Behramgala	80/S,105/S,106/S	373	375	748
Sub-total			No. of Comptt:46	5505	6161	11666
13	Mendhar	Dharamsal	1/M,3b/M,4/M,11/M,15/M,16/M,17a/M,17b/M,19c/M,19d/M,20/M	428	494	922
14	Mendhar	Nar	21a/M,21b/M,22/M,26/M,27/M,30/M	239	323	562
15	Mendhar	Gursain	31/M,32/M,33/M,34a/M,34b/M,35/M,36/M,37/M,38/M,40a/M,40b/M,40c/M	180	879	1059
16	Mendhar	Salwan	41b/M,42/M,44/M,45a/M,45b/M,46/M,47a/M,47b/M,48/M,49/M,50a/M,50b/M	313	740	1053

S.No.	Range	Block	New	Commercial Area	Uncommercial Area	Grand Total
17	Mendhar	Ramkund	51a/M,51b/M,53a/M,53b/M,53c/M,54/M,55a/M,55b/M,56/M,61/M	253	548	801
18	Mendhar	Ghani	63/M,64/M,65a/M,65b/M,66/M,67a/M,67b/M,68/M,72/M,74/M,79/M,80/M	549	684	1233
Sub-total			No. of Comptt:63	1962	3668	5630
Total			No. of Comptt:153	9688	12609	22297

12.4. Special objects of management:

- To rehabilitate and improve the existing forest crop by adopting strict forest protection and improvement measures.
- To develop and improve upon the forest areas of tourist attraction without altering the natural ecological status of these forests.
- To stabilize land slip and land slide areas along the roads.
- In consonance with the objects above, to fulfill only genuine, petty demands of the concessionists to the extent possible.

12.5. Analysis and evaluation of the crop:

12.5.1. The sampling plot technique has been adopted for assessment of growing stock. The field data was collected from 171 sampling plots. Mean value of two variables viz number of stems per hectare and volume of conifers 30 cms. dbh (ob) above per hectare have been computed species and diameter class wise. The result of statistical analysis and further interpretation of the crop is done with the help of following tables:

S.No.	Name of the Table	Table No.
1.	Result of statistical analysis.	Table 12.2.
2.	Summary of Species wise stem Distribution per hectare in Rehabilitation working Circle.	Table 12.3.
3.	Summary of specieswise stem Distribution in the Rehabilitation working circle.	Table 12.4.
4.	Summary of species wise minimum available stem Distribution in Rehabilitation working circle.	Table 12.5.
5.	Summary of species wise percentage of stem Distribution in the working circle in Rehabilitation working circle.	Table 12.6.
6.	Summary of species wise volume (m^3) distribution per hectare in the Rehabilitation working circle.	Table 12.7.
7.	Summary of species wise volume (m^3) distribution in the Rehabilitation working circle.	Table 12.8.
8.	Summary of specieswise minimum available volume (m^3) in the Rehabilitation working circle.	Table 12.9.
9.	Summary of species wise percentage of minimum available volume (m^3) in the Rehabilitation working circle.	Table 12.10.

Table 12.2: Results of Statistical Analysis for Rehabilitation Working Circle.											
Working Circle	**Variable (Per Ha)**	**Sample Points (n)**	**Mean (X)**	**Variance (S^2)**	**Standard Deviation (S)**	**Standard Error (S.E)**	**Coefficient of Variation (%)**	**Confidence limits (95%) (X± t x S.E)**		**Confidence interval (C.I)**	**Lower limits as % of mean (%)**
								lower limit	**Upper limit**		
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Rehabilitation (overlapping) working circle	No. of stems	155	35.68	2659.25	51.57	4.14	144.53	27.50	43.86	16.36	77.07 %
	Volume	155	40.77	3300.23	57.45	4.61	140.91	31.66	49.88	18.22	77.66 %

Column 7: S.E. = S/ square root (n)

Column 8: C.O.V (%) = (S/X) x 100

Column 9: Lower limit = X- (Student t test value for n-1 degrees of freedom * SE)

Column 10: Upper Limit = X + (Student t test value for n-1 degrees of freedom * SE)

Column 11: C.I. = Upper limit - Lower limit

Table 12.3: Summary of Specieswise stems distribution per hectare in Rehabilitation Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	5.29	5.94	2.58	1.81	1.29	0.77	0.13	1.35	0.19	0.32	19.67
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.06	0.00	0.00	0.00	0.06	0.19	0.19	0.13	0.00	2.26	2.89
Kail	0.00	0.00	0.00	0.00	0.13	0.13	0.06	0.13	0.19	0.52	1.16
BL	4.19	4.06	2.19	0.58	0.26	0.32	0.06	0.00	0.00	0.26	11.92
Total	9.54	10.00	4.77	2.39	1.74	1.41	0.44	1.61	0.38	3.36	35.64

Table 12.4: Summary of specieswise stems distribution in the Rehabilitation Working Circle. (Commercial Area= 9688 Ha)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	51249.52	57546.72	24995.04	17535.28	12497.52	7459.76	1259.44	13078.80	1840.72	3100.16	190562.96
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	581.28	0.00	0.00	0.00	581.28	1840.72	1840.72	1259.44	0.00	21894.88	27998.32
Kail	0.00	0.00	0.00	0.00	1259.44	1259.44	581.28	1259.44	1840.72	5037.76	11238.08
BL	40592.72	39333.28	21216.72	5619.04	2518.88	3100.16	581.28	0.00	0.00	2518.88	115480.96
Total	92423.52	96880.00	46211.76	23154.32	16857.12	13660.08	4262.72	15597.68	3681.44	32551.68	345280.32

Table 12.5: Summary of specieswise minimum available stems distribution in Rehabilitation Working Circle. (Lower confidence limit = 77.07 %)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	39498.01	44351.26	19263.68	13514.44	9631.84	5749.24	970.65	10079.83	1418.64	2389.29	146866.88
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	447.99	0.00	0.00	0.00	447.99	1418.64	1418.64	970.65	0.00	16874.38	21578.29
Kail	0.00	0.00	0.00	0.00	970.65	970.65	447.99	970.65	1418.64	3882.60	8661.18
BL	31284.81	30314.16	16351.73	4330.59	1941.30	2389.29	447.99	0.00	0.00	1941.30	89001.17
Total	71230.81	74665.42	35615.41	17845.03	12991.78	10527.82	3285.27	12021.13	2837.28	25087.57	266107.52

Table 12.6: Summary of specieswise percentage of stems distribution in the working circle in Rehabilitation Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	14.84	16.67	7.24	5.08	3.62	2.16	0.36	3.79	0.53	0.90	55.19
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.17	0.00	0.00	0.00	0.17	0.53	0.53	0.36	0.00	6.35	8.11
Kail	0.00	0.00	0.00	0.00	0.36	0.36	0.17	0.36	0.53	1.47	3.25
BL	11.76	11.39	6.14	1.63	0.73	0.90	0.17	0.00	0.00	0.73	33.45
Total	26.77	28.06	13.38	6.71	4.88	3.95	1.23	4.51	1.06	9.43	100

Table 12.7: Summary of specieswise volume (m ^{3}) distribution per hectare in the Rehabilitation Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	5.29	5.94	2.58	1.81	1.29	0.77	0.13	1.35	0.19	0.32	19.67
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.06	0.00	0.00	0.00	0.06	0.19	0.19	0.13	0.00	2.26	2.89
Kail	0.00	0.00	0.00	0.00	0.13	0.13	0.06	0.13	0.19	0.52	1.16
Total	5.35	5.94	2.58	1.81	1.48	1.09	0.38	1.61	0.38	3.10	23.72

Table 12.8: Summary of specieswise volume (m ^{3}) distribution in the Rehabilitation Working Circle. (Commercial Area= 9688 Ha)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	51249.52	57546.72	24995.04	17535.28	12497.52	7459.76	1259.44	13078.80	1840.72	3100.16	190562.96
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	581.28	0.00	0.00	0.00	581.28	1840.72	1840.72	1259.44	0.00	21894.88	27998.32
Kail	0.00	0.00	0.00	0.00	1259.44	1259.44	581.28	1259.44	1840.72	5037.76	11238.08
Total	51830.80	57546.72	24995.04	17535.28	14338.24	10559.92	3681.44	15597.68	3681.44	30032.80	229799.36

Table 12.9: Summary of specieswise minimum available volume (m ^{3}) in the Rehabilitation Working Circle. (Lower confidence limit = 77.66 %)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	39800.38	44690.78	19411.15	13617.90	9705.57	5793.25	978.08	10157.00	1429.50	2407.58	147991.19
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	451.42	0.00	0.00	0.00	451.42	1429.50	1429.50	978.08	0.00	17003.56	21743.48
Kail	0.00	0.00	0.00	0.00	978.08	978.08	451.42	978.08	1429.50	3912.32	8727.48
Total	40251.80	44690.78	19411.15	13617.90	11135.07	8200.83	2859.00	12113.16	2859.00	23323.46	178462.15

Table 12.10: Summary of specieswise percentage of minimum available volume (m ^{3}) in the Rehabilitation Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	22.30	25.04	10.88	7.63	5.44	3.25	0.55	5.69	0.80	1.35	82.93
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.25	0.00	0.00	0.00	0.25	0.80	0.80	0.55	0.00	9.53	12.18
Kail	0.00	0.00	0.00	0.00	0.55	0.55	0.25	0.55	0.80	2.19	4.89
Total	22.55	25.04	10.88	7.63	6.24	4.60	1.60	6.79	1.60	13.07	100.00

12.6. Regeneration survey:

12.6.1. The regeneration survey was carried out along with Sample Plots (0.1 Ha) during the conducting of the sample plots, 10 plots of 2 m × 2 m size were laid along two lines. These lines were taken parallel to one of the boundaries of enumeration plot at a distance of 10 m and 20 m. The 2m x 2m plots can be laid perpendicular to each of these lines and in an alternate fashion along both sides of the lines at a distance of 6 m. This makes 4% survey for the 0.1 ha enumeration plot surveyed. With the help of MS Excel package weightage in terms of various categories of regeneration (that was assigned to each quadrant of 2m x 2m dimension plot) was analysed for working circles. Various categories of regeneration were assigned symbol and weightage (as indicated below) as per PWPR guidelines.

Symbol & weightage	Category of Regeneration	Remarks
e = 5.00	Woody shoots of establishment height (2.5 m) or over upto 10 cms. dbh	Symbol 'e' indicates that at least one such plant is present which is considered sufficient to stock the quadrant completely
w = 4.00	Woody shoots less than establishment height but healthy and vigorous and expected to become established	In absence of (1) symbol 'w' indicates at least one such plant which is considered sufficient to stock the quadrant completely.
u^{+} = 2.00	Non-woody (whippy) old unestablished regeneration. 50 cms. or more in height.	In absence of (1) and (2) symbol 'u+' indicates that there are more than one such plant in the quadrant.
u = 1.00	Non-woody (whippy) old unestablished regeneration. 50 cms. or more in height.	In absence, of (1), (2) and (3) symbol 'u' indicates that there is only one such plant in the quadrant
s+ = 0.50	Sub-whippy old seedling less than 50 cms. in height	In absence of (1), (2), (3), (4) and (5) symbol 's' indicates that there are more than one such plant in the quadrant
s = 0.25	Sub-whippy old seedling less than 50 cms. in height	In absence of (1), (2), (3), (4) and (5) symbol 's' indicates that there is only one such plant in the quadrant
r = 0.00	Current years seedlings or recruitment	In absence of categories (1) (6), symbol 'r' indicates that un-established old whippy and sub-whippy seedlings are absent but current year's seedlings, i.e., recruitment is present.
o	Blank	All categories of regeneration are absent

Regeneration survey was carried out along with a total of 43 plots in Rehabilitation Working Circle

12.6.2. Results of regeneration survey w.r.t. Rehabilitation Working Circle:

	Total	%ge (Total*100/Grand Total)
Total No of 5's (e)	52	12.09
Total No of 4's (w)	36	8.37
Total No of 2's (u+)	103	23.95
Total No of 1's (u)	25	5.81
Total No of 0.5's (s+)	24	5.58
Total No of 0.25's (s)	25	5.81
Total No of 0.00's (r)	57	13.25
Total No of 0's (o)	108	25.14
Grand Total	430	100

12.6.3. From the above table it can be said that in 74.86 % area of Rehabilitation working circle has atleast some regeneration. On the same line more number of "o" cannot be considered good and it can be stated that 25.14% is devoid of any regeneration.

12.7. Method of treatment prescribed:

12.7.1. In view of the discussion above, and in order to achieve the special objects of management, these forests require complete rest, and strict protection from biotic interference, the most important being grazing, fire, illicit damage, encroachments and lopping. The following treatment is prescribed to be given to these forests:

- There is an urgent and immediate need to rehabilitate these forests through such measures as strict closure to grazing, assisted natural regeneration and artificial regeneration by planting and sowing of most suited species among conifers.
- The selected localities, which are too difficult to be planted with conifers, shall be planted with suitable and desirable broad leaved species.
- The degraded forests near and around the huge human settlements, shall be planted with fruit, fodder and firewood yielding and soil enriching species with a view to lessen the pressure on the commercial forests. Besides, these species will help in improving the rural economy.
- Intensive soil conservation measures, including closure, planting and engineering works are necessary in areas under the grip of soil erosion.
- Highly degraded and dry sites may be planted with hardy and drought resistant species like *Robinia pseudoacacia*, *Ailanthus spp, Prunus armeniaca* and other broad leaved species.
- The areas of tourist attraction shall be treated suitably according to their requirement, in order to improve their sylvan beauty.

12.7.2. A multi dimensional approach is required to be adopted, keeping in view the socio economic condition of the local people who are mostly dependent upon these forests. A comprehensive work programme on water-sheds basis should be prepared by involving the

entire sister departments such as (social forestry, Soil conservation, Agrostology, Minor Forest Produce and demarcation) of forest departments and other departments like Horticulture, Sericulture, Apiculture, Agriculture, Irrigation and Flood Control who are directly or indirectly involved in watershed management.

12.7.3. The Divisional Forest Officer Territorial in consultation with other officers of above mentioned departments should prepare a comprehensive treatment plan which should be completed within the prescribed time frame.

12.8. Areas bearing scrub forests (category C):

12.8.1. These are the most difficult areas needing treatment on a priority basis. Silvi-pasture model shall be applied in these areas. Good quality grasses shall be raised. As these areas are prone to severe soil erosion, intensive soil and moisture conservation technique shall be adopted. 30cm deep continuous / staggered V shaped ditch cum bunds shall be made along the contour at 5 cm spacing. In the ditch trees species shall be planted and sowing of seeds of shrub species shall be carried out on bunds at a spacement of 50 cm. Grass seeds shall be sown in between in continuous contour furrows one meter apart. Grass species like Napier, Dinanath, Sataria, Stylosenthies hamata, Lucrrn etc.shall be planted. The forest area falling in this category should be developed as a fodder bank with the special objective of meeting the requirement of nomadic graziers as well.

12.9. Area bearing degraded forests of Fir (category D):

12.9.1. The crop of Fir forests is constituted mainly of trees of mature and over mature age classes and there is a marked absence of trees of younger age classes and regeneration. Factors causing failure of natural regeneration of Fir and the method of treatment to overcome it is summarized as under:

12.9.2. Pasture lands capping fir forests attract a large number of migratory, as well as local livestock during summer months. Fir forest adjoining these pastures also fall victim to heavy grazing. To reduce grazing within acceptable limit it is essential to introduce rotational grazing and introduction of stall feeding.

12.9.3. 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.

12.9.4. Failure of regeneration of Fir is also attributed to un-decomposed acidic humus; it should be raked before seeding and sowing. Planting of broad leaved species like poplars reduces the acidity of soil and makes the soil conditions favourable for establishment of Fir seedlings.

12.9.5. Infrequent good seed years are also partly responsible for failure of regeneration. The problem can be overcome by establishing seed orchards.

12.9.6. Removal of debris and collection and disposal of slash should be carried out in felled areas to help regeneration to come up. The follow up of culture operation in felled over areas have been neglected altogether in past.

12.9.7. In the absence of proper cultural operations, regeneration of Fir has been inadequate. In areas where regeneration of Fir has failed to come up naturally, it should be restocked by artificial methods. Spruce should be preferred to Fir on exposed sites plantation of Popular along with Fir will also help in improving the soil conditions.

12.10. Artificial regeneration of Fir:

12.10.1. It is an irony that despite occupying a substantial portion of the total area of the Division with a serious regeneration problem. The Fir forests failed to attract the attention of foresters. No effort was made to either promote natural regeneration and artificial regeneration of Fir. No Fir nursery exists in the Division at present.

12.11. Afforesation measures:

12.11.1. Plantation programme should be made by territorial Divisional Forest Officer in advance. If the total area of the working circle (5635 hectares) is tackled over a period of 30 years thus annually an area of 187 hectares is proposed to be taken up for reforestation and rehabilitation. Planning process should involve all agencies associated with rural development and local communities. All sister organizations like MFP Project, Social Forestry Project, Astrology wing and Directorate of Soil Conservation should be involved in the rehabilitation of degraded forests and they should work in tandem, in the selected micro-water sheds to improve the ecology of the tract and Socio-economic conditions of the people. The nursery and plantation techniques have been discussed in Plantation Working Circle.

12.12. Nursery and plantation techniques:

Aesculus indica:

Found at 1200 to 2700 metre height in moist, shady ravines and northern aspects.

Seed:

Ripen in September-November, should be collected from the trees or ground. Can be stored in dry earth till spring. About 640 seeds weight a kilogram. Germination capacity is fairly high (70-90 percent).

Nursery technique:

Seed sowing be done in autumn immediately after seed collection. Patches be kept at a spacing of 2 x 2 metres in shady, cool beds. Sowing be done 5 cm below the soil in drills, 15-30 cm apart. Some watering is required.

Planting technique:

Seedlings (6,12 and 18 months old) with naked roots are transplanted during winter, in prepared pits at 2 x 2 metres spacing. Weeding and cleaning be done for 1-2 years. Dry exposed situations be avoided for planting work.

Ailanthus excels:

Seed:

Fruits ripen in May-June. They are winged and are disseminated by wind. They should be dried in sun, beaten mildly and winnowed. Seeds loose the viability quickly, and can not be stored for use in the next year even in sealed containers. Approximately 9000 to 10,000 seeds weight a kilogram. Germination capacity varies from 60 to 80 percent.

Nursery technique:

Seeds be sown in raised seed beds in May-June. Germination commences in about 10-12 days and completes in approximately 30 days. Seedlings be pricked out in polythene bags for the use in next year.

Planting technique:

One year old polybag seedlings are planted in the field in July at a spacing of 2 x 2 metres in pits of 30 cm size. Good fertile soil and about 5 kg farm yard manure be added to each pit. By the end of the first growing season, seedling may reach an average height of 10 to 20 cm only. From the second season onwards, the growth is more rapid i.e. 50 to 60 cm per season. Seedlings are subject to insect attack, particularly in their early stages of development. They are also sensitive to frost. Protection against the above two calamities be applied in advance.

Juglans regia:

Found between 1200 to 3300 metre. It is somewhat sensitive to frost and drought. Browsed by deer and damaged by stem and shoot borers. Grows beat in fairly moist localities and does not thrive in exposed windy situations. It avoids badly drained soils.

Seed:

Fruits ripen in September-October, can be collected by beating and shaking the branches. Outer fleshy coats be removed or be rotten off and nuts be dried in the sun. Should be stored in a well ventilated room, in tins or jars or in a pit in dry ground, filled with dry earth until required for sowing. Nuts 90-100 per kg. Germination capacity is 70 to 80 percent. Gets completed in 5-7 weeks normally.

Nursery technique:

Nuts may be dibbled in pits 2 x2 metres apart, during autumn, before snowfall or in January-February. Two seeds per patch 5 cm deep be sown, should be covered with thorns. Seeds may also be sown in 25 cm deep drills, in lines 10 cm apart.

Planting technique:

Seedlings, without or with earth ball around the roots, be transplanted in the first winter. However, second winter transplants are better for difficult sites. Transplanting during the rainy season is not so successful. Thorough weeding and soil working be done for the first/second year. It is sensitive to weed competition.

Robinia pseudoacacia:

It is a native of North America, and can grow at an elevation of 1500 to 2000 metres. It can grow on a variety of soils but not on very sandy, very acidic or wet soils. Drainage is an important factor affecting the growth of this species.

Seeds:

They are dried in the sun, thrashed and winnowed to obtain clean seeds. About 33 to 77 seeds weigh a gram. They can be stored in airtight containers for one year at room temperature without any appreciable loss in their viability. But, in a dry place and at low temperature (0 ^{o}C to 4 ^{o}C) seeds can be kept viable for 5 years in sealed containers. Seeds require pre-sowing treatment (Sulphuric acid scarification of a short-while, or immersion in hot water).

Nursery technique:

Sowing be done in beds in lines 20 cm apart. Depth of sowing should be about 1.5 cm. Sowing in irrigated nurseries be done in March-April, but in rain-fed nurseries, in June-July. Germination starts in a week and continues up to 10 days. About 85 percent germination can be obtained if the seeds are pre-treated.

Planting technique:

Eight-nine month old seedlings can be planted in 30 cm^{3} pits at a spacing of 2.5 x2.5 metres. In poor sites, 2 x 2 metres spacing can also be used. Naked rooted plants may also be used for planting. Plantation areas be closed for grazing

.

Chapter-XIII

Oak Working Circle

13.1. General description:

13.1.1. Oak (genus Quercus), any of about 450 species of ornamental and timber trees and shrubs constituting the genus *Quercus* in the beech family (Fagaceae), distributed throughout the north temperate zone and at high altitudes in the tropics.

13.1.2. Quercus species are characterized by alternate, simple, deciduous or evergreen leaves with lobed, toothed, or entire margins. The male flowers are borne in pendent yellow catkins, appearing with or after the leaves. Female flowers occur on the same tree, singly or in two- to many-flowered spikes; each flower has a husk of overlapping scales that enlarges to hold the fruit, or acorn, which matures in one to two seasons.

13.1.3. In the Jammu and Kashmir State, the genus Quercus of which five spp. are known, occurs in the following forest divisions: Rajouri, Poonch, Kishtwar, Marwah, Billawar, Jehlum valley (at Uri), Ramban, Udhampur, Reasi and Jammu. *Q. dilaiafa* occurs in all the divisions except the Jehlum valley; *Q. glauca* in Marwah Dacchan; *Q. semicarpifolia* only in Ramban and Keran/Kamraj; *Q. inicana* is only absent from Keran/Kamraj and Jammu and *Q. ilex* from Jammu. From the Kashmir valley proper, no oaks have ever heen recorded.

13.2. General constitution of working circle:

13.2.1. This working circle includes various species of oak, distributed over rigid hilly terrain contributed substantial in to be of broad leaved forest of this area. *Q. leucotrichophora* is the most prevalent oak species in Poonch Forest division. The dense forests are mainly prevalent in lower and moderate reaches of Haveli forest range. However, due to proximity to the villager nearby or having crisscrossed by nomadic tracked during seasonal migration of their cattle these forest heavily exploited, sustained and fresh regeneration is invariable.

13.3. General character of vegetation:

13.3.1. A vegetation of oak working circle consists mainly of dense to denuded trees mixed with scrubs and in basis weeds of exit nature. The patches located in the glens of rigged mountains have survived the onslaught of nomads due inaccessibility. The oak forests of working circle is covered under Banj Oak Forest type 12/C1a as per the classification by champion seth. The composition of the forests very according to its proximity to human habitations or degree of biotic pressure. The under story of his working circle includes *Rubus spp., Berberis aristata, Principia utilis, Viburnum spp.* Wherever canopy is open here due to lopping and felling fodder and fuelwood purpose, the composition has been changed substantially as a result invasive weed like *Eupatorium and Bidens spp. Vibernum spp., Indigofera spp. and Fragaria spp.* had covered the ground substratum. The middle story is occupied by *Quercus leucotrichophora, Pinus roxgburghii, Pinus wallichaiana, Machilus duthei, Maclilus ganibei, Rhododendrion arboretum, Pieris ovalafolia, Pyrus pashia*. The under story consists of *Viburnum* spp. *Desmodium tiliaefolium, Sarcococca saligna, Indigoferra pulchella, Rubus ellipticus, Hedra nepalensis, Rosa*

brunonii, Smilax aspera. The ground floor is invariably *Fragaria vasica, Plantago tibetica, Viola canescens* etc.

13.4. Area Statement:

13.4.1. The detailed statement of species wise area of compartments/Sub-Compartment allotted to this working circle is given in Appendix-VIII. However, range wise abstract of the distribution of the species wise area is provided in the below Table No.13.1.

Table 13.1. The abstract of Range/Block wise area under Oak Working Circle

S.No.	Range	Block	New	Commercial Area	Uncommercial Area	Grand Total
1	Haveli	Mandi	1a/H,1b/H,3/H, 4a/H, 12/H	214	1358	1572
2	Haveli	Loran	29/H	83	54	137
3	Haveli	Sabzian	90/H	176	242	418
4	Haveli	Poonch	93a/H, 96a/H,96b/H,96c/H,97 b/H, 100/H,102/H, 105b/H, 106b/H,107b/H, 108/H	18	1145	1163
5	Haveli	Jhalas	109b/H, 112/H,113a/H, 114a/H,114b/H, 115c/H, 116/H, 118/H,119/H,120/H, 121a/H	130	1015	1145
6	Haveli	Khanetar	125/H, 128/H,129/H, 131/H,135/H	81	549	630
7	Haveli	Poonch	141/H	4	88	92
Sub-total			No. of Comptt:35	706	4451	5157
8	Surankote	Murrah	20b/S	83	120	203
9	Surankote	Samote	59b/S	79	76	155
10	Surankote	Bufliaz	72/S,73/S	227	184	411
11	Surankote	Behramgala	77/S	81	118	199
Sub-total			No. of Comptt:5	470	498	968
12	Mendhar	Ramkund	59/M	19	61	80
13	Mendhar	Ghani	77/M	46	166	212
Sub-total			No. of Comptt:2	65	227	292
Total			No. of Comptt:42	1241	5176	6417

13.4. Special objective of management:

1. To conserve the water regime by means of total protection wherever possible.
2. To regenerate the badly deteriorated areas by means of artificial regeneration or assisted natural regeneration.
3. Protection of oak forests in systematic manner by way of closing the existing area for grazing, firewood collection and wherever possible through dully constituted village forest committees.
4. To raise, wherever possible nursery stock of oak species near to the planting area.

13.5. Analysis and evaluation of the crop:

13.5.1. The sampling plot technique has been adopted for assessment of growing stock. The field data was collected from 69 sampling plots. Mean value of two variables viz number of stems per hectare and volume of conifers 30 cms. dbh (ob) above per hectare have been computed species and diameter class wise. The result of statistical analysis and further interpretation of the crop is done with the help of following tables:

S.No.	Name of the Table	Table No.
1.	Result of statistical analysis.	Table 13.2.
2.	Summary of Species wise stem Distribution per hectare in Oak working Circle.	Table 13.3.
3.	Summary of specieswise stem Distribution in the Oak working circle.	Table 13.4.
4.	Summary of species wise minimum available stem Distribution in Oak working circle.	Table 13.5.
5.	Summary of species wise percentage of stem Distribution in the working circle in Oak working circle.	Table 13.6.
6.	Summary of species wise volume (m^3) distribution per hectare in the Oak working circle.	Table 13.7.
7.	Summary of species wise volume (m^3) distribution in the Oak working circle.	Table 13.8.
8.	Summary of specieswise minimum available volume (m^3) in the Oak working circle.	Table 13.9.
9.	Summary of species wise percentage of minimum available volume (m^3) in the Oak working circle.	Table 13.10.

Table 13.2: Results of Statistical Analysis for Oak Working Circle.											
Working Circle	**Variable (Per Ha)**	**Sample Points (n)**	**Mean (X)**	**Variance (S^2)**	**Standard Deviation (S)**	**Standard Error (S.E)**	**Coefficient of Variation (%)**	**Confidence limits (95%) (X± t x S.E)**		**Confidence interval (C.I)**	**Lower limits as % of mean (%)**
								lower limit	**Upper limit**		
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Oak working circle	No. of stems	69	46.23	2567.06	50.67	6.1	109.6	34.06	147.34	113.28	73.68 %
	Volume	69	81.7	12341.07	111.09	13.37	135.97	55.02	303.38	248.36	67.34 %

Column 7: S.E. = S/ square root (n)

Column 8: C.O.V (%) = (S/X) x 100

Column 9: Lower limit = X- (Student t test value for n-1 degrees of freedom * SE)

Column 10: Upper Limit = X + (Student t test value for n-1 degrees of freedom * SE)

Column 11: C.I. = Upper limit - Lower limit

Table 13.3: Summary of Specieswise stems distribution per hectare in Oak Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.29	0.14	0.72	0.43	1.01	2.03	1.45	1.16	0.14	0.00	7.37
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.14	0.29	0.00	0.14	0.00	0.00	1.16	0.58	0.00	0.29	2.60
Kail	0.72	0.29	0.00	0.43	1.16	0.72	0.43	0.14	0.00	0.29	4.18
BL	7.25	10.29	5.65	3.77	2.32	0.87	0.72	0.72	0.29	0.14	32.02
Total	8.40	11.01	6.37	4.77	4.49	3.62	3.76	2.60	0.43	0.72	46.17

Table 13.4: Summary of specieswise stems distribution in the Oak Working Circle. (Commercial Area= 1241 Ha)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	359.89	173.74	893.52	533.63	1253.41	2519.23	1799.45	1439.56	173.74	0.00	9146.17
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	173.74	359.89	0.00	173.74	0.00	0.00	1439.56	719.78	0.00	359.89	3226.60
Kail	893.52	359.89	0.00	533.63	1439.56	893.52	533.63	173.74	0.00	359.89	5187.38
BL	8997.25	12769.89	7011.65	4678.57	2879.12	1079.67	893.52	893.52	359.89	173.74	39736.82
Total	10424.40	13663.41	7905.17	5919.57	5572.09	4492.42	4666.16	3226.60	533.63	893.52	57296.97

Table 13.5: Summary of specieswise minimum available stems distribution in Oak Working Circle.
(Lower confidence limit = 73.68 %)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	265.17	128.01	658.35	393.18	923.51	1856.17	1325.83	1060.67	128.01	0.00	6738.90
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	128.01	265.17	0.00	128.01	0.00	0.00	1060.67	530.33	0.00	265.17	2377.36
Kail	658.35	265.17	0.00	393.18	1060.67	658.35	393.18	128.01	0.00	265.17	3822.08
BL	6629.17	9408.85	5166.18	3447.17	2121.34	795.50	658.35	658.35	265.17	128.01	29278.09
Total	7680.70	10067.20	5824.53	4361.54	4105.52	3310.02	3438.03	2377.36	393.18	658.35	42216.43

Table 13.6: Summary of specieswise percentage of stems distribution in the working circle in Oak Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.64	0.3	1.57	0.93	2.29	4.5	3.14	2.61	0.41	0	16.39
Deodar	0	0	0	0	0	0	0	0	0	0	0
Fir/Spruce	0.3	0.63	0	0.33	0	0	2.51	1.47	0	0.69	5.93
Kail	1.56	0.63	0	0.93	2.72	1.66	0.95	0.3	0	0.69	9.44
BL	15.8	22.59	12.22	6.68	5.02	1.88	1.56	1.56	0.63	0.3	68.24
Total	18.19	23.85	13.8	9.04	9.72	7.84	8.14	5.63	0.93	1.56	100

Table 13.7: Summary of specieswise volume (m ^{3}) distribution per hectare in the Oak Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.04	0.02	0.35	0.49	2.24	7.18	7.06	7.19	1.01	0.00	25.58
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.02	0.04	0.00	0.23	0.00	0.00	7.94	4.81	0.00	2.95	15.99
Kail	0.09	0.04	0.00	0.59	2.63	2.42	1.92	0.78	0.00	1.95	10.42
Total	0.15	0.10	0.35	1.31	4.87	9.60	16.92	12.78	1.01	4.90	51.99

Table 13.8: Summary of specieswise volume (m ^{3}) distribution in the Oak Working Circle. (Commercial Area= 1241 Ha)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	49.64	24.82	434.35	608.09	2779.84	8910.38	8761.46	8922.79	1253.41	0.00	31744.78
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	24.82	49.64	0.00	285.43	0.00	0.00	9853.54	5969.21	0.00	3660.95	19843.59
Kail	111.69	49.64	0.00	732.19	3263.83	3003.22	2382.72	967.98	0.00	2419.95	12931.22
Total	186.15	124.10	434.35	1625.71	6043.67	11913.60	20997.72	15859.98	1253.41	6080.90	64519.59

Table 13.9: Summary of specieswise minimum available volume (m ^{3}) in the Oak Working Circle. (Lower confidence limit = 67.34 %)

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	33.43	16.71	292.49	409.49	1871.94	6000.25	5899.97	6008.61	844.05	0.00	21376.94
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	16.71	33.43	0.00	192.21	0.00	0.00	6635.37	4019.67	0.00	2465.28	13362.67
Kail	75.21	33.43	0.00	493.06	2197.86	2022.37	1604.52	651.84	0.00	1629.59	8707.88
Total	125.35	83.57	292.49	1094.76	4069.80	8022.62	14139.86	10680.12	844.05	4094.87	43447.49

Table 13.10: Summary of specieswise percentage of minimum available volume (m ^{3}) in the Oak Working Circle.

	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-above	Total
Chir	0.08	0.04	0.67	0.94	4.31	13.81	13.58	13.83	1.94	0.00	49.20
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fir/Spruce	0.04	0.08	0.00	0.44	0.00	0.00	15.27	9.25	0.00	5.68	30.76
Kail	0.17	0.08	0.00	1.13	5.06	4.65	3.69	1.50	0.00	3.76	20.04
Total	0.29	0.20	0.67	2.51	9.37	18.46	32.54	24.58	1.94	9.42	100

13.5. Method of treatment:

13.5.1. The reduction in the area under Oak species as compared to the previous plan in a matter of serious concern and is the prime reason for the constitution of a separate working circle for Oak in the present plan. The aim is to check the rapid fall in the area under Oak and to replenish the degraded Oak Forests keeping in view their importance for ecosystem, water recharge and fuel wood/fodder requirement of the local population.

13.5.2. This plan proposes the treatment of about 60% of the total area of the working circle over next 20 years out of which 20% area shall be treated under Artificial Regeneration, 20% under Aided Natural Regeneration & 20% under Silvicultural Operation.

13.5.3. The area under consideration shall be treated in systematic manner covering soil and water conservation measure combine with regeneration of the denuded areas. Since these working circles is normally lying close to nallas and steep ridges, mechanical structures for conservation of soil and water regime. To improve the natural regeneration of the area, the compartment covered in this working circle shall be taken up under artificial regeneration scheme are assisted natural regeneration scheme depend on accessibility for such operations.

13.5.4. Under Assisted natural regeneration scheme, wherever possible in-situ regeneration of seeds predominantly oak shall be promoted. It being a slow grower, the protection after planting shall be insured for at least five years.

13.5.5. To improve the ground floor of in the highly degraded compartments, special initiative shall be taken for introduction indigenous medicinal, endemic flora through creation of nursery wherever possible.

13.5.6. The importance of Oak nurseries for successful replenishment of Oak species can't simply be overstated, keeping in mind the fact that at present there is no nursery specifically dedicated for raising oak species. Even in the existing nurseries of this forest division oak species is not being raised due to climatologically and edaphic factors. Hence it is proposed that at least two (2) nurseries specifically designated for raising oak species be established in areas where oak is a natural crop like in areas Nangali sahib, Miran sahib etc.

Chapter-XIV

Working Plan for the Eco- Tourism (Overlapping) Working Circle

14.1. General description of the area:

14.1.1. The Poonch forest division is considered to be an amazing destination for the adventure tourism and eco tourism activity. The terrain and the locality of the area is the most favorable for the kind of tourism activities such as paragliding, mountaineering, trekking, skiing, river rafting, etc.

Table 14.1. Compartments prescribed to be managed under Eco-Tourism (Overlapped) working circle

Range	Location	Compartment Number	
		New	Old
Haveli	Danna	105a/H & 105b/H	182a/H & 182b/H
	Nandichull	101/H	178/H
	Gali Mandan	131/H	238/H
	Battalkote	95a/H & 95b/H	166a/H & 166b/H
Surankote	Noorichamb	107/S	300/H
	Tarrani	79/S	272/H
	Dana Shah Sitar	57/S	250/M
	Dana Shah Sitar	58/S	251/M
	Dehri-ki-Gali	74/S	267/H
	Dehri-ki-Gali	75/S	268/H
	Dehri-ki-Gali	76/S	269/H

14.2. Important activities identified under Eco-tourism:

14.2.1. 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 some times 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. The identified routes are as follows:

Bairamgala to Nandansar :

Starting from Bairamgala village near Bufliaz on Mughal road, one can start a marvelous trekking to one of the most serene places in Jammu and Kashmir, i.e the famous seven lakes of Poonch Forest Division. Ironically not more than 50 people reach there; probably due to unavailability of any huts or other facilities on the way. The very first stop can be in Girjan Gali and on the way we come across beautiful Oak and Fir forests which are mostly

undisturbed. On the other side, one can see the Mughal road especially the lights in dogrian area of Mughal road. Although the Girjan Gali and other adjoining areas are devoid of any electricity.There are kacha stone and grass huts which are inhabited only during 3-4 summer months. One can peg tents here or also use these huts of nomads. The nomads graze animals here, mainly buffaloes for milk and related products. The next day, one can ascend upto Panjtari, where, there are beautiful small streams of water. The amazing alpine pastures we see here are very fascinating. Also the moraine brought by glaciers in the north give a picturesque view. After camping here, one can move to Gumsar, which is the first beautiful lake on the way. Further, one can move to Nandansar. On the way, we come across many medicinal plants like *Aconitum hererophyllum and Rheum australe.* Nandansar, located at a height of 3900m above MSL is wonderful lake with breathtaking beauty. The water is bluish and calm except for some ripples made by wind. Mughal emperors used to follow this route for trekking and this lake is surrounded by other lakes nearby. From here starts journey to Mughal road. One also comes across beautiful glaciers and grassy valleys on the way till we head towards Mughal road. The trekking can also be done in reverse mode.

Loran to Nandi chul:

Loran is a beautiful place from where beautiful deodar and fir can be seen. It is adjoining to Kashmir and has great beauty. The huts built here are in Kashmir-style two storied and exhibit beautiful pattern. While trekking from Loran to Nandichul, there is bridle path. Beautiful waterfall which can be enjoyed in Nandichul. Also it is just one day trekking. Moreover, there needs to be an ecotourism hut near waterfall.

Bairamgala to Hasan Tham:

Starting from Bairamgala, one can take another route other than girjan gali and then passing through some habitations and then crossing river, one can proceed towards Hasan Tham. It is a hamlet of small huts which are occupied during summer months only. Having a lot of Trillidium govanianum, Viburnum nervosum, Podophyllum hexandrum, this trekking route is also very beautiful and some hut can be recommended.

14.2.2. River rafting:

It is an interesting recreational activity using a raft to navigate a river. This is usually done on white water or different degrees of rough water, in order to thrill and excite the raft passengers.A good stretch of river from Mandi to Chandimarh can be recommended for river rafting.

14.2.3. Para-gliding:

Paragliding is the recreational and competitive adventure sport of flying paragliders: lightweight, free-flying, foot-launched glider aircraft with no rigid primary structure. The pilot sits in a harness suspended below a hollow fabric wing whose shape is formed by its suspension lines, the pressure of air entering vents in the front of the wing and the aerodynamic forces of the air flowing over the outside. It can be recommended in Pir Gali. Also winter games can be recommended here.

14.2.4. Ramkund in Mendhar:

An ancient temple going back to fifth century A.D has traditional importance and can be amalgamated with Budha-Amarnath Yatra and can be developed as Ecotourism site.

14.2.5. Other important aspects:

Besides having good huts in trekking sites, we can also impress upon making Eco-friendly Restaurants and other small eating points along with suitable waste disposal mechanisms. The people of the area usually traditional Food/Milk products i.e. Delicious Kalari , Makki Roti special along with local Lassi , Temperate herbs (as vegetables like Hand, Ulla, Kandor), Viburnum fruits (collected by locals) which will definitely make an important contribution into Ecotourism activity and attract people besides exhibiting nomadic culture through local language and costumes.

Nomads here also have expertise in collecting and weaving wools collected from Sheeps to make beautiful hand made warm blankets which can be promoted and sold at some Eco-tourism sites through specially built Kiosks.

Also, since many sites don't have access to electricity and thus, Solar lamps/lanterns can be recommended in these sites. Also ponies and separate pony roads can be made so that some people can enjoy this. Also this will provide seasonal sustainable employment to local people.

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.

Short term Training sessions of the local communities in general communication skills i.e. English and in sensitization about actual concept of Ecotourism may be promoted by the Department in association with some NGO's or Corporates i.e. Banks so as to boost their confidence and convenience to Eco-tourists. Also Ecotourism infrastructure may be sponsored by some corporate as part of their Corporate Social Responsibility.

14.2.6. Other Renowned tourist spots:

Seven Lakes: Girgan Dhok is attraction of the place, which is popular as the Valley of Seven Lakes. The seven lakes present in this valley are Gumsagar, Kaldachnisar, Nandansar, Bhagsar, Neelsar, Katorasar, and Sukhsar. Nandansar Lake is the biggest of all the seven measuring around 1 mile in length and half a mile in breadth.

Poonch Fort: The Poonch fort is a major attraction of Poonch city and its history dates back to 16th century A. D. The Poonch Qila was built by Raja Rustum Khan in 1713 AD. The construction of this fort took place many years with the effort of Raja Rustam Khan, who was a lover of architecture. The architecture of the fort is influenced by the Mughal architectural style.There were some changes made in the central block of the building, which were done in Sikh architectural style, during Sikh rule. The present structure of the front block of the fort was made by Raja Moti Singh, who hired a European architect.

Noor-e-Chamb waterfall: Noor-e-Chamb waterfall is at a height of 8,600 feet, one of the major attractions of this place. There is a bridge in front of the waterfall, which is used by tourists to see the waterfall. There is a trail that leads to the mouth of the waterfall. This trail also takes visitors to an old temple. The name of this water fall was derived from the name of Mughal queen Noor Jahan (wife of Mughal emperor Jahangir). The water fall is situated close to the Behram Galla.

Surankote Valley: In Rajatarangini,this town was described as Sawernik in the past.Nealy in 1036 A.D.there was a big fort called kote. Combining the name of the town with the fort,it become Sawernik Kote which ultimately changed to its present name of Surankote. It is very charming valley surrounded by snow clad peaks and is known as Pahalgam of Poonch.

Nandishool: Nandishool waterfall is located at a distance of 6 km from Sultan Pathri and 12 km from Loran. The height of this water fall is around 150 feet. The water fall originates from Pir Panchal and falls into a glacier.

Nangali Sahib Gurudwara: Gurudwara Nangali Sahib is located on a hill and on the banks of Drungali Nallah at a distance of 7 km from Poonch. It is considered as one of the oldest Sikh shrines in northern India for Sikh community. The Gurudwara is visited by thousands of devotees throughout the year. The Gurudwara was built in 1803 by Thakur Bhai Mela Singh Ji, who was the fourth successor of Sant Bhai Feru Singh Ji. Maharaja Ranjit Singh visited this Gurudwara in 1814. He attached four villages with the Gurudwara in the year of 1823. The gurudwara was restored by Mahant Bachitar Singh Ji. On every Sunday a congregation is held in Gurudwara, which is attended by a large number of people. Every year, on the eve of Baisakhi, a function is held in the premises of the Gurudwara.

Swami Budha Amarnath Ji mandir: The Swami Budha Amarnath Ji Mandir is located at a distance of 25 km to the North East of Poonch. The temple is situated in between the Pir Panchal Range on the confluence of two streams, Nallah Gagri and Pulsta Nadi. The temple of Swami Buddha Amarnath Ji is made of a big stone. The temple has four doors i.e. to the North, East, West and South, which defines that the shrine is open for all four castes. The temple houses a natural Shiva Lingam made of a white stone. Besides that, there are other idols placed by local people. The spring around the temple is considered as the holy spring, in which pilgrims take bath before entering the temple.A Mela Swami Budha Amarnath Ji festival is celebrated here annually on the day of Raksha Bandhan. Before this fair, a congregation is organised here on Dashnami Akhara Poonch, in which Havan and Pooja of Chhari Mubarak is performed.

Mandi: Mandi is a village located on the confluence of two streams namely Gagri and Pulsta. The place is situated in a valley, which is narrow and surrounded with steep hills. The village is located at a distance of 20 km from Poonch town. The temple of Mandir Swami Budha Amar Nath Ji is located here.

Krishna ghati: Krishan Ghati is a hilly forest area, located at a distance of 24 km from Poonch.The site is famous for its landscapes and natural beauty with lush green Chir forests.

Ziarat saint Sain Mira sahib: Situated in village Guntrian,10 Kms. from Poonch, the Ziarat of saint Sain Mira Sahib is a popular pilgrim centre, Hundreds of devotees visit this Ziarat.

Ziarat Chhotay Sahib: Located 58 Kms. away from Poonch and 4 Kms. from Mendhar this Ziarat is situated in the village Sakhimaidan. Hundreds of pilgrims come to this place every day.

Ramkund: Another well known shirne located about 68 Kms.from Poonch town is that of Ram Kund temple. Believed to be of Mahabharat period, it is just 08 Kms. away from Mendhar. The temple was said to be constructed by Raja Lalitaditya while others believe that Raja renovated it, and originally it was constructed by Lord Rama when he was on his way to Kashmir. There are three kunds i. Dolamkund ii. Sita Kund iii. Lakshaman kund. People take bath on first of bright half of Chaitra and a mela is held on 14th of Chaitra.

Behramgala: Situated at the foothill of 8,600 ft.high Rattan peak on the historic Mughal Road about 45 Kms from Poonch Town. Behramgala is small picturesque spot in a deep gorge. It is small plateau surrounded by mountains and forests. Just near to it is the confluence of Thatta pani and Parnai streams which further adds to its otherwise scenic and natural beauty.

Buffliaz: Another beautiful hilly spot situated on the foothill of Peer Rattan range is Buffliaz,39 Kms. east of Poonch town. The village named after the horse of Alexander the great (Bunifales) who is said to have died there, is situated on both the banks of Poonch river.

Loran: A small town situated 34 Kms.north of Poonch town was once the capital of Poonch State under Hindu ruler upto 1542. According to Rajatarangini ,it was then known as Lohar Kote. There are ruins of the Lohar Kote Fort which was called as Gateway of Kashmir but now it is destroyed. At this fort, Raja Trilochan Pal defeated Sultan Mahmood Gazanavi.This spot is surrounded by forests and some snow clad peaks.

14.3. Recommended activities:

1) Use of plastic or other non-biodegradable things should be banned or discouraged.
2) Wherever there is huge public gathering Battery operated Public Transportation should be employed to check the problem of Parking/Congestion and Pollution.
3) Solar lights should be promoted where there is no access to Power infrastructure and where Electricity is available LED lights may be provided at subsidized rates. These are important for reducing the per-capita Carbon footprint.
4) Construction of permanent structures should be avoided and if the necessity arises then Ecocretes/Eco-friendly material may be employed.
5) Eco-tourism projects may be subjected to Technical-Economic-Socio feasibility studies for ensuring sustainability.
6) Bio-toilets should be employed compulsorily. Sewage and other waste should not be allowed to mingle in local streams.

7) An effective solid waste disposal plan should be prepared along with other agencies.
8) Disaster mitigation plan/Emergency response measures should be prepared by competent agencies.
9) Telecom and Internet network may be encouraged in an eco-friendly manner. Satellite phones too may be bring into use where there is threat of natural calamity

Chapter- XV

Working Plan for Wildlife (Overlapping) Working Circle

15.1. General description and the present condition of the wildlife:

15.1.1. A Variety of fauna is found in this division is because of varied climatic conditions and altitudinal zonation prevailing in the tract. There were number of Rakhs (game reserves) in the Poonch Forest Division which resulted into extensive damage to wildlife. The important species of the wildlife found in this division have already been enlisted and described in detail in Chapter-II of Part I of this plan. In this regard the following facts are worth consideration.

15.1.2. The over increasing pressure of human population is responsible for sharp decline of wildlife population in this division. Excessive interference by glaziers and their large herds of animals has also led to large scale destruction. Large scale killing of game animals and birds by man, the deforestation has also been responsible for disturbing the habitat of the wildlife and consequent reduction in their number.

Table 15.1. Compartments prescribed to be managed under Wildlife (Overlapped) Working Circle

Range	Compartment Number	
	New	Old
Haveli	72/H	123/H
	73/H	124/H
	74/H	125/H
	83/H	134/H
	84/H	135/H
	85/H	136/H
	86a/H	137/H
	86b/H	138/H
	86c/H	139/H
	87a/H	141/H
	87b/H	142/H
	88a/H	144/H
	88b/H	145/H
	89a/H	220/H
	89b/H	221/H
	Kullian WLR	
	Khara WLR	
Surankote	Kutti WLR	

15.2. Policy of the state and the rules and laws:

15.2.1. For protection, and control of wildlife in the State of Jammu and Kashmir, rules and regulations where passed in the form of The Jammu and Kashmir Game Preservation Act, 1998 (1942 AD), Act No. XXIV of 1998. Thereafter, with a view to protect and preserve the wildlife, The Jammu and Kashmir Wildlife (Protection) Act, 1978, was passed by the State Legislature. This act is now being amended to incorporate changes that have been made in the wildlife related laws nationally and internationally, and to meet the challenges thrown up by the spurt in wildlife offences.

15.3. Area with wildlife department in Poonch:

15.3.1. Tatta Kutti wildlife sanctuary: The origin of Tatta Kutti Wildlife sanctuary lies in the denotification of Trikuta wildlife sanctuary in Reasi District. Hon'ble Supreme Court gave direction to the Government of Jammu and Kashmir to notify a Wildlife Sanctuary which is of double area as that of Trikuta Wildlife sanctuary. Thus in compliance of the Hon'ble Supreme Court's order Tatta Kutti Wildlife sanctuary came into existence vide SRO 47, Dated 30/01/2012 . But the local residents of various villages of Surankot filed a writ petition before the Hon'ble High Court of J&K claiming their rights over Dhoks/Pastures inside the notified Wildlife sanctuary. The Wildlife Department has already cleared its observation before the Hon'ble High Court rejecting all kinds of claims of petitioners. The current status of the Sanctuary is that it is still under the administrative control of Forest Department.

The area of the Tatta Kutti Wildlife sanctuary is 6627 ha. The area is adjacent to the HirPura Wildlife sanctuary in Eastern part of Poonch District on left hand side of the Mughal road while going from Poonch to Kashmir valley. The Wildlife sanctuary lies between 33^0 - 36' and 33^0 - 46' North latitude and 74^0 - 19' to 74^0 - 32' East latitude in Poonch District (Poonch Forest Division) about 82 Km from Poonch District HQ and 52 Km from Surankote.

East	Shopian Forest Division (Hir Pura Wildlife Sanctuary)	
West	i. Chatta Pani ii. Jammian Ki Gali iii. Panj Katha iv. Dobba	Compartments: 21,25,26,32b,32a
North	Haveli Range Ridge Boundary i. Dobba ii. Kulian Forest	Compartments: 32/H,23/H, 36/H, 37/H
South	i Poshana ii Chhata Pani iii Sulla Nar iv Jammian ki Gali	Compartments: 113/S, 2/S, 1/S, 10a/S, 10b/S, 14/b, 19/S, 18/S

A brief account of the Flora, Fauna, Slope and altitude of the proposed area is as follow:

(a) Flora: The main plant species found in the area include Fir,Kail, Acer, Walnut , Bird Cherry, Horse Chestnut , Oak , Berberry , Vibernum , Rosa moschata , Spirea spp. ,

Indigofera spp. ,Podophylum spp. Form the undergrowth. Many herbs of medicinal value also exist in these forests. The regeneration of Fir and Kail is poor in some areas where it is adequate in other areas.

(b) Fauna: The commonly found wild animals are Leopard, Black Bear, Deer, Jackal, Monkeys and Markhor etc. The Markhor remains confined to the areas just adjacent the Hirpura Wildlife Sanctuary like Tatta Kutti, Kalamud and upper reaches of Chhatapani area. The birds like Western Tragopon and Cheer Pheasant are also reported.

(c) Slope and Altitude: The slope ranges from gentle to precipitous. The altitude varies from 2300 meters to 4382 meters.

15.3.2. Kulian wildlife conservation reserve: Earlier it was the part of Khara Wildlife Reserve of Haveli range, Poonch forest division.But in 2011 it was handed to Wildlife Department as Kulian Wildlife conservation reserve area vide letter no : CCF(WL)J/2904-05 dated : 21-12-2011.

Range	Haveli
Compartments	29/H to 38/H
Area	1029 Ha.
Altitude	3000 to 4681 meters.
Aspect	Predominantly Northern
Slope	Precipitous. Only few routes of approaches possible in this.
Location	It is situated above Kullian village about 8 Km in the South. However the approach is through and Dhari village (Dhok)
Drainage	Through a network of streams the main portions drains into Dara ka Nallah. The western small portions drains into Kullian Ka Katha.
Geology, Rock and Soil	Rock : Sandstone , Schist , Gneiss are exposed in some places. Soil : Loam soil found only in depressions where it has deposited recently.
Remarks	Towards the Western boundaries near compartment 22 and 23 typical sub-alpine Fir crop of low density is found. Some birch trees are also found here. In rest of the major portion of the compartment gentler slopes are having few small patches of grass and herb. Very few places are having very small dense patches of Junipers and rarely high level Rhododendrons are seen. Ground flora comprises of Alpine herbs, medicinal plants and grasses. Regeneration in case of Fir is inadequate but established. Markhor is the main consideration among wild animals. Poaching should be guarded against.

15.3.3. Kherri Rakh wildlife conservation reserve: Earlier it was the part of Haveli range, Poonch forest division.But in 2011 it was handed to Wildlife Department as Kherri Rakh Wildlife conservation reserve area vide letter no : CCF(WL)J/2376-78 dated : 17-12-2011.

Range	Haveli
Compartments	42/H , 48/H , 49/H, 51/H, 52/H
Area	1845 Ha.

Altitude	3360 to 4498 meters.
Aspect	Predominantly Western
Boundaries	N- Ridge boundary of Co. 52 E- Divisional Ridge boundary of Pir Panjal Range S- Ridge boundary of Co. 38 W- Non-natural boundary with Co. 41, 42,46,49,50,51
Slope	Precipitous. Only few routes of approaches possible in this.
Location	It is located above Domal in Nandi Chhual Katha about 2 Km in the Northern side and above pathri in Chhapran nallah on the Southern side.
Drainage	It drains through a network of number of seasonal and perennial nallah mainly Nandi Chhual Katha which later joins Loran Nallah.
Geology , Rock and Soil	Rock: Sandstone , Schist , Gneiss are exposed in some places. Soil: Loam soil found only in depressions where it has deposited recently.
Remarks	Mostly the area is blank but a few patches of grassland are found in the Gneiss slopes. In nallah banks a few Birch trees are present. Very few places are having a few dense patches of Junipers and rarely high level of Rhododendron is seen. Ground Flora comprises Alpine Herbs , Medicinal plants and grasses. Regeneration is absent. Markhor is the main consideration among wild animals. Poaching should be guarded against. Further the rest area being rich in Wildlife and Biodiversity and having negligible human habitation, the upper reaches of Compartment 122/H , 123/H and 124/H have also been proposed as Khera Wildlife Reserve as part of proposed Pir Panjal National Park by the Wildlife Department vide Chief Wildlife Warden J&K No. 1005-06/CWLW/05 , Dated : 18/02/2002

15.4. Objects of management:

15.4.1 Wildlife in general and the species which stand on the threshold of extension in particular will be preserved and protected for scientific, recreational, aesthetic, cultural educational and ecological values. Any species of wildlife is unique creation of nature with its own specialized made of life, organic structure and individual behavior. It is impossible to reconstruct on extinct life form. The overall aim should focus on a participatory approach, ensuring support of local communities and other stakeholders for conservation and management of wildlife.

15.5. Wildlife census:

15.5.1. It is necessary to ascertain, how much wild life is present in the area. It will also include the study of species number, age classes, sex ration species ration etc. It may also be necessary to work out quantitative and qualitative analysis of wildlife environment. Productivity trend and potential of animal life present shall also be studied. This will necessitate through study of animal reproduction and other social systems.

15.6. Staff:

15.6.1. The Headquarter of Rajouri-Poonch wildlife division is in Rajouri. It is observed that there is a total number of 16 Non-Gazetted staff working in Poonch region. There is only one Range officer incharge of Poonch-Rajouri Wildlife Division. The concerned Wildlife Warden sits in the Headquarter in Rajouri. There is one Range officer who looks after the Wildlife issues of Poonch region. The Wildlife wing of Poonch region is not having its own staff and all the 16 Non-Gazetted personnel have been borrowed from Social Forestry and State Forest Corporation. Upon enquiry it was observed that there is no Veterinary Doctor for Rajouri-Poonch Wildlife Division. For some Medical help the Poonch Wildlife staff usually approaches Animal Husbandry Governmnt Hospital in the District. While in Rajouri sometimes the help of Veterinary Wing of Indian Army is also taken.

Table 15.1: Table showing Control Rooms in Poonch District:

S.No.	Name of Control Room	Village	Staff Posted (nos)	Remarks
1.	Surankote	Peer Gali to Lassana and all surrounding areas	4	Pre fabricated Hut (one room only)
2.	Poonch	Loran , Mandi , Chandik , Sawjian , Chulass	6	Range Office under construction that will comprise of Control Room
3.	Mendhar	Bhimber Gali to Krishna Ghati, Tota Gali to Kalaban to Baghiote	2	One room taken on rent

Table 15.2: Table showing the Compensation Injured/Death cases and compensation paid constitunency wise by Wildlife Division Rajouri-Poonch in Poonch since 2006 to till date:

Name of Constituency	OB as on 31/03/2015 (Case Settled)				Total No. of Cases Received during 2015-16 up to ending 10/2015							
			Compensation Paid		Cash Received upto ending 10/2015		Total No. of cases		Compensation Paid		Pending	
	Death	Injury	Death	Injury	Death	Injury	Death	Injury	Death	Injury	Death	Injury
Haveli	3	78	3.00	7.03	0	10	0	10	0	0	0	10
Surankot	8	54	9.00	5.67	0	4	0	4	0	0.61	0	4
Mendhar	2	10	1.00	0.61	0	1	0	1	3	0.15	0	1
Grand Total	13	142	13.00	13.31	0	15	0	15	3	0.76	0	15

15.7. Recommendation for protection of wildlife:

15.7.1. For the Protection and promotion of Wildlife in the tract following recommendation are made.

- The provision of wildlife protection Act 1978 should be enforced in letter and spirit.

- It is strongly recommended that a new Wildlife Sanctuary should be carved out of a particular forest patch in Mendhar Range. After consultation with field functionaries, a consensus is arrived at that Co. 142(New No. 16/M) (Behri Forest of Dharmsal block, Beat Chhajla) should be notified as Wildlife sanctuary. Important features which make it suitable to be a Wildlife Sanctuary are:

1. A thick forest comprising of many tree, shrub and herb species.
2. Authenticated presence of wild animals like Barking Deer, Wild cock, Wild pigs, Porcupine, Jackals, leopards, etc.
3. A Natural boundary in the form of a river to the south of the proposed area.
4. Availability of water holes for the wildlife.
5. Absence of any noticeable habitations inside the proposed Sanctuary which generally tends to create rehabilitation and rights problems in the creation of sanctuaries. One Katchaa House is only there in the periphery of the proposed Wildlife which can be relocated and rehabilitated conveniently.

- Compartment 181a (New No. 55a/M) and 182 (New No. 56/M) of Mendhar Range, Ramkund Block and beat Ramkund is also found to be equally suitable to be declared as a Conservation Reserve as it encompasses a pristine forest along with good Wildlife. Biotic intereference was also found to be very less.

- The Border fencing has restricted the movement of animals which has led to increased incidents of Man-animal conflict. Detailed survey of border areas and subsequent planning to mitigate some of the undesired negative side effects of border fencing on wildlife shall be the focus area of current Working Plan. A wide range of high-tech monitoring methods are now available that would allow selected sections of a border to remain unfenced, while still providing security. The areas of greatest importance for wildlife are often remote and rugged, and there may be large gains to be made for wildlife with little compromise on security. More thoughtful fence alignment may also create opportunity to mitigate their effects. There are also examples of sections of border fences being temporarily removed to permit seasonal movements of migratory species. Finally, it is important that wildlife friendly fence designs that minimize the chance of entanglement and mortality are used. Such designs have been successfully retrofitted along border fencing between Kazakhstan and Uzbekistan on the Ustyurt Plateau to enable Saiga Antelope to pass between the two nations, and there may be a scope to develop similar structures for other species in Jammu/Poonch region. Animal tracking data and habitat suitability analyses supported by remote sensing can help guide fence

construction and identify the best locations for mitigation measures. Transborder Wildlife Peace parks need to be developed in Jammu/Poonch region that shall provide atleast one institutional framework to focus mitigation actions into affected areas. Studies by conservation biologists need to be taken on effects of Transborder fencing on genetic vigour and mortality of wildlife. The findings thereof need to be presented before international community and strong lobby of wildlife NGO's across globe to help chalk out strategies for transborder fencing problems of Woldlife.

- Forest department may establish closures where more fruit trees may be planted/raised to keep Wild animals away from habitation. As such frequency of movement in and outside forest areas will reduce considerably.

- Forest department may request defence forces bordering LoC to not to feed wild animals by throwing Cakes, breads and leftover meals, etc around their posts and Headquarters.

- The feasibility and potential of a wildlife corridor between Heerpora and Tattakutti Wildlife Sancturay may be analysed through a detailed study.

- Exotic should be avoided to give way to indigenous plant species. If it is still important to plant Exotics they should be planted admixture with native species.

- Caves, Dens and overhangs used by various species like Leopard and Bear and hence, management activities should be planned and executed in such a way that these sites are not disturbed.

- Wildlife protection committees are constituted at the Range and Divisional level and responsible citizens of the area along with the officers of various departments be made the members of such committees. The committees should regularly review the progress of the measures to be taken for the protection of Wildlife specially the rare species which are approaching the state of extinction and help the implementation of those measures. The District Magistrate of area be persuaded to issue only the bare minimum number of fire arm licenses to genuine persons and to take stern action against those who misuse these fire arms.

- It was found that more number of Control Rooms needs to be established at Sunderbani, Budhal, Darhal, Bhimbar Gali, Thanamandi, Loran. It is recommended that provision for well equipped permanent Structure be envisaged in the long term. In the meanwhile to meet the current prevailing situation Pre-fabricated Huts which are suitably equipped with Staff and other paraphernalia be provided.

- Focus needs to be given on capacity building of Officers /staff of Forest Department and Forest protection force pertaining to matters of Wildlife.

- At present the staffs is borrowed from other wings which are not properly trained to address the issues of Wildlife especially Man-animal conflict thus this issue also needs to be addressed.

- DFO (Territorial) should be made responsible in his own jurisdiction to address the issues pertaining to Wildlife. For this availability of necessary paraphernalia and training of territorial staff is essential.

- Staff shall remain vigilant against any major fire.

- Stress shall be laid to encourage the fruit fodder foliage, Soil binding broad-leaved tree planting in patches vulnerable to erosion so that Soil water and wildlife conservation go side by side.

- A general awareness of the wildlife protection Act and rules needs to be ensured among the common masses in general and the personals of the forests, police and revenue departments in particular.

- Sensitizing the media about the nuances of the problem of human-wildlife conflict should be an essential part of the awareness strategy.

- Media should be encouraged to contribute to diffuse the tense situation surrounding conflict with objective reporting aimed at highlighting the measures to mitigate conflict. Reporting mainly aggressive encounters with wild life can erode local people's tolerance and worsen the situation by forcing the Wildlife Department to unnecessarily trap the wild animal due to public pressure.

- Adequate publicity measures such as displaying attractive boards, posters, pamphlets, brochures at important places showing the benefits of wildlife will cultivate in people the love for the wildlife. For the above exclusive financial support may be extended.

- Seminar and symposium shall be arranged at the school level in which importance of fauna shall be explained to children.

- In Poonch district, where the terrain is difficult, and where houses are scattered in a forest Landscape thus in case of wildlife conflict an Emergency Response team may take time to reach the conflict site. The effectiveness of a Primary Response team is an important requisite here. The Primary Response team may comprise of paid or volunteer members from the local communities, who are trained to respond immediately to a conflict situation. Their primary aim should be to control the crowd and secure the area until the next level (Emergency Response team) of help arrives. In the long term, the well coordinated efforts of Primary Response and Emergency Response teams will prevent escalation and spread of conflict.

- It was observed that when a livestock gets killed by a wild animal i.e. Leopard/Black Bear then the affected person/community does not get any compensation due to absence of any such Policy/Rules/Guidelines/Fund arrangement. For obtaining compensation for livestock killing, the affected people further beers expenses in preparing the file which includes the Police F.I.R., Animal Post-mortem report, Photograph of site, etc. This issue needs to be tackled in a sensitive manner. For the conservation and protection of Wildlife goodwill and cooperation of local communities/public is an essential aspect. Adequate and timely compensation for livestock killing should be considered and implemented at

the earliest as has been done in states like Madhya Pradesh ,Rajasthan ,Tamil Nadu , Karnataka ,Himachal Pradesh , Andhra Pradesh ,Himachal Pradesh , Uttarakhand , Gujarat ,Uttar Pradesh, Kerala, Chhattisgarh, West Bengal , Jharkhand ,Rajasthan, Maharashtra. Possibility of initiating state sponsored insurance schemes for livestock also needs to be explored.

- Wildlife Management Policy need to be drawn at the highest level after taking into consideration the problem and difficulties, with regard to its protection and preservation right from the grass root level, in consistence with the Socio political conditions of the people.

- In Poonch District, the Leopard and Black Bear are more conspicuous in Human-Wildlife conflict. It warrants the proper guidelines for conflict management involving these two animals with respect to Poonch District.

- Emphasis should be given on providing vehicle to Range Officer with adequate funds under POL head and increasing the number of Rescue Vans.

- Flying Squads of the Wildlife Division must be given Emergency vehicle lighting as that has been given to Ambulances, *Police vehicle*. In this respect Government of Kerala (Transport (B) Department) notification through G.O.(P)No.49/2015/Tran. Dated: 26th August 2015 may provide some insight which states "Vehicles of operational agencies which require unhindered access to the roads for performance of their duty, those engaged in emergency duties such as ambulance services, fire services, emergency maintenance etc., police vehicles used for Law and Order duties and the vehicles of Forest Officers who are in charge of Territorial Wing, Wild Life Wing and Flying Squad."

- Suitable Budgetary provisions should be made to meet the aforesaid requisites.

Chapter-XVI

Working Plan for Forest Protection (Overlapping) Working Circle

16.1. General constitution of the working circle:

16.1.1. The density of basic amenities of road and electricity is still far from desirable. In Areas like upper reaches of Loran, Sabjian, Hasan Tham, Girjan Gali, Panjtari, etc., people totally rely on firewood collected from forest as there is no electricity or LPG availability. The lack of these basic amenities has resulted in stagnation of the living standards of the general public over the years. Most people thus still to a great extent depend on timber and firewood from forests to meet their requirements of construction timber and heating. Non-availability of any agreeable alternative renders the situation inescapable. As such in the interior areas it is a sine qua non that the local people have to source timber and firewood from forests. And when not made available as per extant provisions, people have no option but to illegally remove them from forests. It is also a fact that forest department has looked at the issue of damages primarily from the point of view of gap in policing and strived to strengthen the lacunae thereof. However, it would be necessary to take a relook at the issue from the mitigating circumstances point of view. The department has also got caught up in the heightened protectionism from the Hon'ble Courts which had resulted in ban on green felling in the Forests leading to inaction. In such situations the officials at times appreciating the needs of the people are forced to circumvent the law to accommodate the unavoidable genuine and bona fide requirements of the people.This working circle operates throughout the territory of the division.

16.2. Objects of management:

- The main object is to protect these forests from illicit damages.
- To check the smuggling of Forest Produce.
- To check the encroachment upon the Forest land.
- To prevent Forest fires.
- To protect forest crop against pests and diseases.

16.3. Major challenges of forest protection:

1. Illegal felling of tree
2. Firewood collection
3. Torchwood Cutting
4. Fire incidences.
5. Encroachment of Forest land.
6. Grass Cutting and Grazing
7. Pests and diseases
8. Girdling
9. Climate Injuries

16.3.1. Illegal felling: The total population of Poonch district is 4.76 lacs. Out of which 91.90 % reside in rural areas and 8.10 %in urban area. A major proportion of the rural population lives adjacent to the forests. Villages are located at more than 1000 meters altitude and receive moderate to heavy snowfall. The roofs of houses have to be sloping and have an under lying truss structure made of wood. As has been calculated in Chapter 3 that annual requirement of timber for the rural population of this division comes to be 39212 cubic metres two third of this requirement is met from these forests. It is also mentioned in the same chapter that hardly 2% of the total annual timber requirement of the population goes recorded, rest of it is made of by resorting to illicit and illegal means.

16.3.2. Firewood collection: The fire wood collection is also a major threat to the forests. As the tract is situated in higher altitudes, without modern facilities like electricity, people tend to use the natural resources such as fire wood for preparing the food and warming their house during winter. The problem is aggravated by lack of road connectivity to majority of the areas. No modern fuel like LPG can reach these places. Hence, people are forced to use the fire wood. Before the onset of winter season, people collect large quantity of firewood and dump it in their backyard for using it during winter. As has been provided in Chapter 3 that even if it is assumed that 25% of need is met from private land etc. then still forests of Poonch division have to provide 645831 Quintals of Fire wood/year.

16.3.3. Torchwood cutting: The majority of the tract is not connected by electrical grid. To get adequate light, they resort to torch wood cutting. The conifer trees in the vicinity of the villages are bearing the mark of torch wood extraction. People on their way in the bridle paths are uses torch wood during their journey in early morning and in late evening. The torch wood extraction weakens the trees and often attacked by fungus.

16.3.4. Fire Incidences: As the tract is located in the cooler, higher altitudinal zone, fire does not pose the threat at larger way. The fire incidences coincide with either sudden raise in ambient temperature or the prolonged dry weather. Hence, fire incidences are normally noticed during late April, May, June, late October and early November. Mostly the fire damages the dry grasses and sometimes engulfs the conifer trees especially Chir forests in Mendhar Range and some lower portions of Haveli Range. The sanitation of the worked out coupes must be ensured to prevent the fire incidences in the Deodar-Kail forests.

16.3.5. Encroachment of Forest land: In the Poonch forest division, the people tend to encroach upon the forest land for cultivation purposes.

16.3.6. Grass cutting and Grazing: The grass cutting and grazing are observed to be the major threats to the health of forests in this tract. Both of these activities closely linked to the socio-economic behavior of the people of the State. The grass cutting activity severely impedes the regeneration of deodar-kail forests and NTFP's, the impact of grazing observed in the fir-spruce forests at higher altitudes. The department has to regulate the activities by way of creating fodder closures near to the habitation, so that people will not venture into the forests. The degraded forest lands are identified and annexed in the Plantation Working Circle, which may be useful to create closures for the welfare of the people.

16.3.7. Pest and Diseases: Insect attack is not significant in the forests of the Division. Even though, in few patches deodar defoliator is seen, it is not very significant. Similarly Kail stem borers are noticed in few pockets but not widely prevalent. In case of Kail and Deodar, Fomespini the destructive fungi which can cause heart rot disease was prevalent in some pockets of the division. Similarly, other diseases like Armillarea root rot caused by *Armillarea mellea*, root and butt rot in conifers by *Heterobasidium annosum* is also very rare and uncommon. *Superficial* bark damage by *Scolytid bark borers*, and even damage by *Longicorn beetles* of broadleaved species is of very small significance.

16.3.8. Climate injuries: Snow damage is common and when accompanied by snow avalanches, it creates sizeable gaps in t5he forests devoid of vegetation. Damage by landslides is also common especially during floods or unusually heavy rains.

16.3.9. Besides above it is also mentioned here that due to division of forestland for non-forestry purposes under Forest (Conservation) Act case a great loss/ harms have been noticed to the ground flora and fauna which is a great threat to the home, life and also ecological imbalance.

16.4. Enhancing the Protection of forests:

16.4.1. Patrolling: There is no alternative method discovered so far, to replace role of foot-patrolling in protection of the forests. The entire tract is located very remotely in higher altitudinal zone, devoid of any communication and transportation facility. The people have to suffer a lot to meet the DFO for obtaining sanctions. To help the people and to protect the forests, the DFO shall visit the entire division, at least once in a month during summer season. By the intensive touring, the DFO can address the issue of protection and well being of the people. The touring of the DFO and higher officials in this terrain, impact the morale of the field staff working in severe hostile weather conditions. The knowledge acquired by way of patrolling of the forests, will result in efficient and accurate planning for the betterment of the forests.

16.4.2. Check posts: It is recommended to erect the additional check posts to monitor the movement of the forest produces.

16.4.3. The satisfaction of demand for bona fide requirements of people by concession shall reduce the incidences of damages significantly.

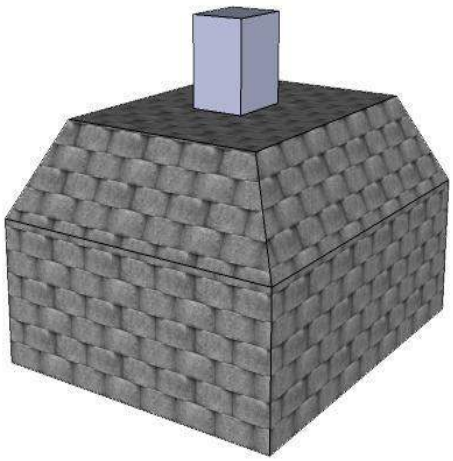
16.4.4. The forest department and the FPF personal keep constant vigil and initiate action on detection of offence. Petty offences for bona fide need are often compounded under rules and offence of grave consequence is challenged in the Court of law.

16.5. Proposed mechanism:

16.5.1. The sanctions should be operated upon on first come first basis as a rule should be affected serially without preference.

16.5.2. **Encroachment:** Encroachment is a direct reflection on the status of demarcation of forest lands. Demarcation needs to be refocused as an activity of paramount interest in forests. With the passage of time and the stress on development, land as resources has become prized and as such primary cause for conflict. In the earlier demarcation exercise was

conducted and the Boundary pillars consisted of loosely packed boulders with wooden posts fixed in the centre. The continued lack of focus on this activity has resulted in non settlement of the areas long encroached as well as absence of concrete action on incidences of fresh encroachment. This issue has been negotiated in the past and has remained the victim of lack of uniform concerted action. Apathy in this regard has reinforced the resolve of the offenders. It is as such desirable that discontinuity in the Boundary Pillars should be addressed at its earliest. The funds under the heads "Protection of forests" under State Plan and grants from Integrated Forest Protection scheme and Intensive Forest Management are exclusively to be utilized for survey, demarcation and pillaring. In areas mired in conflict Boundary Pillars (BP) may be erected to avoid any further advancement of encroachment. All the Boundary Pillars (BP) should be of RCC. The design of Boundary Pillar that can be adopted is given in following figure.The Boundary Pillar design is similar to the ones being used in Madhya Pradesh.



Boundary Pillar

16.5.3. Concurrently it is desirable that the encroached areas are settled and the matter looked at afresh. The security of installed pillars and their constant upkeep is a matter of prime import. A system of quarterly verification of BP's have to be evolved and damage if any, noticed should forthrightly be repaired by the funds available under overhead and recorded as entry in the guard book. It should become essential for the officer taking charge on transfer at the beat level and block level to certify the good condition of BP and report any irregularity. And it is essential that a fresh survey is undertaken as almost on an average 50 years has elapsed since the previous survey and settlement was undertaken. The fresh survey needs to take liberal recourse to the latest technology in survey and spatial database management systems.

16.5.4. *Tashree Burghiate* (Description of Boundary Pillars) need to be immediately revised in reference to present landmarks and prominent physical features. The problem gets multiplied when revenue authorities are recording Girdawaries on demarcated forests without paying any attention towards directions of Hon'ble Supreme Court and various circulars of the state Government from time to time.As per the directions of Hon'ble Supreme Court State land with Forest cover is to be recorded in the name of forest department but this is not being followed in an effective manner. This has resulted in the encroachment over the state/forest land. It is necessary that forest department officials should pay attention to this matter and timely take the matter of getting State land with forest cover entered in the name of forest department in the revenue record.

16.5.5. For effective control of encroachments, it is essential that the beat guards be thoroughly aware of the boundaries of the forests in their respective beats with clear knowledge about boundary pillars and Khasra No's undemarcated forests. As such beat maps should be provided for and pasted in each guard book of the beat guards. All the Guard books must contain clear information about the presence of Boundary Pillars along with their Geo-references. It will also facilitate Handover/Takeover of Forest beat area without any confusion and discrepancy so that every forest guard is made accountable and responsible.

16.5.6. Revenue record needs immediate reconstruction taking help of old record prepared during settlement of 1961-62 still lying in Mahafiz Khana Poonch in the form of Massavies and Misil-e-Haquiet of respective villages. Massavies were prepared on plain paper sheets villagewise during the settlement exercise showing the details of maps of private lands as per Survey No. and demarcation line of forests with enumeration of burgies in them. Since most of the maps (latha) have been destroyed due to unavoidable circumstances. Theses maps can easily be prepared afresh from Massavies which are having clear demarcation line. This need arises because most of the demarcation files of Poonch forest division are incomplete and have lost the maps and description of boundary pillars due to certain unavoidable circumstances.

16.5.7. So far as Berun line forests (undemarcated forests) are concerned they could not be handed over to forest department due to unknown reasons. It contains thousands of Kanals of forest areas in Poonch forest division lying scattered among private survey No's and in the due course of time illegal Girdawaries/Mutations were recorded due to vested interests. Revenue records of such undemarcated forests can be easily reconstructed from massavies.

16.5.8. Berun Line forest (Undemarcated forests) has lost mention in office working in any form. The possibility of Berun Line forest mutation in favor of the individuals in the much acclaimed Roshni scheme can not be ruled out. It is advised that the Poonch Forest Division separately takes a look into the matter to ascertain the facts. Determination of extent, survey No's and mutation on such records can be taken up as a corollary activity to the Demarcation and Pillaring work. To enable demarcation work, all the forestry activity other than timber extraction should be stopped for a period of 2 years and demarcation and pillaring of boundary along the outer stretch neighbouring revenue land should be taken up as a continuous operation on priority basis.

16.5.9. For removing the encroachments an effective coordination is very essential between various agencies but due to some reasons it does not meet the desired level of expectation. One of the main reason is that during the time of removal of encroachment presence of an Executive Magistrate (Revenue Authority) is essential but most of the time these authorities are busy in their day to day work and therefore, which hampers the encroachment removal exercise. In order to remove encroachments from forest land Government may consider about giving Magisterial powers (for purpose of encroachment removal) to Forest Range Officer and above of Forest/Wildlife Department/Assistant Director and above of Forest Protection Force. Recently the Governemnt has conferred Magisterial powers (Executive Magistrate – First Class)to 25 officers of Legal Metrology Department under SRO 341. The same thing may be replicated in the Forest Department.

16.5.10. For effectively pleading encroachment related cases in courts sufficient litigation funds be provided to encourage officers who are pleading cases in courts to save forest land from clutches of encroachers. As per prevailing circumstances a forest officer has to spend from his own pocket to plead a case that may affect the encroachment removal process.

16.5.11. For field level administrative/management convenience creation of three new ranges (along with creation of new posts) out of existing three ranges should be considered. It needs to be mentioned that Haveli and Surankote ranges individually are greater than some forest divisions of the state. Thus, it necessitates the creation of new forest ranges so as to ensure better protection to assets of forest department.

16.6. Fire incidences:

16.6.1. Forest fire occurs predominantly during the months of October to December in the areas under Poonch Forest Division. The fire is caused mainly due to the graziers firing the old shoots to ensure new flush after the receipt of rainfall, and by any accidental torchwood or cigarette butt remains on the forest floor. April, May and June months are characterized by acute dry period. Most of the incidences of fire are ground fire and if acted up timely do not cause much damage. The traditional measures of fire line have not been found effective due to the steep terrain where the tinder rolls down the slope to generate fire at a different location. The most apt method to control fire is by timely action and immediate creation of fire line outside the zone of fire to stop the spread of fire and then extinguish it. In extreme windy conditions counter fire should be adopted inside the fire line. A constant look out should be maintained to notice any tinder roll down and such spread should be immediately doused.

16.6.2. It has been observed that due to the terrain the use of implements and water back packs find little application. As such the best way is to make fire broom from the local material. Purchase of fire resistant foot wear and hand wear would increase the efficiency and reduce injuries. Awareness of people and their participation is essential for effective fire management. Based on fire prone mapping concentrated focus can be given to areas prone to fire and having a history of fire incidences. Also the people in these areas can be made aware of the precautions to be taken for prevention of fire. It is suggested that 1 fire watcher be deputed every fire season in all compartments that have had incidence of fire in

four or more years. The fire vulnerably should be worked out every year and should form the basis for deputing five watchers every year. It is expected that with the resuming of forest working sufficient biomass is going to accumulate on the forest floors and it is to be disposed off every year. The extraction refuse should be got collected and control burnt along a nallah. Before firing the heap a temporary fire line should be made are and the heap and burning should be carried out in areas at least 20 away from tree stand. In coupes where such space is not available the refuse should be burnt in small heaps in 3-4 steps. The FPF staff should be roster based deployed to areas during fire season to supervise the efforts of fire detection and fire fighting.

16.6.3. It has also been observed that the Army units in the LoC region are also into the practice of burning Bushes and other lower vegetation just to get good ground clearance for their operational suitability. However, this poses a great danger to the nearby forests and destroys the regeneration in the areas controlled by them. It is recommended that in their controlled area they should be made more accountable. In areas under the Forest department if there arises any urgency for controlled burning then it should be done in consonance with the Forest department.

16.6.4. Fire management measures:

1. An attitude emphasizing total prevention of forest fire is to be evolved. Awareness on fire damages must be inculcated in the minds of people.
2. Often Forest fires are not reported. Even if reported the losses are underestimated. Forest Department generally fails to project actual losses and hence the Government is not giving sufficient funds.
3. Method of approach in a fire situation needs to be improved. A perfect management plan prescribing essential components needs to be worked in advance.
4. The interface of forest with the human interests enclosures and among the peripheral dwellers has increased with the increase in Boundary length and hence these are the sources of Fire. Farming, rehabilitation, Gujjar-Bakarwal settlements and encroachment areas in and around the forests are sources of most of the Forest fires.

16.6.5. Fire management planning:

1. The Range should be treated as a unit for planning and maps showing details of relief and features should be supplied.
2. An annual action plan should be prepared on the strategic plan for protecting the forest from fire.
3. More concern should be on preventing fire than curative.
4. Participatory Fire management strategy should be evolved based on broader guidelines issued on this aspect.
5. Use of Fire *Alert* and Messaging System (FAMS) as has been employed by Forest Departments of Madhya Pradesh, Gujarat and Himachal Pradesh should be implemented at its earliest.
6. For minimizing fire damage preventing burning should be banned.

7. Data should be gathered on the sources of secondary support like voluntary fire fighters, NGO's.
8. Details of resources like manpower, vehicles, wireless etc should be made available to other wings of forest department and also departments like Fire force, Meteorology should be used during fire season.
9. Safe and careful fire fighting strategy should be applied.
10. Non synthetic clothes should be borne to protect from severe effects of fire.
11. Headgear and goggle will prevent head and eyes.
12. Leather boots should be used.
13. Enough water should be carried to prevent desiccation by heat.
14. Communication between fire fighters is necessary.
15. Shield the body with any non-conducting material in case the fire fighter is caught in fire.
16. The Chir pine needles offer a conducive atmosphere for forest fire to grow rapidly. Hence, if we remove these Chir pine needles in advance and which can later be used for meeting the local energy needs. This will help in a great deal in dealing with forest fires.

16.7. Fire management planning: Girdling is prevalent in many parts of the division. Especially, in Krishna Ghati and its adjoining areas in Haveli range and Mankote area of Mendhar area where people are girdling thick diameter Chir trees to extend cultivation and habitation areas. This leads to drying of tall and thick Chir trees to the extent that they die in a year or so. Hence, there should be enormous vigil on such malpractices.

16.8. Recommendations pertaining to human resource management:

1. The designation of Forest guards should be changed from forest guard to forest beat officers (FBO) as has been done in Andhra Pradesh. This will motivate them and give more social acceptability.
2. Forest guards should be appreciated and rewarded whenever they do good work. This will encourage them to do their duties with more zeal and enthusiasm.
3. In case of any genuine lapses on the part of forest guards, the emphasis should be on rectification of mistakes through proper guidance and counseling by the senior officers rather than punishing the guards. This will motivate the forest guards to do their best.
4. In case of dereliction of duty appropriate punishment should be imposed upon all the hierarchy found to be involved after a transparent investigation.
5. Fresh recruits should be given inception training before posting them in the forest areas.
6. They should be given refresher and capacity building training on a regular basis. Field demonstrations should be given for planning and execution of field works. Capacity building should also involve the wildlife perspective/management (and disaster

management). Training should be given in snake catching, and handling and tranquilizing wild animals particularly leopards and monkeys.

7. Workshops should be organized on regular basis on legal and technical matters/best practices.
8. Housing facilities provided to field functionaries should be improved. There is absence of housing facility/Quarter at most of the part of the division. The field staff is compelled to take shelter on rent basis (most of the time they also meet their dietary needs at same rented place) which may create possibility for damage to forests.
9. Beat helper should be provided to the beat guard for joint patrolling in the forest areas.
10. Vacant posts of forest guards and foresters should be immediately filled up. Many forest guards have left the service to join other departments especially education which warrants immediate reviews of existing working conditions/pay structure.
11. Lack of adequate mobility is adversely affecting forest protection. Group patrolling should be encouraged. A four wheeler should be stationed at range headquarter. Beat guards should be provided motor cycles.
12. It is not possible to provide education to children and medical facilities to family members in remote forest areas. This creates lot of stress among forest guards. It is financially not possible to maintain two establishments. Government should ensure that the wards of forest guards do not suffer due to lack of education and adequate health facilities are provided. If this issue can be taken care of by Government, forest guards can work whole-heartedly in the forest areas.
13. The promotional avenues of forest guards should be improved.

Chapter-XVII

Working Plan for Joint Forest Management (Overlapping) Working Circle

17.1. Description of the programme:

17.1.1. The Indian Forest Policy of 1988 (MoEF, 1988) and the subsequent government resolution on participatory forest management (MoEF, 1990) emphasize the need for people's participation in natural forest management. The policy document asserts that local communities should be motivated to identify themselves with the development and protection of the forests from which they derive benefits. Thus, the policy envisages a process of joint management of forests by the state governments and the local people, which would share both the responsibility for managing the resource and the benefits that accrue from this management. Under joint forest management (JFM), village communities are entrusted with the protection and management of nearby forests. The areas concerned are usually degraded or deforested areas or village fringe forests can come under JFM.

17.1.2. In many locations across the country voluntary participation of people resulted in improved protection of forests and such endeavours inspired institutionalization of collective participation of people in protection of forests by forming Joint Forest Management Committees (JFMC). The JFM programme in the state is structured on the guidelines issued by the Ministry of Environment and Forest under the National afforestation Programme (NAP). National afforestation Programme was started by Government of India in the 10th Five Year Plan by amalgamation of programmes and schemes of similar objectives. The National afforestation and Eco-development Board was established at the centre to oversee the implementation of this programme.

17.1.3. The National afforestation Programme envisaged creation of registered societies at District levels called Forest Development Agency (FDA) and at the State level the State Forest Development Agency (SFDA). Each FDA consists of many, Village Forest Committees (VFC). The FDA framework has 2 major bodies by name General Body and Executive Body. The Conservator of Forests (Territorial) is the Chairman of the FDA and the Divisional Forest Officer concerned the Member Secretary. The General Body consists of the entire village household as members of a village. Each VFC elects a President who becomes member of Executive Body of FDA.

17.1.4. A bottom up approach is adopted in planning process. The Plan of FDA is evolved at the village level by the VFCs, later to be included in the overall FDA Plan. The Plan focuses predominantly on afforestation with minor contribution to village/ community infrastructure. The underlying object of FDA model of afforestation programme is to empower the local community in decision making process of selection of site, selection of species to be planted and to decide on the type of community infrastructure needed and to prioritize it. Creation of sufficient labour days for employment of locals is also a stated objective.

17.1.5. Another way of uplifting local people is through medicinal plants of local, national importance which can be raised in sites which are deteriorated ones. Also collection of medicinal plants from forest areas can be done on a sustainable basis so as to benefit local people.

17.2. The move towards state control of medicinal plants and other NTFPs:

17.2.1. Traditionally, the collection of Medicinal Plants and other NTFPs has been of low intensity and generally sustainable. However, as the economic potential of these has become apparent, the intensity of collection has increased and more significant infrastructures for trade and processing have developed. This has raised concerns for the sustainability of the resources and the distribution of the benefits derived from them. In reaction to these concerns, a number of state governments have taken over the control of a number of Medicinal Plants and other NTFPs. Some of the explicit objectives for state monopoly of NWFP trade are:

- To prevent unscrupulous intermediaries and their agents from exploiting Medicinal Plants and other NTFPs collectors.
- To ensure fair wages to collectors.
- To enhance revenue for the state.
- To ensure quality.
- To maximize the collection of produce.

17.2.2. The use of herbs to treat disease is almost universal among non-industrialized societies and is often more affordable than purchasing modern pharmaceuticals. The World Health Organization (WHO) estimates that 80 percent of the population of some Asian and African countries presently use herbal medicine for some aspect of primary health care. Studies in the United States and Europe have shown that their use is less common in clinical settings, but has become increasingly more common in recent years as scientific evidence about the effectiveness of herbal medicine has become more widely available.

17.3. General constitution of Working Circle:

The Working Circle shall be constituted of all the forest compartments of the Division, as such shall be an overlapping Working Circle.

Table 17.1. Compartments prescribed to be managed under Joint Forest management and Medicinal Plan Conservation (Overlapped) Working Circle

Range	Compartment Number	
	New	Old
Haveli	35/H	86/H
	36/H	87/H
	37/H	88/H
	38/H	89/H
	39/H	90/H
	40/H	91/H
	41/H	92/H
	42/H	93/H
	69/H	120/H
	70/H	121/H
	71/H	122/H
	72/H	123/H
	73/H	124/H
	74/H	125/H
	77/H	128/H
	78/H	129/H
Surankote	1/S	1/H
	2/S	2/H
	3/S	3/H
	4/S	4/H
	5-a/S	5-a/H
	5-b/S	5-b/H
	6/S	6/H
	7/S	7/H
	8/S	8/H
	9/S	9/H

17.4. Management objectives:

1. To productively engage the local community in protection and regeneration of forest.
2. To Develop Medicinal Plants resources in the state for environmental benefits and to harness economic potential of the resource in a sustainable manner for socio-economic upliftment of the people of the State.
3. To repose a sense of ownership and active participation in decision making on management of forests.

17.5. Socio-economic profile of Poonch Forest Division:

17.5.1. The present study socio-economic aspects of Poonch Forest Division bring to light the immense importance of Forests in the daily life of the rural population. District Poonch extending over an area of 1674 Sq. Kms comprises of 6 Tehsils (Poonch , Mendhar , Surankote , Mandi,Mankote and Balakote) ,6 Blocks (Poonch , Mendhar , Surankote , Mandi ,Balakote ,Bufliaz),189 Panchayats . It has 476820 Population as per census 2011 . The

District Population is mostly rural which 91.90% of the total population is and only 8.10% of it resides in towns. The district has a population density of 285 inhabitants per square kilometre. Its population growth rate over the decade 2001-2011 was 27.97%. Poonch has a sex ratio of 890 females for every 1000 males, and an average literacy rate of 68.69%.

17.5.2. Resident Ethnicities include Gujjars mostly reside on the slopes of mountains. They have small pieces of land for cultivation, and cattle for supplementing their economy. Bakerwals are nomadic tribes. Gujjars and Bakerwals speak Gojri whereas rest of the population (excluding Kashmiris) speaks Pahari/Poonchi. The mother tongue is a great cementing factor of the Pahari speaking people because they remain closely associated with each other despite differing faiths.

17.5.3. Poonch district has 36.9% population of Gujjar and Bakkarwal scheduled tribes both of which are nomadic in character. As the terrain of this District is highly mountainous, most of the villages depend in one way on the other on Forests. Most of the agriculture is rain fed for obvious reasons and only 9% of the gross area is irrigated.

17.5.4. Livestock rearing is an important occupation of the village folks in general & migratory proportion in particular. As per latest figures obtained from Office of District Statistics and Evaluation Officer, Poonch there are 1.13 lacs of Buffaloes 0.92 lacs of Cows, 5.18 lacs of Sheep. 2.26 lacs of Goats. Despite the facts every effort is being made to give proper health coverage and breeding facilities, so as to improve the health and quality of the animals, these animals assert great pressure upon the forests by way of unregulated grazing and instigation of fire incidences by cattle and livestock owners for better grass output during the monsoon.

17.5.5. As on date AADHAR enrolment (Percentage of AADHAR generation) is 63.04 %.

17.5.6. In addition to information provided in 3.3. of Chapter- 3 other Socio-Economic information about Poonch District can be provided as:

Table 17.2: Table showing Block-wise area under irrigation for the year 2014-15:

S.No.	Block	Gross Area Irrigated (Hectares)	Net Area Irrigated (Hectares)
1.	Poonch	1318.4	1242
2.	Mandi	93.2	82.8
3.	Surankote	314.00	300.00
4.	Bufliaz	14.00	12.00
5.	Mendhar	540.00	480.00
6.	Balakote	41.2	36.4
Total		2320.8	2153.20

Table 17.3: Table showing No. of pensioners drawing their pension (Category wise including central and defence pensioners):

Category	As per previous Quarter			Quarter Under Report		
	Through Treasury	Through Bank	Total	Through Treasury	Through Bank	Total
Civil Pensioners	160	1340	1510	155	1310	1465
Defence Pensioners	104	-	104	103	-	103
i. Municipal Corporation Pensioners ii. Municipal Council Pensioner iii. NAC	M	38	38	-	38	38
Freedom Fighters	27	-	27	27	-	27
Political Pensioners	-	03	03	-	03	03
Civil Family Pensioners	36	486	522	36	511	547
Defence Family Pensioners	39	-	39	38	-	38
Other Family Pensioners (if any)	-	-	-	-	-	-
Total	367	1877	2244	359	1862	2221

Status of LPG Coverage in Poonch District: LPG is provided in Poonch District by Two organizations HP Gas (Hindustan Petroleum Corporation Limited) and Bharat Gas (Bharat Petroleum Corporation Limited) both of which are Government of India undertakings. HP Gas and Bharat Gas have provided 47410 and 56000 connections respectively and new connections are still increasing thus it can be assumed that dependence on Fire wood for cooking needs may decrease in future.

Table 17.4: Table showing detailed abstract of Gas connections in Poonch district:

Name of Constituency	HP Gas	Bharat Gas
Mendhar	17000	18000
Surankote	13000	19000
Haveli	17410	19000
Total	47410	56000

Table 17.5: Table showing Tehsil wise electricity connections in Poonch district:

S.No.	Name of Sub-Division	No. of connections as on 31-12-2015
1.	Poonch	17246
2.	Mendhar	15378
3.	Surankote	12209
4.	Mandi	7121
	Total	51954

Table 17.6: Table showing Rural healthcare infrastructure in Poonch district:

Number of Sub Centres	Number of Primary Health Centres	Number of Community Health Centres	Sub-Divisional Hospital
102	17	3	0

17.5.7. Transport status (Public/Private) provided by office of the Assistant Regional Transport Officer, District Poonch:

Total Vehicular Population including Commercial/Non-commercial is 11600. 60% of the total District area is covered by PWD, GREF, PMGSY, etc. Most of the roads are link roads which are not in good condition and needs black top and other repairs. There are also frequent accidents due to overloading.

17.6. History of forest development agency in Poonch:

17.6.1. Under the National Afforestation Programme (NAP) scheme Forest Development Agency Poonch was registered under Societies Act. In Poonch Forest Division, 41 VFC's were registered. The list of VFC's of this division is as follows.

Table 17.7: showing the VFC's/JFM Villages Rangewise

S.No.	Name of VFCV/ JFM	Location with name of Range	S.No.	Name of VFCV/ JFM	Location with name of Range
1	Jhullas	Haveli	22.	Dharana	Mendhar
2	Bedar	Haveli	23.	Nangali	Haveli
3	Hari Budha	Haveli	24.	Dara Dullian	Haveli
4	Shiendara	Haveli	25.	Chammbar	Haveli
5	Khanetar	Haveli	26.	Ucchad	Mendhar
6	Arai	Haveli	27.	Draba	Surankote
7	Sawjian	Haveli	28.	Mangnar	Haveli
8.	Buffliaz	Surankote	29.	Danna	Haveli
9.	Mastandara	Surankote	30.	Salwah	Mendhar
10.	Sanai	Surankote	31.	Kanuyian	Haveli
11.	Lassana	Surankote	32.	Poshana	Surankote
12.	Mahra	Surankote	33.	Batalkote	Haveli
13.	Sangla	Surankote	34.	Chajjla/ Kasbalari	Mendhar
14.	Salani	Mendhar	35.	Chhungan	Mendhar

S.No.	Name of VFCV/ JFM	Location with name of Range	S.No.	Name of VFCV/ JFM	Location with name of Range
15.	Ghani	Mendhar	36.	Traranwali	Surankote
16.	Balnoi	Mendhar	37.	Sarhutti	Mendhar
17.	Chajjla	Mendhar	38.	Salotri	Haveli
18.	Kalaban	Mendhar	39.	Tantrigam	Haveli
19.	Gursai	Mendhar	40.	Gursai	Mendhar
20.	Kangra	Mendhar	41.	Marhote	Surankote
21.	Golad	Mendhar			

17.7. Evaluation of the present model:

17.7.1. The operation of FDA has resulted in successful afforestation of degraded forest land; however, the extent of success is far from desirable. An analysis of the model suggests that the interest of the people in the scheme has waned over the period of a decade of its inception. This is in part also reflection of the rising aspiration of the people and also attributable to other rewarding avenues available. It would not be amiss to suggest that the main drawback of this scheme is in its inability to provide immediate benefit or returns. And over the years the scheme has became more of an extended annual works programme of the Forest Department, where due to waning interest, the scheme targets are achieved by the direct involvement of staff with only a name sake presence of the community representative. This in part can be attributive the lack of popular appreciation of these schemes, especially after new schemes like MGNRGA has been in vogue.

17.8. Green India mission:

17.8.1. During the 12th Five Year Plan the Government of India has factored in the popular discontent with afforestation scheme and realizing that people can be engaged only if the scheme appeals to holistic development. The devolvement of power to the people must be real for eliciting genuine engagement. And plantation efforts in isolation, alone may not be sufficient to sustain interest and engagement. However, work done under Green India Mission is NIL in Poonch Forest Division (till date) and it is expected that after its effective implementation it will bring convergence between the conservation goals and people expectations.

17.9. Proposed operational model:

17.9.1. The existent structure of FDA model can be functionally reoriented to make for meaningful, engagement. The application of prescriptions of Working Plan and resultant operations should generate sufficient avenues for gainful employment and active participation of people. The afforestation and extraction operations in forest can be taken up by FDA. The annual extraction coupes of the respective Working Circles adjoining the villages concerned must be done by the VFC of the area. 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.

17.9.2. The operations shall be supervised by the Forest Department staff. 20% of profit from the sale of the produce from extraction should be sharable with the VFC. In case the VFC is not cooperative of efforts of forest department the DFO may deny the concerned VFCs from the profit sharing arrangement. Additionally for the extracted area, plantation must be carried out as per the prescriptions of commercial Working Circles. The plantation as well should be done by the VFC as per the consultancy offered by the Forest Department. The extraction and plantation operation if decided not to be taken up by the VFC or if the progress by a VFC as per plan of operation is not satisfactory, then department shall get it executed on its own. Where plantation have been raised to 10 years of successful establishment, 50% of the trees brought to survival shall accrue as tree credit to the VFC making it eligible for 100% of the realized sale proceeds of trees of first class in the next extraction. This arrangement shall help creation of gainful livelihood, besides cooperation of people in protection and regeneration of forests.

17.9.3. In VFC's which are not located adjacent to productive forests and which lie along Rehabilitation (Overlapping) Working Circle, alternate productive functions like NTFPs and establishment of Solar Power Plants micro and mini hydro electric projects; ecotourism, adventure tourism etc. should be explored. The VFC's which are located close to roads should be assisted in erection of hoarding boards that informs public of message to save and protect forest as well as generate revenue from advertisements. Initially a beginning should be made with NTFP's and Guchhies with its established market and marketing chain should be taken up on pilot basis for familiarization of the trade and trade practices. The same is discussed in detail in NTFP Working Circle. The allocations under the Green India Mission should also be planned and executed by the VFCs. The VFCs should also be actively involved in the distribution of concession trees .The list of concessioners for allotment of trees on priority should be obtained from the VFCs and accordingly operated upon. The VFCs can also be encouraged to raise plants and the same can be purchased by the department for use in plantation works.

17.10. Entry point activity:

17.10.1. The Entry Point Activity (EPA) is crucial for making the programme 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 the Forest Department to fulfill their demands like construction of small bridges (*Trangdies*) and construction of bathroom and other basic amenities. The EPA is very useful in addressing their demands. The abstract of EPA has been provided in Appendix VIII.

Chapter-XVIII

Working Plan for Non-Timber forest produce (Overlapping) Working Circle

18.1. General description:

18.1.1. This Working Circle is constituted to give special impetus to the conservation and development of Medicinal plants and other NTFPs of Poonch forest division. The division is endowed with rich variety of Non Timber Forest Produces. Because of the altitudinal variations starting from 800 meter above MSL to 4745 meter above MSL, and due to climatic variation from temperate to alpine, large number of medicinal plants are recorded. There are more than 80 species of medicinal plants identified in Poonch forest division. Haveli Range and Surankot Range are endowed with these NTFPs in general and medicinal plants in particular.

18.1.2. Most of these species are collected by the local people for their bonafide self-use. Some of the important commercial NTFPs like Kuth (*Saussurealappa*), Belladona (*AtropaBelladona*), Dioscorea (*Dioscoreadeltoidea*), Dhoop (*Jurineamacrocephala*), Bankakri (*Podophyllumhexandrum*), Kahzaban (*Arnebiaspp*), Nagchattri (*Trillium govanianum*), Gucchies (*Morchellaspp* are having significant commercial value.The other information on NTFPs is given in the Chapter III of Part I of the working plan.

18.1.3. These NTFPs were auctioned as is where is basis in the past to the highest bidders which led to unregulated, over extraction of the medicinal plants. Considering the over exploitation, the government has put a ban on collection of NTFPs and presently the ban is lifted for above ground parts like flowers, stems and seeds only for non-destructive harvest.

18.1.4. For the purpose of discussion, this working circle shall focus on two sub topics viz medicinal plants and resin Tapping.

18.1.5. Plants have the ability to synthesize a wide variety of chemical compounds that are used to perform important biological functions, and to defend against attack from predators such as insects, fungi and herbivorous mammals. At least 12,000 such compounds have been isolated so far; a number estimated to be less than 10% of the total. Chemical compounds in plants mediate their effect on the human body through processes identical to those already well understood for the chemical compounds in conventional drugs; thus herbal medicines do not differ greatly from conventional drugs in terms of how they work. This enables herbal medicines to have beneficial pharmacology, but also gives them the same potential as conventional pharmaceutical drugs to cause harmful side effects.

18.1.6. The use of plants as medicines predates written human history. Ethno botany, the study of traditional human uses of plants, is recognized as an effective way to discover future medicines. In 2001, researchers identified 122 compounds used in modern medicine which were derived from Ethno medical plant sources; 80% of these have had an Ethno medical use identical or related to the current use of the active elements of the plant.

18.2. Medicinal plants of Poonch forest division:

18.2.1. Right from the dawn of the civilization plants has been the versatile helpers of the human being. Besides cattering to the basic needs of man, viz., food, shelter and clothing, they provide necessary drugs and medicines for curing his ailments. The curative properties of the plants have been discovered gradually over many centuries and knowledge accumulated was passed on from generation to generation by oral tradition as well as herbal preparations.

18.2.2. Throughout the world demand for the plant based medicines is increasing due to their safety, quality and effectiveness. According to the report of World Health Organization (1978) over 80% of the world's population rely on traditional system of medicines, based largely on plants to meet the primary health care needs. India is also a major exporter of medicinal plant raw materials and their extracts. India has been known for one of the richest ethnobotanical traditions in the world.

18.2.3. A large proportion of the population of the Poonch District living in the far-flung areas still relies on medicinal plants for curing different aliments. The people of these areas depend on the local medicinal plants because no medicinal facilities are available in these areas. It was also observed that folk medicinal knowledge is mainly with old people.

18.2.4. The ethnic groups especially Gujjars and Bakerwals have their own knowledge of traditional herbal medicine inherited from their fore-fathers. These medicines are well accepted by the local people since generations have experienced their efficacy in alleviating a variety of diseases. These herbal drugs are taken either in raw form or as aqueous extracts. Besides these ethnic groups have to rely on the traditional system as they do not have the modern medicinal facilities available in the vicinity.

18.2.5. The dependency on medicinal plants dropped over the last few decades as the area was covered with link roads and shops of allopathic drugs were opened.

18.3. Ethno-veterinary medicine (EVM):

18.3.1. Ethno-veterinary medicine (EVM) is a system that is based on folk beliefs, traditional knowledge, skills, methods and practices used for curing diseases and maintaining health of animals**.** Ethno veterinary medicine provides the major source for the treatment of diseases in livestock throughout the world even today. Humans have used herbal remedies for curing different diseases in their domesticated animals since the advent of civilization. It is estimated that medicinal plants, for several centuries, have been widely used as a primary source of prevention and control of livestock diseases.

18.3.2. Traditional veterinary medicine knowledge like all other traditional knowledge systems is handed down orally from generation to generation and it may disappear because of rapid socio-economic, environmental and technological changes and as a result of the loss of cultural heritage under the guise of civilization**.**

Table 18.1: Table showing list of Medicinal Plants of Poonch Forest Division and other details:

S.No.	Botanical Name	Family	Local Name	Mode of Administration
1.	*Abies pindrow*	Pinaceae	Tung	The powder of the inner flesh red bark is mixed with honey. The mixture so made is given twice a day to cure cough and chronic asthema.
2.	*Aconitum heterophylum*	Ranunculaceae	Atish	The extract of the shoot is use for curing laprosy
3.	*Aconitum vialaceum*	Ranunculaceae	Mohand	Sundried flower petals and sugar after mixing are crushed. The same is then kept in air tight jar for about 10-15 days for fermentation . This fermented mixture is locally called as "Khambir"which is used against cough , cold, fever, stomach problems and liver disorders. Minute dried root pieces are fitted in tooth cavities without swallowing (because it is highly poisonous) for one minute and then thrown out for immediate relief from toothache. Root powder is mixed with oil to make paste which is applied on painful joints and boils to treat them.
4.	*Adiantum venustum*	Pteridaceae	Kakbai	For Cough, jaundice, stomach ailments, headache, fever, body muscular pains and hair fall. Black stalks are used as tooth sticks to clean teeth. Dried fronds are crushed to obtain powder. Powder is added to a glass of water and kept as such overnight. The extract is given next day early in the morning for the treatment of cough, jaundice and stomach ailments. The herb forms an important ingredient of a combination of several different herbs such as whole plants of *Cotula anthemoides,* leaves of *Ocimum basilicum* and leaves and flowers of *Prunella vulgaris*. This combination, locally called "Lossa

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				Ghasa" is thoroughly boiled in water to prepare hot water extract. Ladies, after their deliveries, are advised to have bath with this hot water extract (after dilution withmore water) to cure headache, fever, body muscular pains and hair fall.
5.	*Aesculus indica*	Hippocastanaceae	Haandoon	For Chilblain, joint pains, boils, skin rashes, eruptions, headache, burns, wounds and rat killer. Fruits after crushing are boiled in water to prepare hot water extract which is used to wash feet against chilblain, a painful itching swelling caused by exposure to cold which is locally called "Shuh". Fruit powder is mixed with mustard oil to make paste. The resultant paste is used to cure joint pains, boils, skin rashes, eruptions and headache by its external massage. Sometimes dried fruits are burnt to get ash which is mixed with oil and honey to make paste. Paste is then applied on burns and wounds to stimulate their healing. Dried fruit pieces are mixed with the kernels of *Juglans regia* and mustard oil. The resultant mixture serves as a best home remedy for killing rats. Crushed fruits are mixed with crushed onion bulbs and common salt to make small soft balls which are given to cattle during severe cold to keep them healthy.
6.	*Allium cepa*	Liliaceae	Gundh	For Loss of appetite, acidity,impotency, cold, anorexia, frothy bloat and flow of tears. Small thin slices of bulb are mixed with local mint, common salt and curd and given against loss of appetite and stomach acidity. Slices are also placed in water for

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				overnight. The same water is taken next day early in the morning on empty stomach to strengthen male potency. A mixture of crushed bulbs and common salt is made into balls. These balls are widely used as a traditional household remedy for cattle against cold, anorexia and in cows to stimulate the oestrus cycle. Balls are also given to horses to cure the frothy bloat which is caused due to the grazing of Bataklunt (*Trifolium repens*). A small piece of bulb is placed on top of the ear to prevent the flow of tears from eyes while cutting onions.
7.	*Achyranthus aspera*	Amaranthaceae	Puth Kunda	The decoction of both leaves and roots are used in toothache and abdominal pain. The juice of the herb is given in dyscentery, rheumatism and skin diseases. The paste of the fresh leaves is applied over insect bite. The ash of the plant is mixed with honey is used in cough and asthema. Leaves mixed with ripen fruits of *Rubus fruticosa* are crushed and juice is applied in eye diseases.
8.	*Achillea millefolium*	Asteraceae	Kungi.	Aqueous extract is used to cure urinary tract infection and also given for the release of kidney stone. The 20ml. of decoction is advised twice a day for 3 or 4 days to control the disorder of menstruation in females. It is also an active febrifuge.
9.	*Ajuga Parviflora*	Lamiaceae	Jan-i-adam	Leaf powder is administered orally with water to cure cough, stomach problems, intestinal infection and general body weakness. Water extracted of fresh leaves given to cattle against weakness in digestion and fever.
10.	*Artemisia*	Asteraceae	Jangli	The decoction of the leaves is

S.No.	Botanical Name	Family	Local Name	Mode of Administration
	roxburghiana		ajwan.	given for treatment of liver and stomach disorder. The poultice of inflorescence is used as antihelmintic particularly for children.
11.	*Artemisia absinthum*	Asteraceae	Tithwan	Fresh leaves and inflorescences are crushed and juice is squeezed from it , which is mixed with a glass of lukewarm water or milk and administered orally as a best home remedy against round worms, abdominal pain, fever and diabetes. Dried leaves after soaking in hot water are crushed and then spread on a cloth which is tied on sprained body parts to relieve their pain and swellings.
12.	*Arnebia benthamii*	Boraginaceae	Gaozaban/ Kahzaban	Leaves and flower tops the herb form an important ingradient of a combination of several different herbs such as seeds of Cucumis sativa, Malva neglecta , Foeniculum vulgare , fruits of Zizyphus jujube and fronds of Adiantum capillus-veneris. This combination is known as Sherbeth is given to cure jaundice, palpitation of heart, cough , cold, chronic constipation, fever and also acts as diuretic and a good blood purifier. Decoction is given to ladies after child birth to keep them healthy and strengthen their bones. Roots after crushing are applied as poultice over wounds for quick healing.
13.	*Allium humile*	Liliaceae	Jangli Thom	Fresh bulbs are roasted with ginger in Desi Ghee and used as carminative and gastric stimulant. Fresh bulbs are consumed to recover from rheumatism.
14.	*Berberis lyceum*	Berbaridaceae	Kali sumbali.	The powder of the dry bark is sprinkled on wound even because of cancer for quick healing. The powder of the roots is used for

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				intestinal colic and for the treatment of pharyngitis. It is also a cooling agent .The bark is astringent used for healing internal wounds, cracks of bones, urine burning and also used as tonic in pregnancy. The bark powdered is mixed with desi ghee and given for the treatment of hidden wounds.
15.	*Bergenia ciliata*	Saxifragaceae	Butpio	The dried rhizomes are used for making tea. It is used as tonic and relief of muscular pain. The powder of rhizome is used to cure fever and diarrhea.
16.	*Cannabis sativa*	Cannabinaceae	Bhang	The crushed leaves are mixed with onion and used for poils in the form of poultice. It is used as refrigerant. It is smoked to relive pain.
17.	*Calendula officinalis*	Asteraceae	Hamesh Bahar	Boils, burns, eyelid abscesses and pneumonia. Leaves and flowers are crushed and paste is made by mixing with cow butter. Paste is then applied on boils, burns and abscesses of eye lids to give relief from pain. Poultice is made by crushing of fresh leaves and flowers which is slightly warmed and then spread on a cloth and tied on chest to cure pneumonia in children.
18.	*Centaurea iberica*	Asteraceae	Krech	For Burns, skin rashes, eye vision and defective lactation. Thorns are burnt to get ash which is mixed with cow butter to make paste. Paste is applied on burns and skin rashes for their treatment. Fresh leaves after crushing are mixed with egg and then cooked to prepare omlette. Latter is given to improve the eye vision. It is also given to enhence lactation in females.
19.	*Cichorium intybus*	Asteraceae	Kasni/Wari Hundh	For Body weakness, loosening of joints, body muscular pains,

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				frequent bleeding, loss of appetite and liver problems. Leaves are cooked and given to fresh mothers to cure body weakness, loosening of joints, body muscular pains, frequent bleeding and as appetizer and liver tonic.
20.	*Conyza canadensis*	Asteraceae	Shallut	For Indigestion, dysentery, stomach gases, internal injuries, fever and cough. Aerial portion of the plant is crushed and made into small soft balls which are given to cattle for immediate relief from indigestion and dysentery. Fresh leaves are eaten to cause cooling effect, cure stomach gases and internal injuries. Leaf decoction with sugar is given to cure fever and cough.
21.	*Coriandrum sativum*	Apiaceae	Daniwaal	For Fever, palpitation of heart, jaundice, drying of mouth and headache. Dried seeds are put in cold water at least for one hour. Cold sponging is done by dipping a clean cotton cloth in this cold water and applying it to the chest, head and feet to relieve fever and palpitation of heart. Seed decoction is given to cure jaundice, drying of mouth and headache.
22.	*Cucumis sativus*	Cucurbitaceae	Laer	For Headache, fever, stomach heatup, kidney stones and burning sensation of urine. Fruit slices are consumed as salad. Proximal end of the fruit is sliced. The resultant slice is rubbed on rest of the fruit for about 2-3 minutes so that white foam comes out of it. The slice along with this foam is kept as poultice on forehead to cause cooling effect and to relieve headache and fever. Dried seeds along with the dried seeds of *Lagenaria siceraria* and *Cucumis melo* are put in a glass of cold

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				water as such for overnight. Thus a composite infusion is made which is given to cure stomach heatup, kidney stones and burning sensation of urine.
23.	*Carissa opaca*	Apocynaceae	Garna	Ripe fruits eaten.
24.	*Chenopodium album*	Chenopodiaceae	Bettu	Tender shoot eaten as vegetable.
25.	*Codonopsis ovata*	Campanulaceae	Ludut	Roots are large and are used for making vegetables.
26.	*Coriaria nepalensis*	Coronariaceae	Reekhni	Fruits are known to be edible.
27.	*Cydonia oblonga*	Rosaceae	Bumchuont	For Constipation, birth problems, jaundice, cough, cold, chronic constipation, fever, dysentery, blood purifier, asthma, chest problems, general body weakness and body muscular pains. Seed infusion is given to pregnant women against constipation and to loosen body parts so as to facilitate the normal delivery. The seeds also form an important ingredient of a combination of different herbs such as seeds of *Cucumis sativa, Malva neglecta, Foeniculum vulgare*, fruits of *Zizyphus jujuba*, leaves and flowers of *Arnebia benthamii* and fronds of *Adiantum capillus-veneris*. This combination is locally called as "Sharbeth". The composite decoction of "Sherbeth" is given to cure jaundice, cough, cold, chronic constipation, fever and as a good blood purifier. Fruit slices are sun dried, stored for winter season. Slice decoction is administered orally in case of dysentery. Ripe fruits after being coated externally with a thin layer of mud are roasted and then eaten as a best home remedy against asthma, cold, chest problems and general body weakness. Sundried flowers and

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				sugar after mixing are crushed. The same is then kept in air tight jar for about 10-15 days for fermentation. This fermented mixture is locally called "Khambir Bihi". It is given to cure cough, cold, asthma and body muscular pains.
28.	Cuscuta reflexa	Cuscutaceae	Kuklipoth	The herb is dried into powder and mixed with oil to make paste. Paste is used to cure skin diseases by its external application. It is also massaged on scalp to check hair fall and fight against dandruff . Whole plant decoction is taken in case of migraine , severe fatigue and weakness.
29.	*Carissa caranta*	Apocynaceae	Garanda.	The root paste mixed in 200 ml skimmed milk is given in jaundice. The root paste is massaged to reduce muscle strains, twice a day, for two days.
30.	*Calendula officinalis*	Asteraceae	Sadberga.	The extract of young branches is used to relieve kidney pain and release of kidney stones.
31.	*Daphne papyracea*	Thymeliaceae	Wild pepper	The bark and leaves are crushed and converted into paste. This paste is used as poultice for tumor and swellings. An ointment of the bark of stem and root is used to promote discharge from indolent ulcers, and it is also used for snake and other venomous bites. It is taken internally for chronic rheumatism. The tincture is used to ease neuralgic pain and toothache.
32.	*Debregeasia longifolia*	Debregeasia	Sandari.	The decoction of the young leaves is taken for the treatment of stomaches.
33.	*Dioscorea deltoidea*	Dioscoreaceae	Kala ganda	The powder (5g.) of the dry rhizome along with 20 black pepper is taken thrice a day as antipruritic and blood purifier. It is used as carminative agent. The powder (5g) is taken for treatment of toxaemia and many diseases of

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				children.
34.	*Diplazium frondosum*	Athyriaceae	Khandhor, Kasror	Young circinate leaves are rubbed with a piece of cloth to remove scales and hairs before cooking
35.	*Desmodium podocarpum*	Papilionaceae	Sukhy-ni-Jari.	The aqueous extract of the roots is given to the children suffering from weakness and stunted growth. The drug is taken once in a morning for twenty one days. The drug is believed to cure the weakness and make the children more energetic.
36.	*Euphorbia helioscopia*	Euphorbiaceae	Gur-Sochal	For Skin eruptions, warts, arthritic pain, indigestion, worms and constipation. White coloured latex obtained from the herb is used to cure skin eruptions and warts by its external application. Poultice made by crushing of aerial portion of the plant is applied on arthritic joints to stimulate the formation of blisters. The blisters lateron burst releasing the fluid which in turn alleviates the arthritic pain. Leaf decoction is taken against indigestion, worms and constipation.
37.	*Euphorbia royleana*	Euphorbiaceae	Thor	Pith of young shoots cut into small pieces, washed thoroughly, boiled and cooked as a vegetable and used for preparing rayata .
38.	*Elsholtzia fruticosa*	Lamiaceae.	Mushk buti	The dry leaves (5grams) along with tobacco are smoked for three or five days to cure cough and cold. The fumes of fresh leaves are respired for release of mucus from the respiratory tract in lung infection.
39.	*Foeniculum vulgare*	Apiaceae	Bodiyaan	For Dyspepsia, acidity, constipation,abdominal pain, Jaundice, cough, cold, chronic constipation, fever, blood purifier and joint pains. Seeds are eaten to cure dyspepsia, acidity and constipation. In case of

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				abdominal pain and constipation of a small baby, seeds are chewed to make paste which is applied respectively on abdomen and buttocks. Dried seeds form an important ingredient of "Sharbeth". The composite decoction of "Sherbeth" is given to cure jaundice, cough, cold, chronic constipation, fever and also acts as a good blood purifier. Seeds are also eaten to abstain from smoking. Whole plant is burnt to get ash which is mixed with oil to make paste. Paste is then applied on painful joints.
40.	*Fumaria indica*	Fumariaceae	Shahtar	For Defective eye vision, palpitation of heart, breathing problems, skin diseases, blood purifier, asthma, defective urination with pus, skin rashes, dropsy, menstrual irregularities, male impotency and general body weakness. Dried plant is grinded and powder is made which is administered orally with water against defective eye vision, palpitation of heart, breathing problems, skin diseases and as good blood purifier. Whole plant decoction is taken to overcome asthma, defective urination with pus, skin rashes, dropsy, menstrual irregularities, male impotency and general body weakness.
41.	*Ficus auriculata*	Moraceae	Triambal	Ripe figs eaten, young figs and tender leaves cooked as vegetable.
42.	*Fragaria indica*	Rosaceae	Punjakha	Ripe fruits eaten.
43.	*Fragaria nubicola*	Rosaceae	Jal bunonoo	Rhizome used as a substitute for tea.
44.	*Lathyrus sativus*	Fabaceae	Khesri	It is eaten as Dal and Chapatti
45.	*Galium aparine*	Rubiaceae	Khorti	Shoots and leaves are cooked as pot herb.

S.No.	Botanical Name	Family	Local Name	Mode of Administration
46.	*Galinsoga parviflora*	Asteraceae	Marchawagan Ghasa	For Joint pains.Fresh plants are crushed to make poultice which is tied on painful joints to alleviate pain.
47.	*Geranium wallichianum*	Geraniaceae	Ratanjot	The aqueous extract of the roots (50ml) is takes twice a day to recover from rheumatism. It is also used as aphrodisiac and for the treatment of sexual disability. The rhizome powder is taken to recover from general weakness.
48.	*Helianthus annuus*	Asteraceae	Gulaftab	For Whooping cough and joint pains. Seeds are chewed and eaten to cure whooping cough. Seed oil is gently warmed and applied on painful joints.
49.	*Indigofera heterantha*	Fabaceae	Kathi	Flowers are boiled in milk and are used for curing ulcers.
50.	*Juglans regia*	Juglandaceae	Duon	Tooth infection and toothache, tongue cleaning, mouth ulcers, dry cough, hypertension, joint pains, hair fall, weak milk production in cows, chilblain, insect repellent. Bark of the root is used as an antiseptic tooth brush locally called "Dandasa". It is used to clean the teeth and hence to protect them from infection and ache. The bark is also chewed to clean the tongue, heal the mouth ulcers and by ladies to decorate their lips. Ripe fruit kernels are eaten to cure dry cough and hypertension. Oil obtained by grinding of fruit kernels is considered a best home remedy for joint pains and hair falls by its external massages. The oil cakes are fed to cows to enhance milk production. Dried leaves along with the dried seeds of *Datura stramonium* are vigorously boiled in water to prepare hot water extract which is used to wash the feet during severe cold in winter to cure Chilblain. Fresh green leaves

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				are used as insect repellent.
51.	*Jurinea dolomiaea*	Asteraceae	Dupha/Thandi Jaid	Tea is made by boiling dried root powder in one glass water with two spoon of sugar and half cup of milk. It is taken in case of cough , cold, headache , thirst and whitening of tongue. Root powder is also mixed with oil and common salt to make paste which is applied on wounds to help them to heal and on boils to help them ripe and burst. Root decoction is mixed with mills flour and ghee to form a semi-solid mixture. It is considered to be highly energetic and taken orally to cause excessive sweat formation which in turn given relief from fever and arthritis. Moreover, at some placed leaves are used as vegetable and dried roots are burnt to produce smoke of good smell which is considered to be demon repellent .
52.	*Linum usitatissimum*	Linaceae	Alish	For Boils, rheumatism and less milk production in cows. Chewed seeds are applied in the form of poultice for the relief of painful and pus filled boils. Seed oil is considered best home remedy against rheumatic pains. Oil cakes are fed to cows in a mixture of paddy chaff and water to enhance milk production.
53.	*Mentha longifolia*	Lamiaceae	Pudina	Leaves are used for making chutney.
54.	*Morchella esculenta*	Helvellaceae	Guchi	Fruitification is used as vegetable.
55.	*Marrubium vulgare*	Lamiaceae	Troper	For Arthritic pains, swelling of eyelids, abdominal pain, dysentery, chilblain and muscular pains. Fresh leaves are soaked in hot water for two minutes and then removed and crushed into poultice. Poultice is spread on a cloth,

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				wrapped in it, and then tied on arthritic joints to alleviate pain. The same poultice is applied on eyelids to cure their swellings. Plant is crushed and paste is made from it by mixing with cow butter. The resultant paste is given orally to children against abdominal pain and to cattle against dysentery. Hot water extract is prepared by boiling the dried herb thoroughly in salt water. Extract is then used to wash feet and legs to cure chilblains and muscular pains respectively.
56	*Melia azedarach*	Meliaceae	Dharek.	Roots are bitter and used as antihelmintic. A decoction of leaves is said to be astringent and stomachic.
57.	*Morus nigra*	Moraceae	Tul kull	For Stomach problems, constipation,boils, burns and wounds. Ripe fruits are fondly eaten to cure stomach problems and constipation. Chewed fresh leaves are applied on boils as poultice to help in their ripening, bursting and evacuating the pus. Poultice is also applied on burns and wounds to stimulate healing.
58.	*Mallotus philippensis*	Euphorbiaceae	Kamella.	Loc The red powder obtained The red powder obtained from the surface of the fruits is used to cure mumps and measeals in children
59.	*Origanum vulgare*	Lamiaceae	Sathra	Leaves of the young plants are cooked as vegetable.
60.	*Oxyria digyna*	Polygonaceae	Kalashi	Uses: Leaves are sour, first boiled and then cooked as vegetable.
61.	Oxalis corniculata	Oxalidaceae	Peeli Khatti	Its sour leaves are cooked or made into chutney.booti
62.	*Picorhiza kurroa*	Scrophulariaceae	Koud	Rhizome is dried completely, grinded and converted into powder which is administered orally along with water as a best home remedy against round worms, intestinal infection and stomach disorders.

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				Powder is also mixed with wheat flour, gur and water and mixture is made into semi solid balls which are given to cattle especially horses against pneumonia , tape worms and to keep them healthy during cold season . Sometimes powder is mixed with sugar and packed in bottles which are placed in open sunlight to undergo fermentation. This fermented powder is given in case of weakness , whooping cough and joint pains.
63.	*Pinus roxburghii*	Pinaceae	Chirpine	Seeds are known to be edible by the locals during the scarcity of food.
64.	*Platanus orientalis*	Platanaceae	Chinar	Uses: Infusion of the roots is consumed as a beverage. It is said to have stimulating properties.
65.	*Podophyllum hexandrum*	Podophyllaceae	Bunkakri	Mature fruits are pear like and sweet in taste.
66.	*Plantago major*	Plantaginaceae	Bud Gulla	Leaves are taken as vegetable at some places. Dried seeds are added to warm water to make an infusion which is then kept in a open sky overnight. The cool infusion so prepared is then given on an empty stomach next day early in the morning to cure body pains , urinary irritation , dysentery , constipation and fever.
67.	*Podophyllum hexandrum*	Podophyllaceae	Wanwgun	Ripe fruit juice is eaten against stomach ulcers and dyspepsia . Powder obtained from dried root is administered orally along with water to overcome tumourous growths. Root powder is also mixed with oil to make paste which is a remedy to skin diseases such as rashes and eczema.
68.	*Polygonum amplexicaulis*	Polygalaceae**.**	Masloon.	Dried rhizome is used for making (Masloon) tea.This tea is used as tonic. The decoction (50ml) of the rhizome is taken once a day in the evening for treatment of rheumatic

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				pain, bachache and gout.
69.	*Pteridium aquilibrium*	Pteridiaceae	Kakaie	Boiled and roasted rhizome and young leaves eaten as vegetable and also for pickle preparation.
70.	*Prunella vulgaris*	Laminaceae	Kalaveuth	The leaves and flowers of this herb form an important ingradient of "Lossaghasa". It is thoroughly boiled in water to prepare hot water extract. Ladies after their deliveries are advised to have hot water bath after dilution with more water to cure headache , fever, body muscular pain and hair fall. Steam inhalation of this herb is used to cure migraine and to clear phlegm from chest hence reduces chest infections. Dried powder of flower is then mixed with edible oil to form paste which is applied on wound.
71.	*Punica granatum*	Punicaceae.	Daruna.	The powder of dry rind of fruit (5gms) is mixed with sugar and used three times a day for treatment of epidemic diseases such as diarrhoea and dyscentery. The bark powder is given stomachic, antiemetic and antihelmintic. Powder of dry flower (5gms) is given thrice a day with water for the treatment of all types of leucorrhoea in women. It is also given to cure vomiting due to pregnancy and diarrhoea.
72.	*Pyrus pashia*	Rosaceae	Kainth	Ripe fruits eaten.
73.	*Rhododendron arboreum*	Ericaceae	Hardulli	Fresh or dried flowers used for making chutney, squash and refreshing drink.
74.	*Rumex hastatus*	Polygalaceae	Khatimal.	A mixture prepared with the aqueous extract of leaves and vinegar in equal quantity is given thrice a day to cure jaundice and stone in kidney. The powder of dry leaves is used as refrigerant, diuretic and antiscorbutic. A mixture of fresh

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				leaves and seeds of *Punica granatum* equal quantity is given as a treatment of sunstroke.
75.	*Ricinus communis*	Euphorbiaceae	Harnoli	The powder of the seed is used as purgative for children. The hot leaves are applied over abdomen of children to relieve flatulence. The leaves are also made into poultice and used on poils. The dry seeds are crushed for extracting oil. The oil is given to children for checking constipation.
76.	*Saussurea costus*	Asteraceae	Kouth	Dried roots are grinded to obtain powder which is mixed with edible mustard oil to make paste . Paste is then warmed and finally used to cure skin diseases , arthritis and paralyses of body parts through external massages in exposed sunlight. Root powder is mixed with a mixture of crushed onion bulbs, gur and water and finally made into semi-solid balls which are given to cattle especially horses as tonic to keep them healthy during cold season. Root powder is also mixed with water and taken orally with water to overcome joint pains, stomach problems and to dissolve kidney stones.
77.	*Solanum nigrum*	Solanaceae	Makoy	Ripe fruits eaten.
78.	*Sonchus asper*	Asteraceae	Hundh.	Leaves are cooked and used for abdominal pain.
79.	*Solanum nigrum*	Solanaceae	Kachmach	The aqueous extract of the plant (20ml) is given thrice a day for treatment of chronic enlargement of liver, in bleeding piles and dysentery. The fruits are used to cure fever, diarrhoea, eye diseases and hydrophobia.
80.	*Thymus serculum*	Lamiaceae	Merchari	Seeds used in pickle.
81.	*Xanthoxylum alatum*	Rutaceae	Timbru, Timber	Young leaves and fruits used for making chutney, for flavoring the food.
82.	*Uritica dioica*	Urticaceae	Soi	Roots are dried, grinded amd made

S.No.	Botanical Name	Family	Local Name	Mode of Administration
				into powder which is applied externally to minor wounds and blisters to avoid infections and stimulate healing. Leaves are soaking in hot water are fried in oil after which curd and salt is added to make a special dish called Yakhni . It is taken with cooked rice to cure high blood pressure. Sometimes the plant is used to treat paralysed body parts by putting them on affaected parts.
83.	*Valeriana jatamansi*	Valerianaceae	Mushkibala	Roots after complete drying are stored for later use. They are grinded into powder which is taken orally with warm water against abdominal pain , worms , diarrhoea , fever and urinary disorders. Powder is also mixed with oil to make paste which is applied on wounds for healing.
84.	Viburnum grandiflorum	Caprifoliaceae	Guchh	Ripe fruits edible.
85.	*Verbascum thapsus*	Verbenaceae	Gidar tomaku	The dried leaves are smoked to remove irritation of the mucous membrane, the cough associated with bronchitis, asthma, whooping and spasmodic coughs in general. It can also be good for diarrhoea, inflammation of the urinary system. After placing bruised mulle in leaves in olive oil and leaving it for a period, the oil can be used for relieving pain of earache.
86.	*Vitex negundo*	Verbenaceae	Bana	The juice obtained by squeezing the young leaves is given for the treatment of gum diseases. It is also used to cure sore throat and diseases. Fresh leaves are used as bandage for pain in chest and back.

Table 18.2: Table showing list of other Medicinal plants in Poonch Forest Division:

Achyranthes bidentata Family : Amaranthaceae	*Ipomoea pilosa* Family : Convolvulaceae	*Stellaria aquatica* Family : Caryophyllaceae
Acorus calamus Family : Acoraceae	*Iris kemaonensis* Family : Iridaceae	*Symplocos crataegoides* Family : Symplocaceae
Adonis aestivalis Family : Ranunculaceae	*Juncus bufonius* Family : *Juncaceae*	*Tagetus minuta* Family : Asteraceae
Agropyron repens Family : Poaceae	*Justicia adhatoda* Family : Acanthaceae	*Tanacetum longifolium* Family : Asteraceae
Allium roylei Family : Liliaceae	*Leontopodium himalayanum* Family : Asteraceae	*Taraxacum officinale* Family : Asteraceae
Anagallis arvensis Family : Primulaceae	*Lonicera alpigena* Family : Caprifoliaceae	*Trachyspermum ammi* Family : Apiaceae
Anemone obtusiloba Family : Ranunculaceae	*Mariscus sieberianus* Family : Cyperaceae	*Trifolium repens* Family : Fabaceae
Anethum sowa Family :Apiaceae	*Mentha longifolia* Family : Lamiaceae	*Tulipa stellata* Family : Liliaceae
Arisaema jacquemontii Family :Araceae	*Micromeria biflora* Family : Lamiaceae	*Viola canescens* Family : Violaceae
Artemisia maritima Family :Asteraceae	*Morina longifolia* Family : Morinaceae	*Viola patrinii* Family : Violaceae
Artemisia scoparia Family :Asteraceae	*Nasturtium officinale* Family : Brassicaceae	*Viola serpens* Family : Violaceae
Bergenia legulata Family :Saxifragaceae	*Nepeta elliptica* Family : Lamiaceae	*Viscum album* Family : Viscaceae
Bidens pilosa Family : Asteraceae	*Nerium indicum* Family : Apocynaceae	*Withania somnifera* Family : Solanaceae
Bistorta amplexicaulis Family : Polygonaceae	*Olea ferruginea* Family : Oleaceae	*Xanthium strumarium* Family :Asteraceae
Bromus patulus Family : Poaceae	*Origanum normale* Family : Lamiaceae	*Hedera nepalensis* Family : Araliaceae
Bupleurum falcatum Family : Apiaceae	*Pergularia daemia* Family : Asclepiadaceae	*Heracleum candicans* Family : Apiaceae
Buxus wallichina Family: Buxaceae	*Phytolacca acinosa* Family : Phytolaccaceae	*Hydrocotyle javanica* Family : Apiaceae
Capsella bursa – pastoris Family : Brassicaceae	*Pistacia integerrima* Family : Anacardiaceae	*Impatiens roylei* Family : Balsaminaceae
Caralluma tuberculata Family: Ascalpidaceae	*Plantago lanceolata* Family : Plantaginaceae	*Ipomoea nil* Family : Convolvulaceae
Carpesium abrotanoides Family : Asteraceae	*Pleurospermum brunonis* Family : Apiaceae	*Solanum surrattense* Family : Solanaceae
Cichorium intybus Family : Asteraceae	*Polemonium caeruleum* Family : Polemoniaceae	*Solidago virga-aurea.* Family : Asteraceae
Clematis montana	*Polygala abyssinica*	*Spiraea canescens*

Family : Asteraceae	Family : Polygalaceae	Family : Rosaceae
Clinopodium vulgare Family : Lamiaceae	*Polygonum glabrum* Family : Polygonaceae	*Spiraea sorbifolia* Family : Rosaceae
Commelina benghalensis Family : Commelinaceae	*Polygonum nepalense* Family : Polygonaceae	*Stachys sericea* Family : Lamiaceae
Corydalis rutifolia Sibth Family : Fumariaceae	*Populas ciliata* Family : Salicaceae	*Sedum ewersii* Family : Crassulaceae
Daphne oleoides Family : Thymealaeaceae	*Prinsepia utilis* Family : Rosaceae	*Senopodophyllum hexandrum* Family : Podophyllaceae
Datura stramonium Family : Solanaceae	*Rabdosia rugosa* Family : Lamiaceae	*Sisymbrium irio* Family : Brassicaceae
Delphinium roylei Family : Ranunculaceae	*Ranunculus arvensis* Family : Ranunculaceae	*Solanum pseudo-capsicum* Family : Solanaceae
Digitalis purpurea Family : Scrophulariaceae	*Rhododendron campanulatum* Family : Ericaceae	*Rubus niveus* Family : Rubiaceae
Duchesnea indica Family : Rosaceae	*Robinia pseudo-acacia* Family : Fabaceae	*Rumex nepalensis* Family : Polygonaceae
Eleagnus umbellata Family: Elleaganaceace	*Rorippa indica* Family : Brassicaceae	*Salvia moorcroftiana* Family : Lamiaceae
Erigeron canadensis Family : Asteraceae	*Rorippa islandica* Family : Brassicaceae	*Sauromatum guttatum* Family : Araceae
Euphorbia pilosa Family : Euphorbiaceae	*Geranium nepalense* Family :Geraniaceae	*Rosa brunonii* Family : Rosaceae
Fagopyrum esculentum Family : Polygonaceae	*Geum roylei* Family : Rosaceae	*Rosa macrophylla* Family : Rosaceae
Ficus palmata Family : Moraceae	*Girardinia heterophylla* Family : Urticaceae	*Rubia cardifolia* Family : Rubiaceae
Fumaria parviflora Family : Fumariaceae	*Gnaphalium luteo-album* Family : Asteraceae	*Galium tenuissimum* Family : Rubiaceae
Galium rotundifolium Family : Rubiaceae	*Gentiana argentea* Family : Gentianaceae	

Table 18.3: Table showing the details about the medicinal plants used for Ethno-veterinary purpose:

S.No.	Botanical Name	Family	Local Name	Medicinal Uses	Description
1.	*Arisaema flavum*	Araceae	Hathbis	Milk deficiency	The rhizome is poisonous. The mixture of boiled rhizome and wheat flour is given to the cattles for increasing milk
2.	*Andrachne cordifolia*	Euphorbiaceae	Karukni	Diarrhea	Vermifuge for cattle
3.	*Euphorbia cognata*	Euphorbiaceae	Dodali	Goats Scabies	Extract and paste of fresh stem and leaves used as an

S.No.	Botanical Name	Family	Local Name	Medicinal Uses	Description
					effective poultice to cure skin disease of goats
4.	*Mallotus philippensis*	Euphorbiaceae	Kamilla	Abdominal worms	Red powder obtained from surface of the fruits is used medicinally to remove the Threadworms and Ascaris.
5.	*Aesculus indica*	Hippocastanaceae	Bunkhor	Chest diseases of horses	Nuts are colic, used for cure of chest diseases of horses, donkeys, mules, and given to the cattle as stimulant.
6.	*Debregeasia salicifolia*	Urticaceae	Sindari	Diarrhea	Leaves are given to the animals as a treatment of diarrhea and flatulence.
7.	*Acacia modesta*	Mimosaceae	Plahi	Delivery.	The bark decoction is mixed disorder in with butter and fed to buffalo cattle and cow for easy delivery and release of placenta.
8.	*Adhatoda vesica*	Acanthaceae	Bahkar	Intestinal worm	The decoction of root and leaves is given orally to hoof rot calves for elimination of intestinal worms as antihelmintic. The ash mixed with oil of sarsoon (*Brassica compestris* L. Brassicaceae) is applied to cure hoof rots and rubbed on skin as insect (Mosquitoes and flies) repellent.
9.	*Carissa caranta*	Apocynaceae	Garanda	Foot and mouth diseases of cattle (Mokahar)	Its root is mixed with pericarp of mango (*Mangifera indica* L. Anacadiaceae) in water and used as wormicide of intestine. Its leaves are crushed with honey and fed to give relief of foot and mouth disease (Mokahar) of cattle.
10.	*Cedrella toona*	Meliaceae	Toon	Diarrhea, Dysenter	Its bark is mixed with methi (*Trigonella foenicum* L. Fabaceae), seeds and yogurt and given orally to cattle and sheep for chronic diarrhea and dysentery.
11.	*Chenopodium album*	Chenopodiaceae	Ghanari	Skin disease	The decoction of whole plant with mokari (*Solanum surrattense* Benth. Solanaceae) is prepared and given orally to cure skin disease.
12.	*Melia azedarach*	Meliaceae	Dharek	Stomach	Seeds are crushed and mixed

S.No.	Botanical Name	Family	Local Name	Medicinal Uses	Description
				flatulence	with milk and given to cattle to cure fever and seasonal cough and increase appetite by lessening stomach flatulence and killing worms (helmintic).
13.	*Ricinus communis*	Euphorbiaceae	Harnoli	Prolapse of uterus	Seed oil mixed with decoction of jaman (*Cordia obliqua* Willd. Boraginaceae) leaves are given to cattle for constipation problems and increase appetite. Its leaf extract with damen (*Grewia* sp) bark fiber and fruit is frequently used for prolapse of uterus and easy delivery and to hasten release of after birth in buffalo.
14.	*Sassuria heteromala*	Asteraceae	koth	Stomach flatulence	The seeds are carminative for horses and also considered cure for horse bite.
15.	*Sorghum halepense*	Poaceae	Barron gass	Mastitis (swollen mammary glands	Root decoction is mixed with mud of pound and pasted on teats of cattle to cure mastitis while kalar booti (*Trichodesma indica*) is hung in middle of door of cattle room and buffalo and cow pass in and out under it, it is believed that as soon as mud-paste and this plant dry, the mastitis diminishes subsequently.
16.	*Trichodesma indicum*	Boraginaceae	Kalar booti	Snake bite	Its root decoction is used and mastitis against snake bite poison while its leaves poultice is effective against inflammation and swellings. It is also used to cure mastitis in combination with other plant
17.	*Taraxacum officinale*	Asteraceae	Handd	Milk deficiency	The whole plant is fed to cattle and goats with leaves of Plahi (*Acacia modesta*) to increase the milk production.
18.	*Rhamnus purpurea*	Rhamnaceae	Dadralu	Abdomina worms	Fresh fruits and leaves are given to the cattle as antihelmint

18.4. Marketing status of medicinal plants:

18.4.1. The inhabitants of Poonch district sell a few medicinal plant species in the local market commercially. These plant species are collected in the area during April to August. Only a few species like *Trichodesma indicum* (Tripatri), *Trillidium govanianum (*Nagchhatri*) , Morchella esculenta* (Guchi), *Allium humile (*Jungli Thom*) , Berberis lyceum (*Kali Sumbali*) , Dioscorea deltoidea (*Kala Ganda*), Mentha longifolia (*Pudina*), Saussurea costus (*Kouth*), Polygonum amplexicaulis (*Masloon*) , Viburnum grandiflorum (*Guchhi*), etc.* of them traded in national markets while rest was used locally.

18.4.2. The medicinal plant species are under intense pressure; as market provide main source of supply to herb trades and herbalists practicing in urban areas. The species like *Abies pindrow, Berberis lyceum, Bergenia ciliata, Caryopteris odorata, Dioscoria deltoidea,Gallium elegans, Geranium wallichianum, Mallotus philippensis, Pistacia integerrima, Punica granatum,Rumex hirsuta, Trichodesma indicum, Viola biflora,Zanthoxylum alatum, Ziziphus oxyphylla, Sapindus saponaria and Daphne papyracea* are traded to local and national markets.However, the population of the medicinal plants drastically decreased due to the high rate of population growth, stimulus of commercial trade in the medicinal plants and increased marketing pressure on the medicinal plants. It was also observed that the potential area of the valley visited by the commercial gatherers (Nomad and Quack) during summer and raining season with their goats and sheep herds collect useful medicinal plants.

18.4.3. List of plants which are banned for export vide Government of India Notification No. 2(RE-98)/1997-2002, Dated: 13/04/1998 has been provided in Appendix.

18.5. Need for government intervention:

18.5.1. Medicinal Plants' Sector offers immense potential for economic activity by providing income-generating opportunities to a very large section of the rural population of the state through the conservation & sustainable use of the natural resources. Success stories of Medicinal Plants based economic enterprise of China and other South-East Asian countries are well known.

18.5.2. A State like Jammu and Kashmir has better growing conditions which harbours rich natural plant species. There are other factor endowments like the traditional skill of people in use of Medicinal Plants, available labour, huge internal and export market (after addressing the Biodiversity / Access to Benefit sharing concerns of local communities) and a good transport network. To fulfil the above vision, the Forest Department, based on its Joint Forest Management Principles, should develop medicinal plant conservatories in different agro-climatic zones as has been done in Karnataka by involving local communities in protection and management of forests and in benefit sharing. Since the local people are the custodians of both the medicinal plant knowledge and the resources, their participation in conservation of medicinal plants is essential for long-term cooperation and sustainability. This model has worked well in certain places in the State of Karnataka. Failure at a few sites is due to non-continuity of committed and trained personnel of the

Government, and lack of co-ordination between Government personnel and the members of the Joint Forest Management Committee. For Example the medicinal plant conservatory park established in Shimoga (Karnataka) has been successful largely due to continuation of Department personnel and active participation of local people.

18.5.3. It is recommended to form a MPCA (Medicinal Plant Conservation Area) in Hassan- Tham area of Pir-Panjal mountains in Surankote Range because this area abounds in endangered and rare medicinal plan species like *Podophyllum hexandrum , Trillidium govanianum , Diplazium spp. , Viburnum spp.* , etc.

18.5.4. There are schemes and programmes of central as well as state governments towards this objective, which somehow, have been of limited applicability only and could not create an environment for the desired level of urgency of conservation and sustainable economic activity to take off. Enormous advantage from this Sector can be derived, if the State Government takes timely and proper initiatives.

18.6. Activities and programmes to be implemented:

18.6.1. A broad outline of the activities and programmes to be implemented is as follows: The executive staff of the Department should implement activities of policy, planning, coordination and promotional nature. Specialized activities should be implemented through the ground level functionaries of the department:

Assessment and periodic monitoring of the resource:

- Assessment of growing stock.
- Mapping of medicinal plants forests.
- Monitoring changes in the status of the resource base.
- Create and maintain a database on the resource.
- Establishment of herbal gardens.

Development of resource:

- Sustainable management of medicinal plants forests
    - Silvicultural practice based on working scheme.
- Enhancement of productivity
    - Adoption of modern nursery practices.
    - Introduction of suitable exotic species.
    - Clonal multiplication.
- Creation of medicinal plants plantations.
- *In-situ and Ex- situ* conservation of endemic and threatened species.
- The Forest Department will raise plantations.
- Institutions like JFM committees, NGOs will be encouraged to create Medicinal Plants plantations and then to set up small scale enterprises. The Forest Department, based on the grants received from the above resources may provide funding support for such activity.

Utilization & economic enterprise:

- Development of cottage and small scale industries.
- Promotion of medium to large scale industries.
- Market Information Support.
- Developing marketing infrastructure.
- Export promotion.

Extension & training:

- Organize training for processing of raw material and use of machines.
- Training for plantation and its management.
- Setting up of demonstration centres.
- Awareness programmes.

Miscellaneous:

- At a later stage, provision for levying a cess on the Medicinal Plants based trade may be made for generating revenue for the Forest Department.

Financial implication:

- The Forest Department should endeavor to secure funds from the institutions like NEC, MoEFCC, National Medicinal Plants Board, Jammu and Kashmir State Medicinal Plant board, etc for the activities like training and extension programmes, establishment of demonstration centers, Technology Development & Market Information System etc.

18.7. Jammu and Kashmir state medicinal plants board:

18.7.1 In order to develop the potential sector of medicinal plants, National Medicinal Plants Board has been constituted under Ministry of Health and Family Welfare, Government of India. Directorate of I.S.M. acts as a Nodal agency for Jammu and Kashmir State Medicinal Plants Board which has been set up in the State in 2001 with a view to ensure conservation, development and a marketing of Medicinal plants and to coordinate, monitor and give directions in accordance with the policies of National Medicinal Plants Board (NMPB) Department of AYUSH, Government of India.

18.8. Discussion and conclusion:

18.8.1. Exploitation from wild results in depletion of resource bases endangering the species. Realizing the importance, it has been felt necessary to undertake both *in-situ,* as well as *ex-situ* conservation. *Ex-situ* conservation may be done in the form of depositing the live materials in the gene bank, establishing field gene bank and also promoting cultivation of medicinal plants.

18.8.2. Vegetative propagation by cuttings, some specialized structures like suckers, rhizomes, tubers etc. and sexual propagation through seeds are being followed for the multiplication of the collected materials. All the plants were found to be used by the local people of the area for the treatment of various ailments. People use these plants in different forms such as juice, extract, decoction, paste, infusion, powder, etc.

18.8.3. Medicinal Plants are generally collected in an unorganized and unscientific manner and used in the state mostly in herbal formulations. Capabilities in the form of 'Good cultivation and Collection Practices', 'Good Manufacturing and Marketing practice's etc. are absent in the State. In view of fast growing demand for the medicinal plants for the use in Pharmaceuticals, Cosmetics, Dietary Supplements etc. Both at National as well as International level, implementation of the projects and the schemes meant for cultivation, collection, R&D, awareness, commercial supply of the medicinal plants for generation of income and employment while ensuring conservation of endemic and threatened species through the sustainable use is the urgent need of the hour.

18.9. Resin extraction and tapping:

18.9.1. Special objects of management: The object of management is to obtain sustained yield of resin without harming chir crop.

18.10. Past working:

18.10.1. Most of the areas under chir crop were taken up for resin extraction on large scale during 1970's.

18.10.2. 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 onwards.

18.10.3. Past resin extraction details:

Table 18.4: Table showing past Resin Extraction of Poonch Forest Division Details w.e.f. 1999-2000 to 2003-04

S.No	Year	Number of Blazes	Extracted in Tins	Revenue realized (Rs)	Expenditure Incurred (Rs)
1	1999-00	98655	16405	5124043	2550268
2	2000-01	87934	16941	3445053	3200000
3	2001-02	79429	15570	5794296	2434999
4	2002-03	61843	11032	3143674	2550619
5	2003-04	61843	12332	4892426	1987993
6	2004-05	No extraction of resin has been done			

18.10.4. Resin tapping not been done as per prescribed norms and regulations in the past. During the currency of French up and lip method, it was misunderstood that deeper the cut and more than resin yield. The field staff and the tappers could not be made to understand that resin exists 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.

18.10.5. 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 conc., 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 already done with technical precision.

18.10.6. 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.

18.11. Method of extraction:

18.11.1. 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 interspaces of 10cms. Later on when the earliest incisions made get healed up them the interspaces 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.

18.11.2. 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.

18.11.3. 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 above 15 cm from 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 year's blaze and position of the blaze is marked just above the previous year's blaze. Rest of the operations of first year is 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 interspaces of 7.5 cms.

18.11.4. Length of the channel and its height above ground level:

Year	Length of initial	Channel cms refreshned	Total	Height of Channel	
				From bottom space left between ground level and channel	Up to top of channel
1	0	34	34	15	49
2	34	34	68	15	83
3	68	34	102	15	117
4	102	34	136	15	151

18.11.5. 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.

18.12. Resin channel survey:

18.12.1. Objective: To ascertain the suitability of Chir crop for resin tapping in future.

18.12.2. Methodology:

a. 95 plots were randomly selected from Substratum I (Chir areas).

b. 0.1 ha. Area plot was laid and all Chir trees of exploitable diameter i.e. 40-50 cm dia. and above were plotted.

c. A total of 248 trees were mapped in the survey.

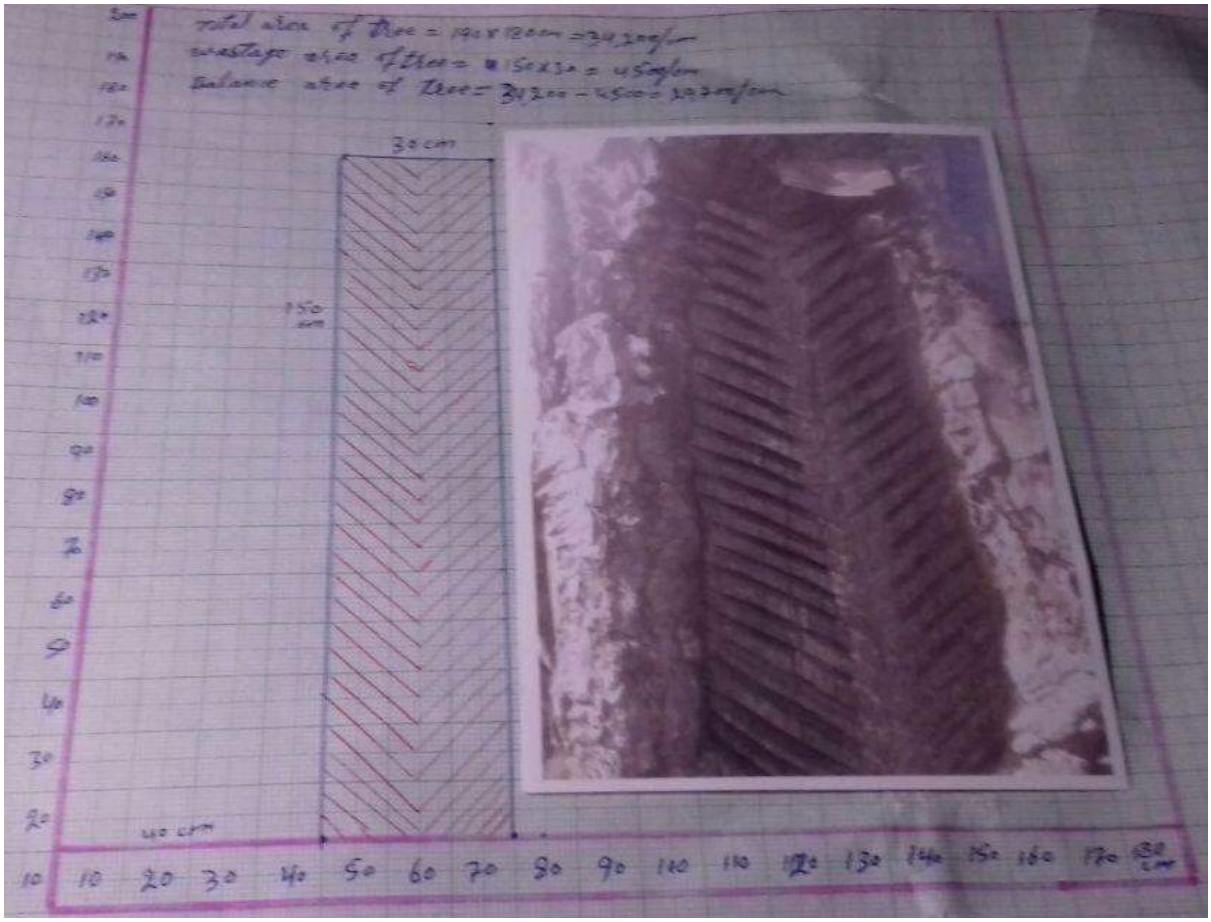
d. The surface area of each tree from 10 cm above ground to height of 2 meter was mapped and plotted on a graph sheet showing the area of blazes across the girth.

e. From the graph sheet, effective area available for further exploitation was calculated and inference was drawn which also includes the general condition of the tree and its vulnerability.

18.13. Results of resin channel survey exercise:

18.13.1. Resin channel survey exercise was undertaken by the field parties during the course of this revision of the plan a total of 95 sample plots were surveyed in Chir areas of the Division. A total of 248 trees in all Dia classes over the entire division were surveyed.

Range	No. of Plots	Total No. of trees	Fit Plots	Unfit Plots
Mendhar	82	174	13	69
Haveli	13	74	02	11
Surankote	00	00	00	00
Total	95	248	15	80



Pic 18.13 : Pictures showing the Resin Channel Survey Exercise.

18.13.2. Detail of Resin Channel Survey Exercise:

Table 17.5: Table showing Range/Compartment wise detail of Resin Channel Survey in the respect of Poonch Forest Division:

Plot no.	No. of trees (> 40 cm)	Range	Comptt. No.	Remarks
0	0	Mendhar	51a/M	Unfit for resin tapping
1	0	Mendhar	45a/M	Unfit for resin tapping
2	01	Mendhar	45a/M	Fit for resin tapping
3	0	Mendhar	47/M	Unfit for resin tapping
4	0	Mendhar	32/M	Unfit for resin tapping
5	05	Mendhar	31/M	Fit for resin tapping
6	04	Mendhar	29/M	Unfit for resin tapping
7	01	Mendhar	23/M	Unfit for resin tapping
8	06	Mendhar	23/M	Unfit for resin tapping
9	5	Mendhar	3/M	Unfit for resin tapping
10	06	Mendhar	3/M	Unfit for resin tapping
11	0	Mendhar	38/M	Unfit for resin tapping
12	05	Mendhar	37/M	Fit for resin tapping
13	05	Mendhar	40a/M	Unfit for resin tapping
14	01	Mendhar	40/M	Unfit for resin tapping
15	03	Mendhar	34b/M	Unfit for resin tapping
16	00	Mendhar	34/M	Unfit for resin tapping
17	0	Mendhar	34/M	Unfit for resin tapping
18	0	Mendhar	34/M	Unfit for resin tapping
19	02	Mendhar	41/M	Fit for resin tapping
20	0	Mendhar	41/M	Unfit for resin tapping
21	01	Mendhar	39/M	Unfit for resin tapping
22	0	Mendhar	42/M	Unfit for resin tapping
23	03	Mendhar	42/M	Fit for resin tapping
24	03	Mendhar	62/M	Unfit for resin tapping
25	0	Mendhar	61/M	Unfit for resin tapping
26	02	Mendhar	73/M	Unfit for resin tapping
27	05	Mendhar	58/M	Unfit for resin tapping
28	15	Haveli	121a/M	Fit for resin tapping
29	05	Haveli	121b/M	Fit for resin tapping
30	0	Mendhar	94/M	Unfit for resin tapping
31	03	Mendhar	9a/M	Unfit for resin tapping
32	01	Mendhar	12/M	Unfit for resin tapping
33	06	Mendhar	13/M	Fit for resin tapping
34	0	Mendhar	12/M	Unfit for resin tapping
35	03	Mendhar	13/M	Unfit for resin tapping
36	0	Mendhar	14/M	Unfit for resin tapping

Plot no.	No. of trees (> 40 cm)	Range	Comptt. No.	Remarks
37	0	Mendhar	13/M	Unfit for resin tapping
38	01	Mendhar	14/M	Unfit for resin tapping
39	03	Mendhar	18/M	Unfit for resin tapping
40	02	Mendhar	27/M	Unfit for resin tapping
41	05	Mendhar	25/M	Unfit for resin tapping
42	0	Mendhar	24/M	Unfit for resin tapping
43	07	Mendhar	25/M	Unfit for resin tapping
44	07	Mendhar	24/M	Unfit for resin tapping
45	0	Mendhar	25/M	Unfit for resin tapping
46	0	Mendhar	64/M	Unfit for resin tapping
47	0	Mendhar	07/M	Unfit for resin tapping
48	02	Mendhar	07/M	Fit for resin tapping
49	0	Mendhar	07/M	Unfit for resin tapping
50	0	Mendhar	75/M	Unfit for resin tapping
51	06	Mendhar	75/M	Fit for resin tapping
52	0	Mendhar	76a/M	Unfit for resin tapping
53	0	Mendhar	75/M	Unfit for resin tapping
54	08	Mendhar	76b/M	Fit for resin tapping
55	0	Mendhar	79/M	Unfit for resin tapping
56	05	Mendhar	79/M	Unfit for resin tapping
57	03	Haveli	115/H	Unfit for resin tapping
58	09	Haveli	114a/H	Unfit for resin tapping
59	03	Haveli	114b/H	Unfit for resin tapping
60	04	Haveli	113/H	Unfit for resin tapping
61	14	Haveli	12/H	Unfit for resin tapping
62	04	Haveli	113/H	Unfit for resin tapping
63	02	Mendhar	62/M	Unfit for resin tapping
64	0	Mendhar	63/M	Unfit for resin tapping
65	05	Mendhar	73/M	Unfit for resin tapping
66	08	Mendhar	115/M	Unfit for resin tapping
67	0	Mendhar	71/M	Unfit for resin tapping
68	0	Mendhar	71/M	Unfit for resin tapping
69	0	Mendhar	71/M	Unfit for resin tapping
70	04	Mendhar	63/M	Fit for resin tapping
71	06	Haveli	116/H	Unfit for resin tapping
72	05	Haveli	116/H	Unfit for resin tapping
73	04	Haveli	119/H	Unfit for resin tapping
74	04	Haveli	115a/H	Unfit for resin tapping
75	00	Mendhar	32/M	Unfit for resin tapping
76	02	Mendhar	35/M	Unfit for resin tapping
77	05	Mendhar	10/M	Unfit for resin tapping

Plot no.	No. of trees (> 40 cm)	Range	Comptt. No.	Remarks
78	0	Mendhar	44/M	Unfit for resin tapping
79	01	Mendhar	44/M	Unfit for resin tapping
80	0	Mendhar	39/M	Unfit for resin tapping
81	0	Mendhar	51b/M	Unfit for resin tapping
82	08	Mendhar	51a/M	Fit for resin tapping
83	0	Mendhar	51b/M	Unfit for resin tapping
84	07	Mendhar	51b/M	Fit for resin tapping
85	02	Mendhar	51a/M	Fit for resin tapping
86	03	Mendhar	03a/M	Unfit for resin tapping
87	04	Mendhar	03a/M	Unfit for resin tapping
88	02	Mendhar	03/M	Unfit for resin tapping
89	02	Mendhar	03b/M	Unfit for resin tapping
90	04	Mendhar	03b/M	Unfit for resin tapping
91	03	Mendhar	03b/M	Unfit for resin tapping
92	03	Mendhar	03a/M	Unfit for resin tapping
93	05	Mendhar	03a/M	Unfit for resin tapping
94	04	Mendhar	03b/M	Unfit for resin tapping

18.14. Findings:

1. The crop has been over exploited for resin tapping.
2. Blazes have been indiscriminately placed on the trees leading to virtual girdling of trees in many cases.
3. Most of the trees exploited for resin tapping were found to have been affected badly by fire.
4. Most of the dead fallen Chir trees are of higher exploitable Dia. classes. These were found to be affected by fire and over-exploited for resin.
5. No. of trees in exploitable dia. classes which have still not tapped for resin is very less.

It is well known fact that extraction of resin makes Chir forests vulnerable to forest fires especially when acid is used for increasing resin yield. Large scale damage to trees during forest fires in past years in Chir areas can be attributed directly to the deep gashes(not healed up) made in cup and lip method for Resin extraction, which has exposed the resinous portion of the tree and made them vulnerable to fire.

18.15. Conclusion & prognosis:

18.15.1. A complete rest is prescribed for the Chir crop for a minimum period of 10 Years (i.e. during the period of the plan in 2016-17 to 2025-26), so that the lower dia. classes move into the exploitable Dia. classes and a decision should only be taken after fresh surveys during next plan.

Chapter–XIX

Working Plan for Grazing (Overlapping) Working Circle

19.1. General description and character of the vegetation:

19.1.1. The Poonch forest division has abundant grasslands. There is a sizeable area under pasture land in the subtropical, alpine and sub-alpine zones. These pastures lands are mostly devoid of tree growth and sustain a variety of medicinal herbs and shrubs, and palatable and unpalatable grasses.

19.1.2. Sub-Tropical grasslands: This sub-type occurs between 900 metre to 1800 metre elevation in the whole of Mendhar Range and Jhallas and Lassana blocks. Here chir forms the top canopy. The predominant perennial grass species mainly found here are *Cymbopogon spp , Cenchrus Ciliaris , Arundinella Intricata , Eulalia Mollis , Agrostis Alba.* , *Eulaliopsis binata, Bothriochloa intermida, Heteropogon contortus* and *Chryopogon fulvus*. Important annual grass species are *Apluda mutica* and *Eragrostis unioloides*.

19.1.3. Temperate alpine type: This type occurs in temperate areas of this division like surankote, bufliaz and adjoining areas, Danna shastaar. The principal perennial species are *Dactylis Glomerata ,Festuca spp.,Agrostis spp. , Clamagrostis spp.,Bromus spp. , Themeda spp., Danthonia spp.,*etc.Alpine and subalpine pastures are abundant mainly in the Pir Panjal range . Areas like Girjan gali, Panjtari, lakes' area abounds in such pastures. Numerous nomadic herds reach there to graze every year during summers and under heavy pressure these are fast depleting. Uncontrolled grazing and browsing does not allow the herbs and greases to flourish. The better palatable species are thus diminishing. Besides erosion is rampant which shrinks grassland extent.Grasses mainly found are *Agrostis Canina , Alopecurus Himalaicus , Stipa Sibirica ,Bothriochloa pertusa , Chrysopogon echinulatus , Dactylis Glomerata , Phleum Alpinum , Poa Bulbosa , Poa sterilis*

19.1.4. Due to large number of ever increasing grazing animals in the locality, most of the fir forests of this division have suffered heavily on account of unrestricted, uncontrolled and unregulated grazing. Since these grazing lands carry more than the optimum number of live stock, a pronounced depletion of the palatable grass species has taken place, accompanied by an invasion of unpalatable species and obnoxious weeds. The grazing lands, as result of over grazing, exhibit a depleted and degraded look. Such kind of grazing is not only inimical to the regeneration of conifers, but is also responsible for the deterioration of pasture lands.

19.1.5. During the reign of Maharaja as mentioned in the Working Plan of Hayat Khan the Deodar forests in Mandi were closed to goats. Besides quite a few other forests in Haveli and Mendhar range were closed to grazing. The entire forest tract is subjected to uncontrolled and unrestricted grazing both by local and nomadic cattle. The number of these Cattle has gone beyond the carrying capacity of these forests. This is the main cause of the failure of the natural regeneration. Hence due to excessive grazing in Chir Forests the overall condition of regeneration is quite unsatisfactory. Due to grazing not only the seedlings and

young samplings are browsed but also the soil get trampled due to continuous movement of grazing and browsing of cattle causing varying degree of soil erosion.

19.2. Incidence of grazing: The incidence of grazing in the forests of this division is roughly estimated on the basis of total number of animal units grazing in these forests vis-à-vis the area of the forests including pasture lands. For calculating the total number of animal units the following conversion factors have been applied:

1 cattle (cow- ox)	1 animal unit
1 Calf (less than a year old)	½ animal unit
1 Horse/ Pony	1 animal unit
1 Buffalo	2 animal units
1 Sheep	½ animal unit
1 Goat	½ animal unit
1 Others	1 animal unit

As per the data of livestock provided in 1.10.3. (fluctuating live stock population grazing in the forests of Poonch forest division enumerated by the territorial division) of Part-I roughly about 16357 cattle units have utilized the forests for grazing needs and similar number is brought into the forests by the migratory graziers during their seasonal movements.The actual number may be quite above as possibility of livestock in comparatively developed residential blocks grazing in forests cannot be denied. This figure is far beyond the carrying capacity of the existing grass lands and pastures.

19.3. Sharing of grazing lands:

19.3.1. Traditionally the migratory graziers 'share' the grazing lands among themselves. They treat the common property resources as their own traditional property and treat it accordingly. They use to 'sell', 'mortgage' and 'transfer to their wards'. As there are many disputes among the people in using the grazing lands. Always there are quarrels among the nomadic and locals and between the groups as well.

19.4. Collection of grazing fee:

19.4.1. The forest department collects the grazing fees *only* from the nomadic graziers. The Block forest officer and the forest guards used to reach the alpine pastures and collect the grazing fee from the migratory graziers as per the rates announced by the Government for this purpose. The grazing fees is also collected and verified in the grazing check posts.

19.5. Duration of stay in the alpine pastures:

19.5.1. The migratory graziers leave the plains on the onset of summer to avoid the scorching sun and reach the cool alpine meadows. Their stay in alpine pastures is determined by availability of forage in the alpine as well as in plains. During the good monsoon years in the plains, the graziers tend to scale down from the alpine pastures by early September and reach the plains by October. During drought years, they prolong their stay at alpine pastures upto mid October.

19.6. Grazing by local people:

19.6.1. The local people are also rearing livestocks sufficiently to meet the demands. They use the grazing lands located close to their hamlets. Mostly they restricted to sub alpine pastures. They used to cut the grasses from the blank areas of the forest during October and dump the grasses in their backyards to feed their animals during peak winter, as the entire area would be covered with thick blanket of snow. The grass cutting activity is causing the most deleterious effects to the regeneration of forest both directly as well as indirectly triggering soil erosion.

19.6.2. Excessive grazing has aggravated the problem of soil erosion, which has further degraded the grasslands. To supplement the inadequate supply of grass, leaf fodder from a number of tree species is procured by the local population for feeding their livestock. As a result, fodder trees are being mercilessly lopped for the said purpose.

19.7. Method of treatment:

19.7.1. Over grazing is a major and very complicated problem, which is causing main hurdles in the successful regeneration of Fir forests. Being a socio-economic problem, it has to be tackled accordingly. It calls for the active considerations of all the agencies, government, non-government, people and politics connected directly or indirectly with this problem. Therefore, the following method of treatment is suggested:

19.7.2. A detailed survey of all pasture lands should be carried out with respect to their carrying capacity and actual incidence of grazing. Grazing plan for the division be prepared in consistence with the Grazing Policy of the state. Grazing should, at the earliest be regulated and controlled on scientific lines under the proper plans required to be drawn up at micro levels.

19.7.3. All efforts should be made to scale down the population of unproductive cattle by encouraging the introduction of high yielding varieties of the cattle, and castration of unproductive cattle. The departments concerned with improvement of livestock are required to be actively involved in this stupendous task.

19.7.4. Till such time, a balance between the live stock population and carrying capacity of the grazing lands is struck, the live stock should be stall-fed with forage and other concentrates from various sources. 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.

19.7.5. Rotational grazing: Rotational grazing “involves dividing the range into several pastures and then grazing each in sequence throughout the grazing period”. Utilizing rotational grazing can improve livestock distribution while incorporating rest period for new forage.

19.7.6. Rest rotation grazing: Rest rotation grazing "divides the range into at least four pastures. One pasture remains rested throughout the year and grazing is rotated amongst the

residual pastures." This grazing system can be especially beneficial when using sensitive grass that requires time for rest and re-growth.

19.7.7. Deferred rotation grazing: Deferred rotation "involves at least two pastures with one not grazed until after seed-set". By using deferred rotation, grasses can achieve maximum growth during the period when no grazing occurs.

19.7.8. 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.

19.7.9. The local population needs to be encouraged for raising grasses and fodder yielding tree species on their private lands, in order to ease the excessive grazing pressure on the forests.

19.7.10. Plantation of Palatable grasses, Shrubs and legumes can be taken up in the blanks near the habitations and along the migratory routes of Nomadic graziers. There are vast expenses of blanks and at times complete stretch of compartments is almost blank. As per the availability of funds DFO-Territorial can select areas preferably near to habitations and plant various fodder species which are high yielding and can improve the carrying capacity of area. In this context DFO-Social Forestry, District Soil Conservation Officer, Agrostology wing can play an important role.

19.7.11. The pasture lands, at present, require much intensive management on scientific lines for the overall betterment of the forests.

19.8. Important Migratory Routes used by nomadic communities:

19.8.1. Movement of Nomadic Graziers from winter pastures in low lying areas to highland summer pastures with a start of spring is an age old practice. Gujjars and Bakarwals are two such communities which practice such life style. Some local people also move along with their cattle from their homes to temporary summer houses (Dhoks) in upper areas. Important Dhoks of Poonch Forest Division are : Hasan Tham , Mastan , Seri , Girjan Gali , Panjtari , Topi Pir, etc.

19.8.2. Various Migratory routes of nomadic graziers from district Poonch are as under:

1. Sunderbani to Beri Pattan to Seri to Nowshera to Chingus to Rajouri to Thanamandi to Dera ki Gali to District Poonch.
2. From Surankot to Behramgala to Girjan Gali.
3. From part of Sunderbani while reaching at Thanamandi by route of Ratan Pir to District Poonch.
4. From part of Sunderbani while reaching at Rajouri by Manjakot to Bimbher Gali to District Poonch.
5. Rajouri to Thanamandi to Ratan Pir to District Poonch.
6. Rajouri to Thanamandi to Kuth wali Gali to Disctrict Poonch.

19.9. Welfare measures need to be taken for nomadic communities:

19.9.1. Gujjars and Bakerwals are hard working community who supply most of the milk and milk products to the people in cities and villages and thus, play an important role in the economy of the state. Their other demands such as Inclusion of Gojri language in the 8th Schedule of the Constitution, construction of dwelling units, free vaccination of animals, healthcare centres, availability of power and water in their areas (dhoks)etc. too need to be considered on priority to better their condition.

19.9.2. Special Camps must be organised to prepare their PRCs and ST Category Certificates. Moreover, efforts must be made to bring their animals and flock of sheep and goats under insurance cover to compensate their loss due to heavy rain/snow or wild animals, accidents while moving on the roads, steep hills etc. But it must be ensured that these benefits percolate to the lowest level and the poorest of the community are uplifted to enable them to live an honourable life.

19.9.3. These people have no permanent addresses hence they have got no land allocation for housing purpose. With no proof of residence or property ownership certificates, they are not in a position to avail ration cards and have not been included in the BPL list. Thus this issue needs to be addressed at its earliest.

19.9.4. Their literacy rate is low and they often remain deprived of educational and other facilities due to their being nomadic. Though the Government has started welfare schemes such as Gujjar and Bakarwal Hostels, Mobile Schools etc, for the people of this community, these welfare measures are insufficient in view of the hardships faced by this community. Thus promoting literacy among these should be a great thing as it will also bring awareness about their rights. Better knowledge and awareness will make them an important stakeholder in Forest and Wildlife protection.

19.9.5. With no certification of their residence, they also face a lot of trouble in getting the caste certificate, which results further in not being able to avail government welfare schemes. Thus special campaigns for providing them Caste certificate should be organised regularly.

19.9.6. During their seasonal migration the Nomadic graziers face numerous problems such as bad weather , lack of proper halting places , shortage of fodder and water , lack of proper paths for movement , lack of Medicare for Human and livestock , etc. Traffic of vehicles on roads also poses a number of problems.

19.9.7. Among the extremely patriarchal nomadic communities there is hardly any protection for women, and the progressive property laws and laws for the dignity of women have virtually no relevance to the women in these communities. Living utterly undignified lives in destitute conditions, they are subject to maltreatment and abuse.

19.9.8. It is also recommended that a senior police officer at the district level be specially authorised to hear the grievances of misuse of law against the members of these communities.

19.9.9. For improving their Socio-Economic status it is recommended that special market zones may be developed at suitable places in large cities, giving them priority in the allocation of space.

19.10. Erosion control in grasslands:

19.10.1. Overgrazing reduces vegetative cover and also causes compaction of soil. Both these factors contribute towards accelerated soil erosion. In Poonch Forest Division, pastures are generally located in the uppermost reaches of the mountains. Thus, the phenomenon of erosion which is initiated in these pasture lands, assumes enormous proportions in the downhill areas. Therefore, it is very important to initiate soil and water conservation measures in the high pasture lands. The following methods are hence prescribed.

19.10.2. Contour furrows: Contour furrows are small channels or excavations, constructed on contours to store water and allow it to be held inside the ground level. The excavated material is put on the downstream side. Sites with long uniform and gentle slopes are found to be more suitable for constructing contour furrows. It is not recommended on steep slopes. The furrows are normally 10 to 20 cm wide and 10 to 15 cm deep and spaced 100 cm to 200 cm apart.

19.10.3. Contour trenching: Contour trenching is also one of the mechanical measures for conservation of soil and moisture. This involves excavation of trenches along the contour, or across the slope of the land, generally in the top portions of the catchment. Contour trenching on very steep slopes is not practicable. Land with slope more than 20 percent is generally not contour trenched. The trenches are not more than 15 metres long and are usually staggered throughout the area. In cross sections, they are 30 cm deep and 30 cm or 60 cm wide. The trenches should run perfectly level so as not to allow the trenches to be converted into gullies. The soil excavated in trenching is used to form a bund on the downstream side leaving a berm equal to the depth of the trench.

19.10.4. Control of gullies: Gullies are normally formed when the rill and sheet erosion continues unchecked. It usually begins in areas with natural depressions, livestock trails etc. Overgrazing, intense rains and faulty land management practices are responsible for gully formation. The following measures are suggested for the control of gullies.

19.10.5. Construction of contour and peripheral bunds: To check the growth of gully formation and to control soil erosion, the first thing that needs to be done is to prevent the water from entering the gully. This can be done by retaining as much water in the catchment area as possible, and to safely dispose off the excess runoff. For this purpose contour and peripheral bunds may be constructed. Excess runoff can be disposed off safely by digging diversion channel above the gully head.

19.10.6. Easing of the head of the gully: To prevent the water fall erosion and eating back of the gully, one of the measures is the easing of gully head. This can be done by partly cutting at the top and filling the base. The head can be sloped to the angle of repose required by the soil.

19.10.7. Gully plugging: Gully plugs are structures designed to halt the upstream progress of gullies by reducing the grade at the top of the slope which, when paved or protected, will allow the drainage to get from the upper to the lower level without further erosion. These are constructed to check the velocity of runoff, to increase percolation and to encourage silting. Vegetation can be established on such silted areas. Various materials can be used for construction of gully plugs such as brush wood, live hedges, earth, sandbags and boulders.

19.10.8. Pasture improvement: The best way to rehabilitate and develop the rangeland is to manage it on ecological principles. By mere closing of the area and adoption of controlled grazing, rangeland improvement is not possible. Reseeding of range is resorted to only when the grass regeneration is inadequate, native vegetation has disappeared and the range is required to be improved quickly. Some of the species suitable for difference zones of Poonch forest division are listed overleaf.

Table 19.1: Table showing list of the Sub-tropical species suitable for difference zones of Poonch forest division:

Cymbopogon coloratus	Cymbopogon martini
Sehima nervosum	Themeda triandra
Brachiaria mutica	Cenchrus ciliaris
Chloris gayana	Dichanthium annulatum
Arundinella nepalensis	Arundinella bengalensis
Eulaliopsis binata	Paspalum dilatatum
Themeda anathera	Panicum anidoale
Heteropogon contortus	Chrysopogon fulvus
Apluda mutica	Pennisetum pedicellatum

Table 19.2: Table showing list of the Temperate species suitable for difference zones of Poonch forest division:

Cocks foot	Phalaris tuberosa
Bromus inermis	Poa pratensis
Lolium multiflorum	Festuca elatior

19.11. Method of seeding:

19.11.1. The most economical and quickest method of sowing the seeds is by broadcasting. Broadcast sowing is suitable for light, fluffy soils, especially those which have been loosened by frost action. The cracks in the soil act as gaps for receiving the seeds. Broadcast sowing has been found to be more effective if the soil is covered by brush drag or harrows after sowing.

19.11.2. Grass seeds are very small in size and light in weight. There is a risk of their being washed or blown away by the currents of water or wind. This can be avoided by sowing of palletized seeds. The seed is processed into small pellets which are easy to handle and are less vulnerable to be blown away by wind or water. A homogenous thick paste is prepared

by incorporating seeds in the mixture of sand, clay, cow-dung and fertilizer in the ratio of 3:1:1:1 and using sufficient quantity of water. Pellets, or small balls of convenient size, are prepared in such a way that each pellet contains 2 or 3 seeds. The pellets are meant to give the seedling a vigorous start. The pellets are dried and stored for 4-6 months before sowing. Sowing of pellets is normally carried out just before the first monsoon or just after the pre-monsoon showers.

19.12. Vegetative propagation:

19.12.1. The practice of propagation through vegetative material is resorted to when sufficient quantity of seeds is not available. The practice consists of transplanting, grass seedlings raised in nursery, or rooted slips of old tussocks, on well prepared soils having optimum moisture condition. It ensures quick establishment of the grasses. It is more expensive than the direct seeding but has advantage of quick growth. In transplanting, it is easy to maintain the requisite plant population.

19.13. Role of fire in grass land management:

19.13.1. Controlled fire is a major factor in determining the composition of grasslands and a widespread and powerful tool in grassland management. Its effect depends on its intensity, seasonality, frequency and type. The intensity depends on the type, structure and abundance of fuel. As the animals selectively removed the palatable grasses from the grass lands and leave the unpalatable grasses. If left uncontrolled the unpalatable grasses dominates and deteriorate the quality and productivity of the grass lands. Fire is the economic tool used to remove unpalatable grass and enable re-growth and access to the young herbage by grazing stock. It often stimulates re-growth and supplies a green bite when most needed. Fire is also used, to control woody vegetation. Burning of grassland must be carefully controlled and timed, otherwise it can cause serious damage; although planning burning and controlling fire is difficult and labour-consuming. Since fire has so severe effect, burning must take the whole ecosystem into account, not only the grass and the grazing livestock. Ill-timed fire can have a devastating effect on wildlife, including nesting and young birds.

Chapter-XX
Working Plan for Plantation (Overlapping) Working Circle

20.1. General description:

20.1. The forests of Poonch forest division are generally in good health however, in dispersed locations along the forest fringe areas, forest have been rendered open due to intense biotic interference and are resultantly under stocked. Most of the compartments having such areas have been included under the Rehablitation working circle. The general mode of regeneration of the forest in this plan has been conceived to be done through augmentation of natural regeneration. Although still, it is necessary that areas unable to stock themselves naturally are artificially stocked by under planting of saplings. As such the areas under this Working Circle include all the locations that require to be treated artificially for establishment of regeneration.

20.2. Objectives of management:

1. Restocking of degraded & open forest.
2. To intensively protect such areas by exclusion of biotic interference when needed.
3. Use of artificial regeneration technique in areas not regenerating naturally.

20.3. Distribution of area: The area of treatment can be divided into two categories.

1. The areas included in Rehablitation working circle.
2. Area that is under open forests in other Working Circle.

The range wise area detail is given below.

Table-20.1: Table showing Range wise area available for treatment for plantation in Poonch Forest Division:

Range	Area in RWC (ha.)	Open Forest area in other circles (ha.)
Haveli	7113	11687
Surankote	11865	1144
Mendhar	5922	12502
Grand Total	24900	25333

20.4. Method of treatment proposed:

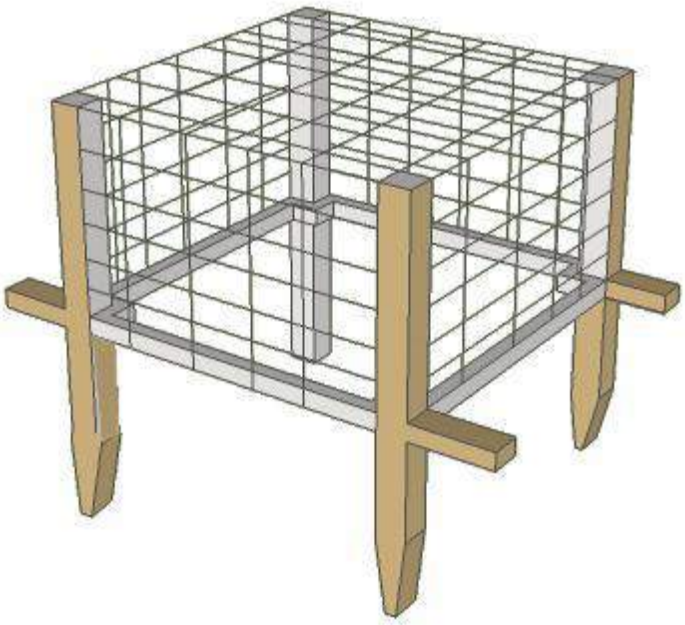
20.4.1. The restocking of areas can be broadly divided into two categories. One areas that are to be stocked after they have been worked and the other include area that have been degraded and need external intervention for restocking. The restocking of the areas that are worked as per the prescriptions of the plan as a general rule are to be undertaken by naturally aided regeneration. But in areas that have good site quality and have been rendered degraded and under stocked either due to biotic factors like grazing and illegal felling or by abiotic factors like wind throw damage or land slide, have to be restocked artificially.

20.4.2. In the worked forests the area should be regenerated naturally. However, in failed regeneration coupes establishment of regeneration must be taken up by artificially

augmented regeneration. Seed year in conifers as a rule are separated by at least 3 years. Augmentation of natural regeneration by patch sowing should be adopted in the intervening 5 years after the crop has been worked. Initially augmentation of natural regeneration by patch sowing of conifer seeds should be adopted along with the naturally available seed fall. Either individual staggered patches or continuous contour patches must be adopted for reestablishment. Only conifer should be promoted in the coupe stands. In regions where even 5 years after conclusion of working, sufficient regeneration has not established shall be taken up for plantation operations. The site specific plan should be got approved from the Conservator of Forests by the Divisional Forest Officer after justifying the reasons for repeated failure of regeneration.

20.4.3. If failure of regeneration is noticed until the 3rd year ending of the working of forest in the coupes, then in anticipation of plantation operations plants must be raised in the nursery to enable planting out after 2 ½ years. The area replanted are not closed, but the plants planted be selectively protected by patch guards and seedling guards. The figure of Patch guard is given below. The Patch guards will work out expensive but are an effective compromise in the given situation of wide spread grazing in the divisional area.

Patch guard



Picture 20.4: Picture showing the schematic diagram of a Patch guard.

20.4.4. To ensure success of natural regeneration, the following requirements should be kept in mind:

1. Suitable seed source in visibility.
2. Suitability of forest floor to receive the seeds.
3. Creation of suitable microclimate especially availability of light.

4. Removal of vegetative competition from weeds.
5. Exclusion from browsing and grazing.

20.4.5. The plantation works in the Rehablitation working circle on the other hand shall be undertaken intensively by closure of area to be replanted or restocked. At a time only 50 ha. should be taken up for plantation work. Functionally the regeneration of worked out forests should be restocked by the Forest department, on the other hand the compartment in Rehablitation working circle which are very near to the town and villages can be planted by Social Forestry Department. It would be appropriate to recoup these forests keeping in mind the requirements of the people and as such can be planted with fruit, nut and fodder crops. The plantation should be protected by fencing. Barbed wire fencing by past practice has been found insufficient to secure the area due to the heavy intensity of grazing and browsing live stocks. Fencing by rectangular cross wires having gap of 6x5 inch spacing can be used for goat and cattle proofing. The plantation should be taken up progressively from the top of the hill downwards and as far as possible in continuity. The area treated should be opened up after 5 years as a rule, unless extended by the permission of Conservator of Forests. The materials used in fencing whatever salvageable should be reused in the next year plantation.

20.4.6. In addition to the areas above, any other area as desired suitable for plantation by the Divisional Forest Officer with the approval of the Chief Conservator should be taken up for treatment. The areas to be restocked under the provisions of Compensatory afforestation should also be taken up in the areas above. In case alternate land is provided by the District Administration they shall also be subject to the prescriptions of the current Chapter.

20.5. Nursery:

20.5.1. Presence of productive nurseries is very essential for planning of plantation and treatment of area. In areas that have high pressure due to biotic interference, the seedlings should be vibrant to outgrow the height of browsing animal in the closure period. It is therefore essential to have sufficient stock of quality planting material. The Division should have at least 3 central nurseries ideally located in each range, with productive capacity of 1 lac poly bags each, on a business as usual pattern. And in case of planned plantation works additional equivalent quantity be raised. The nursery should be established in location where at least 2 hectare land is available. Provision of water for irrigation and the accessibility of road are a must. However the absence of the above should not be a constraint in establishment of nursery in good sites and irrigation as well as connectively should be ensured irrespective of the cost involved. If the seedlings raised are not utilized then they should be put to sale. Regular annual sale of seedlings should be encouraged to enable peoples interest in planting the trees in their private lands. The environment related days like World Forestry Day, World Environment Day, World Ozone Day etc should be used to take up mass plantation in areas outside forest. The local population and schools and educational institutions should be involved for creation of awareness and educational purposes.

20.5.2. The transportation of seedlings to plantation sites is a challenge especially because of the brittleness of the containers used to raise conifer. Poly bags are the most prevalent container used. The plants raised in poly bags suffer from root coiling and then the rate of growth in the initial years is a casualty. The raising of plants in root trainers using vermiculite as the medium, shall reduce the damage in transportation of seedling, as well as shall be easy to carry. It will however be as well appropriate to endeavour for naked rooted planting in coniferous in good sites as is predominant in conifers across the world. NRs shall be more feasible for transportation to site and work out to be economical.

20.6. Nursery plantation techniques:

(1) Conifer Trees:

(A) Deodar (Cedrus deodara): Found between 2000 to 2600 meters.Young plants suffer severely from browsing and insects specially cockchafer grubs and cutworms. It is somewhat susceptible to fungal attack.

a. Seed: Cones ripen in October – November, should be collected by hand and dried. Seeds are threshed out and can be stored until sowing. Since the seeds are oily they do not retain viability for more than a few months. An average sample of one kilogram contains 7,000 to 8,000 seeds. Germination percent is very high, around 90 percent. Germination starts in spring but may take four to five months to complete.

b. Nursery technique: Direct sowing is successful in good situations.
Sowing be done in November before snowfall, and if necessary sowing will again be done in April. Sowing may be done by broadcast also, in contour lines, elongated patches across the contour or dibbled in lines 3 m apart. Individual seed may be sown in drills 10-15 cm apart, and covered with thorns. Germination begins after 2-3 months.

c. Raising of seedlings in poly-bags: The poly-bags of 6”X9” is being used for raising of conifer seedlings. The potting mixture is prepared by mixing sieved soil, river sand and decomposed farmyard manure and forest soil in the ratio of 7:1:1:1. The farmyard manure is added to improve the fertility of soil. The forest soil is added to improve the micro flora of the rooting medium. The pH of the rooting medium must be tested with litmus paper; if found acidic, lime can be added @ 15g per kg of rooting medium. The Calcium ions improve the soil structure also. The potting mixture is filled in the poly-bags and seeds are sown. In the open areas, it is always recommended to create overhead thatching to allow diffused sunlight as the tender plants cannot withstand the scorching sunlight in the first year.

d. Pests in nurseries: Sometimes, the insect larvae are found to attack the tender conifer seedlings. The insect larvae are found to feed the tender leaves and shoots in the early morning hours and in the late evenings. The careful observation of the plants can reveal the pest damage. Toward off all the kind of insect larvae, it is recommended to spray 25 ml of malathion dissolved in 25 litres of water and sprayed in one kanal area of nursery.

e. Planting technique: Seedlings be pricked out in July when 10-15 cm long, or in next July when 15 to 20 cm tall and planted out in the third year when 30 to 45 cm long. Less vigorous seedlings may be pricked out and kept in the nursery for one more year. Long (20cm) seedlings may be planted out directly from the nursery beds without pricking out. Seedlings with or without earth around the roots are put out in holes on a cloudy day. Usual spacing of 2 x 2 meters or in contour lines 3 x 3 meters be used. Thorough weeding and cleaning is required for 2-3 years, early and frequent thinning also needed.

(B) Kail (Pinus wallichiana): It is found in temperate Himalayas at 2000 to 3000 meters height, but sometimes between 1000 to 4000 meters also. It is a strong light demander but grows well on cool aspects. On hot aspects and shallow soils, shading is necessary.

a. Seed: Cones ripen during September to November. They should be collected from the trees, dried in the sun or kiln and seeds be extracted by shaking or beating the cones. Seeds can be stored after air drying for 12 to 18 months. A kilogram contains about 16,000 seeds. Germination capacity of the fresh seeds is upon 90 percent, which completes in one to four months.

b. Nursery technique: Seed may be sown or broadcast in prepared contour lines or patches from November to June. Spacing of patches should be 2 x 2 meters. Germination occurs in rains and the seedlings be pricked out in the following rains.

c. Raising of seedlings in Poly-bags: The poly bags of 6”X9” is being used for raising of conifer seedlings. The potting mixture is prepared by mixing sieved soil, river sand, decomposed farmyard manure and forest soil in the ratio of 7:1:1:1. The farmyard manure is added to improve the fertility of soil. The forest soil is added to improve the microflora of the rooting medium. The pH of the rooting medium must be tested with litmus paper; if found acidic, lime can be added @ 15g per kg of rooting medium. The Calcium ions improve the soil structure also. The potting mixture is filled in the poly bags and seeds are sown. In the open areas, it is always recommended to create overhead thatching to allow diffused sunlight as the tender plants cannot withstand the scorching sunlight in the first year.

d. Pests in nurseries: Sometimes, the insect larvae are found to attack the tender conifer seedlings. The insect larvae are found to feed the tender leaves and shoots in the early morning hours and in the late evenings. The careful observation of the plants can reveal the pest damage. For ward off all the kind of insect larvae, it is recommended to spray 25 ml of malathion dissolved in 25 litres of water and sprayed in one kanal area of nursery.

e.Planting technique: Two or three year old seedlings are lifted with balls of earth and are transplanted during rains. They should be 20 to 35 cm in height. Usual spacing, of 1.5 x 1.5 meters or 2 x 2 meters be kept. Weeding and cleaning is required for 2-3 years. Early, frequent and light thinning is necessary to prevent snow damage.

(2) Broad leaved species:

(b) **Oak *(Quercus leucotrichophora)* :** Found between 1200 to 2400 meters.

a. Seed: They are normally attacked by insects but seed years are frequent. Seeds are large (on an average 550 per kg). They are collected in December- February and can be stored for a year in cool and dry place. Germination capacity is high, up to 95 percent but takes a month to complete germination.

b. Pre sown treatment of seeds: The hard impermeable seed coat must be made soft to accelerate germination. Also, the stratification treatment is required for uniform germination of seeds. The treatment is imparted to seeds in the month of January. For imparting the treatment to the seeds, a polythene sheet of size about 4' X 5' is laid down in the open area and all the sides are raised to 6" height to make it as a trough. The seeds are spread as a layer of about 1" height uniformly over the sheet and water column of about 3" is maintained over the seeds. The water will be bit warm during the day time due to exposure to direct sun light but it will be very cold during the night hours. The seeds must be kept in the same arrangement for about 20 days. If water evaporates, water must be added to maintain the level. The alternate cold and warm treatment will soften the seed coat and the seeds will imbibe water and start sprouting in 15-20 days. The imbibed, sprouted seed shall be sown in the raised beds for further germination.

c. Raised beds for germination of seeds: The raised beds are created and the partly sprouted seeds are sown with the care that the sprouted end is not damaged. The uniform germination of seeds is observed in next 20 days. Within three months the seedlings will attain a height of about 4" height. Then the seeds can be carefully pricked out and transplanted in the polythene bags for further growth. The seedlings can be planted out in the forest on the third year.

d. Nursery technique: Dibbling be done in winter at a spacing of 1.5 x 1.5 meters or 2 x 2 meters. Sowing drills 1-2 cm below the soil and 20-30 cm apart, can also be done during February- March. Pricking out of seedlings is not necessary but may be done in the second rains. Roots should be slightly trimmed. Seedlings be kept in the nursery for 3-4 years.

e. Planting technique: Seedlings 30-40 cm tall be transplanted when 2-4 years old, in prepared pits at a spacing of 1.5 x 1.5 meters or 2x2 meters. Winter planting is not very successful. Weeding and cleaning is required for several years, however, thinning is not needed for a long time. It should also be protected against browsing. It is a slow growing species.

***(b)* House Chest Nut *(Aesculus indica)*:**

a. Seed: Ripens during September-November should be collected from the trees or ground can be stored in dry earth till spring. About 640 seeds weight a kilogram. Germination capacity is fairly high (70-90 percent).

b. Nursery technique: Seed sowing be done in autumn immediately after seed collection. Patches be kept at a spacing of 2 x 2 meters in shady, cool beds. Sowing has to be done 5 cm below the soil in drills, 15-30 cm apart. Some watering is required.

c. Planting technique: Seedlings (6, 12 and 18 months old) with naked roots are transplanted during winter, in prepared pits at 2 x 2 meters spacing. Weeding and cleaning has to be done for 1-2 years.Dry exposed situations shall be avoided for planting work.

(c) Alnus nepalensis: Found between 800 to 2700 meters. It is susceptible to snow break, frost, grazing and insect attack. It is a fast growing species. Fruits ripen in February-March. They should be collected by lopping the branches. Seeds are extracted after sun drying by beating the cones. Seeds are very minute, about 8 lacs per kg. They should be dried before storage. Germination is about 70 percent, 4 to 6 weeks after sowing.

a. Nursery technique: Direct or broadcast sowing be done in February-March in shaded beds; should be covered by mulch. At low elevations i.e. below 1500 meter, transplanting in May and at higher elevation planting be done in the following rains.

b. Planting technique: Seedlings 15 cm to 75 cm long, with or without the ball of earth around the roots be planted out in prepared pits, at the beginning of first or second rains. Autumn transplanting in September and winter transplanting is done in January. It is successful in moist and humid localities, requires no tending after the third year.

(d) Walnut (Juglans regia): Found between 1200 to 3300 meters. Fruits ripens during September-October can be collected by beating and shaking the branches. Outer fleshy coats be removed or be rotten off and nuts be dried in the sun. It should be stored in a well ventilated room, in tins or jars or in a pit in dry ground, filled with dry earth until required for sowing. Nuts 90-100 per kg. Germination capacity is 70 to 80 percent. Germination gets completed in 5-7 weeks normally.

a. Nursery technique: Nuts may be dibbled in pits 2 x2 meters apart, during autumn, before snowfall or in January-February. Two seeds per patch 5 cm deep be sown, should be covered with thorns. Seeds may also be sown in 25 cm deep drills, in lines 10 cm apart.

b. Planting technique: Seedlings, without or with earth ball around the roots, be transplanted in the first winter. However, second winter transplants are better for difficult sites. Transplanting during the rainy season is not so successful. Thorough weeding and soil working be done for the first/second year. It is sensitive to weed competition.

20.7. Participation by the local people: People's Participation is the backbone of this Working Circle as the treatment proposed aspires to fulfil local demands of fuel, fodder, small timber. Various aspects of people's participation are discussed as under:

1. In view of excessive biotic interference and severe damages to forests by expanding population, the Foresters, the Social scientists, Planners and NGO's have concluded that there is fundamental need to evolve 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 cooperative sharing of rights and responsibilities that make Joint Forest Management a true partnership between Forest communities and Forest Department.
2. In the process of gathering the support of local people for the aforestation 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 will not allow them to get together.The main power group of the villages must be associated with Joint Forest Management communities. 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.

Chapter-XXI
Miscellaneous Regulations

21.1. Buildings:

21.1.1. The buildings that are presently being maintained by the Poonch Forest Division have been enlisted under Appendix XVII.

21.1.2. The condition of some of buildings is dilapidated and requires immediate repair / renovation besides construction of guard huts and residential accommodation for Block Foresters should be constructed at beat and block headquarters. The location of beats and blocks headquarters are also needs to be fixed.

21.2. Roads and paths:

21.2.1. Since the commercial exploitation of forests has been restricted to removal of dry / fallen material only (due to ban on green felling), the roads constructed during the past are in a miserable condition. At present a network of roads by GREF, R&B and PMGSY is spread to important parts of division. New roads are also coming up for better connectivity in the District.

21.2.2. There is a good network of forest inspection paths almost all over the forest areas, although some of them have not been repaired for many years for want of adequate funds. The existing roads need to be repaired yearly and maintained properly. A few more inspection paths are required to be constructed in this division. Well maintained inspection paths can also serve as fire-lines.

21.3. Bridges:

19.3.1. Bridges constructed by the Public Works Department and GREF exist in this division. However, attention should be paid towards the construction of a few more wooden bridges in this division. Funds for the same can be obtained under the BRGF.

21.4. Forest demarcation and consolidation:

21.4.1. As already discussed in detail under section 1.7 of this plan, the demarcation boundaries of these forests are almost non-existent, except in the areas where renovation of boundary pillars was carried out recently. This, coupled with the fact that little attention is being paid towards this very important aspect, makes the forests extremely vulnerable to encroachments. Large areas have already been encroached upon and the condition in the field at many places is so bad that it is virtually impossible to locate and identify the boundary line in these forests.

21.4.2. The demarcation record should be consolidated and authenticated in collaboration with revenue authorities. Records should be maintained in a manner that their validity is not doubted in the courts of law. All the forests must be demarcated within shorter span of time. The Boundary Pillars must be identified on ground and its location must be recorded using GPS. The location of the BPs must be transferred to the GIS Platform for long term

preservation. The entire demarcation files must be stored electronically at all levels of forest administration right from the Office of the PCCF up to the Range and Block Offices.

21.4.3. For effective control of encroachments, it is essential that the beat guards should be thoroughly aware of the boundaries of the forests in their respective beats. Each Guard should be in the possession of a beat map, which also indicates the location of boundary pillars and knowledge of surveyors of undemarcated forests in their respective beats.

21.5. Management of Berun line forests and uncultivated wastelands:

21.5.1. In addition to the blank scrub area, pastures, and stony wastelands of this division there is a sizeable area available outside the demarcated forests which is neither cultivated nor properly managed. Practically no investment is being made on these resources as compared to the intensity of use to which they are put. There are the compelling reasons to formulate policies for this category of land to realize its productive potential to the best possible extent. A multi-disciplinary approach is needed for its proper and comprehensive management.

21.5.2. In order to arrest their further deterioration, the Berun line forests, as ordered by the Government of Jammu and Kashmir, are to be taken over from the charge of the Revenue Department immediately, and managed on scientific lines.

21.6. Social forestry:

21.6.1. In order to lessen the ever increasing pressure of human and animal population on the conventional forests, an integrated use of non-forest land for agriculture and forestry in manner that maximizes production of goods and services, is the only answer. The term social forestry is used for various programmes of extending tree cover to the non-forests areas including agricultural lands, wastelands and strips along the roads etc. Social forestry schemes are already under implementation in this division and non-forest areas are being taken up for planting.

21.6.2. In order to realize the full benefit of social forestry, a comprehensive package of technology needs to be developed for various agro-climatic zones after taking into consideration the needs and customs of the local population. It requires a multi-disciplinary approach, and research efforts of specialists from various disciplines like agronomy, extension, soil science, forestry, horticulture, economics and social sciences. For improving the economic condition of the local population, watershed approach to development needs to be adopted.

21.7. Forest nurseries:

21.7.1. Forest nurseries are of paramount importance in any artificial regeneration programme. Unfortunately, for the want of adequate funds and planning, little attention has been paid towards the creation and maintenance of forest nurseries in this division.

21.7.2. In order to make concerted efforts towards the reforestation of conifer species, a comprehensive, long term effort is required. The temporary nurseries for conifer plants near the planting site are the best alternative in hilly terrains. Adoption of modern techniques like

root trainers, glass houses, sprinkler irrigation etc. will go a long way in providing the necessary planting stock required for meeting the plantation targets set under this plan. Seeds from genetically superior trees should be used for raising good quality planting stock in the nurseries.

21.7.3. However, the nurseries should be established keeping in view the future availability of funds required for such plantations. Raising of planting stock in the nursery is of no use if it is not planted in time in the field for want of funds and proper planning.

21.8. Reorganization of Poonch forest division:

21.8.1. Need for eorganization:

1. Difficulty in proper management of far flung areas.
2. Mostly hilly and snow bound.
3. Difficult terrain poor road connectivity.
4. Lack of proper communication.
5. Some check posts required to control movement of timber and NTFR.

Chapter-XXII
Staff and Labour Supply

22.1. Establishment:

22.1.1. The staff of Poonch Forest Division has registered a negligible increase since the inception of the previous plan. There is a shortage of executive staff at the level of Range Officers and below. The present strength of the establishment is inadequate to cope with the ever increasing workload. The fact that a significant number of field functionaries are untrained makes the matters even worse. Although the territorial Divisional Forest Officers have been conferred additional powers under the amended Forest Act, no corresponding effort has been made to augment the establishment and infrastructure of the division so that the DFO can effectively discharge his duties as Authorized Officer.

22.2. Labour supply:

22.2.1. The availability of skilled and unskilled labour is not much of a difficulty in this division, except during the periods of sowing and harvesting of the agricultural crops, which of course do not last for more than two or three weeks owing to the small size of holdings. There has been a decline in the trend of importing labour from adjoining districts and other states because of a change in the Government policy, as well as a decrease in the volume of extraction. Due to the severe financial crunch that the State is facing, the requirement of labour for developmental activities is also on the decline. However, with the developmental projects in this district, the division may face paucity of labour in the near future.

Chapter-XXIII
Control

23.1. Control forms: As per the standard procedure, the following control forms are prescribed to be maintained.

23.1.1. **Control form A:** It shall be maintained on the standard format in use, for recording the major markings (fellings) and other subsidiary markings (fellings) carried out in Deodar Kail Modified Shelter Wood Working Circle (Conversion block), Mixed Conifers Selection Working Circle and Fir Selection Working Circle, separately for each of the three working circles. As usual, a deviation statement indicating species wise plus and minus account of the actual removal (fellings), vis-à-vis the prescribed yield, will be complied at the close of every year and the same brought forward in the subsequent year and summed up (plus or minus) with the prescribed yield for that year. Control shall be exercised on the volume extracted with an *Area Check.*

23.1.2. **Control form B:** This control form shall be maintained on the standard format in use for recording the yield realised from the converted and unallotted blocks of Deodar Kail Irregular Working Circle. It shall be maintained in the same way as Control Form – A, except that the excess removals, if any, during a year are to be adjusted in the subsequent year but the deficit shall lapse to the forest.

23.1.3. **Control form C:** It will be maintained to record and monitor the progress of the regeneration works in the areas taken up for artificial regeneration. Such areas are to be written-off from this form only after they carry adequate and established regeneration.

23.1.4. **Control Form D:** This control form shall indicate the proposals of the territorial DFO for marking of coupes during the next three years. It is required to be submitted well in time, to the Conservator of Forests, Working Plan and Research Circle, through the concerned territorial Conservator of Forests, who will convey his approval after due scrutiny of the proposals in consultation with the Chief Conservator of Forests. The arrears in respects of Control Forms need to be completed at once and their future maintenance ensured and made purposeful.

23.2. Compartment histories: These are, in fact, the most important records of happenings in a forest. They must be objectively maintained and updated, both at range as well as Divisional level. Entries regarding marking, extraction, resin extraction, plantation and development works, fire, encroachments, land transfer and any other significant event that happens in a compartment, must be made in the compartment history file at the earliest possible dispatch. In addition, the touring officers should note their observations and instructions on compartment history files, for the purpose of control and record.

23.3. Divisional journal: This document, although very important, has not been maintained in the division. It is of immense use to the DFO and must be maintained and updated regularly. It should contain detail information on subjects like regeneration, plantation, soil conservation works, seed years, disease/insect attacks, statistics of outturn of timber and

fuel wood, abstract of information on past/current leases, contracts, roads, buildings and meteorological data. On the analogy of the Divisional Journal, record must be maintained at range and block levels.

23.4. Guard books: By and large, the maintenance of Guard Books has remained neglected. In certain cases the Guard Books have been found lacking even the elementary data regarding description of boundaries of the beat, number and name of the compartments, beat maps, number of boundary pillars and *chaks*. The Guard book must be maintained properly and checked frequently by the Range Officers at least once in a month and by the DFO at least once in six months.

Chapter-XXIV

Financial Forecast and Cost of the Plan

24.1. General introduction: In order to give effect to the proposed prescriptions in the Working Plan it is essential that the entire gamut of activities weigh up economically. As such, the allocation of funds to various activities mentioned in the Working Plan as well the financial viability of the operations is worked out in this chapter.

24.2. Anticipated expenditure:

24.1. The expenditure anticipated to be incurred giving effect to the prescriptions of the Working Plan under various Working Circle is enumerated below and eventually summated to arrive at an estimate of total expenditure expected to be incurred during the Working Plan period.

24.3. Plan expenditures:

(a) Chir working circle:

For Chir working circle (60% of the total area of 3437 ha. to be treated in 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	687.4	1.00	687.4
Aided Natural Regeneration (ANR) @ 20% of the working circle's area	687.4	0.45	309.33
Silvicultural Operation @ 20% of the working circle's area	687.4	0.25	171.85
Total (60% of the total area)	2062.2		1168.58

The anticipated annual expenditure would be Rs. 58.429 lacs.

(b) Fir working circle:

For Fir Working Circle (60% of the total area of 24807 ha. to be treated in 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	4961.4	1.00	4961.4
Aided Natural Regeneration (ANR) @ 20% of the working circle's area	4961.4	0.45	2232.63
Silvicultural Operation @ 20% of the working circle's area	4961.4	0.25	1240.35
Total (60% of the total area)	14884.2		8434.38

The anticipated annual expenditure would be Rs. 421.719 lacs.

(c) Rehabilitation working circle:

For Rehabilitation Working Circle (60% of the total area of 22297 ha. to be treated in 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	4459	1.00	4459
Aided Natural Regeneration (ANR) @ 20% of the working circle's area	4459	0.45	2007
Silvicultural Operation @ 20% of the working circle's area	4459	0.25	1115
Total (60% of the total area)	13377		7581

The anticipated annual expenditure would be Rs. 379.05 lacs.

(d) Protection working circle:

The protection works would involve the following activities.

S. No.	Activity	Annual fund requirement (in Lacs.)
01.	Construction and maintenance of Check Posts, engagement of fire watchers, purchase of fire fighting tools and gathering of intelligence.	10.00
02.	Erection of B.Ps.	75.00
03.	Construction of infrastructures for housing of field staff.	50.00
	Total	**135.00**

(e) Oak working circle:

For Oak working circle (60% of the total area of 6417 ha. to be treated in 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	1283.4	1.00	1283.4
Aided Natural Regeneration (ANR) @ 20% of the working circle's area	1283.4	0.45	577.53
Silvicultural Operation @ 20% of the working circle's area	1283.4	0.25	320.85
Total (60% of the total area)	3850.2		2181.78

The anticipated annual expenditure would be Rs. 109.089 lacs.

(f) Joint forest management and medicinal plants working circle:

To give effect to the prescriptions of this Working Circle upfront payment by the FDA to the VFC's and the beneficiaries might to require. Also some funds would be needed for capacity

building and training of VFC members. Revolving funds of 1 Crore would need to be allocated as credit to the FDA on returnable basis.

Hence the annual fund requirement for executing the plan works would be Rs. 1203.287 lacs.

24.4. Non-Plan expenditures:

(g) Staff:

The annual salary to staff of all the three wings i.e; Forest Department, SFC & F.P.F together would account for about Rs. 5.16 crores per annum.

(h) Over head:

The over head cost is kept as Rs. 0.80 Crore lump sum per annum.

Hence the annual fund requirement for meeting the non-plan expenditure would be Rs. 596.00 lacs.

Based on the above proposed expenditure, the annual total expenditure works out to be 1799.287 lacs. and for the next 10 years would be Rs.17992.87 lacs (Rs.179.928 Crores).

24.5. Revenue:

(a) **Timber:** Most of the revenue shall be accrue from the sale of timber by State Forest Corporation. The detail of timber that shall be extracted from the forests of this Division annually and on the basis of average rate chargeable from the State Forest Corporation for the above listed species, the total annual revenue from timber harvests worked out is as under:

Species	Volume (m^3)	Royalty (as per 1991 tentative rates) Rs/Cum	Revenue in Rs.
Chir	1200	1306.12	1567344
Total	1200	1306.12	1567344

(b) NTFP:

i) Revenue (as per Poonch forest division conservative estimate) from NTFP including Guchhies (at 2016-17 level) = 30.00 lacs.

ii) Miscellaneous: (Grazing, Timber, concessions, firewood and compensation) =70.00 lacs.

Grand Total Rs. 115.67 lacs (Approximately Rs. 1.15 Crores annually)

However, the figures above are mere projections. Nevertheless, these figures bring out very clearly, that if proper investment is made in the forestry sector in conjunction with the necessary legal and policy inputs, the state shall be in a position to regenerate the dwindling forest reserves, and, the tangible and intangible benefits that will accrue will far exceed the initial investment. Timely investment in forestry sector is also important from the point of view of sustainability of future returns, both material and environmental, because for the requirements of the future generations, action has to be initiated today.

24.6. Cost of the plan:

24.6.1. The expenditure incurred on the revision of the working plan for Poonch Forest Division is as under:

Unit of Appropriation	**Amount (Rs.)**
Plan	
CAPEX, IFM(CSS),XIII FC Award,etc	27,15,000
Total	27,15,000

The expenditure above is inclusive of the amount spent on the purchase computer and computer peripherals, paint , stationery and stock items. The PWPR and layout were carried out by the Territorial DFO and above mentioned expenditure includes the expenditure done during by the Territorial division.

In terms of field work, the expenditure under the Plan head for the revision of the Working Plan for Poonch Forest Division, works out to Rs 17.15 lacs and Rs.17.65 per Hectare. This is inclusive of the assets that have been created in the Working Plan Division. The field work expense includes the expenditure incurred on need based driver's salary, PoL, Computer and GIS work and other miscellaneous expenses.

Chapter-XXV
Summary of prescriptions

S.No.	Prescription	Section	Page(S)
1	**Chir working circle**	**9**	**91-110**
	Area statement = 3437 hectares	9.2.	91
	Silvicultural System = Selection System	9.4.	93
	Exploitable size and Rotation:	9.5.	94
	Deodar and Kail = 70cm. d.b.h.		
	Fir = 80cm. d.b.h.		
	Rotation :	9.7.	94
	Chir= 120 years , Deodar = 150 years and Kail= 150 years		
	Fir = 240 years		
	Felling Cycle = 30 years	9.6.	94
	Annual yield from the working circle:	9.9.3.	101
	Chir= 1200 m^3 Kail= 0 m^3		
	Total= 1200 m^3		
	Size of the Annual Coupe = 57.83 hectares	9.11	104
	Allowable cut per hectare = 20.75 m^3 per annum	9.12	104
	Regeneration survey	9.20	108
2	**Fir Protection cum Rehabilitation Working Circle**	**10**	**111-123**
	Area statement = 24807 hectares	10.3.	112
	Silvicultural System= Selection System	10.5.	113
	Exploitable size :	10.6.	113
	Deodar and Kail =70cm. d.b.h.		
	Fir =80cm. d.b.h.		
	Rotation :	10.7.	113
	Chir = 120 years , Deodar and Kail =150 years		
	Fir =240 years		
	Felling Cycle =30 years	10.8.	113
	Calculation of yield:	10.11.	115
	Regeneration survey	10.12.	121
3	**Protection Working Circle**	**11**	**124-133**
	Area statement = 27489 hectares	11.2.	124
	Analysis and evaluation of the crop	11.4.	126
	Regeneration Survey	11.5.	132
4	**Rehabilitation Working Circle**	**12**	**134-149**
	Area statement = 22297 hectares	12.3.	134
	Analysis and evaluation of the crop	12.5.	137
	Regeneration survey	12.6.	144
	Method of treatment prescribed	12.7.	145
	Artificial regeneration of Fir	12.10.	147
	Afforesation measures	12.11.	147

Appendices

Appendix I. Statement of details of Demarcated Forests of Poonch Forest Division as per Form-I

Date of Entry	Forest			Year of Demarcation	Area		Number of Boundary Pillars	Number of Chaks	Number of Boundary Pillars
	Name	Illaqa	Tehsil		(Ha)	Sq. Miles			
Mendhar									
06-10-1961	Dabraj	Dabraj	Mendhar	09/11/1960 to 06/10/61	360.43	Mile 23 Jreeb 14 Karam 9	450	7	100
31-05-1961	Sorian	Darguloon	Mendhar	26/03/1961 to 31/05/1961	14.50	Mile 0 Jreeb 90 Karam 8	8	1	-
13-12-1960	Dhargloom-I	Darguloon	Mendhar	29/11/1956 to 13/12/1960	135.57	Mile 26 Jreeb 75 Karam 9	365	7	13
16-11-1960	Dhargloom-II	Darguloon	Mendhar	29/11/1956 to 16/11/1960	174.82	Mile 7 Jreeb 93 Karam 9	124	1	8
03-05-1961	Nar	Bherwa	Mendhar	17/11/1955 to 03/05/1961	15.86	Mile 2 Jreeb 64 Karam 5	26		
09-05-1961	Bayien	Bherwa	Mendhar	27/07/1960 to 09/05/1961	33.60	Mile 1 Jreeb 48 Karam 09	22		
15-05-1961	Ghancharan	Achad	Mendhar	16/11/1960 to 15/05/1961	38.30	A- Mile 1 Jreeb 16 Karam 6 , B- Mile 3 Jreeb 9 Karam 06	A -30 , B-70, Total-100	2	9
23-12-1960	Parathi	Gursai	Mendhar	5/02/1955 to 23/12/1960	10.70	Mile 0 Jreeb 87 Karam 07	14	-	-
13-12-1960	Basola Nar	Nakam Manjhari	Mendhar	05/12/1955 to 23/12/1960	52.60	Mile 1 Jreeb 71 Karam 15	33	-	-
09-05-1956	Beru	Gursai	Mendhar	09/05/1956 to 31/05/1964	69.71	Mile 5 Jreeb 54 Karam 5	50	1	9
01-11-1960	Kallar Mohra Part A & B	Kallar Mohra	Mendhar	Apr-58	34.17	Mile 6 Jreeb 13 Karam 6	A-119	2	-

					135	Mile 8 Jreeb 91 Karam 5	B-205	1	-
04-05-1961	Katarian	Salwa	Mendhar	07/11/1959 to 04/05/1961	171.88	Mile 5 Jreeb 90 Karam 5	74	4	34
13-12-1960	Bachia	Gursai	Mendhar	04/01/1956 to 13/12/1960	5.82	Mile 1 Jreeb 4 Karam 5	12	-	-
17-11-1960	Gursai	Gursai	Mendhar	22/05/1961 to 17/11/1961	113.98	Mile 7 Jreeb 78 Karam 6	97	1	8
13-12-1960	Bain dhara	Gursai	Mendhar	12/03/1956 to 13/12/1960	22.26	Mile 1 Jreeb 45 Karam 7	28	1	5
20-02-1961	Naka Churan	Chulanga	Mendhar	27/12/1960 to 20/02/1961	13.37	Mile 2 Jreeb 34 Karam 0	47	-	-
10-11-1961	Kalaban	Bhetula Charain	Mendhar	28/08/1959 to 10/11/1961	109.83	Mile 8 Jreeb 14 Karam 1	132	2	23
31-03-1961	Sarian	Kalaban	Mendhar	16/10/1959 to 31/03/1961	11.80	Mile 1 Jreeb 68 Karam 0	24	-	-
31-05-1961	Dharamsal	Gulandh	Mendhar	18/04/1961 to 31/05/1961	9.16	Mile 1 Jreeb 13 Karam 4	17	1	6
13-11-1961	Makar Hawara	Jakar Mora Hajri Bata Dorian	Mendhar	22/04/1961 to 13/11/1961	0	NA	64	-	-
12-11-1961	Phamnanar	Phamnanar	Mendhar	07/08/1958 to 12/11/1961	240.9	Mile 13 Jreeb 16 Karam 7	175	6	53
31-03-1961	Ranjayanalla	Kalaban	Mendhar	13/04/1959 to 31/03/1961	10.79	Mile 2 Jreeb 3 Karam 6	37	-	-
01-04-1961	RattaJabra	Sungut	Mendhar	28-08-1956	218.55	Mile 8 Jreeb 23 Karam 5	87	1	13
14-08-1960	Khacharmar	Gullutea	Mendhar	14-08-1960	17.97	Mile 1 Jreeb 8 Karam 0	12	-	-

13-12-1960	Gullutea	Gullutea	Mendhar	24/06/1956 to 13/12/1960	486.84	Mile 18 Jreeb 19 Karam 7	154	2	52
31-03-1961	Bacha	Mora	Mendhar	18/04/1958 to 31/03/1961	9.33	Mile 1 Jreeb 23 Karam 0	20	-	-
19-09-1962	Khorni	Gursai	Mendhar	19-09-1962	419.72	Mile 22 Jreeb 17 Karam 06	384	8	75
24-05-1961	Theri	Guland	Mendhar	20/03/1961 to 24/05/1961	62.72	Mile 2 Jreeb 66 Karam 8	36	-	-
20-02-1961	Morian	Gursai	Mendhar	05/1960 to 20/02/1961	76.06	Mile 4 Jreeb 74 Karam 04 Mile 0 Jreeb 15 Karam 01	A-38 B-04	1	14
27-11-1961	Chungan	Bhatti dhar Mankote Narole Thera Topa Keni	Mendhar	2/09/1960 to 27/11/1961	1075.5	Mile 46 Jreeb 21 Karam 07	709	8	166
24-05-1961	Kasbalari	Seyediani	Mendhar	02/09/1960 to 24/05/1960	354.1	Mile 12 Jreeb 56 Karam 1	216	5	58
304-03-1961	Nar	Bataadoriyan Naka Manjhyari	Mendhar	30/08/1956 to 30/03/1961	499.78	Mile 14 Jreeb 69 Karam 09	223	6	41
23-11-1961	Dhurian	Bhatta Dhurian	Mendhar	02/10/1961 to 23/11/1961	116.91	Mile 4 Jreeb 12 Karam 02	16	2	10
17-10-1961	Patanatir Kalaban	Patanatir	Mendhar	25/09/1959 to 17/10/1961	231.59 1.80	Mile 8 Jreeb 85 Karam 0 Mile 0 Jreeb 42 Karam 0	A-81 B-13	-	-

25-08-1952	Garang	Kasrari	Mendhar	28-08-1992	4.45	Mile 0 Jreeb 90 Karam 37	6	-	-
20-11-1961	Patanatir	Kalaban , Chatral , Selwa , Banola	Mendhar	21/11/1955 to 20/11/1961	187.5	Mile 7 Jreeb 10 Karam 07	99	1	6
27-11-1961	Chajjla	Balota Dharana	Mendhar	24/02/1961 to 27/11/1961	862.99	Mile 28 Jreeb 88 Karam 3	A : 401 B : 09	1	4
					1.34	Mile 0 Jreeb 39 Karam 0		13	125
15-11-1955	Garang	Salwa	Mendhar	15-11-1955	40.46	Mile 1 Jreeb 07 Karam 0	28	-	-
01-09-1960	Mankote	Mankote	Mendhar	01-09-1960	643.32	Mile 26 Jreeb 07 Karam 09	65	7	200
15-06-1992	Kukurbani	Gursai	Mendhar	15-06-1992	3.64		15	-	-
29-12-1992	Thandi Kassi	Thakial	Mendhar	23-12-1992	6.88		36	-	-
05-01-1961	Camter	Uchad	Mendhar	20-09-1960	29.22	Mile 2 Jreeb 46 Karam 1	34	2	11
03-01-1960	Sagara	Not Mentioned	Mendhar	03-01-1960	262.71	Mile 11 Jreeb 29 Karam 3	135	3	25
12-11-1960	Bayan	Uchad	Mendhar	12-11-1960	6.72	Mile 1 Jreeb 05 Karam 02	23	-	-
06-11-1960	Khad Dari	Mankote , Chajjla	Mendhar	06-11-1960	5.05	Mile 1 Jreeb 09 Karam 06	29	-	-
18-05-1959	Chowki	Salwa	Mendhar	18-05-1959	24.84	Mile 2 Jreeb 00 Karam 04	26	-	-
01-09-1956	Harni	Gursai Gultha Harni	Mendhar	01-09-1956	117.99	Mile 14 Jreeb 91 Karam 07	61	-	-

10-10-1960	Yahan	Seyediani	Mendhar	10-10-1960	2.47	Mile 0 Jreeb 56 Karam 02	7	-	-
09-10-1960	Seyediani	Seyediani	Mendhar	09-10-1960	11.44	Mile 1 Jreeb 06 Karam 09	15	-	-
15-04-1958	Manjhari , Jaranwali Gali	Majhari	Mendhar	15-04-1958	79.92	Mile 4 Jreeb 18 Karam 02	63	2	15
Total Area (in Ha)					7646.86				
Haveli									
13-04-1961	A: Mora	Dukhwar	Haveli	1961	20.23	Mile 36 Jreeb 0 Karam 18	A: 37 B: 8	-	-
	B: Chiral				3.359	Mile 1 Jreeb 20 Karam 08			
03-10-1960	Kamrakhari	Kamrakhari	Haveli	1960	36.42	Mile 1 Jreeb 71 Karam 0	A: 20 B: 6 C : 48 D: 04	-	-
					10.52	Mile 1 Jreeb 03 Karam 08			
					11.24	Mile 3 Jreeb 22 Karam 07			
					12.14	Mile 0 Jreeb 92 Karam 01			
Date Not Mentioned	Mandhar	Mandhar	Haveli	Date Not Mentioned	1.232		60	-	-
11-06-1962	Lokassia	Lokassia	Haveli	1962	70.6	Mile 3 Jreeb 47 Karam 3	A : 41	1	6

					44.72	Mile 2 Jreeb 35 Karam 09	B: 19		
					9.9	Mile 1 Jreeb 06 Karam 04	C: 14		
16-07-1962	Gulpur	Gulpur	Haveli	1962	25.18	Mile1 Jreeb 68 Karam 0	A: 12 B: 4	-	-
					5.845	Mile 0 Jreeb 58 Karam 04			
09-07-1962	Dharamsal	Dharamsal Khadi , Karmara	Haveli	1962	38.67	Mile 3 Jreeb 62 Karam 08	31	-	-
23-04-1959	Thanpeer Delewali Noona Bandi	Noona bandi Dingla Bandi Chechia Nangali Thanpeer	Haveli	1959	143.3	Mile 8 Jreeb 27 Karam 07	A :62 B : 15 C :50	-	-
17-10-1960	Chandak	Chandak	Haveli	1960	8.225	Mile 1 Jreeb 10 Karam 0	14	-	-
17-09-1960	Pothi	Checktro	Haveli	1960	11.11	Mile 1 Jreeb 10 Karam 0	13	-	-
29-04-1959	Danadhariya Sathra	Danadhariya Sathra	Haveli	1959	6.07	Mile 1 Jreeb 53 Karam 1	25	-	-
04-07-1960	Chambar Kanari	Chambar Kanari	Haveli	1960	573.3	Mile 15 Jreeb 81 Karam 1	151	9	92
19-08-1960	Bedar	Bedar Nabdi Maharkote	Haveli	1960	233.8	Mile 7 Jreeb 32 Karam 7	64	-	-
01-05-1960	A: Dhalan	Dhalan	Haveli	1961	12.14	Mile 1 Jreeb 38 Karam 02	9	1	4

	B : Aruwali	Aruwali			34.4	Mile 1 Jreeb 67 Karam 0	11	1	4
	C : Chhamb	Chhamb			103.1	Mile 2 Jreeb 24 Karam 08	18	2	13
18-10-1959	Kasba Part A & B	Kasba Part A & B	Haveli	1959	91.73	Mile 4 Jreeb 84 Karam 6	93	1	-
					11.35	Mile 1 Jreeb 86 Karam 5	34	2	32
08-08-1959	Kangot	Kangot	Haveli	1959 to 20/09/1960	13.49	Mile 1 Jreeb 18 Karam 3	18	-	-
01-07-1959	Bandi Chechia Part 1 to 6	Bandi Chechia	Haveli	1959	51.71	Mile 3 Jreeb 49 Karam 8	Part 1 : 19 Part 2 : 43 Part 3 : 23 Part 4 : 16 Part 5: 23 Part 6 : 10	-	-
					33.26	Mile 3 Jreeb 41 Karam 5			
					10.8	Mile 1 Jreeb 38 Karam 3			
					7.692	Mile 1 Jreeb 46 Karam 0			
					17.54	Mile 1 Jreeb 22 Karam 4			
					2.249	Mile 0 Jreeb 21 Karam 06			
17-04-1962	Kafarkatha	Sharichaujana	Haveli	1962	25.18	Mile 2 Jreeb 23 Karam 09	25	-	-
08-07-1961	Bagialdhara	Bagialdhara	Haveli	1961	201.7	Mile 10 Jreeb 77 Karam 09	84	2	4
07-06-1961	Haribuda	Haribuda Bela	Haveli	1960	1004	Mile 23 Jreeb	174	6	52

		Vaseri Nadian etc				03 Karam 9			
17-06-1962	Skoot Part A & B	Darobhaghyal	Haveli	1962	35.97	Mile 3 Jreeb 52 Karam 05	A: 21 B: 9	-	-
					4.472	Mile 0 Jreeb 64 Karam 08		-	-
19-09-1960	Nangali	Nangali	Haveli	1960	54.18	Mile 3 Jreeb 92 Karam 5	41	-	-
27-06-1962	Ajot	Not Mentioned	Haveli	1962	47.21	Mile 8 Jreeb 88 Karam 06	43	-	-
24-08-1959	Patiyan	Not Mentioned	Haveli	1959	57.1	Mile 2 Jreeb 18 Karam 07	32	-	-
1959/60	Dokbari	Dokbari	Haveli	1959/60	168	Mile 4 Jreeb 5 Karam 15	123	-	-
04-08-1970	Pothi		Haveli	31-03-1960	9.778	Mile 2 Jreeb 83 Karam 1	35	-	-
08-06-1973	Kalai	Kalai	Haveli	1959	71.05	Mile 5 Jreeb 83 Karam 03	84	-	-
Date Not Mentioned	Dal Pahadi	Dara Darya	Haveli	1960	125.7	Mile 9 Jreeb 65 Karam 01	95	1	7
					5.843	Mile 0 Jreeb 83 Karam 09	13	1	6
02-12-1959 to 09-05-1961	Pench		Haveli	02-12-1959 to 09-05-1961		A :Mile 7 Jreeb 79 Karam 02 B : Mile 3 Jreeb 42 Karam 01	A : 111 B : 37	8	48
20-04-1961	Mangnar	Kanayian	Haveli	1959	444.1	Mile 22 Jreeb 19 Karam 06	254	18	132
11-07-1960 to 13-05-1964	Loran	Loran	Haveli	11-07-1960 to 13-05-1964	A:2116 B:16.32 C:2.25	Mile 30 Jreeb 04 Karam 04	1353	32	258

03-05-1963	A : Soolatri	Soolatri	Haveli	28/08/1961 to 03/05/1963	A:139.4	Mile 11 Jreeb 95 Karam 11	A : 143	1	5
	B: Deriyan				B:5.66	Mile 0 Jreeb 77 Karam 2	B: 21	1	4
	C : Soolatri				C:46.20	Mile 04 Jreeb 92 Karam 07	C: 64	-	-
20-09-1960	Shahpur	Shahpur	Haveli	23/1959 to 20/09/1960	665.5	Mile 11 Jreeb 56 Karam 01	35	1	5
04-04-1961	Gali Pindi, Bandi Kamal Khan	Pindi	Haveli	26/03/1959 to 04/04/1961		Mile 3 Jreeb 61 Karam 03	52	1	11
20-09-1960	Islamabad	Islamabad	Haveli	1959 to 20/09/1960	78.89	Mile 5 Jreeb 62 Karam 09	78	2	8
31-08-1962	Barachar	Barachar	Haveli	17/08/1960 to 31/08/1962	21.58	Mile 1 Jreeb 18 Karam 09	10	-	-
05-08-1960	Thok khari	Banath Thok Khari	Haveli	15/05/1959 to 05/08/1960	168	Mile 9 Jreeb 16 Karam 06	123	4	37
20-07-1963	Shindara	Shindara Kunaiyan Nabna	Haveli	1959 to 20/07/1963	364.5	Mile 16 Jreeb 30 Karam 05	217	4	28
	Ratanwali	Pollis	Haveli	Forest is not complete as mentioned in Form 1					
13-05-1964	Khari Ban	Khari Ban	Haveli	1960 to 13-05-1964	383.4	Mile 4 Jreeb 37 Karam 08	77	28	275
22-04-1964	Khanetar	Khanetar	Haveli	05-03-1960 to 22-04-1964	530.5	Mile 17 Jreeb 05 Karam 01	233	28	287
19-09-1964	Gagraia	Gagraia	Haveli	05/1961 to 19/09/1964	672.4	Mile 09 Jreeb 02 Karam 01	A : 68	1	12

					7.193	Mile 03 Jreeb 85 Karam 04	B: 38	4	32
	Sawjian		Haveli	No Chak/Record available				-	-
	Arai		Haveli	No Chak/Record available				-	-
	Cheladhangri		Haveli	No Chak/Record available				-	-
14-01-1961	Soolinia	Soolinia	Haveli	15/08/1960 to 14/01/1961	67	Mile 05 Jreeb 0 Karam 07	26	-	-
Total Area (in Ha)					9194.20				
Surankote									
02-03-1964	Girjin Dok	Kostain	Surankote	14/06/1962 to 02/03/1964	11817	Mile 44 Jreeb 34 Karam 08	19	-	
06-04-1960	Thandikassi	Lassana	Surankote	06-04-1960	13.732	Mile 2 Jreeb 13 Karam 01	25	-	-
22-10-1955 to 21-09-1961	Patan	Behramgala	Surankote	22-10-1955 to 21-09-1961	23.057	Mile 2 Jreeb 52 Karam 02	49	2	13
01-12-1960	Smaut Potha	Smaut Potha Snehi Gursai Surankote	Surankote	01-12-1960	187.73	Mile 10 Jreeb 63 Karam 01	189	2	21
08-12-1960 to 25-09-1961	Snehi Khedar	Snehi	Surankote	08-12-1960 to 25-09-1961	513.93	Mile 17 Jreeb 31 Karam 06	78	4	36
04-05-1960	Lassana	Lassana Dhunkh	Surankote	04-05-1960	496.84	Mile 07 Jreeb 78 Karam 05	137	49	244
03-06-1961	Surankote Kallar Mora	Surankote	Surankote	03-06-1961	158.04	Mile 10 Jreeb 91 Karam 03	230	1	12

00-00-1959	Kalar katal	Suran	Surankote	00-00-1959	29.471	Mile 1 Jreeb 46 Karam 07	24	-	-
00-00-1959	Tararawali, Sanghalni	Suran	Surankote	00-00-1959	135.01	Mile 06 Jreeb 19 Karam 07	100	1	5
00-00-1957	Phagla Malan	Phagla Malan	Surankote	00-00-1957	421.35	Mile 07 Jreeb 79 Karam 0	80	4	28
00-00-1960	Gundi	Gundi	Surankote	00-00-1960	272.94	Mile 11 Jreeb 53 Karam 09	113	-	
08-11-1961	Hari	Hari Part A & B	Surankote	08-11-1961	13.484	Mile 2 Jreeb 13 Karam 0	A: 10	1	4
					525.19	Mile 0 Jreeb 26 Karam 0	B: 20	1	4
11-12-1961	Mara , Bunikhet	Mara	Surankote	16-06-1959 to 11-12-1961	2068.3	Mile 16 Jreeb 60 Karam 18	110	5	61
10-11-1961	Behramgala A,B,C	Behramgala	Surankote	10-11-1961	242.7	Mile 08 Jreeb 79 Karam 01	A:85	1	8
					25.179	Mile 2 Jreeb 20 Karam 07	B:19	1	19
					35.972	Mile 4 Jreeb 37 Karam 02	C:31	1	6
								4	50
28-01-1962	Tattakutti	Kostan	Surankote	16/09/1961 to 28/01/1960	12128	Mile 06 Jreeb 95 Karam 05	39	-	-
06-04-1960	Lathoong	Lathoong Morh Bachai , Moroth	Surankote	24/04/1958 to 06/04/1960	66.093	Mile 02 Jreeb 87 Karam 09	48	-	-
15-06-1960	Dara Sangla	Sangla	Surankote	17/07/1959 to 15/06/1960	570.85	Mile 12 Jreeb 36 Karam 01	78	12	63

10-11-1961	Chandimarh	Chandimarh	Surankote	20/07/1960 to 10/11/1961	795.12	Mile 14 Jreeb 11 Karam 03	80	9	52
28-01-1962	Dodi	Dodi	Surankote	24/11/1957 to 28/01/1962	8955.7	Mile 11 Jreeb 28 Karam 04	38	-	-
17-11-1961	Poshana, Dongrian	Poshana, Dongrian	Surankote	29/06/1960 to 17/11/1961	1470.5	Mile 23 Jreeb 15 Karam 02	110	7	32
23-11-1961	Marhot	Marhot	Surankote	12/10/1960 to 23/11/1961	820.42	Mile 16 Jreeb 67 Karam 09	103	4	34
06-09-1962	Bufliaz	Bufliaz	Surankote	12/11/1961 to 06/09/1962	544.81	Mile 15 Jreeb 66 Karam 0	104	21	158
28-01-1962	Marah	Marah	Surankote	27/10/1961 to 28/01/1962	1278.8	Mile 10 Jreeb 48 Karam 01	34	19	247
24-11-1961	Daraba	Daraba	Surankote	17/07/1955 to 24/11/1961		Mile 16 Jreeb 08 Karam 02	81	15	111
Total Area (in Ha)					43610				
Grand total of Area of all 3 Ranges					60451.06				

Note: The demarcation details of Poonch Forest Division are available in Urdu language (not in English).This information is obtained from Muhafiz khana of Demarcation Division, Dogra Hall, Jammu in Urdu language (as in Form-I). The information, therefore, has been reproduced above in English language. The names (or other terms) of places/forests used above may have some variation due to difference (if any) in pronunciation in Urdu/English. It is better to refer to original Form-I in case of any discrepancy or clarification.

Appendix II. Statement of details of Berunlines Forests of Poonch Forest Division

Range	S.No.	Name of Beruline Forests	Area : Kanal-Marlas
Mendhar	1.	Daraba	120
	2.	Bafliaz	70-5
	3.	Traranwali	520-15
	4.	Mohra	642-5
	5.	Bohanikheti	378-12
	6.	Salian	774-4
	7.	Chanansahr	475-08
	8.	Hari	36-8
	9.	Malhan	616-19
	10.	Bhagle	821-11
	11.	Gonthal	215-02
	12.	Sangle	1729.00
	13.	Bemrot	280.00
	14.	Dhara-Mohra	251.00
	15.	Sanglani	564.16
Surankote	1.	Gundi	224.15
	2.	Marhot	2795-07
	3.	Chandimarh	353-00
	4.	Poshana	257-14
	5.	Dogray	564.09
	6.	Behramgalla	474-09
	7.	Mehra	91-03
	8.	Smote	459-09
	9.	Surankote	1881.19
	10.	Potha	98.12
	11.	Lassana	510-08
	12.	Sanai	298-01
	13.	Kalar-Kattal	36-16
	14.	Mohra-Bachai	472-18
	15.	Dhar-Gloon	5624.00
	16.	Sanjiot	17941.02
	17	Bhata-Dhuri	5082-02
	18.	Kalar-Mohra	2028-18
	19.	Culathu	9466-00
	20.	Goladh	1549.03
	21.	Dharana	232
	22.	Chajjla	1674.19
	23.	Sagra	7355.01
	24.	Dabraj	2461.13
	25.	Ghani	10544.18
	26.	Balnoi	4531.16
	27.	Mankot	226.13
	28.	Sailani	2835.02
	29.	Ucchad	1528.06
	30.	Bhati-Dhar	356.09

Range	S.No.	Name of Beruline Forests	Area : Kanal-Marlas
	31.	Thera	242.00
	32.	Topa	877.16
	33.	Kasblari	3354.02
	34.	Chak-Banola	298.00
	35.	Chungan	767.15
	36.	Bhera	1548.15
Haveli	1.	Shahpur	5498.00
	2.	Mandhar	1166.08
	3.	Aslamabad	946.09
	4.	Casba	523.07
	5.	Bandichechian	743.11
	6.	Kankot	670.06
	7.	Banvat	1013.13
	8.	Dhokri	253.02
	9.	Dalhan	345.00
	10.	Bagial-Dara	263.02
	11.	Degwar-Terian	397.18
	12.	Degwar-Kalday-clan	528.15
	13.	Kausalian	209.13
	14.	Karmarah	520.01
	15.	Gagrian	882.00
	16.	Ajpura	300.00
	17	Nandi	255.00
	18.	Baila	325.03
	19.	Azamabad	20.13
	20.	Salnoia	389.01
	21.	Chelia	30.00
	22.	Dhengri	65.00
	23.	Saroi	61.12
	24.	Denugam	86.00
	25.	Chamber-Kanari	00-19
	26.	Bedar-Beinai	11-06
	27.	Jandoolla	56-10
	28.	Pendi	162.16
	29.	Dandi-Kamakhan	49-15
	30.	Nangeli	28-00
	31.	Dingla	101.08
	32.	Naunabandi	51-14
	33.	Garel	305-15
	34.	Dhara	489.04
	35.	Fateh-Pur	34.00
	36.	Dana-Dhakaran	124.11
	37.	Kehnu	70-17
	38.	Kalani	50-02
	39.	Bari-Budha	168-00
	40.	Seri-Khawaja	60-00
	41.	Serichowan	109.00
	42.	Dara-Dillian	405-09

Appendix III. Estate area Statement and Working circle of Poonch Forest Division

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
1	Haveli	Mandi	1a/H	52a/H	0	0	0	0	0	343	71	414	414	Protection WC	370	Oak WC
2	Haveli	Mandi	1b/H	52b/H	0	0	0	0	0	273	199	472	472	Protection WC	456	Oak WC
3	Haveli	Mandi	2/H	53/H	0	0	55	0	55	8	44	52	107	Rehabilitation WC	124	Rehabilitation WC
4	Haveli	Mandi	3/H	54/H	0	0	0	0	0	186	96	282	282	Protection WC	296	Oak WC
5	Haveli	Mandi	4a/H	55a/H	0	0	62	38	100	50	77	127	227	Rehabilitation WC	234	Oak WC
6	Haveli	Mandi	4b/H	55b/H	0	0	29	6	35	29	30	59	94	Rehabilitation WC	95	Rehabilitation WC
7	Haveli	Mandi	5/H	56/H	0	0	13	0	13	4	3	7	20	Rehabilitation WC	14	Rehabilitation WC
8	Haveli	Mandi	6/H	57/H	0	0	69	47	116	7	75	82	198	Rehabilitation WC	172	Rehabilitation WC
9	Haveli	Mandi	7/H	58/H	0	0	40	67	107	26	8	34	141	Fir WC	134	Fir Protection cum Rehabilitation WC
10	Haveli	Mandi	8/H	59/H	0	3	47	153	203	18	36	54	257	Fir WC	273	Fir Protection cum Rehabilitation WC
11	Haveli	Mandi	9/H	60/H	0	0	17	231	248	25	22	47	295	Fir WC	289	Fir Protection cum Rehabilitation WC
12	Haveli	Mandi	10/H	61/H	0	0	60	135	195	13	28	41	236	Fir WC	248	Fir Protection cum Rehabilitation WC
13	Haveli	Mandi	11a /H	62a/H	0	0	36	119	155	28	25	53	208	Rehabilitation WC	217	Rehabilitation WC
14	Haveli	Mandi	11b/H	62b/H	0	0	25	5	30	17	43	60	90	Rehabilitation WC	86	Rehabilitation WC
15	Haveli	Mandi	12/H	63/H	0	0	68	46	114	30	33	63	177	Rehabilitation WC	173	Oak WC
16	Haveli	Mandi	13/H	64/H	0	0	27	79	106	13	8	21	127	Protection WC	183	Protection WC
17	Haveli	Mandi	14/H	65/H	0	0	17	50	67	15	1	16	83	Fir WC	101	Fir Protection

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
																cum Rehabilitation WC
18	Haveli	Mandi	15/H	66/H	0	0	2	177	179	24	2	26	205	Protection WC	200	Protection WC
19	Haveli	Mandi	16a/H	67a/H	0	0	39	119	158	69	6	75	233	Fir WC	192	Fir Protection cum Rehabilitation WC
20	Haveli	Mandi	16b/H	67b/H	0	0	6	0	6	28	24	52	58	Rehabilitation WC	70	Rehabilitation WC
21	Haveli	Mandi	17/H	68/H	0	0	11	0	11	8	3	11	22	Rehabilitation WC	104	Rehabilitation WC
22	Haveli	Mandi	18/H	69/H	0	0	31	52	83	16	15	31	114	Rehabilitation WC	115	Rehabilitation WC
23	Haveli	Mandi	19/H	70/H	0	0	3	245	248	62	7	69	317	Fir WC	312	Fir Protection cum Rehabilitation WC
24	Haveli	Mandi	20/H	71/H	0	0	19	199	218	35	9	44	262	Fir WC	262	Fir Protection cum Rehabilitation WC
25	Haveli	Mandi	21/H	72/H	0	0	9	208	217	83	10	93	310	Fir WC	335	Fir Protection cum Rehabilitation WC
26	Haveli	Mandi	22/H	73/H	0	0	6	141	147	45	34	79	226	Fir WC	247	Fir Protection cum Rehabilitation WC
27	Haveli	Mandi	23/H	74/H	0	0	14	128	142	17	53	70	212	Fir WC	192	Fir Protection cum Rehabilitation WC
28	Haveli	Mandi	24/H	75/H	0	0	68	182	250	71	16	87	337	Fir WC	326	Fir Protection cum Rehabilitation WC
29	Haveli	Mandi	25/H	76/H	0	0	59	41	100	59	19	78	178	Fir WC	168	Fir Protection cum Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
30	Haveli	Mandi	26/H	77/H	0	0	22	64	86	53	75	128	214	Fir WC	225	Fir Protection cum Rehabilitation WC
31	Haveli	Mandi	27/H	78/H	0	0	42	47	89	78	30	108	197	Fir WC	197	Fir Protection cum Rehabilitation WC
32	Haveli	Mandi	28/H	79/H	0	0	9	73	82	39	1	40	122	Fir WC	133	Fir Protection cum Rehabilitation WC
33	Haveli	Loran	29/H	80/H	0	5	3	75	83	42	12	54	137	Fir WC	123	Oak WC
34	Haveli	Loran	30/H	81/H	0	1	17	60	78	102	6	108	186	Fir WC	187	Fir Protection cum Rehabilitation WC
35	Haveli	Loran	31/H	82/H	0	0	8	99	107	7	21	28	135	Fir WC	143	Fir Protection cum Rehabilitation WC
36	Haveli	Loran	32/H	83/H	0	0	0	115	115	32	6	38	153	Fir WC	153	Fir Protection cum Rehabilitation WC
37	Haveli	Loran	33/H	84/H	0	0	17	127	144	48	3	51	195	Fir WC	196	Fir Protection cum Rehabilitation WC
38	Haveli	Loran	34/H	85/H	0	0	20	127	147	12	8	20	167	Fir WC	164	Fir Protection cum Rehabilitation WC
39	Haveli	Loran	35/H	86/H	0	0	25	71	96	0	92	92	188	Fir WC	184	Fir Protection cum Rehabilitation WC
40	Haveli	Loran	36/H	87/H	0	0	31	51	82	0	132	132	214	Fir WC	230	Protection WC
41	Haveli	Loran	37/H	88/H	0	0	46	82	128	1	1004	1005	1133	Protection WC	1092	Protection WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
42	Haveli	Loran	38/H	89/H	0	0	0	6	6	0	907	907	913	Protection WC	944	Protection WC
43	Haveli	Loran	39/H	90/H	0	0	7	62	69	7	51	58	127	Fir WC	127	Fir Protection cum Rehabilitation WC
44	Haveli	Loran	40/H	91/H	0	0	34	194	228	5	36	41	269	Fir WC	256	Fir Protection cum Rehabilitation WC
45	Haveli	Loran	41/H	92/H	0	0	26	187	213	7	63	70	283	Fir WC	212	Fir Protection cum Rehabilitation WC
46	Haveli	Loran	42/H	93/H	0	0	43	163	206	9	115	124	330	Fir WC	294	Fir Protection cum Rehabilitation WC
47	Haveli	Loran	43/H	94/H	0	0	42	143	185	20	40	60	245	Fir WC	248	Fir Protection cum Rehabilitation WC
48	Haveli	Loran	44/H	95/H	0	0	24	156	180	20	31	51	231	Fir WC	222	Fir Protection cum Rehabilitation WC
49	Haveli	Loran	45/H	96/H	0	0	15	158	173	1	10	11	184	Fir WC	234	Fir Protection cum Rehabilitation WC
50	Haveli	Loran	46/H	97/H	0	0	65	214	279	3	55	58	337	Fir WC	328	Fir Protection cum Rehabilitation WC
51	Haveli	Loran	47/H	98/H	0	0	16	127	143	24	35	59	202	Protection WC	160	Protection WC
52	Haveli	Loran	48/H	99/H	0	0	20	251	271	6	12	18	289	Fir WC	253	Fir Protection cum Rehabilitation WC
53	Haveli	Loran	49/H	100/H	0	0	38	123	161	12	97	109	270	Fir WC	239	Fir Protection cum

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
																Rehabilitation WC
54	Haveli	Loran	50/H	101/H	0	0	18	34	52	10	6	16	68	Rehabilitation WC	65	Rehabilitation WC
55	Haveli	Loran	51/H	102/H	0	0	26	151	177	9	46	55	232	Fir WC	211	Fir Protection cum Rehabilitation WC
56	Haveli	Loran	52/H	103/H	0	0	1	45	46	0	407	407	453	Fir WC	231	Protection WC
57	Haveli	Loran	53/H	104/H	0	0	44	108	152	21	286	307	459	Protection WC	450	Protection WC
58	Haveli	Loran	54/H	105/H	0	0	31	68	99	9	58	67	166	Fir WC	151	Fir Protection cum Rehabilitation WC
59	Haveli	Loran	55/H	106/H	0	0	12	164	176	11	23	34	210	Fir WC	195	Fir Protection cum Rehabilitation WC
60	Haveli	Loran	56/H	107/H	0	0	23	66	89	9	46	55	144	Fir WC	118	Fir Protection cum Rehabilitation WC
61	Haveli	Loran	57/H	108/H	0	0	70	112	182	31	30	61	243	Fir WC	204	Fir Protection cum Rehabilitation WC
62	Haveli	Loran	58/H	109/H	0	0	28	71	99	15	25	40	139	Protection WC	126	Protection WC
63	Haveli	Loran	59a/H	110a/H	0	0	10	23	33	7	9	16	49	Fir WC	47	Rehabilitation WC
64	Haveli	Loran	59b/H	110b/H	0	0	2	69	71	4	8	12	83	Fir WC	86	Fir Protection cum Rehabilitation WC
65	Haveli	Loran	60/H	111/H	0	0	20	95	115	11	114	125	240	Fir WC	237	Fir Protection cum Rehabilitation WC
66	Haveli	Sabzian	61/H	112/H	0	0	2	119	121	49	57	106	227	Fir WC	230	Fir Protection cum Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
67	Haveli	Sabzian	62/H	113/H	0	0	3	69	72	33	9	42	114	Fir WC	118	Fir Protection cum Rehabilitation WC
68	Haveli	Sabzian	63/H	114/H	0	0	22	76	98	67	90	157	255	Fir WC	228	Fir Protection cum Rehabilitation WC
69	Haveli	Sabzian	64a/H	115a/H	0	0	42	0	42	41	1	42	84	Fir WC	87	Protection WC
70	Haveli	Sabzian	64b/H	115b/H	0	0	91	0	91	33	6	39	130	Fir WC	133	Protection WC
71	Haveli	Sabzian	64c/H	115c/H	0	0	23	0	23	26	1	27	50	Fir WC	39	Protection WC
72	Haveli	Sabzian	65/H	116/H	0	0	16	75	91	39	17	56	147	Fir WC	159	Fir Protection cum Rehabilitation WC
73	Haveli	Sabzian	66/H	117/H	0	0	7	135	142	39	5	44	186	Protection WC	189	Protection WC
74	Haveli	Sabzian	67/H	118/H	0	15	0	76	91	54	1	55	146	Fir WC	148	Fir Protection cum Rehabilitation WC
75	Haveli	Sabzian	68/H	119/H	0	0	14	55	69	17	6	23	92	Fir WC	85	Fir Protection cum Rehabilitation WC
76	Haveli	Sabzian	69/H	120/H	0	0	1	202	203	9	2	11	214	Protection WC	204	Protection WC
77	Haveli	Sabzian	70/H	121/H	0	0	18	184	202	5	44	49	251	Fir WC	190	Fir Protection cum Rehabilitation WC
78	Haveli	Sabzian	71/H	122/H	0	0	21	76	97	10	151	161	258	Protection WC	228	Protection WC
79	Haveli	Sabzian	72/H	123/H	0	0	0	0	0	0	965	965	965	Protection WC	976	Protection WC
80	Haveli	Sabzian	73/H	124/H	0	0	0	0	0	0	1127	1127	1127	Protection WC	1280	Protection WC
81	Haveli	Sabzian	74/H	125/H	0	0	10	21	31	0	189	189	220	Protection WC	243	Protection WC
82	Haveli	Sabzian	75/H	126/H	0	0	49	51	100	2	138	140	240	Rehabilitation WC	231	Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
83	Haveli	Sabzian	76/H	127/H	0	38	0	69	107	32	27	59	166	Rehabilitation WC	181	Rehabilitation WC
84	Haveli	Sabzian	77/H	128/H	0	0	13	59	72	10	4	14	86	Fir WC	112	Fir Protection cum Rehabilitation WC
85	Haveli	Sabzian	78/H	129/H	0	0	42	46	88	4	51	55	143	Protection WC	122	Protection WC
86	Haveli	Sabzian	79/H	130/H	0	0	15	68	83	6	55	61	144	Rehabilitation WC	129	Rehabilitation WC
87	Haveli	Sabzian	80/H	131/H	0	1	17	0	18	13	28	41	59	Rehabilitation WC	50	Rehabilitation WC
88	Haveli	Sabzian	81/H	132/H	0	0	2	221	223	9	5	14	237	Rehabilitation WC	273	Rehabilitation WC
89	Haveli	Sabzian	82/H	133/H	0	0	44	184	228	15	29	44	272	Fir WC	268	Fir Protection cum Rehabilitation WC
90	Haveli	Sabzian	83/H	134/H	0	0	10	141	151	7	108	115	266	Fir WC	231	Fir Protection cum Rehabilitation WC
91	Haveli	Sabzian	84/H	135/H	0	0	3	71	74	0	636	636	710	Fir WC	704	Protection WC
92	Haveli	Sabzian	85/H	136/H	0	0	8	16	24	0	534	534	558	Protection WC	609	Protection WC
93	Haveli	Sabzian	86a/H	137/H	0	0	4	105	109	5	317	322	431	Protection WC	421	Protection WC
94	Haveli	Sabzian	86b/H	138/H	0	0	40	142	182	28	307	335	517	Protection WC	479	Protection WC
95	Haveli	Sabzian	86c/H	139/H	0	0	102	92	194	28	37	65	259	Protection WC	284	Protection WC
96	Haveli	Sabzian	86d/H	140/H	0	0	95	89	184	17	95	112	296	Rehabilitation WC	254	Rehabilitation WC
97	Haveli	Sabzian	87a/H	141/H	0	0	5	157	162	3	2	5	167	Protection WC	148	Protection WC
98	Haveli	Sabzian	87b/H	142/H	0	0	58	123	181	10	136	146	327	Protection WC	323	Protection WC
99	Haveli	Sabzian	87c/H	143/H	0	0	62	109	171	31	23	54	225	Protection WC	187	Protection WC
100	Haveli	Sabzian	88a/H	144/H	0	0	21	141	162	26	0	26	188	Protection WC	162	Protection WC
101	Haveli	Sabzian	88b/H	145/H	0	0	47	116	163	1	228	229	392	Protection WC	385	Protection WC
102	Haveli	Sabzian	88c/H	146/H	0	0	30	29	59	20	6	26	85	Protection WC	56	Protection WC
103	Haveli	Sabzian	89a/H	220/H	0	0	83	320	403	10	249	259	662	Rehabilitation WC	635	Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
104	Haveli	Sabzian	89b/H	221/H	1	0	51	169	221	11	254	265	486	Rehabilitation WC	484	Rehabilitation WC
105	Haveli	Sabzian	90/H	161/H	0	0	45	131	176	122	120	242	418	Protection WC	338	Oak WC
106	Haveli	Sabzian	91/H	162/H	0	0	2	28	30	5	278	283	313	Protection WC	229	Protection WC
107	Haveli	Poonch	92/H	163/H	0	0	2	0	2	0	192	192	194	Protection WC	201	Protection WC
108	Haveli	Poonch	93a/H	164a/H	0	0	0	0	0	91	45	136	136	Protection WC	135	Oak WC
109	Haveli	Poonch	93b/H	164b/H	0	5	101	0	106	47	200	247	353	Rehabilitation WC	337	Rehabilitation WC
110	Haveli	Poonch	94a/H	165a/H	0	0	3	0	3	8	205	213	216	Protection WC	203	Protection WC
111	Haveli	Poonch	94b/H	165b/H	0	9	0	0	9	53	42	95	104	Protection WC	104	Protection WC
112	Haveli	Poonch	94c/H	165c/H	0	0	8	0	8	10	12	22	30	Rehabilitation WC	36	Rehabilitation WC
113	Haveli	Poonch	95a/H	166a/H	0	0	0	0	0	18	19	37	37	Protection WC	46	Protection WC
114	Haveli	Poonch	95b/H	166b/H	0	0	0	0	0	41	24	65	65	Protection WC	65	Protection WC
115	Haveli	Poonch	96a/H	167a/H	0	0	0	0	0	59	18	77	77	Rehabilitation WC	73	Oak WC
116	Haveli	Poonch	96b/H	167b/H	0	0	0	0	0	19	22	41	41	Rehabilitation WC	39	Oak WC
117	Haveli	Poonch	96c/H	167c/H	0	0	0	0	0	26	20	46	46	Rehabilitation WC	39	Oak WC
118	Haveli	Poonch	97a/H	168a/H	0	0	0	0	0	67	10	77	77	Protection WC	140	Protection WC
119	Haveli	Poonch	97b/H	168b/H	0	0	0	0	0	80	96	176	176	Rehabilitation WC	62	Oak WC
120	Haveli	Poonch	98/H	169/H	0	0	0	2	2	0	213	213	215	Protection WC	212	Protection WC
121	Haveli	Poonch	99/H	170/H	0	0	0	0	0	4	260	264	264	Protection WC	248	Protection WC
122	Haveli	Poonch	100/H	177/H	0	0	0	0	0	101	67	168	168	Protection WC	178	Oak WC
123	Haveli	Poonch	101a/H	178a/H	0	0	0	0	0	18	2	20	20	Protection WC	19	Protection WC
124	Haveli	Poonch	101b/H	178b/H	0	0	2	0	2	7	17	24	26	Protection WC	25	Protection WC
125	Haveli	Poonch	102/H	179/H	0	0	0	0	0	45	4	49	49	Protection WC	64	Oak WC
126	Haveli	Poonch	103a/H	180a/H	0	0	3	0	3	0	23	23	26	Rehabilitation WC	25	Rehabilitation WC
127	Haveli	Poonch	103b/H	180b/H	0	0	0	0	0	8	62	70	70	Rehabilitation WC	62	Rehabilitation WC
128	Haveli	Poonch	104a/H	181a/H	0	0	0	0	0	9	20	29	29	Rehabilitation WC	29	Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
129	Haveli	Poonch	104b/H	181b/H	0	0	0	0	0	8	14	22	22	Rehabilitation WC	23	Rehabilitation WC
130	Haveli	Poonch	104c/H	181c/H	0	0	0	0	0	27	50	77	77	Rehabilitation WC	75	Rehabilitation WC
131	Haveli	Poonch	105a/H	182a/H	0	0	0	0	0	14	18	32	32	Rehabilitation WC	26	Rehabilitation WC
132	Haveli	Poonch	105b/H	182b/H	0	0	0	0	0	45	12	57	57	Rehabilitation WC	37	Oak WC
133	Haveli	Poonch	106a/H	183a/H	0	0	0	0	0	53	85	138	138	Rehabilitation WC	103	Rehabilitation WC
134	Haveli	Poonch	106b/H	183b/H	0	0	7	0	7	55	26	81	88	Rehabilitation WC	65	Oak WC
135	Haveli	Poonch	106c/H	183c/H	0	0	0	0	0	1	35	36	36	Rehabilitation WC	29	Rehabilitation WC
136	Haveli	Poonch	107a/H	184a/H	0	0	0	0	0	14	8	22	22	Protection WC	20	Protection WC
137	Haveli	Poonch	107b/H	184b/H	3	0	0	0	3	113	19	132	135	Protection WC	137	Oak WC
138	Haveli	Poonch	108/H	185/H	8	0	0	0	8	149	33	182	190	Protection WC	196	Oak WC
139	Haveli	Jhalas	109a/H	186a/H	1	0	0	0	1	23	39	62	63	Protection WC	70	Protection WC
140	Haveli	Jhalas	109b/H	186b/H	10	0	0	0	10	115	45	160	170	Protection WC	158	Oak WC
141	Haveli	Jhalas	110/H	217/M	117	0	0	0	117	0	3	3	120	Protection WC	105	Protection WC
142	Haveli	Jhalas	111a/H	218a/M	65	0	0	0	65	11	15	26	91	Protection WC	86	Protection WC
143	Haveli	Jhalas	111b/H	218b/M	8	0	0	0	8	10	10	20	28	Protection WC	25	Protection WC
144	Haveli	Jhalas	112/H	219/M	40	0	0	0	40	66	17	83	123	Chir WC	109	Oak WC
145	Haveli	Jhalas	113a/H	220a/M	16	0	0	0	16	61	27	88	104	Chir WC	103	Oak WC
146	Haveli	Jhalas	113b/H	220b/M	6	0	0	0	6	22	16	38	44	Rehabilitation WC	47	Rehabilitation WC
147	Haveli	Jhalas	114a/H	221a/M	0	0	7	0	7	61	12	73	80	Chir WC	78	Oak WC
148	Haveli	Jhalas	114b/H	221b/M	17	0	0	0	17	42	20	62	79	Chir WC	70	Oak WC
149	Haveli	Jhalas	115a/H	222a/M	7	0	0	0	7	22	34	56	63	Chir WC	61	Rehabilitation WC
150	Haveli	Jhalas	115b/H	222b/M	0	0	0	0	0	21	24	45	45	Chir WC	45	Rehabilitation WC
151	Haveli	Jhalas	115c/H	222c/M	1	0	0	0	1	26	4	30	31	Rehabilitation WC	36	Oak WC
152	Haveli	Jhalas	115d/H	222d/M	2	0	0	0	2	18	13	31	33	Rehabilitation WC	31	Rehabilitation WC
153	Haveli	Jhalas	116/H	223/M	6	0	0	0	6	95	35	130	136	Chir WC	139	Oak WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
154	Haveli	Jhalas	117/H	224/M	2	0	0	0	2	37	22	59	61	Rehabilitation WC	65	Rehabilitation WC
155	Haveli	Jhalas	118/H	225/M	2	0	0	0	2	39	16	55	57	Rehabilitation WC	75	Oak WC
156	Haveli	Jhalas	119/H	226/M	5	0	0	0	5	125	23	148	153	Chir WC	153	Oak WC
157	Haveli	Jhalas	120/H	227/M	0	0	26	0	26	113	23	136	162	Protection WC	169	Oak WC
158	Haveli	Jhalas	121a/H	228a/M	0	0	0	0	0	43	7	50	50	Chir WC	51	Oak WC
159	Haveli	Jhalas	121b/H	228b/M	24	0	0	0	24	46	15	61	85	Chir WC	83	Chir WC
160	Haveli	Jhalas	122/H	229/M	1	0	0	0	1	38	15	53	54	Protection WC	51	Protection WC
161	Haveli	Jhalas	123/H	230/M	13	0	0	0	13	72	17	89	102	Protection WC	111	Protection WC
162	Haveli	Jhalas	124a/H	231a/M	1	0	0	0	1	21	27	48	49	Rehabilitation WC	47	Rehabilitation WC
163	Haveli	Jhalas	124b/H	231b/M	4	0	0	0	4	0	3	3	7	Rehabilitation WC	11	Rehabilitation WC
164	Haveli	Khanetar	125/H	232/M	2	0	0	0	2	67	26	93	95	Protection WC	95	Oak WC
165	Haveli	Khanetar	126/H	233/M	19	0	0	0	19	48	18	66	85	Rehabilitation WC	84	Rehabilitation WC
166	Haveli	Khanetar	127/H	234/M	22	0	0	0	22	33	55	88	110	Protection WC	113	Protection WC
167	Haveli	Khanetar	128/H	235/M	0	0	33	0	33	138	10	148	181	Rehabilitation WC	201	Oak WC
168	Haveli	Khanetar	129/H	236/M	0	0	0	0	0	143	36	179	179	Protection WC	150	Oak WC
169	Haveli	Khanetar	130/H	237/M	35	0	0	0	35	44	15	59	94	Protection WC	114	Protection WC
170	Haveli	Khanetar	131/H	238/M	9	0	0	0	9	22	6	28	37	Protection WC	33	Oak WC
171	Haveli	Khanetar	132/H	239/M	13	0	0	0	13	25	55	80	93	Protection WC	90	Protection WC
172	Haveli	Khanetar	133/H	240/M	26	0	0	0	26	11	3	14	40	Rehabilitation WC	47	Rehabilitation WC
173	Haveli	Khanetar	134a/H	241a/M	44	0	0	0	44	24	11	35	79	Rehabilitation WC	110	Rehabilitation WC
174	Haveli	Khanetar	134b/H	241b/M	39	0	0	0	39	40	27	67	106	Protection WC	104	Protection WC
175	Haveli	Khanetar	135/H	242/M	37	0	0	0	37	77	24	101	138	Protection WC	136	Oak WC
176	Haveli	Khanetar	136/H	243/M	9	0	0	0	9	28	21	49	58	Rehabilitation WC	64	Rehabilitation WC
177	Haveli	Khanetar	137/H	244/M	42	0	0	0	42	46	28	74	116	Protection WC	120	Protection WC
178	Haveli	Poonch	138a/H	281a/H	0	0	0	0	0	14	16	30	30	Rehabilitation WC	33	Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
179	Haveli	Poonch	138b/H	281b/H	30	0	0	0	30	8	67	75	105	Rehabilitation WC	103	Rehabilitation WC
180	Haveli	Poonch	139a/H	282a/H	9	0	0	0	9	13	73	86	95	Rehabilitation WC	50	Rehabilitation WC
181	Haveli	Poonch	139b/H	282b/H	17	0	0	0	17	0	59	59	76	Rehabilitation WC	48	Rehabilitation WC
182	Haveli	Poonch	140a/H	283a/H	25	0	0	0	25	2	47	49	74	Protection WC	47	Protection WC
183	Haveli	Poonch	140b/H	283b/H	17	0	0	0	17	24	41	65	82	Protection WC	70	Protection WC
184	Haveli	Poonch	140c/H	283c/H	31	0	0	0	31	18	0	18	49	Protection WC	28	Protection WC
185	Haveli	Poonch	141/H	284/H	4	0	0	0	4	85	3	88	92	Rehabilitation WC	97	Oak WC
186	Khara WLCR	Poonch			0	0	20	80	100	0	1848	1848	1948		1845	
187	Kulian WLCR	Poonch			0	0	17	74	91	1	1006	1007	1098		1029	
Total for Haveli Range					**790**	**77**	**3034**	**10170**	**14071**	**6332**	**17085**	**23417**	**37488**		**36328**	
188	Surankote	Murrah	1/S	1/H	0	0	1	54	55	64	482	546	601	Protection WC	559	Protection WC
189	Surankote	Murrah	2/S	2/H	0	0	37	61	98	8	91	99	197	Fir WC	312	Rehabilitation WC
190	Surankote	Murrah	3a/S	3a/H	0	0	0	1	1	0	27	27	28	Rehabilitation WC	36	Rehabilitation WC
191	Surankote	Murrah	3b/S	3b/H	0	0	10	24	34	0	51	51	85	Rehabilitation WC	75	Rehabilitation WC
192	Surankote	Murrah	4/S	4/H	0	0	50	139	189	2	197	199	388	Fir WC	398	Rehabilitation WC
193	Surankote	Murrah	5a/S	5a/H	0	0	15	76	91	0	153	153	244	Fir WC	217	Rehabilitation WC
194	Surankote	Murrah	5b/S	5b/H	0	0	5	2	7	1	71	72	79	Rehabilitation WC	90	Rehabilitation WC
195	Surankote	Murrah	6/S	6/H	0	0	47	94	141	1	13	14	155	Fir WC	144	Fir Protection cum Rehabilitation WC
196	Surankote	Murrah	7/S	7/H	0	0	16	167	183	0	15	15	198	Fir WC	144	Fir Protection cum Rehabilitation WC
197	Surankote	Murrah	8/S	8/H	0	0	15	97	112	2	96	98	210	Fir WC	154	Fir Protection cum Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
198	Surankote	Murrah	9/S	9/H	0	0	39	22	61	4	72	76	137	Protection WC	122	Protection WC
199	Surankote	Murrah	10a/S	10a/H	0	0	59	301	360	7	90	97	457	Fir WC	362	Fir Protection cum Rehabilitation WC
200	Surankote	Murrah	10b/S	10b/H	0	0	11	48	59	4	38	42	101	Fir WC	176	Fir Protection cum Rehabilitation WC
201	Surankote	Murrah	11a/S	11a/H	0	0	28	156	184	0	33	33	217	Fir WC	201	Fir Protection cum Rehabilitation WC
202	Surankote	Murrah	11b/S	11b/H	0	0	31	116	147	0	93	93	240	Fir WC	170	Fir Protection cum Rehabilitation WC
203	Surankote	Murrah	12/S	12/H	0	0	28	45	73	0	319	319	392	Fir WC	398	Protection WC
204	Surankote	Murrah	13/S	13/H	0	0	89	152	241	8	258	266	507	Fir WC	502	Protection WC
205	Surankote	Murrah	14/S	14/H	0	0	66	180	246	7	363	370	616	Rehabilitation WC	617	Rehabilitation WC
206	Surankote	Murrah	15/S	15/H	0	0	15	32	47	6	166	172	219	Rehabilitation WC	222	Rehabilitation WC
207	Surankote	Murrah	16/S	16/H	0	0	240	186	426	73	83	156	582	Fir WC	584	Fir Protection cum Rehabilitation WC
208	Surankote	Murrah	17/S	17/H	0	0	76	154	230	52	38	90	320	Fir WC	317	Fir Protection cum Rehabilitation WC
209	Surankote	Murrah	18/S	18/H	0	0	27	175	202	56	3	59	261	Fir WC	281	Fir Protection cum Rehabilitation WC
210	Surankote	Murrah	19/S	19/H	0	0	13	112	125	8	54	62	187	Fir WC	209	Fir Protection cum Rehabilitation WC
211	Surankote	Murrah	20a/S	20a/H	0	0	67	259	326	42	136	178	504	Fir WC	473	Fir Protection

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
																cum Rehabilitation WC
212	Surankote	Murrah	20b/S	20b/H	0	0	36	47	83	52	68	120	203	Protection WC	206	Oak WC
213	Surankote	Murrah	21/S	21/H	0	0	56	132	188	86	24	110	298	Fir WC	273	Fir Protection cum Rehabilitation WC
214	Surankote	Murrah	22/S	22/H	0	0	40	202	242	43	30	73	315	Fir WC	352	Fir Protection cum Rehabilitation WC
215	Surankote	Murrah	23/S	23/H	0	0	134	310	444	6	356	362	806	Fir WC	795	Fir Protection cum Rehabilitation WC
216	Surankote	Murrah	24/S	24/H	0	0	85	144	229	23	201	224	453	Fir WC	391	Fir Protection cum Rehabilitation WC
217	Surankote	Murrah	25/S	25/H	0	0	140	168	308	45	106	151	459	Rehabilitation WC	476	Rehabilitation WC
218	Surankote	Murrah	26/S	26/H	0	0	104	357	461	165	188	353	814	Fir WC	831	Fir Protection cum Rehabilitation WC
219	Surankote	Murrah	27/S	27/H	0	0	7	182	189	47	9	56	245	Fir WC	281	Fir Protection cum Rehabilitation WC
220	Surankote	Murrah	28/S	28/H	0	0	78	109	187	2	159	161	348	Fir WC	304	Fir Protection cum Rehabilitation WC
221	Surankote	Murrah	29/S	29/H	0	0	48	57	105	4	170	174	279	Fir WC	206	Protection WC
222	Surankote	Murrah	30/S	30/H	0	0	30	282	312	47	212	259	571	Fir WC	487	Fir Protection cum Rehabilitation WC
223	Surankote	Murrah	31/S	31/H	0	0	0	132	132	43	39	82	214	Fir WC	223	Fir Protection

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
																cum Rehabilitation WC
224	Surankote	Murrah	32a/S	32a/H	0	0	0	127	127	99	64	163	290	Fir WC	295	Fir Protection cum Rehabilitation WC
225	Surankote	Murrah	32b/S	32b/H	0	0	0	64	64	13	67	80	144	Fir WC	157	Fir Protection cum Rehabilitation WC
226	Surankote	Murrah	33a/S	33a/H	0	0	5	169	174	27	77	104	278	Fir WC	286	Fir Protection cum Rehabilitation WC
227	Surankote	Murrah	33b/S	33b/H	0	0	12	125	137	26	3	29	166	Fir WC	158	Fir Protection cum Rehabilitation WC
228	Surankote	Murrah	34/S	34/H	0	0	98	290	388	4	87	91	479	Fir WC	495	Fir Protection cum Rehabilitation WC
229	Surankote	Murrah	35/S	35/H	0	0	108	135	243	4	134	138	381	Fir WC	403	Fir Protection cum Rehabilitation WC
230	Surankote	Murrah	36/S	36/H	0	0	23	19	42	0	57	57	99	Rehabilitation WC	179	Rehabilitation WC
231	Surankote	Murrah	37/S	37/H	0	0	28	169	197	8	32	40	237	Fir WC	250	Fir Protection cum Rehabilitation WC
232	Surankote	Murrah	38/S	38/H	0	0	141	175	316	32	192	224	540	Fir WC	527	Fir Protection cum Rehabilitation WC
233	Surankote	Murrah	39/S	39/H	0	0	50	3	53	39	256	295	348	Rehabilitation WC	334	Rehabilitation WC
234	Surankote	Murrah	40/S	40/H	0	0	83	2	85	0	293	293	378	Rehabilitation WC	369	Rehabilitation WC
235	Surankote	Gundi	41/S	41/H	0	0	103	7	110	23	206	229	339	Rehabilitation WC	335	Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
236	Surankote	Gundi	42/S	42/H	0	0	385	78	463	60	164	224	687	Rehabilitation WC	656	Rehabilitation WC
237	Surankote	Gundi	43/S	43/H	0	0	211	247	458	19	351	370	828	Rehabilitation WC	810	Rehabilitation WC
238	Surankote	Gundi	44a/S	44a/H	0	0	16	0	16	0	17	17	33	Rehabilitation WC	34	Rehabilitation WC
239	Surankote	Gundi	44b/S	44b/H	0	0	25	0	25	19	21	40	65	Rehabilitation WC	62	Rehabilitation WC
240	Surankote	Gundi	44c/S	44c/H	0	0	241	120	361	47	48	95	456	Rehabilitation WC	468	Rehabilitation WC
241	Surankote	Gundi	45/S	45/H	0	0	22	304	326	34	76	110	436	Rehabilitation WC	434	Rehabilitation WC
242	Surankote	Gundi	46/S	46/H	0	0	53	116	169	15	224	239	408	Rehabilitation WC	386	Rehabilitation WC
243	Surankote	Gundi	47/S	47/H	0	0	99	51	150	28	61	89	239	Rehabilitation WC	238	Rehabilitation WC
244	Surankote	Gundi	48/S	48/H	0	0	42	212	254	5	19	24	278	Rehabilitation WC	264	Rehabilitation WC
245	Surankote	Gundi	49/S	49/H	0	0	31	202	233	23	178	201	434	Rehabilitation WC	406	Rehabilitation WC
246	Surankote	Gundi	50/S	50/H	0	0	37	52	89	38	550	588	677	Rehabilitation WC	647	Rehabilitation WC
247	Surankote	Gundi	51a/S	51a/H	0	0	49	0	49	2	464	466	515	Rehabilitation WC	473	Rehabilitation WC
248	Surankote	Gundi	51b/S	51b/H	0	0	32	0	32	6	37	43	75	Rehabilitation WC	54	Rehabilitation WC
249	Surankote	Gundi	51c/S	51c/H	0	0	132	0	132	38	179	217	349	Rehabilitation WC	301	Rehabilitation WC
250	Surankote	Samote	52/S	245/M	0	0	0	0	0	4	10	14	14	Rehabilitation WC	17	Rehabilitation WC
251	Surankote	Samote	53/S	246/M	0	0	107	0	107	13	42	55	162	Rehabilitation WC	142	Rehabilitation WC
252	Surankote	Samote	54/S	247/M	0	0	107	0	107	28	43	71	178	Rehabilitation WC	150	Rehabilitation WC
253	Surankote	Samote	55/S	248/M	0	0	27	0	27	22	22	44	71	Rehabilitation WC	63	Rehabilitation WC
254	Surankote	Samote	56/S	249/M	0	0	24	0	24	1	44	45	69	Rehabilitation WC	69	Rehabilitation WC
255	Surankote	Samote	57/S	250/M	0	0	63	0	63	24	71	95	158	Rehabilitation WC	165	Rehabilitation WC
256	Surankote	Samote	58/S	251/M	0	0	62	0	62	1	49	50	112	Rehabilitation WC	102	Rehabilitation WC
257	Surankote	Samote	59a/S	252a/M	0	0	14	0	14	0	53	53	67	Rehabilitation WC	70	Rehabilitation WC
258	Surankote	Samote	59b/S	252b/M	0	0	79	0	79	46	30	76	155	Protection WC	147	Oak WC
259	Surankote	Samote	60/S	253/M	29	0	0	0	29	11	29	40	69	Protection WC	53	Protection WC
260	Surankote	Samote	61/S	254/M	51	0	0	0	51	21	38	59	110	Rehabilitation WC	103	Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
261	Surankote	Samote	62/S	255/M	7	0	0	0	7	7	59	66	73	Rehabilitation WC	74	Rehabilitation WC
262	Surankote	Samote	63/S	256/M	27	0	0	0	27	14	75	89	116	Rehabilitation WC	116	Rehabilitation WC
263	Surankote	Samote	64/S	257/M	33	0	0	0	33	4	21	25	58	Rehabilitation WC	59	Rehabilitation WC
264	Surankote	Bufliaz	65/S	258/M	112	0	0	0	112	9	24	33	145	Protection WC	150	Protection WC
265	Surankote	Bufliaz	66/S	259/M	187	0	0	13	200	32	55	87	287	Protection WC	255	Protection WC
266	Surankote	Bufliaz	67/S	260/M	193	0	0	39	232	40	39	79	311	Protection WC	279	Protection WC
267	Surankote	Bufliaz	68/S	261/M	0	0	119	9	128	49	17	66	194	Protection WC	189	Protection WC
268	Surankote	Bufliaz	69/S	262/M	0	0	95	0	95	41	13	54	149	Rehabilitation WC	159	Rehabilitation WC
269	Surankote	Bufliaz	70/S	263/M	0	0	145	18	163	22	76	98	261	Protection WC	256	Protection WC
270	Surankote	Bufliaz	71/S	264/M	0	0	132	41	173	24	66	90	263	Rehabilitation WC	262	Rehabilitation WC
271	Surankote	Bufliaz	72/S	265/M	0	0	141	1	142	71	42	113	255	Protection WC	216	Oak WC
272	Surankote	Bufliaz	73/S	266/M	0	0	85	0	85	54	17	71	156	Protection WC	156	Oak WC
273	Surankote	Bufliaz	74/S	267/M	0	0	215	40	255	38	13	51	306	Rehabilitation WC	318	Rehabilitation WC
274	Surankote	Bufliaz	75/S	268/M	0	0	150	33	183	24	43	67	250	Fir WC	258	Protection WC
275	Surankote	Bufliaz	76/S	269/M	0	0	19	0	19	13	21	34	53	Rehabilitation WC	51	Rehabilitation WC
276	Surankote	Behramgala	77/S	270/M	0	0	81	0	81	88	30	118	199	Rehabilitation WC	202	Oak WC
277	Surankote	Behramgala	78/S	271/M	0	0	76	7	83	26	38	64	147	Protection WC	186	Protection WC
278	Surankote	Behramgala	79/S	272/M	0	0	90	187	277	32	35	67	344	Fir WC	331	Fir Protection cum Rehabilitation WC
279	Surankote	Behramgala	80/S	273/M	0	0	81	9	90	74	37	111	201	Fir WC	181	Rehabilitation WC
280	Surankote	Behramgala	81/S	274/M	0	0	44	182	226	21	34	55	281	Fir WC	253	Fir Protection cum Rehabilitation WC
281	Surankote	Behramgala	82/S	275/M	0	0	9	130	139	6	21	27	166	Fir WC	167	Fir Protection cum Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
282	Surankote	Behramgala	83/S	276/M	0	0	43	209	252	2	38	40	292	Fir WC	300	Fir Protection cum Rehabilitation WC
283	Surankote	Behramgala	84/S	277/M	0	0	49	155	204	2	103	105	309	Protection WC	312	Protection WC
284	Surankote	Behramgala	85/S	278/M	0	0	12	3	15	0	210	210	225	Protection WC	223	Protection WC
285	Surankote	Behramgala	86/S	279/M	0	0	0	1	1	0	961	961	962	Protection WC	972	Protection WC
286	Surankote	Behramgala	87/S	280/M	0	0	0	0	0	0	565	565	565	Protection WC	604	Protection WC
287	Surankote	Behramgala	88/S	281/M	0	0	0	0	0	0	529	529	529	Protection WC	531	Protection WC
288	Surankote	Behramgala	89/S	282/M	0	0	0	0	0	0	506	506	506	Protection WC	523	Protection WC
289	Surankote	Behramgala	90/S	283/M	0	0	0	0	0	0	247	247	247	Protection WC	214	Protection WC
290	Surankote	Behramgala	91/S	284/M	0	0	0	0	0	0	622	622	622	Protection WC	600	Protection WC
291	Surankote	Behramgala	92/S	285/M	0	0	0	0	0	0	472	472	472	Protection WC	478	Protection WC
292	Surankote	Behramgala	93/S	286/M	0	0	8	41	49	0	761	761	810	Protection WC	806	Protection WC
293	Surankote	Behramgala	94/S	287/M	0	0	10	106	116	4	796	800	916	Protection WC	913	Protection WC
294	Surankote	Behramgala	95/S	288/M	0	0	15	184	199	0	199	199	398	Protection WC	383	Protection WC
295	Surankote	Behramgala	96/S	289/M	0	0	7	42	49	11	11	22	71	Protection WC	80	Protection WC
296	Surankote	Behramgala	97/S	290/M	0	0	47	73	120	47	19	66	186	Fir WC	212	Fir Protection cum Rehabilitation WC
297	Surankote	Behramgala	98/S	291/M	0	0	52	162	214	38	10	48	262	Fir WC	255	Fir Protection cum Rehabilitation WC
298	Surankote	Behramgala	99/S	292/M	0	0	24	212	236	13	7	20	256	Fir WC	278	Fir Protection cum Rehabilitation WC
299	Surankote	Behramgala	100/S	293/M	0	0	43	312	355	10	44	54	409	Fir WC	397	Fir Protection cum Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
300	Surankote	Behramgala	101/S	294/M	0	0	39	330	369	3	104	107	476	Fir WC	455	Fir Protection cum Rehabilitation WC
301	Surankote	Behramgala	102/S	295/M	0	0	18	73	91	1	186	187	278	Protection WC	246	Protection WC
302	Surankote	Behramgala	103/S	296/M	0	0	30	151	181	0	323	323	504	Protection WC	531	Protection WC
303	Surankote	Behramgala	104/S	297/M	0	0	11	23	34	6	28	34	68	Fir WC	72	Fir Protection cum Rehabilitation WC
304	Surankote	Behramgala	105/S	298/M	0	0	55	168	223	14	99	113	336	Rehabilitation WC	350	Rehabilitation WC
305	Surankote	Behramgala	106/S	299/M	0	0	38	22	60	1	150	151	211	Rehabilitation WC	215	Rehabilitation WC
306	Surankote	Behramgala	107/S	300/M	0	0	31	98	129	33	23	56	185	Fir WC	192	Fir Protection cum Rehabilitation WC
307	Surankote	Behramgala	108/S	301/M	0	0	8	194	202	28	19	47	249	Fir WC	229	Fir Protection cum Rehabilitation WC
308	Surankote	Behramgala	109/S	302/M	0	0	2	164	166	3	7	10	176	Fir WC	170	Fir Protection cum Rehabilitation WC
309	Surankote	Behramgala	110/S	303/M	0	0	54	270	324	12	112	124	448	Fir WC	417	Fir Protection cum Rehabilitation WC
310	Surankote	Behramgala	111/S	304/M	0	0	47	113	160	14	113	127	287	Fir WC	227	Fir Protection cum Rehabilitation WC
311	Surankote	Behramgala	112/S	305/M	0	0	18	253	271	6	51	57	328	Fir WC	403	Fir Protection cum Rehabilitation WC
312	Surankote	Behramgala	113/S	306/M	0	0	17	84	101	14	108	122	223	Protection WC	212	Protection WC
313	Surankote	Behramgala	114/S	307/M	0	0	5	94	99	0	128	128	227	Protection WC	189	Protection WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
314	Surankote	Behramgala	115/S	308/M	0	0	22	186	208	2	353	355	563	Protection WC	595	Protection WC
315	Surankote	Behramgala	116/S	309/M	0	0	33	86	119	3	412	415	534	Protection WC	559	Protection WC
316	Surankote	Murrah	T.K. Wildlife Sanctuary		0	0	126	450	576	1	4242	4243	4819		5638	
Total for Surankote Range					**639**	**0**	**6598**	**12410**	**19647**	**2645**	**22126**	**24771**	**44418**		**44589**	
317	Mendhar	Dharamsal	1/M	127/M	98	0	0	0	98	7	5	12	110	Rehabilitation WC	84	Rehabilitation WC
318	Mendhar	Dharamsal	2a/M	128a/M	30	0	0	0	30	9	1	10	40	Protection WC	39	Protection WC
319	Mendhar	Dharamsal	2b/M	128b/M	31	0	0	0	31	9	0	9	40	Protection WC	40	Protection WC
320	Mendhar	Dharamsal	3a/M	129a/M	39	0	0	0	39	19	8	27	66	Chir WC	61	Chir WC
321	Mendhar	Dharamsal	3b/M	129b/M	14	0	0	0	14	8	54	62	76	Rehabilitation WC	75	Rehabilitation WC
322	Mendhar	Dharamsal	4/M	130/M	18	0	0	0	18	0	52	52	70	Rehabilitation WC	62	Rehabilitation WC
323	Mendhar	Dharamsal	5a/M	131a/M	55	0	0	0	55	32	17	49	104	Protection WC	44	Protection WC
324	Mendhar	Dharamsal	5b/M	131b/M	75	0	0	0	75	50	14	64	139	Protection WC	126	Protection WC
325	Mendhar	Dharamsal	6a/M	132a/M	41	0	0	0	41	2	7	9	50	Protection WC	53	Protection WC
326	Mendhar	Dharamsal	6b/M	132b/M	9	0	0	0	9	7	4	11	20	Protection WC	19	Protection WC
327	Mendhar	Dharamsal	7/M	133/M	39	0	0	0	39	16	4	20	59	Chir WC	56	Chir WC
328	Mendhar	Dharamsal	8/M	134/M	31	0	0	0	31	23	4	27	58	Protection WC	57	Protection WC
329	Mendhar	Dharamsal	9a/M	135a/M	60	0	0	0	60	58	1	59	119	Chir WC	123	Chir WC
330	Mendhar	Dharamsal	9b/M	135b/M	55	0	0	0	55	12	12	24	79	Chir WC	76	Chir WC
331	Mendhar	Dharamsal	10/M	136/M	55	0	0	0	55	2	2	4	59	Chir WC	82	Chir WC
332	Mendhar	Dharamsal	11/M	137/M	60	0	0	0	60	4	25	29	89	Rehabilitation WC	55	Rehabilitation WC
333	Mendhar	Dharamsal	12/M	138/M	38	0	0	0	38	33	18	51	89	Chir WC	89	Chir WC
334	Mendhar	Dharamsal	13/M	139/M	136	0	0	0	136	61	23	84	220	Chir WC	204	Chir WC
335	Mendhar	Dharamsal	14/M	140/M	56	0	0	0	56	44	44	88	144	Chir WC	128	Chir WC
336	Mendhar	Dharamsal	15/M	141/M	55	0	0	0	55	20	64	84	139	Rehabilitation WC	137	Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
337	Mendhar	Dharamsal	16/M	142/M	67	0	0	0	67	31	65	96	163	Rehabilitation WC	160	Rehabilitation WC
338	Mendhar	Dharamsal	17a/M	143a/M	16	0	0	0	16	8	41	49	65	Rehabilitation WC	67	Rehabilitation WC
339	Mendhar	Dharamsal	17b/M	143b/M	24	0	0	0	24	13	17	30	54	Rehabilitation WC	46	Rehabilitation WC
340	Mendhar	Dharamsal	18/M	144/M	25	0	0	0	25	21	18	39	64	Chir WC	65	Chir WC
341	Mendhar	Dharamsal	19a/M	145a/M	8	0	0	0	8	13	23	36	44	Protection WC	34	Protection WC
342	Mendhar	Dharamsal	19b/M	145b/M	10	0	0	0	10	5	10	15	25	Protection WC	21	Protection WC
343	Mendhar	Dharamsal	19c/M	145c/M	0	0	0	0	0	0	13	13	13	Rehabilitation WC	18	Rehabilitation WC
344	Mendhar	Dharamsal	19d/M	145d/M	13	0	0	0	13	5	4	9	22	Rehabilitation WC	23	Rehabilitation WC
345	Mendhar	Dharamsal	20/M	146/M	63	0	0	0	63	4	54	58	121	Rehabilitation WC	117	Rehabilitation WC
346	Mendhar	Nar	21a/M	147a/M	46	0	0	0	46	5	71	76	122	Rehabilitation WC	127	Rehabilitation WC
347	Mendhar	Nar	21b/M	147b/M	28	0	0	0	28	8	36	44	72	Rehabilitation WC	70	Rehabilitation WC
348	Mendhar	Nar	22/M	148/M	36	0	0	0	36	11	26	37	73	Rehabilitation WC	62	Rehabilitation WC
349	Mendhar	Nar	23/M	149/M	136	0	0	0	136	31	33	64	200	Chir WC	201	Chir WC
350	Mendhar	Nar	24/M	150/M	93	0	0	0	93	39	7	46	139	Chir WC	147	Chir WC
351	Mendhar	Nar	25/M	151/M	88	0	0	0	88	11	21	32	120	Chir WC	118	Chir WC
352	Mendhar	Nar	26/M	152/M	14	0	0	0	14	13	11	24	38	Rehabilitation WC	37	Rehabilitation WC
353	Mendhar	Nar	27/M	153/M	83	0	0	0	83	40	80	120	203	Chir WC	185	Rehabilitation WC
354	Mendhar	Nar	28/M	154/M	188	0	0	0	188	13	9	22	210	Protection WC	192	Protection WC
355	Mendhar	Nar	29/M	155/M	83	0	0	0	83	40	37	77	160	Chir WC	162	Chir WC
356	Mendhar	Nar	30/M	156/M	32	0	0	0	32	1	21	22	54	Chir WC	53	Rehabilitation WC
357	Mendhar	Gursain	31/M	157/M	21	0	0	0	21	22	96	118	139	Chir WC	163	Rehabilitation WC
358	Mendhar	Gursain	32/M	158/M	4	0	0	0	4	0	28	28	32	Chir WC	45	Rehabilitation WC
359	Mendhar	Gursain	33/M	159/M	17	0	0	0	17	7	114	121	138	Chir WC	131	Rehabilitation WC
360	Mendhar	Gursain	34a/M	160a/M	1	0	0	0	1	2	12	14	15	Chir WC	14	Rehabilitation WC
361	Mendhar	Gursain	34b/M	160b/M	52	0	0	0	52	25	156	181	233	Chir WC	234	Rehabilitation WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
362	Mendhar	Gursain	35/M	161/M	14	0	0	0	14	4	81	85	99	Chir WC	81	Rehabilitation WC
363	Mendhar	Gursain	36/M	162/M	3	0	0	0	3	0	59	59	62	Chir WC	65	Rehabilitation WC
364	Mendhar	Gursain	37/M	163/M	15	0	0	0	15	25	48	73	88	Chir WC	32	Rehabilitation WC
365	Mendhar	Gursain	38/M	164/M	31	0	0	0	31	14	49	63	94	Chir WC	93	Rehabilitation WC
366	Mendhar	Gursain	39/M	165/M	40	0	0	0	40	38	70	108	148	Chir WC	153	Chir WC
367	Mendhar	Gursain	40a/M	166a/M	22	0	0	0	22	20	45	65	87	Chir WC	85	Rehabilitation WC
368	Mendhar	Gursain	40b/M	166b/M	0	0	0	0	0	0	22	22	22	Rehabilitation WC	20	Rehabilitation WC
369	Mendhar	Gursain	40c/M	166c/M	0	0	0	0	0	0	50	50	50	Rehabilitation WC	40	Rehabilitation WC
370	Mendhar	Salwan	41a/M	167a/M	42	0	0	0	42	33	38	71	113	Chir WC	110	Chir WC
371	Mendhar	Salwan	41b/M	167b/M	40	0	0	0	40	23	35	58	98	Chir WC	95	Rehabilitation WC
372	Mendhar	Salwan	42/M	168/M	73	0	0	0	73	43	81	124	197	Chir WC	186	Rehabilitation WC
373	Mendhar	Salwan	43/M	169/M	21	0	0	0	21	9	51	60	81	Protection WC	95	Protection WC
374	Mendhar	Salwan	44/M	170/M	25	0	0	0	25	15	52	67	92	Chir WC	84	Rehabilitation WC
375	Mendhar	Salwan	45a/M	171a/M	63	0	0	0	63	25	18	43	106	Rehabilitation WC	95	Rehabilitation WC
376	Mendhar	Salwan	45b/M	171b/M	15	0	0	0	15	3	23	26	41	Chir WC	45	Rehabilitation WC
377	Mendhar	Salwan	46/M	172/M	51	0	0	0	51	10	60	70	121	Rehabilitation WC	102	Rehabilitation WC
378	Mendhar	Salwan	47a/M	173a/M	0	0	0	0	0	0	66	66	66	Chir WC	65	Rehabilitation WC
379	Mendhar	Salwan	47b/M	173b/M	2	0	0	0	2	10	40	50	52	Rehabilitation WC	50	Rehabilitation WC
380	Mendhar	Salwan	48/M	174/M	25	0	0	0	25	14	67	81	106	Rehabilitation WC	103	Rehabilitation WC
381	Mendhar	Salwan	49/M	175/M	12	0	0	0	12	6	65	71	83	Chir WC	71	Rehabilitation WC
382	Mendhar	Salwan	50a/M	176a/M	6	0	0	0	6	1	45	46	52	Rehabilitation WC	51	Rehabilitation WC
383	Mendhar	Salwan	50b/M	176b/M	1	0	0	0	1	3	35	38	39	Chir WC	33	Rehabilitation WC
384	Mendhar	Ramkund	51a/M	177a/M	22	0	0	0	22	8	46	54	76	Chir WC	75	Rehabilitation WC
385	Mendhar	Ramkund	51b/M	177b/M	6	0	0	0	6	0	36	36	42	Chir WC	42	Rehabilitation WC
386	Mendhar	Ramkund	52/M	178/M	79	0	0	0	79	4	107	111	190	Chir WC	190	Chir WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
387	Mendhar	Ramkund	53a/M	179a/M	32	0	0	0	32	0	24	24	56	Rehabilitation WC	55	Rehabilitation WC
388	Mendhar	Ramkund	53b/M	179b/M	0	0	0	0	0	0	28	28	28	Chir WC	25	Rehabilitation WC
389	Mendhar	Ramkund	53c/M	179c/M	0	0	0	0	0	0	63	63	63	Rehabilitation WC	57	Rehabilitation WC
390	Mendhar	Ramkund	54/M	180/M	17	0	0	0	17	5	103	108	125	Rehabilitation WC	125	Rehabilitation WC
391	Mendhar	Ramkund	55a/M	181a/M	12	0	0	0	12	8	25	33	45	Rehabilitation WC	44	Rehabilitation WC
392	Mendhar	Ramkund	55b/M	181b/M	41	0	0	0	41	17	30	47	88	Rehabilitation WC	65	Rehabilitation WC
393	Mendhar	Ramkund	56/M	182/M	104	0	0	0	104	12	46	58	162	Rehabilitation WC	73	Rehabilitation WC
394	Mendhar	Ramkund	57/M	183/M	44	0	0	0	44	31	31	62	106	Chir WC	98	Chir WC
395	Mendhar	Ramkund	58/M	184/M	51	0	0	0	51	3	35	38	89	Chir WC	89	Chir WC
396	Mendhar	Ramkund	59/M	185/M	19	0	0	0	19	35	26	61	80	Rehabilitation WC	82	Oak WC
397	Mendhar	Ramkund	60/M	186/M	21	0	0	0	21	28	49	77	98	Protection WC	90	Protection WC
398	Mendhar	Ramkund	61/M	187/M	19	0	0	0	19	24	73	97	116	Chir WC	121	Rehabilitation WC
399	Mendhar	Ghani	62/M	188/M	59	0	0	0	59	53	44	97	156	Chir WC	123	Chir WC
400	Mendhar	Ghani	63/M	189/M	17	0	0	0	17	27	48	75	92	Chir WC	87	Rehabilitation WC
401	Mendhar	Ghani	64/M	190/M	0	0	0	0	0	6	18	24	24	Chir WC	17	Rehabilitation WC
402	Mendhar	Ghani	65a/M	191a/M	1	0	0	0	1	4	10	14	15	Rehabilitation WC	14	Rehabilitation WC
403	Mendhar	Ghani	65b/M	191b/M	0	0	0	0	0	4	17	21	21	Chir WC	17	Rehabilitation WC
404	Mendhar	Ghani	65c/M	191c/M	17	0	0	0	17	12	33	45	62	Chir WC	17	Chir WC
405	Mendhar	Ghani	66/M	192/M	74	0	0	0	74	14	117	131	205	Rehabilitation WC	195	Rehabilitation WC
406	Mendhar	Ghani	67a/M	193a/M	16	0	0	0	16	2	38	40	56	Rehabilitation WC	54	Rehabilitation WC
407	Mendhar	Ghani	67b/M	193b/M	136	0	0	0	136	4	105	109	245	Rehabilitation WC	234	Rehabilitation WC
408	Mendhar	Ghani	68/M	194/M	120	0	0	0	120	5	66	71	191	Rehabilitation WC	167	Rehabilitation WC
409	Mendhar	Ghani	69/M	195/M	65	0	0	0	65	18	52	70	135	Chir WC	136	Chir WC
410	Mendhar	Ghani	70/M	196/M	69	0	0	0	69	30	35	65	134	Chir WC	132	Chir WC
411	Mendhar	Ghani	71/M	197/M	63	0	0	0	63	44	66	110	173	Chir WC	160	Chir WC

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total	Previous W.C. allotment	Previous Estate Area	Current W.C. allotment
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total				
412	Mendhar	Ghani	72/M	198/M	21	0	0	0	21	30	42	72	93	Chir WC	92	Rehabilitation WC
413	Mendhar	Ghani	73a/M	199a/M	47	0	0	0	47	15	25	40	87	Chir WC	87	Chir WC
414	Mendhar	Ghani	73b/M	199b/M	14	0	0	0	14	16	11	27	41	Chir WC	37	Chir WC
415	Mendhar	Ghani	74/M	200/H	21	0	0	0	21	21	36	57	78	Rehabilitation WC	65	Rehabilitation WC
416	Mendhar	Ghani	75/M	201/M	120	0	0	0	120	13	79	92	212	Chir WC	204	Chir WC
417	Mendhar	Ghani	76a/M	202a/M	27	0	0	0	27	6	6	12	39	Chir WC	34	Chir WC
418	Mendhar	Ghani	76b/M	202b/M	71	0	0	0	71	19	59	78	149	Chir WC	158	Chir WC
419	Mendhar	Ghani	77/M	203/M	46	0	0	0	46	82	84	166	212	Chir WC	210	Oak WC
420	Mendhar	Ghani	78/M	204/M	70	0	0	0	70	50	36	86	156	Protection WC	153	Protection WC
421	Mendhar	Ghani	79/M	205/M	54	0	0	0	54	26	11	37	91	Rehabilitation WC	83	Rehabilitation WC
422	Mendhar	Ghani	80/M	206/M	89	0	0	0	89	3	30	33	122	Rehabilitation WC	109	Rehabilitation WC
423	Mendhar	Ghani	81/M	207/M	67	0	0	0	67	0	0	0	67	Protection WC	67	Protection WC
Total for Mendhar Range					**4395**	**0**	**0**	**0**	**4395**	**1759**	**4252**	**6011**	**10406**		**9739**	
Total for all 3 Ranges					**5824**	**77**	**9632**	**22580**	**38113**	**10736**	**43463**	**54199**	**92312**		**90656**	

Appendix IV. Area statement for Fir Protection cum Rehabilitation Working Circle of Poonch Forest Division

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
1	Haveli	Mandi	7/H	58/H	0	0	40	67	107	26	8	34	141
2	Haveli	Mandi	8/H	59/H	0	3	47	153	203	18	36	54	257
3	Haveli	Mandi	9/H	60/H	0	0	17	231	248	25	22	47	295
4	Haveli	Mandi	10/H	61/H	0	0	60	135	195	13	28	41	236
5	Haveli	Mandi	14/H	65/H	0	0	17	50	67	15	1	16	83
6	Haveli	Mandi	16a/H	67a/H	0	0	39	119	158	69	6	75	233
7	Haveli	Mandi	19/H	70/H	0	0	3	245	248	62	7	69	317
8	Haveli	Mandi	20/H	71/H	0	0	19	199	218	35	9	44	262
9	Haveli	Mandi	21/H	72/H	0	0	9	208	217	83	10	93	310
10	Haveli	Mandi	22/H	73/H	0	0	6	141	147	45	34	79	226
11	Haveli	Mandi	23/H	74/H	0	0	14	128	142	17	53	70	212
12	Haveli	Mandi	24/H	75/H	0	0	68	182	250	71	16	87	337
13	Haveli	Mandi	25/H	76/H	0	0	59	41	100	59	19	78	178
14	Haveli	Mandi	26/H	77/H	0	0	22	64	86	53	75	128	214
15	Haveli	Mandi	27/H	78/H	0	0	42	47	89	78	30	108	197
16	Haveli	Mandi	28/H	79/H	0	0	9	73	82	39	1	40	122
17	Haveli	Loran	30/H	81/H	0	1	17	60	78	102	6	108	186
18	Haveli	Loran	31/H	82/H	0	0	8	99	107	7	21	28	135
19	Haveli	Loran	32/H	83/H	0	0	0	115	115	32	6	38	153
20	Haveli	Loran	33/H	84/H	0	0	17	127	144	48	3	51	195
21	Haveli	Loran	34/H	85/H	0	0	20	127	147	12	8	20	167
22	Haveli	Loran	35/H	86/H	0	0	25	71	96	0	92	92	188
23	Haveli	Loran	39/H	90/H	0	0	7	62	69	7	51	58	127

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
24	Haveli	Loran	40/H	91/H	0	0	34	194	228	5	36	41	269
25	Haveli	Loran	41/H	92/H	0	0	26	187	213	7	63	70	283
26	Haveli	Loran	42/H	93/H	0	0	43	163	206	9	115	124	330
27	Haveli	Loran	43/H	94/H	0	0	42	143	185	20	40	60	245
28	Haveli	Loran	44/H	95/H	0	0	24	156	180	20	31	51	231
29	Haveli	Loran	45/H	96/H	0	0	15	158	173	1	10	11	184
30	Haveli	Loran	46/H	97/H	0	0	65	214	279	3	55	58	337
31	Haveli	Loran	48/H	99/H	0	0	20	251	271	6	12	18	289
32	Haveli	Loran	49/H	100/H	0	0	38	123	161	12	97	109	270
33	Haveli	Loran	51/H	102/H	0	0	26	151	177	9	46	55	232
34	Haveli	Loran	54/H	105/H	0	0	31	68	99	9	58	67	166
35	Haveli	Loran	55/H	106/H	0	0	12	164	176	11	23	34	210
36	Haveli	Loran	56/H	107/H	0	0	23	66	89	9	46	55	144
37	Haveli	Loran	57/H	108/H	0	0	70	112	182	31	30	61	243
38	Haveli	Loran	59b/H	110b/H	0	0	2	69	71	4	8	12	83
39	Haveli	Loran	60/H	111/H	0	0	20	95	115	11	114	125	240
40	Haveli	Sabzian	61/H	112/H	0	0	2	119	121	49	57	106	227
41	Haveli	Sabzian	62/H	113/H	0	0	3	69	72	33	9	42	114
42	Haveli	Sabzian	63/H	114/H	0	0	22	76	98	67	90	157	255
43	Haveli	Sabzian	65/H	116/H	0	0	16	75	91	39	17	56	147
44	Haveli	Sabzian	67/H	118/H	0	15	0	76	91	54	1	55	146
45	Haveli	Sabzian	68/H	119/H	0	0	14	55	69	17	6	23	92
46	Haveli	Sabzian	70/H	121/H	0	0	18	184	202	5	44	49	251
47	Haveli	Sabzian	77/H	128/H	0	0	13	59	72	10	4	14	86
48	Haveli	Sabzian	82/H	133/H	0	0	44	184	228	15	29	44	272

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
49	Haveli	Sabzian	83/H	134/H	0	0	10	141	151	7	108	115	266
50	Surankote	Murrah	6/S	6/H	0	0	47	94	141	1	13	14	155
51	Surankote	Murrah	7/S	7/H	0	0	16	167	183	0	15	15	198
52	Surankote	Murrah	8/S	8/H	0	0	15	97	112	2	96	98	210
53	Surankote	Murrah	10a/S	10a/H	0	0	59	301	360	7	90	97	457
54	Surankote	Murrah	10b/S	10b/H	0	0	11	48	59	4	38	42	101
55	Surankote	Murrah	11a/S	11a/H	0	0	28	156	184	0	33	33	217
56	Surankote	Murrah	11b/S	11b/H	0	0	31	116	147	0	93	93	240
57	Surankote	Murrah	16/S	16/H	0	0	240	186	426	73	83	156	582
58	Surankote	Murrah	17/S	17/H	0	0	76	154	230	52	38	90	320
59	Surankote	Murrah	18/S	18/H	0	0	27	175	202	56	3	59	261
60	Surankote	Murrah	19/S	19/H	0	0	13	112	125	8	54	62	187
61	Surankote	Murrah	20a/S	20a/H	0	0	67	259	326	42	136	178	504
62	Surankote	Murrah	21/S	21/H	0	0	56	132	188	86	24	110	298
63	Surankote	Murrah	22/S	22/H	0	0	40	202	242	43	30	73	315
64	Surankote	Murrah	23/S	23/H	0	0	134	310	444	6	356	362	806
65	Surankote	Murrah	24/S	24/H	0	0	85	144	229	23	201	224	453
66	Surankote	Murrah	26/S	26/H	0	0	104	357	461	165	188	353	814
67	Surankote	Murrah	27/S	27/H	0	0	7	182	189	47	9	56	245
68	Surankote	Murrah	28/S	28/H	0	0	78	109	187	2	159	161	348
69	Surankote	Murrah	30/S	30/H	0	0	30	282	312	47	212	259	571
70	Surankote	Murrah	31/S	31/H	0	0	0	132	132	43	39	82	214
71	Surankote	Murrah	32a/S	32a/H	0	0	0	127	127	99	64	163	290
72	Surankote	Murrah	32b/S	32b/H	0	0	0	64	64	13	67	80	144
73	Surankote	Murrah	33a/S	33a/H	0	0	5	169	174	27	77	104	278

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
74	Surankote	Murrah	33b/S	33b/H	0	0	12	125	137	26	3	29	166
75	Surankote	Murrah	34/S	34/H	0	0	98	290	388	4	87	91	479
76	Surankote	Murrah	35/S	35/H	0	0	108	135	243	4	134	138	381
77	Surankote	Murrah	37/S	37/H	0	0	28	169	197	8	32	40	237
78	Surankote	Murrah	38/S	38/H	0	0	141	175	316	32	192	224	540
79	Surankote	Behramgala	79/S	272/M	0	0	90	187	277	32	35	67	344
80	Surankote	Behramgala	81/S	274/M	0	0	44	182	226	21	34	55	281
81	Surankote	Behramgala	82/S	275/M	0	0	9	130	139	6	21	27	166
82	Surankote	Behramgala	83/S	276/M	0	0	43	209	252	2	38	40	292
83	Surankote	Behramgala	97/S	290/M	0	0	47	73	120	47	19	66	186
84	Surankote	Behramgala	98/S	291/M	0	0	52	162	214	38	10	48	262
85	Surankote	Behramgala	99/S	292/M	0	0	24	212	236	13	7	20	256
86	Surankote	Behramgala	100/S	293/M	0	0	43	312	355	10	44	54	409
87	Surankote	Behramgala	101/S	294/M	0	0	39	330	369	3	104	107	476
88	Surankote	Behramgala	104/S	297/M	0	0	11	23	34	6	28	34	68
89	Surankote	Behramgala	107/S	300/M	0	0	31	98	129	33	23	56	185
90	Surankote	Behramgala	108/S	301/M	0	0	8	194	202	28	19	47	249
91	Surankote	Behramgala	109/S	302/M	0	0	2	164	166	3	7	10	176
92	Surankote	Behramgala	110/S	303/M	0	0	54	270	324	12	112	124	448
93	Surankote	Behramgala	111/S	304/M	0	0	47	113	160	14	113	127	287
94	Surankote	Behramgala	112/S	305/M	0	0	18	253	271	6	51	57	328
Total					0	19	3316	13977	17312	2573	4922	7495	24807

Estate Area taken in previous working plan = 28862 Ha.

Appendix V. Area statement for Chir Selection Working Circle of Poonch Forest Division

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
1	Haveli	Jhalas	121b/H	228b/M	24	0	0	0	24	46	15	61	85
2	Mendhar	Dharamsal	3a/M	129a/M	39	0	0	0	39	19	8	27	66
3	Mendhar	Dharamsal	7/M	133/M	39	0	0	0	39	16	4	20	59
4	Mendhar	Dharamsal	9a/M	135a/M	60	0	0	0	60	58	1	59	119
5	Mendhar	Dharamsal	9b/M	135b/M	55	0	0	0	55	12	12	24	79
6	Mendhar	Dharamsal	10/M	136/M	55	0	0	0	55	2	2	4	59
7	Mendhar	Dharamsal	12/M	138/M	38	0	0	0	38	33	18	51	89
8	Mendhar	Dharamsal	13/M	139/M	136	0	0	0	136	61	23	84	220
9	Mendhar	Dharamsal	14/M	140/M	56	0	0	0	56	44	44	88	144
10	Mendhar	Dharamsal	18/M	144/M	25	0	0	0	25	21	18	39	64
11	Mendhar	Nar	23/M	149/M	136	0	0	0	136	31	33	64	200
12	Mendhar	Nar	24/M	150/M	93	0	0	0	93	39	7	46	139
13	Mendhar	Nar	25/M	151/M	88	0	0	0	88	11	21	32	120
14	Mendhar	Nar	29/M	155/M	83	0	0	0	83	40	37	77	160
15	Mendhar	Gursain	39/M	165/M	40	0	0	0	40	38	70	108	148
16	Mendhar	Salwan	41a/M	167a/M	42	0	0	0	42	33	38	71	113
17	Mendhar	Ramkund	52/M	178/M	79	0	0	0	79	4	107	111	190
18	Mendhar	Ramkund	57/M	183/M	44	0	0	0	44	31	31	62	106
19	Mendhar	Ramkund	58/M	184/M	51	0	0	0	51	3	35	38	89
20	Mendhar	Ghani	62/M	188/M	59	0	0	0	59	53	44	97	156
21	Mendhar	Ghani	65c/M	191c/M	17	0	0	0	17	12	33	45	62
22	Mendhar	Ghani	69/M	195/M	65	0	0	0	65	18	52	70	135
23	Mendhar	Ghani	70/M	196/M	69	0	0	0	69	30	35	65	134

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
24	Mendhar	Ghani	71/M	197/M	63	0	0	0	63	44	66	110	173
25	Mendhar	Ghani	73a/M	199a/M	47	0	0	0	47	15	25	40	87
26	Mendhar	Ghani	73b/M	199b/M	14	0	0	0	14	16	11	27	41
27	Mendhar	Ghani	75/M	201/M	120	0	0	0	120	13	79	92	212
28	Mendhar	Ghani	76a/M	202a/M	27	0	0	0	27	6	6	12	39
29	Mendhar	Ghani	76b/M	202b/M	71	0	0	0	71	19	59	78	149
Total					1735	0	0	0	1735	768	934	1702	3437

Estate Area taken in previous working plan = 6468 Ha

Appendix VI. Area statement for Protection Working Circle of Poonch Forest Division

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
1	Haveli	Mandi	13/H	64/H	0	0	27	79	106	13	8	21	127
2	Haveli	Mandi	15/H	66/H	0	0	2	177	179	24	2	26	205
3	Haveli	Loran	36/H	87/H	0	0	31	51	82	0	132	132	214
4	Haveli	Loran	37/H	88/H	0	0	46	82	128	1	1004	1005	1133
5	Haveli	Loran	38/H	89/H	0	0	0	6	6	0	907	907	913
6	Haveli	Loran	47/H	98/H	0	0	16	127	143	24	35	59	202
7	Haveli	Loran	52/H	103/H	0	0	1	45	46	0	407	407	453
8	Haveli	Loran	53/H	104/H	0	0	44	108	152	21	286	307	459
9	Haveli	Loran	58/H	109/H	0	0	28	71	99	15	25	40	139
10	Haveli	Sabzian	64a/H	115a/H	0	0	42	0	42	41	1	42	84
11	Haveli	Sabzian	64b/H	115b/H	0	0	91	0	91	33	6	39	130
12	Haveli	Sabzian	64c/H	115c/H	0	0	23	0	23	26	1	27	50
13	Haveli	Sabzian	66/H	117/H	0	0	7	135	142	39	5	44	186
14	Haveli	Sabzian	69/H	120/H	0	0	1	202	203	9	2	11	214
15	Haveli	Sabzian	71/H	122/H	0	0	21	76	97	10	151	161	258
16	Haveli	Sabzian	72/H	123/H	0	0	0	0	0	0	965	965	965
17	Haveli	Sabzian	73/H	124/H	0	0	0	0	0	0	1127	1127	1127
18	Haveli	Sabzian	74/H	125/H	0	0	10	21	31	0	189	189	220
19	Haveli	Sabzian	78/H	129/H	0	0	42	46	88	4	51	55	143
20	Haveli	Sabzian	84/H	135/H	0	0	3	71	74	0	636	636	710
21	Haveli	Sabzian	85/H	136/H	0	0	8	16	24	0	534	534	558
22	Haveli	Sabzian	86a/H	137/H	0	0	4	105	109	5	317	322	431
23	Haveli	Sabzian	86b/H	138/H	0	0	40	142	182	28	307	335	517

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
24	Haveli	Sabzian	86c/H	139/H	0	0	102	92	194	28	37	65	259
25	Haveli	Sabzian	87a/H	141/H	0	0	5	157	162	3	2	5	167
26	Haveli	Sabzian	87b/H	142/H	0	0	58	123	181	10	136	146	327
27	Haveli	Sabzian	87c/H	143/H	0	0	62	109	171	31	23	54	225
28	Haveli	Sabzian	88a/H	144/H	0	0	21	141	162	26	0	26	188
29	Haveli	Sabzian	88b/H	145/H	0	0	47	116	163	1	228	229	392
30	Haveli	Sabzian	88c/H	146/H	0	0	30	29	59	20	6	26	85
31	Haveli	Sabzian	91/H	162/H	0	0	2	28	30	5	278	283	313
32	Haveli	Poonch	92/H	163/H	0	0	2	0	2	0	192	192	194
33	Haveli	Poonch	94a/H	165a/H	0	0	3	0	3	8	205	213	216
34	Haveli	Poonch	94b/H	165b/H	0	9	0	0	9	53	42	95	104
35	Haveli	Poonch	95a/H	166a/H	0	0	0	0	0	18	19	37	37
36	Haveli	Poonch	95b/H	166b/H	0	0	0	0	0	41	24	65	65
37	Haveli	Poonch	97a/H	168a/H	0	0	0	0	0	67	10	77	77
38	Haveli	Poonch	98/H	169/H	0	0	0	2	2	0	213	213	215
39	Haveli	Poonch	99/H	170/H	0	0	0	0	0	4	260	264	264
40	Haveli	Poonch	101a/H	178a/H	0	0	0	0	0	18	2	20	20
41	Haveli	Poonch	101b/H	178b/H	0	0	2	0	2	7	17	24	26
42	Haveli	Poonch	107a/H	184a/H	0	0	0	0	0	14	8	22	22
43	Haveli	Jhalas	109a/H	186a/H	1	0	0	0	1	23	39	62	63
44	Haveli	Jhalas	110/H	217/M	117	0	0	0	117	0	3	3	120
45	Haveli	Jhalas	111a/H	218a/M	65	0	0	0	65	11	15	26	91
46	Haveli	Jhalas	111b/H	218b/M	8	0	0	0	8	10	10	20	28
47	Haveli	Jhalas	122/H	229/M	1	0	0	0	1	38	15	53	54
48	Haveli	Jhalas	123/H	230/M	13	0	0	0	13	72	17	89	102

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
49	Haveli	Khanetar	127/H	234/M	22	0	0	0	22	33	55	88	110
50	Haveli	Khanetar	130/H	237/M	35	0	0	0	35	44	15	59	94
51	Haveli	Khanetar	132/H	239/M	13	0	0	0	13	25	55	80	93
52	Haveli	Khanetar	134b/H	241b/M	39	0	0	0	39	40	27	67	106
53	Haveli	Khanetar	137/H	244/M	42	0	0	0	42	46	28	74	116
54	Haveli	Poonch	140a/H	283a/H	25	0	0	0	25	2	47	49	74
55	Haveli	Poonch	140b/H	283b/H	17	0	0	0	17	24	41	65	82
56	Haveli	Poonch	140c/H	283c/H	31	0	0	0	31	18	0	18	49
57	Surankote	Murrah	1/S	1/H	0	0	1	54	55	64	482	546	601
58	Surankote	Murrah	9/S	9/H	0	0	39	22	61	4	72	76	137
59	Surankote	Murrah	12/S	12/H	0	0	28	45	73	0	319	319	392
60	Surankote	Murrah	13/S	13/H	0	0	89	152	241	8	258	266	507
61	Surankote	Murrah	29/S	29/H	0	0	48	57	105	4	170	174	279
62	Surankote	Samote	60/S	253/M	29	0	0	0	29	11	29	40	69
63	Surankote	Bufliaz	65/S	258/M	112	0	0	0	112	9	24	33	145
64	Surankote	Bufliaz	66/S	259/M	187	0	0	13	200	32	55	87	287
65	Surankote	Bufliaz	67/S	260/M	193	0	0	39	232	40	39	79	311
66	Surankote	Bufliaz	68/S	261/M	0	0	119	9	128	49	17	66	194
67	Surankote	Bufliaz	70/S	263/M	0	0	145	18	163	22	76	98	261
68	Surankote	Bufliaz	75/S	268/M	0	0	150	33	183	24	43	67	250
69	Surankote	Behramgala	78/S	271/M	0	0	76	7	83	26	38	64	147
70	Surankote	Behramgala	84/S	277/M	0	0	49	155	204	2	103	105	309
71	Surankote	Behramgala	85/S	278/M	0	0	12	3	15	0	210	210	225
72	Surankote	Behramgala	86/S	279/M	0	0	0	1	1	0	961	961	962
73	Surankote	Behramgala	87/S	280/M	0	0	0	0	0	0	565	565	565

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
74	Surankote	Behramgala	88/S	281/M	0	0	0	0	0	0	529	529	529
75	Surankote	Behramgala	89/S	282/M	0	0	0	0	0	0	506	506	506
76	Surankote	Behramgala	90/S	283/M	0	0	0	0	0	0	247	247	247
77	Surankote	Behramgala	91/S	284/M	0	0	0	0	0	0	622	622	622
78	Surankote	Behramgala	92/S	285/M	0	0	0	0	0	0	472	472	472
79	Surankote	Behramgala	93/S	286/M	0	0	8	41	49	0	761	761	810
80	Surankote	Behramgala	94/S	287/M	0	0	10	106	116	4	796	800	916
81	Surankote	Behramgala	95/S	288/M	0	0	15	184	199	0	199	199	398
82	Surankote	Behramgala	96/S	289/M	0	0	7	42	49	11	11	22	71
83	Surankote	Behramgala	102/S	295/M	0	0	18	73	91	1	186	187	278
84	Surankote	Behramgala	103/S	296/M	0	0	30	151	181	0	323	323	504
85	Surankote	Behramgala	113/S	306/M	0	0	17	84	101	14	108	122	223
86	Surankote	Behramgala	114/S	307/M	0	0	5	94	99	0	128	128	227
87	Surankote	Behramgala	115/S	308/M	0	0	22	186	208	2	353	355	563
88	Surankote	Behramgala	116/S	309/M	0	0	33	86	119	3	412	415	534
89	Mendhar	Dharamsal	2a/M	128a/M	30	0	0	0	30	9	1	10	40
90	Mendhar	Dharamsal	2b/M	128b/M	31	0	0	0	31	9	0	9	40
91	Mendhar	Dharamsal	5a/M	131a/M	55	0	0	0	55	32	17	49	104
92	Mendhar	Dharamsal	5b/M	131b/M	75	0	0	0	75	50	14	64	139
93	Mendhar	Dharamsal	6a/M	132a/M	41	0	0	0	41	2	7	9	50
94	Mendhar	Dharamsal	6b/M	132b/M	9	0	0	0	9	7	4	11	20
95	Mendhar	Dharamsal	8/M	134/M	31	0	0	0	31	23	4	27	58
96	Mendhar	Dharamsal	19a/M	145a/M	8	0	0	0	8	13	23	36	44
97	Mendhar	Dharamsal	19b/M	145b/M	10	0	0	0	10	5	10	15	25
98	Mendhar	Nar	28/M	154/M	188	0	0	0	188	13	9	22	210

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
99	Mendhar	Salwan	43/M	169/M	21	0	0	0	21	9	51	60	81
100	Mendhar	Ramkund	60/M	186/M	21	0	0	0	21	28	49	77	98
101	Mendhar	Ghani	78/M	204/M	70	0	0	0	70	50	36	86	156
102	Mendhar	Ghani	81/M	207/M	67	0	0	0	67	0	0	0	67
Total					1607	9	1742	4012	7370	1613	18506	20119	27489

Estate Area taken in previous working plan = 36947 Ha

Appendix VII. Area statement for Rehabilitation Working Circle of Poonch Forest Division

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
1	Haveli	Mandi	2/H	53/H	0	0	55	0	55	8	44	52	107
2	Haveli	Mandi	4b/H	55b/H	0	0	29	6	35	29	30	59	94
3	Haveli	Mandi	5/H	56/H	0	0	13	0	13	4	3	7	20
4	Haveli	Mandi	6/H	57/H	0	0	69	47	116	7	75	82	198
5	Haveli	Mandi	11a /H	62a/H	0	0	36	119	155	28	25	53	208
6	Haveli	Mandi	11b/H	62b/H	0	0	25	5	30	17	43	60	90
7	Haveli	Mandi	16b/H	67b/H	0	0	6	0	6	28	24	52	58
8	Haveli	Mandi	17/H	68/H	0	0	11	0	11	8	3	11	22
9	Haveli	Mandi	18/H	69/H	0	0	31	52	83	16	15	31	114
10	Haveli	Loran	50/H	101/H	0	0	18	34	52	10	6	16	68
11	Haveli	Loran	59a/H	110a/H	0	0	10	23	33	7	9	16	49
12	Haveli	Sabzian	75/H	126/H	0	0	49	51	100	2	138	140	240
13	Haveli	Sabzian	76/H	127/H	0	38	0	69	107	32	27	59	166
14	Haveli	Sabzian	79/H	130/H	0	0	15	68	83	6	55	61	144
15	Haveli	Sabzian	80/H	131/H	0	1	17	0	18	13	28	41	59
16	Haveli	Sabzian	81/H	132/H	0	0	2	221	223	9	5	14	237
17	Haveli	Sabzian	86d/H	140/H	0	0	95	89	184	17	95	112	296
18	Haveli	Sabzian	89a/H	220/H	0	0	83	320	403	10	249	259	662
19	Haveli	Sabzian	89b/H	221/H	1	0	51	169	221	11	254	265	486
20	Haveli	Poonch	93b/H	164b/H	0	5	101	0	106	47	200	247	353
21	Haveli	Poonch	94c/H	165c/H	0	0	8	0	8	10	12	22	30
22	Haveli	Poonch	103a/H	180a/H	0	0	3	0	3	0	23	23	26
23	Haveli	Poonch	103b/H	180b/H	0	0	0	0	0	8	62	70	70

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
24	Haveli	Poonch	104a/H	181a/H	0	0	0	0	0	9	20	29	29
25	Haveli	Poonch	104b/H	181b/H	0	0	0	0	0	8	14	22	22
26	Haveli	Poonch	104c/H	181c/H	0	0	0	0	0	27	50	77	77
27	Haveli	Poonch	105a/H	182a/H	0	0	0	0	0	14	18	32	32
28	Haveli	Poonch	106a/H	183a/H	0	0	0	0	0	53	85	138	138
29	Haveli	Poonch	106c/H	183c/H	0	0	0	0	0	1	35	36	36
30	Haveli	Jhalas	113b/H	220b/M	6	0	0	0	6	22	16	38	44
31	Haveli	Jhalas	115a/H	222a/M	7	0	0	0	7	22	34	56	63
32	Haveli	Jhalas	115b/H	222b/M	0	0	0	0	0	21	24	45	45
33	Haveli	Jhalas	115d/H	222d/M	2	0	0	0	2	18	13	31	33
34	Haveli	Jhalas	117/H	224/M	2	0	0	0	2	37	22	59	61
35	Haveli	Jhalas	124a/H	231a/M	1	0	0	0	1	21	27	48	49
36	Haveli	Jhalas	124b/H	231b/M	4	0	0	0	4	0	3	3	7
37	Haveli	Khanetar	126/H	233/M	19	0	0	0	19	48	18	66	85
38	Haveli	Khanetar	133/H	240/M	26	0	0	0	26	11	3	14	40
39	Haveli	Khanetar	134a/H	241a/M	44	0	0	0	44	24	11	35	79
40	Haveli	Khanetar	136/H	243/M	9	0	0	0	9	28	21	49	58
41	Haveli	Poonch	138a/H	281a/H	0	0	0	0	0	14	16	30	30
42	Haveli	Poonch	138b/H	281b/H	30	0	0	0	30	8	67	75	105
43	Haveli	Poonch	139a/H	282a/H	9	0	0	0	9	13	73	86	95
44	Haveli	Poonch	139b/H	282b/H	17	0	0	0	17	0	59	59	76
45	Surankote	Murrah	2/S	2/H	0	0	37	61	98	8	91	99	197
46	Surankote	Murrah	3a/S	3a/H	0	0	0	1	1	0	27	27	28
47	Surankote	Murrah	3b/S	3b/H	0	0	10	24	34	0	51	51	85
48	Surankote	Murrah	4/S	4/H	0	0	50	139	189	2	197	199	388

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
49	Surankote	Murrah	5a/S	5a/H	0	0	15	76	91	0	153	153	244
50	Surankote	Murrah	5b/S	5b/H	0	0	5	2	7	1	71	72	79
51	Surankote	Murrah	14/S	14/H	0	0	66	180	246	7	363	370	616
52	Surankote	Murrah	15/S	15/H	0	0	15	32	47	6	166	172	219
53	Surankote	Murrah	25/S	25/H	0	0	140	168	308	45	106	151	459
54	Surankote	Murrah	36/S	36/H	0	0	23	19	42	0	57	57	99
55	Surankote	Murrah	39/S	39/H	0	0	50	3	53	39	256	295	348
56	Surankote	Murrah	40/S	40/H	0	0	83	2	85	0	293	293	378
57	Surankote	Gundi	41/S	41/H	0	0	103	7	110	23	206	229	339
58	Surankote	Gundi	42/S	42/H	0	0	385	78	463	60	164	224	687
59	Surankote	Gundi	43/S	43/H	0	0	211	247	458	19	351	370	828
60	Surankote	Gundi	44a/S	44a/H	0	0	16	0	16	0	17	17	33
61	Surankote	Gundi	44b/S	44b/H	0	0	25	0	25	19	21	40	65
62	Surankote	Gundi	44c/S	44c/H	0	0	241	120	361	47	48	95	456
63	Surankote	Gundi	45/S	45/H	0	0	22	304	326	34	76	110	436
64	Surankote	Gundi	46/S	46/H	0	0	53	116	169	15	224	239	408
65	Surankote	Gundi	47/S	47/H	0	0	99	51	150	28	61	89	239
66	Surankote	Gundi	48/S	48/H	0	0	42	212	254	5	19	24	278
67	Surankote	Gundi	49/S	49/H	0	0	31	202	233	23	178	201	434
68	Surankote	Gundi	50/S	50/H	0	0	37	52	89	38	550	588	677
69	Surankote	Gundi	51a/S	51a/H	0	0	49	0	49	2	464	466	515
70	Surankote	Gundi	51b/S	51b/H	0	0	32	0	32	6	37	43	75
71	Surankote	Gundi	51c/S	51c/H	0	0	132	0	132	38	179	217	349
72	Surankote	Samote	52/S	245/M	0	0	0	0	0	4	10	14	14
73	Surankote	Samote	53/S	246/M	0	0	107	0	107	13	42	55	162

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
74	Surankote	Samote	54/S	247/M	0	0	107	0	107	28	43	71	178
75	Surankote	Samote	55/S	248/M	0	0	27	0	27	22	22	44	71
76	Surankote	Samote	56/S	249/M	0	0	24	0	24	1	44	45	69
77	Surankote	Samote	57/S	250/M	0	0	63	0	63	24	71	95	158
78	Surankote	Samote	58/S	251/M	0	0	62	0	62	1	49	50	112
79	Surankote	Samote	59a/S	252a/M	0	0	14	0	14	0	53	53	67
80	Surankote	Samote	61/S	254/M	51	0	0	0	51	21	38	59	110
81	Surankote	Samote	62/S	255/M	7	0	0	0	7	7	59	66	73
82	Surankote	Samote	63/S	256/M	27	0	0	0	27	14	75	89	116
83	Surankote	Samote	64/S	257/M	33	0	0	0	33	4	21	25	58
84	Surankote	Bufliaz	69/S	262/M	0	0	95	0	95	41	13	54	149
85	Surankote	Bufliaz	71/S	264/M	0	0	132	41	173	24	66	90	263
86	Surankote	Bufliaz	74/S	267/M	0	0	215	40	255	38	13	51	306
87	Surankote	Bufliaz	76/S	269/M	0	0	19	0	19	13	21	34	53
88	Surankote	Behramgala	80/S	273/M	0	0	81	9	90	74	37	111	201
89	Surankote	Behramgala	105/S	298/M	0	0	55	168	223	14	99	113	336
90	Surankote	Behramgala	106/S	299/M	0	0	38	22	60	1	150	151	211
91	Mendhar	Dharamsal	1/M	127/M	98	0	0	0	98	7	5	12	110
92	Mendhar	Dharamsal	3b/M	129b/M	14	0	0	0	14	8	54	62	76
93	Mendhar	Dharamsal	4/M	130/M	18	0	0	0	18	0	52	52	70
94	Mendhar	Dharamsal	11/M	137/M	60	0	0	0	60	4	25	29	89
95	Mendhar	Dharamsal	15/M	141/M	55	0	0	0	55	20	64	84	139
96	Mendhar	Dharamsal	16/M	142/M	67	0	0	0	67	31	65	96	163
97	Mendhar	Dharamsal	17a/M	143a/M	16	0	0	0	16	8	41	49	65
98	Mendhar	Dharamsal	17b/M	143b/M	24	0	0	0	24	13	17	30	54

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
99	Mendhar	Dharamsal	19c/M	145c/M	0	0	0	0	0	0	13	13	13
100	Mendhar	Dharamsal	19d/M	145d/M	13	0	0	0	13	5	4	9	22
101	Mendhar	Dharamsal	20/M	146/M	63	0	0	0	63	4	54	58	121
102	Mendhar	Nar	21a/M	147a/M	46	0	0	0	46	5	71	76	122
103	Mendhar	Nar	21b/M	147b/M	28	0	0	0	28	8	36	44	72
104	Mendhar	Nar	22/M	148/M	36	0	0	0	36	11	26	37	73
105	Mendhar	Nar	26/M	152/M	14	0	0	0	14	13	11	24	38
106	Mendhar	Nar	27/M	153/M	83	0	0	0	83	40	80	120	203
107	Mendhar	Nar	30/M	156/M	32	0	0	0	32	1	21	22	54
108	Mendhar	Gursain	31/M	157/M	21	0	0	0	21	22	96	118	139
109	Mendhar	Gursain	32/M	158/M	4	0	0	0	4	0	28	28	32
110	Mendhar	Gursain	33/M	159/M	17	0	0	0	17	7	114	121	138
111	Mendhar	Gursain	34a/M	160a/M	1	0	0	0	1	2	12	14	15
112	Mendhar	Gursain	34b/M	160b/M	52	0	0	0	52	25	156	181	233
113	Mendhar	Gursain	35/M	161/M	14	0	0	0	14	4	81	85	99
114	Mendhar	Gursain	36/M	162/M	3	0	0	0	3	0	59	59	62
115	Mendhar	Gursain	37/M	163/M	15	0	0	0	15	25	48	73	88
116	Mendhar	Gursain	38/M	164/M	31	0	0	0	31	14	49	63	94
117	Mendhar	Gursain	40a/M	166a/M	22	0	0	0	22	20	45	65	87
118	Mendhar	Gursain	40b/M	166b/M	0	0	0	0	0	0	22	22	22
119	Mendhar	Gursain	40c/M	166c/M	0	0	0	0	0	0	50	50	50
120	Mendhar	Salwan	41b/M	167b/M	40	0	0	0	40	23	35	58	98
121	Mendhar	Salwan	42/M	168/M	73	0	0	0	73	43	81	124	197
122	Mendhar	Salwan	44/M	170/M	25	0	0	0	25	15	52	67	92
123	Mendhar	Salwan	45a/M	171a/M	63	0	0	0	63	25	18	43	106

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
124	Mendhar	Salwan	45b/M	171b/M	15	0	0	0	15	3	23	26	41
125	Mendhar	Salwan	46/M	172/M	51	0	0	0	51	10	60	70	121
126	Mendhar	Salwan	47a/M	173a/M	0	0	0	0	0	0	66	66	66
127	Mendhar	Salwan	47b/M	173b/M	2	0	0	0	2	10	40	50	52
128	Mendhar	Salwan	48/M	174/M	25	0	0	0	25	14	67	81	106
129	Mendhar	Salwan	49/M	175/M	12	0	0	0	12	6	65	71	83
130	Mendhar	Salwan	50a/M	176a/M	6	0	0	0	6	1	45	46	52
131	Mendhar	Salwan	50b/M	176b/M	1	0	0	0	1	3	35	38	39
132	Mendhar	Ramkund	51a/M	177a/M	22	0	0	0	22	8	46	54	76
133	Mendhar	Ramkund	51b/M	177b/M	6	0	0	0	6	0	36	36	42
134	Mendhar	Ramkund	53a/M	179a/M	32	0	0	0	32	0	24	24	56
135	Mendhar	Ramkund	53b/M	179b/M	0	0	0	0	0	0	28	28	28
136	Mendhar	Ramkund	53c/M	179c/M	0	0	0	0	0	0	63	63	63
137	Mendhar	Ramkund	54/M	180/M	17	0	0	0	17	5	103	108	125
138	Mendhar	Ramkund	55a/M	181a/M	12	0	0	0	12	8	25	33	45
139	Mendhar	Ramkund	55b/M	181b/M	41	0	0	0	41	17	30	47	88
140	Mendhar	Ramkund	56/M	182/M	104	0	0	0	104	12	46	58	162
141	Mendhar	Ramkund	61/M	187/M	19	0	0	0	19	24	73	97	116
142	Mendhar	Ghani	63/M	189/M	17	0	0	0	17	27	48	75	92
143	Mendhar	Ghani	64/M	190/M	0	0	0	0	0	6	18	24	24
144	Mendhar	Ghani	65a/M	191a/M	1	0	0	0	1	4	10	14	15
145	Mendhar	Ghani	65b/M	191b/M	0	0	0	0	0	4	17	21	21
146	Mendhar	Ghani	66/M	192/M	74	0	0	0	74	14	117	131	205
147	Mendhar	Ghani	67a/M	193a/M	16	0	0	0	16	2	38	40	56
148	Mendhar	Ghani	67b/M	193b/M	136	0	0	0	136	4	105	109	245

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
149	Mendhar	Ghani	68/M	194/M	120	0	0	0	120	5	66	71	191
150	Mendhar	Ghani	72/M	198/M	21	0	0	0	21	30	42	72	93
151	Mendhar	Ghani	74/M	200/H	21	0	0	0	21	21	36	57	78
152	Mendhar	Ghani	79/M	205/M	54	0	0	0	54	26	11	37	91
153	Mendhar	Ghani	80/M	206/M	89	0	0	0	89	3	30	33	122
Total					2257	44	3738	3649	9688	2205	10404	12609	22297

Estate Area taken in previous working plan = 12727 Ha

Appendix VIII. Area statement for Oak Working Circle of Poonch Forest Division

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
1	Haveli	Mandi	1a/H	52a/H	0	0	0	0	0	343	71	414	414
2	Haveli	Mandi	1b/H	52b/H	0	0	0	0	0	273	199	472	472
3	Haveli	Mandi	3/H	54/H	0	0	0	0	0	186	96	282	282
4	Haveli	Mandi	4a/H	55a/H	0	0	62	38	100	50	77	127	227
5	Haveli	Mandi	12/H	63/H	0	0	68	46	114	30	33	63	177
6	Haveli	Loran	29/H	80/H	0	5	3	75	83	42	12	54	137
7	Haveli	Sabzian	90/H	161/H	0	0	45	131	176	122	120	242	418
8	Haveli	Poonch	93a/H	164a/H	0	0	0	0	0	91	45	136	136
9	Haveli	Poonch	96a/H	167a/H	0	0	0	0	0	59	18	77	77
10	Haveli	Poonch	96b/H	167b/H	0	0	0	0	0	19	22	41	41
11	Haveli	Poonch	96c/H	167c/H	0	0	0	0	0	26	20	46	46
12	Haveli	Poonch	97b/H	168b/H	0	0	0	0	0	80	96	176	176
13	Haveli	Poonch	100/H	177/H	0	0	0	0	0	101	67	168	168
14	Haveli	Poonch	102/H	179/H	0	0	0	0	0	45	4	49	49
15	Haveli	Poonch	105b/H	182b/H	0	0	0	0	0	45	12	57	57
16	Haveli	Poonch	106b/H	183b/H	0	0	7	0	7	55	26	81	88
17	Haveli	Poonch	107b/H	184b/H	3	0	0	0	3	113	19	132	135
18	Haveli	Poonch	108/H	185/H	8	0	0	0	8	149	33	182	190
19	Haveli	Jhalas	109b/H	186b/H	10	0	0	0	10	115	45	160	170
20	Haveli	Jhalas	112/H	219/M	40	0	0	0	40	66	17	83	123
21	Haveli	Jhalas	113a/H	220a/M	16	0	0	0	16	61	27	88	104
22	Haveli	Jhalas	114a/H	221a/M	0	0	7	0	7	61	12	73	80
23	Haveli	Jhalas	114b/H	221b/M	17	0	0	0	17	42	20	62	79

S.No.	Range	Block	New	Old	Commercial Area					Uncommercial Area			Grand Total
					Chir	Deodar	Kail	Fir/Spruce	Total	Broad Leaved	Blanks	Total	
24	Haveli	Jhalas	115c/H	222c/M	1	0	0	0	1	26	4	30	31
25	Haveli	Jhalas	116/H	223/M	6	0	0	0	6	95	35	130	136
26	Haveli	Jhalas	118/H	225/M	2	0	0	0	2	39	16	55	57
27	Haveli	Jhalas	119/H	226/M	5	0	0	0	5	125	23	148	153
28	Haveli	Jhalas	120/H	227/M	0	0	26	0	26	113	23	136	162
29	Haveli	Jhalas	121a/H	228a/M	0	0	0	0	0	43	7	50	50
30	Haveli	Khanetar	125/H	232/M	2	0	0	0	2	67	26	93	95
31	Haveli	Khanetar	128/H	235/M	0	0	33	0	33	138	10	148	181
32	Haveli	Khanetar	129/H	236/M	0	0	0	0	0	143	36	179	179
33	Haveli	Khanetar	131/H	238/M	9	0	0	0	9	22	6	28	37
34	Haveli	Khanetar	135/H	242/M	37	0	0	0	37	77	24	101	138
35	Haveli	Poonch	141/H	284/H	4	0	0	0	4	85	3	88	92
36	Surankote	Murrah	20b/S	20b/H	0	0	36	47	83	52	68	120	203
37	Surankote	Samote	59b/S	252b/M	0	0	79	0	79	46	30	76	155
38	Surankote	Bufliaz	72/S	265/M	0	0	141	1	142	71	42	113	255
39	Surankote	Bufliaz	73/S	266/M	0	0	85	0	85	54	17	71	156
40	Surankote	Behramgala	77/S	270/M	0	0	81	0	81	88	30	118	199
41	Mendhar	Ramkund	59/M	185/M	19	0	0	0	19	35	26	61	80
42	Mendhar	Ghani	77/M	203/M	46	0	0	0	46	82	84	166	212
Total					225	5	673	338	1241	3575	1601	5176	6417

Appendix: IX. Statement of Developmental Works conducted under various schemes in Poonch Forest Division

Statement showing the Afforestation activity under District Plan in Poonch Forest Division

S.No.	Year	Total Area Tackled			
		Area (in Ha)	Fencing (in Rft)	No. of Plants Planted	MEW (m^3)
1.	2004-05	40	13000	16000	-
2.	2005-06	35	10000	20000	53.00
3.	2006-07	100	32000	54000	309.00
4.	2007-08	100	3000	43500	174.80
5.	2008-09	90	25200	30000	171.00
6.	2009-10	88	26500	28500	163.00
7.	2010-11	75	22500	28500	116.75
8.	2011-12	60	20000	23000	347
9.	2012-13	60	20000	23000	410
10.	2013-14	60	19000	14200	86
11.	2014-15	60	19000	19000	198

Statement showing the Afforestation activity under State Sector in Poonch Forest Division

S.No.	Year	Total Area Tackled			
		Area (in Ha)	Fencing (in Rft)	No. of Plants Planted	MEW (m^3)
1.	2004-05	109	37000	41000	-
2.	2005-06	10	4000	8000	-
3.	2006-07	20	6000	8000	50.56
4.	2007-08	35	11000	9000	-
5.	2008-09	60	10000	20630	-
6.	2009-10	73	11000	19627	459
7.	2010-11	55	17500	23000	83

8.	2011-12	28	9000	11500	130
9.	2012-13	39	13000	2202	-
10.	2013-14	30	10000	9000	-
11.	2014-15	30	10000	9000	-

Statement showing the Afforestation activity under Chief Minister's Participatory Scheme in Poonch Forest Division

S.No.	Year	Total Area Tackled			
		Area (in Ha)	Fencing (in Rft)	No. of Plants Planted	MEW (m^3)
1.	2004-05	-	-	10000	-
2.	2005-06	30	10000	16450	375.00
3.	2006-07	30	10000	20000	136.48
4.	2007-08	20	6500	10000	100.00
5.	2008-09	15	5000	15000	190.00
6.	2009-10	15	4500	10000	130.00
7.	2010-11	15	4500	10000	128.69
8.	2011-12	15	4500	10000	127
9.	2012-13	15	4500	10000	135
10.	2013-14	05	3000	3000	-
11.	2014-15	09	3000	3000	-

Statement of progress report under Integrated Forest Protection Scheme (CSS) in Poonch Forest Division

S.No.	Year	Item/Unit	Description	Physical
1.	2005-06	Fire Lines Creation	a) Creation of Fire lines.	-
			b) Firelines/Contour Inspection path creation width 1 to 1.5 Mtr from Co. 201/M to 204/M	4
		Fire Watcher	Fire Watchers 6 Nos@1800 per month for 4 month (Haveli and Mendhar Ranges)	24
		Fire fighting cells	Setting up of fire fighting cells	0
		Fire fighting equipments	Fire fighting equipments (Haveli, Mendhar and Surankote Ranges)	1
			Component Total	49
		Component : Preparation for Working Plan/Survey and demarcation		
		Building	Forester/Ranger Huts Plinth area= 655 Sq. Ft. (Surankote Range)	1
			Component Total	1
			Grand Total	50
2.	2006-07	Component : Forest Fire Control and Management		
		Fire Lines Creation	a) Creation of Fire lines.	40
		Fire line Management already created under the project	Fire line management already created under the project	50
		Fire Watcher	Fire Watchers 6 Nos@1800 per month for 4 month (Haveli and Mendhar	3

			Ranges)	
		Fire fighting cells	Setting up of fire fighting cells	0
		Inspection Path	Inspection Path	6
		Fire fighting equipments	Fire fighting equipments	1
		Total		100
3.	2007-08	Fire Lines Creation	a) Creation of Fire lines.	10
		Fire Watcher	Fire Watcher	Engagement of Fire watcher in Haveli, Surankote and Mendhar Ranges
4.	2008-09	Integrated Forest Protection	Fire Watcher	Engagement of 14 Fire Watcher as under : Haveli :4 Mendhar :8 Surankot :2 Total = 14 Fire Watchers

Statement of Physical activity under other schemes in Poonch Forest Division

<table>
<tr><th></th><th>Year</th><th colspan="3">Constituency</th><th>Achievement</th></tr>
<tr><td rowspan="15">I.F.M.</td><td rowspan="5">2012-13</td><td colspan="3">Assistance to JFMS’s</td><td rowspan="5">100%</td></tr>
<tr><td colspan="3">Purchase of Fire fighting equipments</td></tr>
<tr><td colspan="3">Fixing of Chain link fencing around Inspection Hut at Dehra-Ki-Gali</td></tr>
<tr><td colspan="3">Constructed Bridle Path by fixing tiles at Dehra-Ki-Gali</td></tr>
<tr><td colspan="3">Constructed 90 ft protection wall around Inspection Hut at Dehra-Ki-Gali</td></tr>
<tr><td>2013-14</td><td colspan="3">NIL</td><td></td></tr>
<tr><td rowspan="9">2014-15</td><td>Head</td><td>Item of Work</td><td colspan="2">Physical</td></tr>
<tr><td rowspan="2">Forest Fire control and management</td><td>Creation of Fire line/control burning</td><td colspan="2">Haveli : Comptt 217/H to 230/H=5 Km
Surankote : Comptt 267/H to 268/H=2 Km
Mendhar : Total 8 Km
Comptt 201/H to 206/M
Comptt 127/M to 144/M
Comptt 149/M to 151/M
Total : 15 Km</td></tr>
<tr><td>Fire watchers Engagement</td><td colspan="2">3 Nos</td></tr>
<tr><td></td><td>Assistance to JFMC’s</td><td colspan="2">-</td></tr>
<tr><td></td><td>Setting up of fire fighting cell</td><td colspan="2">-</td></tr>
<tr><td></td><td>Training and Awareness</td><td colspan="2">2 Nos</td></tr>
<tr><td></td><td>Purchase of Fire Fighting equipments</td><td colspan="2">-</td></tr>
<tr><td></td><td>Construction of water well structure</td><td colspan="2">-</td></tr>
<tr><td></td><td>Fire mapping /preparation of plan</td><td colspan="2">-</td></tr>
</table>

		Constituency	Area (Ha)	Works Executed
Development of City Forest Poonch	2012-13	Haveli	15	Levelling of park good earth
				Fixing of Grill around park
				Cutting and earth work of main road
				White wash and painting of building
	2013-14	Nil		
	2014-15	Nil		

		Constituency	Area (Ha)	Planting (Nos)	MEW (m^3)
Bamboo Mission	2012-13				
	2013-14	Haveli	20	7000	125
		Surankote	25	7000	200
		Total	35	14000	325
	2014-15				
	2014-15	Nil			

Statement Showing Physical activity Under 12th Finance Commission for Poonch Forest Division

S.No.	Year	Total Area Tackled(Ha)	Fencing in Rft	No. of Plants Planted	MEW (m^3)
1.	2005-06	2.025	-	18230	-
2.	2006-07	10	3286	-	-
3.	2007-08	22	7000	20000	391
4.	2008-09	-	7000	7000	48
5.	2009-10	-	7000	7000	48
6.	2010-11	-	43700	-	-

Statement Showing Physical and Financial Achievement under 13th Finance Commission award for preparation of Working Plan for Poonch Forest Division

S.No.	Year	Purchase of Instrument						
1.	2010-11	Crown Densiometer , Laser Range finder,Binoculars, Spot light, Compass, Digital verinier calliper, Ranging rods, Pantograph, Chuldaries , Caliper Aluminium , Hypsometer , Ravi Altimeter , Abney level 5"with slow motion, Brass compass 2", Wedge Prism (factor 1), Diameter tape ,Measuring tapes, Alpine tents, Sleeping bags,Chisels, Axes, Butamin Tarcoal, White and green paint , Brushes , GPS, Digital Camera, Petromax, Rain coats, Folding Chairs, Folding Tables, Overhead charges (Computer, fax Machine,Photocopier, Stationary items and furniture)						
2.	2012-13	115 Sampling points						
3.	2013-14	**A. Release under Revalidated Funds**						
			Allotment (in lacs)	**No. of Units established**	**Area(Ha)**	**Fencing**	**Planting**	**MEW(m^3)**
		i.Renovation of fencing.	5.00	11	110	34600	-	-
		ii.Maintenance of City Forests.	5.00	a. Repaired 03 view points. b. Constructed 1600 Sft. Bridle Path. c. Constructed 8 ft Path from parking place to main lawn				
		B. Normal						
		i. Forest Maintenance and Development						
		a.Repair of fencing with planting	2.00	3	36	11000	8050	-
		ii. Improvement of New Potha Nursery	3.00	a. Completed 13000 Rft Fencing b. Constructed Mali hut				
		13th Finance commission award	16.40	a. Constructed Hut at Murah b. Completed Hut at Dehra-Ki-Gali c. Completed Ceiling at Dehra-Ki-Gali d. Completed Forest Road in Dhargloon				
		Total	31.40					

		Constituency	Area(Ha)	Fencing (Rft)	Planting	MEW(m^3)
4.	2014-15	Haveli (New Closure)	20	6500	9000	--
		Total	20	6500	9000	--
		Haveli (Renovation)	--	10000	8000 Patches	126.44
		Surankote (Renovation)	--	7000	6000 Patches	31.96
		Mendhar (Renovation)	--	2500	2000 Patches	31.96
		Total	--	19500	16000	190.36

Statement showing component wise physical activity under "CAMPA" for the year 2011-12

S.No.	Co.No.	Area	Fencing (in Rft)	No. of Plants to be Planted	SC Work (m^3)	Nursery
			Physical	Physical	Physical	Physical
1.	52/H	20	6500	22000	200	22000
2.	165/M	20	6500	8000	200	8000
3.	245/S	40	13500	44000	200	44000
4.	264/S	40	13500	16000	200	16000
	Total	120	40000	90000	800	90000
	Maintenance of last year's unit	150	-	-	-	-
	Grand Total	120	40000	90000	800	90000

Statement showing component wise physical activity under "CAMPA" for the year 2012-13

S.No.	Allotment (in lacs)	No. of Units established	Area (Ha)	Fencing (in Rft)	Planting	MEW(m^3)
1.	93.70	09	175	56500	131000	1800

Statement component wise physical activity under "CAMPA" for the year 2013-14

S.No.	Allotment (in lacs)	No. of Units established	Area (Ha)	Fencing (in Rft)	Planting	MEW(m^3)
1.	176.47	17	400	124500	258350	4350

Statement component wise physical activity under CAMPA for the year 2013-14

Planting Component

S.No.	Compartment No.	Particular of Item	Target		Cumulative ending 03/2014	
			Area in Ha.	Physical (in Rft)	Area in Ha.	Physical (in Rft)
Fencing with Sq. PCC post in pits 45*22*22 cm size by using B.A. wire						
1.	143/S	Dharana	20	6500@46.96	20	6500
2.	192/H	Karmara	20	6500	20	6500
3.	299-300/S	Noori Chhamb	20	6500	20	6500
4.	52/H	Haribudha	20	6500	20	6500
5.	242/S	Shiendra	20	6500	20	6500
6.	164/H	Norrpur	20	6500	20	6500
7.	16/S	Handuwala	20	6500	20	6500
8.	256/S	Samote	20	6500	20	6500
9.	42/S	Dhandidhara	20	6500	20	6500

10.	252/S	Sanai	20	6500	20	6500
11.	268/S	Dodiwali	20	6500	20	6500
12.	106/H	Doba	20	6500	20	6500
13.	177/H	Thandi Kassi	20	6500	20	6500
	Mughal					
14.	3/S	Near Er. Younis Memorial	40	12000	40	12000
15.	5/S	Godabani	25	7500	25	7500
16.	115/S	Mansar	60	16000	60	16000
17.	116/S	Chattapani	15	4500	15	4500
		Grand Total	400	124500	400	124500

Plantation

S.No.	Particular of Item	Target
	Plantation/Compartment No.	**Pits Plants in Nos.**
1.	143/S	11900
2.	192/H	11900
3.	299-300/S	11900
4.	52/H	11900
5.	242/S	11900
6.	164/H	11900
7.	16/S	11900
8.	256/S	11900
9.	42/S	11900
10.	252/S	11900
11.	268/S	11900
12.	106/H	11900
13.	177/H	11900

Mughal Road		
14.	3/S	15000
15.	5/S	10000
16.	115/S	20000
17.	116/S	8000
	Grand Total	207700
Dibbling		
1.	3/S	
2.	5/S	
3.	115/S	
4.	116/S	
		Total
	Extra Carriage	
		Grand Total

Statement showing component wise work under CAMPA for Poonch Forest Division for the Year 2014-15

S.No.	Compartment No.	Name of Unit	Area (in Ha)	Fencing	No. of Plants	SC Works	Nursery
				Physical	Physical	Physical	Physical
1.	164/H	Noorpur	20	6500	11000	150 m^3	11000
2.	106/H	Loran Upper	20	6500	11000	150 m^3	11000
3.	57/H	Arai	20	6500	11000	150 m^3	11000
4.	236/H	Khanater	20	6500	11000	150 m^3	11000
5.	184/H	Nangali Gali	20	6500	11000	150 m^3	11000
6.	185/H	Hundian Gali	20		11000	150 m^3	11000
7.	251/S	Dana Shah Sitar	20	6500	11000	150 m^3	11000

8.	246/S	Dhartwali	20	6500	11000	150 m^3	11000
9.	1/S	Mughal Road Chattapani	20	6500	11000	150 m^3	11000
10.	5/S	Dogrian	20	6500	11000	150 m^3	11000
11.	7/S	Panar	20	6500	11000	150 m^3	11000
		Total	220	71500	121000	1650 m^3	121000
	Maintenance of last year's Units		725	-	-	-	-
	Extra Carriage		-	-	-	-	-
	Grand Total		945	71500	121000	1650	121000

S.No.	Name of Component	Physical Targets
1.	i.Fencing ii.Area in Hectare	71500 Rft 220 Heactare
2.	Planting	121000 Plants
3.	SC Works	1650
4.	Nursery Cost	121000
5.	Infrastructure	i.Fencing of Potha Nursery and construction of Mali Hut= 4.00 lac ii.Construction of Check post Chandak=3.50 lac iii. Upkeep and maintenance of DFO Residence=2.00 lac iv. Repair and renovation of RO Surankote office=2.00 lac v. Construction of Grazing Check post at Behramgalla = 5.00 lac vi. Operationalisation of F.R.H. Poonch= 1.50 lac vii. Construction of one store room in DFO office complex= 2.00 lac

Statement showing component wise work under CAMPA for Poonch Forest Division for the Year 2014-15

Planting Component

S.No.	Compartment No.	Particular of Item	Target	
			Area in Ha.	Physical (in Rft)
Fencing with Sq. PCC post in pits 45*22*22 cm size by using B.A. wire				
1.	139-a/H	Narian	20	6500 @49.53
2.	130/H	Brari	20	6500
3.	106/H	Doba Loran	20	6500
4.	236/H	Khanetar	20	6500
5.	164/H	Noorpur	20	6500
6.	167-a/M	Topa Salwah	20	6500
7.	160/M	Gursai Mori	20	6500
8.	251/S	Dana Shahsitar	20	6500
9.	246/S	Mori	20	6500
10.	43/S	Sangla Berawali	20	6500
		Extra Carriage		
		Total	210	68500
Mughal Road				
11.	7/S	Panar	20	6000
12.	9/S	Panar	20	6000
		Total	40	12000
		Extra Carriage		
		Grand Total	250	80500

Plantation

S.No.	Particular of Item	Target		
		Pits Plants in Nos.	Trench Plants in Nos.	Total
Plantation/Compartment No.				
1.	139-a/H	9000	0	11900
2.	130/H	9000	0	11900
3.	106/H	12000	0	11900
4.	236/H	8000	0	11900
5.	164/H	18000	0	11900
6.	167-a/M	8000	0	11900
7.	160/M	5000	0	11900
8.	251/S	8000	0	11900
9.	246/S	7000	0	11900
10.	43/S	8000	0	11900
	Total	92000	0	92000
Mughal Road				
11.	7/S	4000	0	4000
12.	9/S	4000	0	4000
	Total	8000	0	8000
	Grand Total	100000	0	100000

FDA works undertaken in Poonch Forest Division

Statement showing the detail of works executed in FDA (Unit/VFC wise) during 2007-08

S.No.	Name of VFC	Co. No.	Item of Work executed
1.	Kangra	149/M	a. Construction of passenger shed at Tarakote Compartment
2.	Gursai	161/M	a. B/Path at Mohalla to Batangiwala= 3 Km in compartment 162/M b. B/Path at Mohalla Phamanar to Gursai= 3 Km in 160-61/M c. Plantation , 5000 in Co. 161/M d. Nursery cost
3.	Kalaban	173/M	a. B/Path near Masjid Kalaban awan in compartment 173/M b. B/Path near Masjid Nabnee in Co. 174/M c. B/Path at Mohalla Awan to Natroot Jelhari= 2 Km in Co. 173/M
4.	Ucchad	192/M	a. Construction of Bawali near Middle School Gauchara in 192/M b. Construction of Bawali Jabar Ucchad in Co. 192/M c. Construction of B/Room at ground Mohalla Ucchad in Co. 192/M d. Plantation 5000 plants in Co. 192/M e. Nursery Cost
5.	Salani	189/M	a. Construction of B/Room at Jama Masjid Salani b. Construction of B/Room near Masjid Serian salani c. Construction of B/Room at Mohalla Serian Salani near Primary School Sarian
6.	Ghani	197/M	a. Construction of road from Garib Das temple to lower Devta = 1.5 Km b. Construction of Compounf wall and repair of Eidgah near H.S. School Tanda c. Plantation 4000 plants in Co. 197/M d. Nursery Cost
7.	Banloi	202/M	a. Construction of road from Garib Das temple to lower Devta= 1 Km b. Construction of Eidgah at near Balnoi

8.	Chajjla Mankote	137/M	a. Construction of B/Path= 2 Km from Kalyani to Mohalla Choi b. Construction of Bawali at Chajja c. Construction of Bawali at Mankote d. Plantation 8000 plants in Co. 136-137/M e. Nursery Cost
9.	Dharana	141/M	a. Construction of B/Room with tanki at Mohalla Basoni b. Construction of B/Room with tanki at Mohalla Masjid Chechian c. Plantation 12000 plants in Co. 141,143/M d. Nursery Cost
10.	Gohlad	145/M	a. Construction of B/Room with tanki at Mohalla Sayedan b. Construction of B/Room with tanki near Masjid Panakha c. Plantation 19000 plants in Co. 145/M d. Nursery Cost
1.	Lassana	247/S	a. Repair of fencing 3000 Rft b. Plantation 4000 plants . c. M.E.W.= 60 M3 d. Nursery Cost
2.	Sanai	250/S	a. Construction of C/Wall around Eidgah Jamodh Sayeeda b. Plantation of Safeda= 4000 c. Nursery Cost
3.	Draba	258/S	a. Plantation = 10000 b. Bathroom 2 Nos at Draba Tata Pani c. Nursery Cost
4.	Mastandara	263/S	a. Bathroom at Mastandara
5.	Buffliaz	260/S	a. Plantation = 5000 b. Bathroom at HS School Buffliaz c. Nursery Cost
6.	Marha	273/S	a. Passenger Shed at Pamnar b. Plantation = 4000 c. Nursery Cost
7.	Sangla	41/S	a. Passenger Shed at Nanga Shah Ziarat
1.	Jhullas	221/H	a. Construction of B/Room b. B/Path

			c. Plantation= 6000 d. Nursery Cost
2.	Dara Dullian	224/H	a. Construction of Bawali at Dara b. Construction of B/Path at 3 Km c. Plantation= 27000 d. Nursery Cost
3.	Mangnar	226/H	a. Construction of Shelter Shed b. Plantation= 10000 c. Nursery Cost
4.	Nangali	169/H	a. Distribution of sewing machine= 20
5.	Khanetar	237/H	a. Construction of B/Path from Middle school Tanda to Khanetar Gali= 4 Km b. Construction of bathroom near Govt. Primary School Kalar c. Nursery Cost
6.	Shiendara	242/H	a. Construction of Water tanki 200 ltr. Near Bawali Kalsa Mohalla b. B/Path from Kalai to Shiendara= 4 Km
7.	Sawjian	118/H	a. Construction of B/Path from Sundri to Sapan wali= 4 Km b. Construction of B/Path Khet to Grang 4 Km
8.	Bedar	113/H	a. Construction of Shelter Shed Chaki Wali Ziarat b. Plantation= 6000 c. Nursery Cost
9.	Chamber	162/H	a. Construction of Shelter Shed Chaki Wali Ziarat b. Plantation= 5000 c. Nursery Cost
10.	Haribudha	52/H	a. Construction of 2 Km B/Path from Malhan to Dhara b. Construction of Bathroom near Primary School Dheri
11.	Arai	58/H	a. Construction of community shed at Ziarat Sharief Hadyat Shah Gazi
12.	CEO		a. Purchase of Computer b. Purchase of Office Furniture c. Fuel for Jeep d. T.A. bill for employee e. Office expenses

			f. Purchase of Generator and Inverter for office
			Total

Statement showing the detail of works executed in FDA (Unit/VFC wise) during 2008-09

S.No.	Name of VFC	Co. No. Area (Ha)	Item of Work executed
1.	Danna	99/H 75 Ha	a. Fencing of stone wall and B A wire= 16089 Rft b. Planting of 60000 plants c. Soil and Moisture work 300 m3 d. Entry Point Activity : 1. B/Path Pamla Doke= 3.10 Km 2. B/Path Sultan Pathri = 3.10 Km 3. B/Path Kallar to Kayla = 3.50 Km
2.	Shiendara	240/H 75 Ha	a. Fencing of stone wall and B A wire= 16089 Rft b. Planting of 30000 plants c. Soil and Moisture work 300 m3 d. Entry Point Activity : 1. Bathroom at Marha Kossalian 2. Shed at Mohalla near Ziarat Sharief Shiendara
3.	Mahra	270/S 75 Ha	a. Fencing of stone wall and B A wire= 16089 Rft b. Planting of 35000 plants c. Soil and Moisture work 216 m3 d. Entry Point Activity : 1. B/Path Parnai to Rattan Pir= 7 m 2. Passenger shed at kalal Gali Ziarat
4.	Salwah	168/M 50 Ha	a. Fencing of stone wall and B A wire= 11058 Rft b. Planting of 50000 plants c. Soil and Moisture work 216 m3 d. Entry Point Activity : 1. B/Path from Kangariala to Nawni = 2.50 Km 2. B/Path from Chaper Dara to Top Comptt. 167-

			a/M = 2 Km
5.	CEO		a. Purchase of Office Furniture b. Fuel for Jeep c. T.A. bill for employee d. Office expenses e. Purchase of Computer
			Total

Statement showing the detail of works executed in FDA (Unit/VFC wise) during 2009-10

S.No.	Name of VFC	Range	Amount
1.	Danna	Haveli	2.918
2.	Shiendara	Haveli	2.918
3.	Kanuyian	Haveli	2.918
4.	Chhamber	Haveli	2.918
5.	Bedar	Haveli	3.232
6.	Jhullas	Haveli	4.633
7.	Battle Kote	Haveli	4.633
8.	Tantrigam	Haveli	4.633
9.	salotri	Haveli	3.232
		Total	32.349
10.	Draba	Surankote	4.633
11.	Mahra	Surankote	2.918
12.	Poshana	Surankote	2.918
13.	Taranwali	Surankote	4.633
14.	Marhote	Surankote	3.240
		Total	18.342
15.	Chajjla-Kasblari	Mendhar	4.633
16.	Chungan	Mendhar	4.633
17.	Sarhuti	Mendhar	4.633

18.	Gursai	Mendhar	3.232
19.	Salwah	Mendhar	2.918
		Total	20.049
20.	CEO		10.00
		G.Total	80.74

Statement showing the detail of works executed in FDA (Unit/VFC wise) during 2010-11

S.No.	Name of VFC	Compartment No.	Area	Creation			Soil/Moisture
				Planting	Patch sowing/Dibbling	Fencing	
				Physical	Physical	Physical	Physical (m^3)
Aided Natural Regeneration							
1.	Danna	-	-	-	-	-	
2.	Shindra	-	-	-	-	-	
3.	Mahra	-	-	-	-	-	
4.	Salwah	167/M	25	2000	3000	5000	86
5.	Kanuyia	229-230/H	50	2000	8000	10000	170
6.	Poshana	3-4/S	75	4000	11000	15000	253
	Total		150	8000	22000	30000	509
Aided Natural Regeneration							
1.	Bedar	112 to 114/H	25	4000	19000	5000	86
2.	Jhullas	220 to 222/H	25	4000	19000	5000	86
3.	Batalkot	82,83,95,99/H	25	4000	19000	5000	86
4.	Chajjla/Kasblari	183-184/M	25	4000	19000	5000	86
5.	Chunga	174-177/M	25	4000	19000	5000	86
6.	Draba	256-259/S	25	4000	19000	5000	86
7.	T.Wali	39-40/S	25	4000	19000	5000	86
8.	Sarhuti	164-166/M	25	4000	19000	5000	86
	Total		200	32000	152000	40000	688
Silvi Pasture							
1.	Chamber	161-163/M	50	4000	16000	10000	172

2.	Salotri	-	-	-	-	-	-
3.	Tatrigam	106,109,110/H	25	2000	8000	5000	86
4.	Gursai	160-162/M	25	2000	8000	5000	86
5.	Marhote	44-48/S	25	2000	8000	5000	86
	Total		125	10000	40000	25000	430
	CEO		-	-	-	-	-
	Grand Total		475	50000	214000	95000	1508

Statement showing the detail of works executed in FDA (Unit/VFC wise) for year 2013-14

S.No.	Name of VFC	Co. No.	Comp	Area	Advance Work		Creation			Entry Point Activity	
					Fencing (3HT)	Achievements	Planting	Achievements			
					Target	Rft	Physical	Area	Physical	Target	Achievement
1.	Jhullas	220/H	ANR	25	7500	7500	5000	25	5000	0	0
2.	Sawjian	131/H	ANR	25	7500	7500	5000	25	5000	0	0
3.	Trarranwali	40/S	ANR	50	15000	15000	10000	50	10000	0	0
4.	Poshana	3/S	ANR	0	0	0	0	0	0	0	0
5.	Salwah	167/M	ANR	0	0	0	0	0	0	0	0
6.	Kanuian	229/H	ANR	0	0	0	0	0	0	0	0
7.	Poshana	3/S	ANR	0	0	0	0	0	0	0	0
			Total	100	30000	30000	20000	100	20000	0	0
8.	Battalkote	95/H	AR	20	6500	6500	22000	20	4000	0	0
9.	Chajjla-Kasblari	183/M	AR	20	6500	6500	22000	20	22000	0	0
10.	Mahra	273/S	AR	20	6500	6500	22000	20	22000	0	0
11.	Battalkote	95/H	AR	0	0	0	0	0	0	0	0
12.	Chajjla-Kasblari	183/M	AR	0	0	0	0	0	0	0	0
13.	Draba	256/S	AR	0	0	0	0	0	0	0	0

14.	Jhullas	220/M	AR	0	0	0	0	0	0	0	0
15.	Chajjla-Kasblari	183/M	AR	0	0	0	0	0	0	0	0
16.	Draba	256/S	AR	0	0	0	0	0	0	0	0
17.	Battalkote	95/H	AR	0	0	0	0	0	0	0	0
			Total	60	19500	19500	66000	60	48000	0	0
18.	Bedar	113/H	SPD	20	6500	6500	8000	20	8000	0	0
19.	Shindara	242/H	SPD	20	6500	6500	8000	20	8000	0	0
20.	Draba	256/S	SPD	20	6500	6500	8000	20	8000	2	1
21.	Tantrigam	106/H	SPD	0	0	0	0	0	0	0	0
22.	Chhungam	174/M	SPD	0	0	0	0	0	0	0	0
23.	Marhote	44/S	SPD	0	0	0	0	0	0	0	0
24.	Marhote	44/S	SPD	0	0	0	0	0	0	0	0
25.	Tantrigam	106/H	SPD	0	0	0	0	0	0	0	0
			Total	60	19500	19500	24000	60	24000	2	1
	Over Head		0	0	0	0	0	0	0	0	0
			G. Total	220	69000	69000	110000	220	92000	2	1

Statement showing the detail of works executed in FDA (Unit/VFC wise) for year 2014-15

Constituency	Area(Ha)	Fencing (Rft)	Planting
Haveli	50	16500	41000
Mendhar	-	-	-
Surankote	50	16500	10000
	100	33000	51000

Appendix X. List of Nurseries of Poonch Forest Division

S.No.	Name of Nursery	Range	Area (in Acre)	Title of Land	Source of Irrigation
1.	Poonch	Haveli	2.5	Department	Artificial
2.	Potha	Surankote	2.5	Department	Irrigated
3.	Samote	Surankote	01	Department	Rainfed
4.	Bhata Dhurian	Mendhar	04	Department	Rainfed
5.	Ari	Mendhar	01	Department	Rainfed
6.	Mendhar	Mendhar	0.70	Department	Irrigated
7.	Sawjian	Haveli	2.5	Department	Rainfed

Appendix XI. List of Check Posts of Poonch Forest Division

S.No.	Name of Check Post	Location	Infrastructure	Remarks
1	Chandak	Chandak (Poonch)	Govt. Building	Old broken not worthy living
2	Surankote	Surankote	Govt. Building	Requires repair and extension as double roof
3	D.K.G.	Dehra ki Gali	Govt. Building	Badly Damaged
4	Bhimber Gali	Bhimber Gali	Govt. Building	Badly Damaged
5	Behramgala (Grazing)	Behramgala	Private Building	Hired Building

Appendix XII. Statement showing Tehsil wise Roads and Bridges in Poonch District constructed by various agencies.

S.No.	Name of Road	Tehsil	Agency
1	FDL 471-FDL481	Mendhar	GREF
2	Sathra Pindi Gali	Haveli	GREF
3	Gulpur Chichi	Haveli	GREF
4	Bhimber Gali to Surankote	Mendhar-Surankote	GREF
5	Dhundak Madana	Surankote	GREF
6	Khet-Sawjian	Haveli	GREF
7	Banwat-Garhi	Haveli	GREF
8	Mankote T-Jn to KG Top (Km 0.00 to Km 18.600) to NHDL	Mendhar	GREF
9	Jaranwali gali to Shashitar (Km 0 to Km 13.150)	Mendhar-Surankote	GREF
10	Sawjian to Sawjian Top	Haveli	GREF
11	FDL-478 to TAQ Road	Mendhar	GREF
12	Major to Dall Pahari	Mendhar	GREF
13	Gali noorpur in Doda	Haveli	GREF
14	B. N. Base to rakh Haveli	Haveli	GREF
15	Jhullas to FDL-468	Mendhar	GREF
16	636 TAC to Road head TAC HQ	Mendhar	GREF
17	Loran-oranpathri-Kullian	Haveli	GREF
18	Gali to Angan pathri	Haveli	GREF
19	Army check BSF Check road	Haveli	GREF
20	FDL 472 Vehicle Gate -FDL 471	Mendhar	GREF
21	Shahsitar to K.G Top	Haveli/Mendhar/ Surankote	GREF
22	Nabna to Chungan road Part-I	Mendhar	PMGSY
23	Phamnar Parat to Naka Manjhari	Mendhar	PMGSY
24	Balnoi to Ghani	Mendhar	PMGSY
25	Km 18th of To2 to Gursai Middle	Mendhar	PMGSY
26	Km 06th of To5 to Salotri	Mendhar	PMGSY

27	Km 7th of To1 to Nar Upper	Mendhar	PMGSY
28	Km 14th of To1 to Kallar Mohrah	Mendhar	PMGSY
29	Ari Upper to Sarhuti 2nd	Mendhar	PMGSY
30	Km 06th of To5 to Salotri	Mendhar	PMGSY
31	Dharana to Chajila	Mendhar	PMGSY
32	Sagra to Dabraj	Mendhar	PMGSY
33	Km 10th OF T02 to Gursai Lower	Mendhar	PMGSY
34	Pathanateer to Salwah Upper	Mendhar	PMGSY
35	Behramgala to Manai Under	Mendhar	PMGSY
36	Km 16th to TO1 to Naka Manjhari	Mendhar	PMGSY
37	Battalkote to Bellabala	Mendhar	PMGSY
38	Nabna to Chungan Part-II	Mendhar	PMGSY
38	Parmote to Lathoung PHASE VII	Mendhar	PMGSY
38	Nabna to Chungan Part-III	Mendhar	PMGSY
39	Steel Bridge at Marah Nallah	Surankote	PWD
40	Tractor road main road to Ziarat Dhargloon	Mendhar	PWD
41	Magnar-Kalsan link	Mendhar	PWD
42	Jugal to Kullian	Mendhar	PWD
43	Uchhad to Kanni	Mendhar	PWD
44	Dharana to Malikpur	Mendhar	PWD
45	Choi to Mankote	Mendhar	PWD
46	Gurah to Nima Chungan	Mendhar	PWD
47	Jhulas to KG Lower Devta	Mendhar	PWD
48	HARNI to B.G	Mendhar	PWD
49	Gali Pindi to Chella Dhangri	Haveli	PWD
50	Mandi-Phagala-Bufliaz	Mendhar	PWD
51	Suka Chua to Charoon	Haveli	PWD
52	Sagra to Ghani	Mendhar	PWD

53	Jaranwali Gali to Khetan Draba	Mendhar/Surankote	PWD
54	Mughal Road	Surankote	Mughal Road
	BRIDGES		
	Ari Nalla Bridge	Mendhar	PWD
	Bhegali Bridge	Mendhar	PWD
	Sher-e-Kashmir Bridge Poonch	Haveli	PWD
	Betar Nalla Bridge	Haveli	PWD
	Mandi Bridge	Mandi	PWD
	Mendhar Nalla Bridge		GREF
	Phugal Bridge Uchhad		GREF
	Kalai Bridge		GREF
	8 Bridges have been built on Mughal Road		Mughal Road

Appendix XIII. Statement of Buildings Existing in Poonch Forest Division under the control of Forest Department

S.No.	Name of Building	Location	Accomodation available	Total Plinth area (Sq. ft)	Year of const.	Capital cost	Distance from Motorable road.	Present condition
1	DFO's Residential quarter	Poonch	3 Rooms, 1 kitichen ,1 Store , 1 Veranda	2050	1963	30000.00	On the Road	Good
2	DFO's Office	Poonch	4 Rooms, 1 Store, 1 Veranda and 1 B/R	884	1966	32000.00	On the Road	Good
3	Range Residential quarter	Poonch	B/2 Rooms, 1 Kitchen , 1 Veranda and 1 B/R	500	1976	21999.49	On the Road	Partially damaged during earthquake
4	Range Office cum Residential qtr.	Surankote	2 Rooms, 1 Store , 1 Veranda	232	1976	15000.00	On the Road	Good
5	Cattle Pond	Phagla	1 Room	258	1976	3994.75	Half K.M	Damaged
6	Cattle Pond	Surankote	1 Room	1550	1976	3239.89	On the Road	Damaged
7	Forester's Quarter	Mendhar	3 rooms, 1 kitchen,1 B/R	784	1973	12000.00	On the Road	Damaged
8	Forester's Quarter	Poonch	1Room,1kitchen, 1 varanda	376	1974	8997.95	On the Road	Good
9	Range Office Haveli	Poonch	6 Rooms and 1 Veranda	1152	1976	40889.76	On the Road	Good
				--	1999-2000	Do	Do	--

10	Forest Rest House	Behramgala	2 Rooms, 1 Store , 1 Kitchen and 1 Veranda	957	1972	7499.50	On the Road	Damaged
11	Forest Rest House	Dana Shah	2 Rooms, 1 S/Room and 1 Kitchen	900	1964	16997.00	10 Km	Damaged
12	Inspection Hut	Poonch	3 Rooms , 2 B/R and 1 Veranda	641.255	1970	18445.00	On the Road	Needs Repair
13	Mali Hut	Poonch	1 Room and 1 Kitchen	484	1970	9855.60	On the Road	Needs Repair
14	Mali Hut	Phagla	1 Room and 1 Kitchen	637	1974	7953.44	On the Road	Transferred to SF Division
15	Mali Hut	Surankote	1 Room ,1 S/Room and 1 Kitchen	534	1964	8255.88	On the Road	Needs Repair
16	Check Post Building	Chandak	6 Rooms and 2 Veranda	1155	1978	45000.00	On the Road	Needs Repair
17	Check Post Building	Surankote	2 Rooms and 1 Veranda	762	1978	18000.00	On the Road	Needs Repair
18	Garage	Poonch	1 Room	800	1978	14000.00	On the Road	Needs Repair
19	Store Room	Poonch	2 Rooms	374				
20	Bathroom with DFO's Qtr.	Poonch	1 Bathroom	155	1982	20000.00	On the Road	Needs Repair
21	Bathroom	Poonch	1 Bathroom	50.50				
22	Hospital cum Resi Qtr.	Sawjian	5 Rooms	715	1982	75000.00	On the Road	Damaged
23	Check Post	Behramgala			1986	20000.00	On the Road	Needs Repair

24	Guard Hut	Co.167/M	1 Room	400	1986	10000.00	On the Road	Damaged
25	Guard Hut	Jaranwali Gali	1 Room	400	1986	10000.00	On the Road	Damaged
26	Guard Hut	Nangali	1 Room	400	1986	10000.00	On the Road	Damaged
27	Pine Lodge	Kanuian (City Forest)	1 Room, 1 Store, 1 Kitchen and Veranda	900	1995	153000.00	On the Road	Good
28	Hut	Poonch	2 Rooms, 1 Kitchen, 1 B/R and 1 Veranda	660	1997	140000.00	On the Road	Good
29	R.O. Surankote's Qtr	Surankote	2 Rooms, 1 B/R, 1 Kitchen and Veranda		2005	360000	On the Road	Good
30	BO Quarter	Surankote (Dehra-Ki-Gali)	2 Room,1 B/R, 1 Kitchen and Veranda		2008	241000.00	On the Road	Good
31	DFO Quarter	Poonch	3 Room, 2 B/R, 1 Kitchen and Veranda	1200	2008	1000000.00	On the Road	Good
32	Control Room, BO Qtr	Poonch	2 Rooms and 1 B/R	450	2008	400000.00	On the Road	Good
33	Guard Hut Poonch	Poonch	1 Room	375	2009	100000.00	On the Road	Good
34	Wooden Hut	Dehra-Ki-Gali	3 Rooms		2010	3500000	Transferred to Rajouri Division	Good
35	Guard Hut	Dehra-Ki-Gali	1 Room, 1 Bathroom and Veranda		2010	450000	On the Road	Good
36	Check Post at Dehra-Ki-Gali	Dehra-Ki-Gali	2 Rooms with Kitchen		2011	177000	On the Road	Good
37	Timber Shed	Poonch	One Shed		2011	240000	On the Road	Good
38	Timber Shed	Surankote	One Shed		2011	250000	On the Road	Good

39	Chowkidar Hut	Dehra-Ki-Gali	1 Room , 1 Toilet		2012	491000	On the Road	Good
40	Inspection Hut	Dehra-Ki-Gali	2 Rooms , 1 lobby,1 Kitchen, 2 Toilets and 1 Veranda		2012	1831000	On the Road	Good
41	Kitchen cum Store	Poonch	1 Kitchen , 1 Store		2013	150000	On the Road	Good

Appendix XIV. Statement Showing the Detail of Marking (2002-03 to 2014-15) Conducted and Handed over to S.F.C.

S.No.	Year	Compartment No.	Species	Marking Conducted	
				No.	Volume (in cft)
1	2002-03	132/H	Fir dry fallen	78	18119
		133/H	Fir dry fallen	26	4439
		134/H	Fir dry fallen	85	16133
			Total	189	38689
2	2003-04	85/H	Fir dry standing	105	17441
			Pole	22	
			Total	127	17441
		86/H	Fir dry standing	62	13000
			Pole	4	
			Total	66	13000
		94/H	Fir dry standing	576	42155
			Pole	479	
			Total	1055	42155
		132/H	Fir Green fallen	79	14572
			Fir dry	7	944
			Total	86	15516
		133/H	Fir Green fallen	61	8916
			Fir dry	9	965
			Kail Green fallen	1	189
			Total	71	10070
		134/H	Fir Green fallen	128	18727
			Fir dry	19	3176
			Kail Green fallen	1	80
			Total	147	21983
3	2004-05	93/H	Kail dry fallen	156	10410
			Fir dry fallen	517	70514
			Total	673	80924
		94/H	Kail dry fallen	1040	42918
			Fir dry fallen	377	35660
			Total	1417	78578
		97/H	Deodar dry fallen	9	1076

			Kail dry fallen	27	1946
			Fir dry fallen	108	14701
			Total	144	17720
4	2005-06	Nil	Nil	Nil	Nil
5	2006-07	148/M	Chir Green	111	892
			B.L.	642	
		149/M	Chir Green	495	13195
			B.L.	535	
		150/M	Chir Green	282	10467
			B.L.	630	
		151/M	Chir Green	192	4542
			B.L.	232	
		153/M	Chir Green	240	6422
			B.L.	254	
		154/M	Chir Green	309	2724
			B.L.	745	
		155/M	Chir Green	85	3567
			B.L.	518	
		157/M	Chir Green	128	5166
			B.L.	271	
		158/M	Chir Green	50	501
			B.L.	4	
		159/M	Chir Green	574	3353
			B.L.	135	
		254/M	Chir Green	289	2626
			B.L.	33	
		255/S	Chir Green	171	5389.80
			B.L.	16	
		1/S	Kail	338	17558
			Fir	140	911
		2/S	Kail	258	17763
			Fir	58	4980
		3/S	Kail	955	46283
		4/S	Kail	358	20960
			Fir/Spruce	217	27038
		5/S	Kail	134	5827
			Fir/Spruce	187	16571
			B.L.	59	
		6/S	Kail	50	313
			Fir/Spruce	263	8170
			B.L.	589	
		9/S	Kail	139	1383
			Fir/Spruce	39	1701
			B.L.	178	
		13/S	Kail	42	614
			Fir/Spruce	10	118
			B.L.	49	
		14/S	Kail	131	1101
			Fir/Spruce	11	1041

			B.L.	90	
6	2007-08	Nil	Nil	Nil	Nil
7	2008-09	12/S	Kail Green	16	170
			Fir Green	01	360
			B.L.	39	
		188/M	Chir Green	129	8550
			Chir Pole	117	
			B.L.	18	
		189/M	Chir Green	41	2607
			Chir Pole	66	
			B.L.	05	
8	2009-10	Nil	Nil	Nil	Nil
9	2010-11	Nil	Nil	Nil	Nil
10	2011-12	Nil	Nil	Nil	Nil
11	2012-13	Nil	Nil	Nil	Nil
12	2013-14	93/H	Kail	70	5953
			Poles	32	
			Fir	52	7562
		94/H	Kail	458	42311
			Poles	47	
			Fir	244	35728
			Poles	40	
13	2014-15	Nil	Nil	Nil	Nil

Appendix XV. Statement Showing the Detail of Departmental Extraction (2005-06 to 2014-15) Conducted and Handed over to S.F.C.

S.No.	Year	Compartment No.	Species	Volume (in cft)
1	2005-06	10(a)/SKT	Kail	234.25
		127/H	Kail	122.8
		95/H	Kail	356.69
		79/H	Kail	511.35
		222/H	Chir	272.5
			Total	**1497.59**
2	2006-07	10(a)/SKT	Kail	500
		10(a)/SKT	Fir	560.37
		59/H	Kail	35.32
		95/H	Kail	262.24
		79/H	Kail	237.96
			Total	**1595.89**
3	2007-08	36/SKT	Kail	352.78
		265/SKT	Kail	248.18
		79/H	Kail	224.53
			Total	**825.49**
4	2008-09	10(a)/SKT	Kail	1089.24
		10(a)/SKT	Fir	700
		267/SKT	Kail	2610.48
		95/H	Kail	4031.7
		79/H	Kail	3117.37
		221/H	Chir	168.38
			Total	**11717.17**
5	2009-10	95/H	Kail	2000
		95/H	Fir	2234.17
		79/H	Kail	3028.52
		267/SKT	Kail	887.25
		194/M	Chir	564.23
			Total	8714.17
6	2010-11	95/H	Kail	300
		95/H	Fir	363.93
		96/H	Kail	564.06
		96/H	Fir	500
		78/H	Kail	282.55
		67-68/H	Fir	309.45
		79/H	Kail	3388.55
		104/H	Fir	347.79
		115/H	Kail	743.1
		116/H	Kail	773.15
		199/M	Chir	266.39
		04/SKT	Kail	1482.1
			Total	9321.09
7	2011-12	104/M	Fir	294.7
		80/H	Kail	59.53
		116/H	Kail	1433.6

		95/H	Kail	500
		95/H	Fir	627.51
		81-82/H	Kail	296.41
		190/H	Kail	988.6
		172/M	Chir	381.4
		04/SKT	Fir	2007.83
			Total	**6587.58**
8	2012-13	134/M	Chir	659.67
		80/H	Kail	73.67
		82/H	Kail	992.4
		79/H	Kail	203.07
		115(a)/H	Kail	965.7
		115(b)/H	Kail	751.1
		115(c)/H	Kail	107.62
		116/H	Kail	1310.4
		126/H	Kail	317.5
		01/SKT	Kail	397
		02/SKT	Kail	788.37
		309/SKT	Kail	2000
		309/SKT	Fir	998.45
		130/M	Chir	330.4
		140/M	Chir	409.92
		188/M	Chir	470.49
		189/M	Chir	239.4
		203/M	Chir	90
		204/M	Chir	187.2
		205/M	Chir	150
			Total	**11442.36**
9	2013-14	139/H	Kail	8188.46
		139/H	Fir	4000
		102/H	Kail	311.12
		64/H	Kail	376
		78/H	Kail	327.2
		83/H	Kail	683
		83/H	Fir	500.54
		79/H	Fir	1858.12
		95/H	Fir	2618.81
		99/H	Kail	2000
		99/H	Fir	1765.49
		126/H	Fir	238.98
		01/SKT	Kail	1678.39
		02/SKT	Fir	273.28
		04/SKT	Fir	647.51
		309/SKT	Kail	2000
		309/SKT	Fir	1249.21
		03/SKT	Kail	450
		130/M	Chir	332
		133/M	Chir	93.6
		134/M	Chir	121.8
		139/M	Chir	147

		140/M	Chir	93.6
		151/M	Chir	48
		155/M	Chir	190.2
		165/M	Chir	48
		166/M	Chir	46.8
		168/M	Chir	141.6
		169/M	Chir	34.2
		170/M	Chir	44.4
		188/M	Chir	476.91
		195/M	Chir	150
		196/M	Chir	93.6
		197/M	Chir	150
		198/M	Chir	150
		201/M	Chir	150
		203/M	Chir	144
		204/M	Chir	187.2
		205/M	Chir	150
			Total	**32159.02**
10	2014-15	139/H	Kail	17414
		139/H	Fir	2500
		131/H	Kail	404
		131/H	Fir	230.63
		134/H	Kail	1556.13
		134/H	Fir	363.36
		83/H	Kail	691
		4/SKT	Fir	1261.56
		188/M	Chir	931
		203/M	Chir	322.41
		130/M	Chir	478.34
			Total	**26152.07**

Appendix XVI. Statement showing Forest area diverted for non-forestry purposes under the provisions of The J&K Forest (Conservation) Amendment Act 2001 and J&K Forest (Conservation & Afforestation) Rules, 2000 (SRO 203 of 2000)

S.No.	Name	User Agency	Sanctioned Date	Order No	Forest Area (Ha)
1	Construction of 37.5 MW Parnai Hydro-Electric Project by the JKSPDC	J&K SPDC	17/5/2013	204-FST of 2013	10.457
2	Construction of road Km 6th of T05 to Salotri by PMGSY	PMGSY	12/07/2009	105-FCA of 2009	0.49
3	Jhulas to KG Lower Devta by PWD (R&B) under (NABARD)	PWD (R&B)	12/07/2009	103-FCA of 2009	0.89
4	ARI Upper to Sarooti Part-II by PMGSY	PMGSY	12/07/2009	101-FCA of 2009	0.39
5	Kuriya to Keshwan Km 9th Darbdhan Anjole by PMGSY	PMGSY	12/07/2009	102-FCA of 2009	1.172
6	Jugal to Kullian by PWD (R&B)	PWD (R&B)	26/11/2009	99-FCA of 2009	2.16
7	Mandi-Phagala-Bufliaz by PWD (R&B)	PWD (R&B)	02/10/2011	50-FST of 2011	13.07
8	Choi to Mankote by PWD (R&B) under (NABARD)	PWD (R&B)	12/07/2009	111-FCA of 2009	0.21
9	By PWD (R&B) under (NABARD)	PWD (R&B)	12/07/2009	110-FCA of 2009	0.39

10	Gurah to Nima Chungan Road by PWD (R&B) under (NABARD)	PWD (R&B)	12/07/2009	109-FCA of 2009	0.451
11	Uchhad to Kanni by PWD (R&B) under (NABARD)	PWD (R&B)	12/07/2009	107-FCA of 2009	0.36
12	Construction of FDL-478 to TAQ road by 79 RCC (GREF)	GREF	17/2/2010	05-FCA of 2010	1.44
13	Sawjian to Sawjian Top by 79 RCC (GREF)	GREF	17/2/2010	06-FCA of 2010	1.78
14	Widening of Gali Noorpur in Doda by GERF	GREF	29/9/2010	363-FST of 2010	38.25
15	Sagra to Dabraj under PMGSY	PMGSY	14/12/2010	465-FST of 2010	3.3
16	Gali Pindi to Chella Dhangri under NABARD	PWD (R&B)	14/12/2010	463-FST of 2010	3
17	Dharana to Chajila under PMGSY	PMGSY	13/12/2010	460-FST of 2010	3.86
18	Construction of 7th of TOI to Nar Upper road under PMGSY	PMGSY	13/12/2010	43-FCA of 2010	1.668
19	Construction of road from Km 14th of TOI to Kallar Mohra	PMGSY	29/9/2010	38-FCA of 2010	0.6
20	16th to TO1 to Naka Manjhari under PMGSY	PMGSY	13/10/2011	38-FCA of 2011	1.14
21	Pathanateer to Salwah upper under PMGSY	PMGSY	10/02/2011	51-FST of 2011	4.98

22	B. N. Base to Rakh Haveli by GREF	GREF	03/09/2011	96 FST of 2011	4.5
23	Behramgala to Manai under PMGSY	PMGSY	26/7/2011	17-FCA of 2011	0.6
24	Loran-Oranpathri-Kullian road by 79 RCC by GREF	GREF	03/09/2011	102-FST of 2011	15.127
25	Battalkote to Bellabala under PMGSY	PMGSY	25/2/2012	03-FCA of 2012	0.349
26	Construction of road from 10th of T02 to Gursai Lower by PMGSY	PMGSY	01/03/2011	02-FCA of 2011	0.96
27	Shahsitar to K.G Top by GREF	GREF	15/10/2014	306-FST of 2014	27.825
28	Mini Secretariat at Mendhar by Revenue Department	PWD (R&B)	05/10/2012	241-FST of 2012	0.9
29	Suka Chua to Charoon road by PWD (R&B)	PWD (R&B)	02/07/2013	51-FCA of 2013	1.11
30	Army Check BSF Check road by GREF	GREF	13/12/2013	64 -FCA of 2013	1.1
31	FDL 472 Vehicle Gate -FDL 471 by GREF	GREF	13/12/2013	65 -FCA of 2013	1.2
32	Construction of Shed for water Pump/ D. G. set and water sump by Indian Air Force	Air Force	22/5/2014	170-FST of 2014	0.19
33	Jaranwali Gali to Khetan Draba by PWD (R&B)	PWD (R&B)	07/06/2013	62-FCA of 2013	1.97
34	Parmote to Lathoung Phase VII by PMGSY	PMGSY	06/02/2015	129-FST of 2015	0.51

35	Construction of 400 KV D/C Samba-Amargarh Transmission line by NRSS XXIX in Kathua, Jammu, Reasi, Nowhsra, Rajouri, Poonch, Udhampur, Shopian, & Pir Panjal Forests Division	NRSS	16/9/2015	250-FST of 2015	63.43
36	Construction of road from Jaranwali Gali to Shashitar (Km 0 to Km 13.150) by GREF	GREF	04/08/2009	162-FST of 2009	18.36
37	Construction of Magnar-Kalsan link road by PWD (R&B)	PWD (R&B)	26/11/2009	100-FCA of 2009	0.63
38	Construction of Nabna to Chungan under PMGSY	PMGSY	17/5/2013	264-FST of 2013	1.5
38	Construction of Nabna TO Chungan under PMGSY	PMGSY	15/3/2007	122-FST of 2007	2.6
38	Construction of Nabna to Chungan under PMGSY	PMGSY	30/9/2015	260-FST of 2015	0.502
39	Installation of stone crusher near Allah Khurri bridge on Mughal road by PWD (R&B)	PWD (R&B)	26/5/2008	186-FST of 2008	1.1
40	132 KV Transmission line from Rajouri to Poonch by PWD in Rajouri Forest Division and Poonch Forest Division	PDD	26/5/2008	183-FS of 2008	5.59

41	Construction of steel bridge at Marah Nallah by PWD	PWD (R&B)	27/5/2008	194-FST of 2008	0.018
42	Mobile Cellular Communication System (MCCS) including erection of communication tower, Construction of three barracks , A helipad and other allied infrastructure by Army in Kopra	ARMY	19/6/2009	260-FST of 209	1
43	Construction of Pump Room for water supplyy to Jawahar Navodaya Vidyalaya in SURANKOTE by PHE	PHE	27/5/2008	222-FST of 2008	0.107
44	Construction of road from Phamnar Parat to Naka Manjhari by PWD under PMGSY	PMGSY	02/08/2008	43-FC of 2008	0.755
45	Construction of road from Balnoi to Ghani by PWD under PMGSY	PMGSY	15/4/2008	62-FCA OF 2008	1.64
46	Construction of Mangar-Kalsan link road Haveli Range by PWD (R&B)	PWD (R&B)	26/11/2009	100-FCA OF 2009	0.63
47	Construction of road from Sagra to Ghani by PWD (R&B)	PWD (R&B)	18/3/2013	117-FST OF 2013	2.896

48	Construction of road from Mankote T-JN to KG Top (Km 0.00 to Km 18.600) to NHDL Specification by GREF	GREF	04/08/2009	160-FST OF 2009	11.72
49	Construction of road from Harni to B.G in Poonch by PWD (R& B)	PWD (R&B)	09/01/2010	29-FCA OF 2010	0.45
50	Construction of road from SakhI Maidan to Kalai by the ERA	ERA	19/6/2009	268-FST OF 2009	0.339
51	Construction of road from Km. 18th of TO1 to Gursai middle by PWD under PMGSY	PMGSY	29/9/2009	97-FC OF 2009	1
52	Construction of Tractor road Main road to Ziarat Dhargloon by the Rural Development (RDD)	PWD	20/1/2009	09-FC OF 2009	0.36
53	Construction of road 636 TAC to road Head TAC HQ by GREF	GREF	24/8/2012	36-FC OF 2012	0.9
54	Construction of road from Major to Dall Pahari by GREF	GREF	17/2/2010	04-FC OF 2010	1.305
55	Construction of road from Jhullas to FDL-468 BY 79 RCC (GREF)	GREF	21/4/2011	194-FST OF 2011	9.405
56	Consruction of road from Gali to Angan Pathri by GREF	GREF	22/5/2013	228-FST OF 2013	17.412

57	Construction of ROAD from Balnoi base FDL-468 by GREF	GREF	24/6/2011	271-FST OF 2011	1.125
58	Construction of Bunker at Surankote	6 RR	27/11/2000	486-FST of 2000	16.00
59	Loran-Dholanwali Narian Road	22 Punjab	12/04/2002	196-FST of 2002	5.00
60	OP Track from Bufliaz to Kulali	16 RR	01/10/2005	405-FST of 2005	3.00
61	Installation of Mobile Cellular Communication Station at Kopra	25 RR	19/06/2009	266-FST of 2009	1.00
62	Mughal Road	Mughal Road	29/09/2005	388-FST of 2009	132.00
63	Excretion of tower at Dehra-Ki-Gali	Bharti Infratel	27/05/2008	223-FST of 2008	0.028
64	Pump Room for JNV Surankote	PHE Division, Poonch	27/05/2008	227-FST of 2008	0.107
65	37.5 MW Parnai Hydroelectric Project (Draba) Poonch	JKSPDC	17/05/2013	264-FST of 2013	10.457
66	Gulpur-Sarla Road	GREF	08/12/1995	376-FST of 1995	5.00
67	FDL 471-FDL481 Road	GREF	12/12/1995	388-FST of 1995	5.00
68	Sathra Pindi Gali Road	GREF	24/04/2000	157-FST of 2000	5.00
69	Gulpur Chichi Road	GREF	26/04/2000	180-FST of 2000	2.22
70	Bhimber Gali to Surankote Road	GREF	08/11/2000	456-FST of 2000	28.00
71	Dhundak Madana Road	GREF	21/11/2000	476-FST of 2000	17.50

72	Khet-Sawjian Road	GREF	09/07/2004	PCCF Order 08-FC of 2004	0.488
73	Banwat-Garhi Road	GREF	24/09/2004	160-FST of 2004	1.751
74	Km 18th of TO2 to Gursai Middle	PMGSY	29/09/2009	PCCF ORDER No. 29-09-2009	1.00
Total					233.551

Appendix XVII. Socio-economic survey in Poonch Forest Division

Mendhar									
S.No.	**Name of Village**	**No. of Household**	**Total Population**	**%ge of families using only fuelwood**	**Average firewood for house hold/day(Kg)**	**Timber required annually(cft)**	**Man-animal conflict**	**Drinking water**	**Irrigation**
1	Nar	485	2500	All	18	1455	Leopard	Tap water	Rain fed
2	Sanjyot	1092	4300	All	20	3276	Leopard	Tap water	Rain fed
3	Bhata-Dhurian	885	3300	All	20	2655	Leopard	Tap water	Rain fed
4	Kangra	550	3570	All	15	1650	Bear,Leopard	Tap water	Rain fed
5	Dhargloon	980	5500	All	18	2940	Leopard	Tap water	Rain fed
6	Datoot	230	1200	All	20	690	Leopard	Tap water	Rain fed
7	Balakote	675	4032	All	16	2025	Leopard	Tap water	Rain fed
8	Darhati	540	3200	All	20	1620	Leopard	Tap water	Rain fed
9	Punjani	130	2500	All	15	390	Leopard	Tap water	Rain fed
10	Suwala	320	2300	All	22	960	Leopard	Tap water	Rain fed
11	Darhana	391	4400	All	17	1173	Leopard	Tap water	Rain fed
12	Harm	455	5670	60% (40% Gas)	15	1365	Nil	Tap water	Rain fed
13	Ari	249	4530	50% (50% Gas)	15	747	Nil	Tap water	Rain fed
14	Salwan	472	4720	All	20	1416	Nil	Tap water	Rain fed
15	Gursai	570	5781	All	20	1710	Nil	Tap water	Rain fed
16	Pathanateer	336	1132	All	17	1008	Nil	Tap water	Rain fed
17	Kalaban	427	1844	All	18	1281	Leopard	Tap water	Rain fed
18	Changian	590	4720	All	20	1770	Leopard	Tap water	Rain fed
19	Chyad	325	1600	All	15	975	Nil	Tap water	Rain fed
20	Mankote	380	1736	All	16	1140	Nil	Tap water	Rain fed
21	Surhuti	240	1424	All	18	720	Leopard	Tap water	Rain fed
22	Chaad	356	1228	All	21	1068	Nil	Tap water	Rain fed
23	Chajala	421	1756	All	24	1263	Nil	Tap water	Rain fed

24	Mankote	526	2263	All	17	1578	Nil	Tap water	Rain fed
25	Brila	298	926	All	20	894	Bear,Leopard	Tap water	Rain fed
Haveli									
S.No.	**Name of Village**	**No. of Household**	**Total Population**	**%ge of families using only fuelwood**	**Average firewood for house hold/day(Kg)**	**Timber required annually(cft)**	**Man-animal conflict**	**Drinking water**	**Irrigation**
1	Jhullas	1018	5137	All	18	3054	Nil	Spring	Rain fed
2	Saltari	392	2045	All	20	1176	Nil	Spring	Rain fed
3	Dara-dullian	1365	7120	All	21	4095	Nil	Spring	Rain fed
4	Mangner	824	3964	All	24	2472	Leopard	Spring	Rain fed
5	Kanuyian	810	4317	All	17	2430	Leopard	Spring	Rain fed
6	Bhaineh	595	3051	All	15	1785	Leopard	Spring	Rain fed
7	Khanetar	1980	9355	All	18	5940	Nil	Spring	Rain fed
8	Chandak	87	412	60% (40% Gas)	9	261	Nil	Spring	Rain fed
9	Chaktroo	516	2742	60% (40% Gas)	17	1548	Nil	Spring	Rain fed
10	Dingla	398	1984	All	23	1104	Nil	Spring	Rain fed
11	Janyar	168	973	All	18	504	Nil	Spring	Rain fed
12	Nangali	315	1565	All	24	945	Leopard	Spring	Rain fed
13	Noonabanori	428	2284	All	19	1284	Leopard	Spring	Rain fed
14	Saral	295	1688	All	17	885	Leopard	Spring	Rain fed
15	Shahpur	571	3380	All	26	1713	Leopard	Spring	Rain fed
16	Mandhaar	356	1682	All	22	1068	Nil	Spring	Rain fed
17	Karni	160	751	All	21	480	Nil	Spring	Rain fed
18	Islamabad	372	1927	All	24	1116	Nil	Spring	Rain fed
19	Qasba	690	3385	All	21	2070	Nil	Spring	Rain fed
20	Bandichachian	785	3970	All	19	2355	Nil	Spring	Rain fed
21	Kankote	172	956	All	20	516	Nil	Spring	Rain fed
22	Banwat	620	3083	All	20	1860	Nil	Spring	Rain fed
23	Siklu	342	1328	All	23	1026	Leopard	Spring	Rain fed

24	Uandi	578	2124	All	18	1734	Leopard	Spring	Rain fed
25	Chakra	642	2442	All	19	1926	Leopard	Spring	Rain fed
26	Salooniamu	428	1785	All	15	1284	Nil	Spring	Rain fed
27	Kassi	726	2967	All	24	2178	Nil	Spring	Rain fed
28	Bandi Kamakhan	824	3349	All	16	2472	Nil	Spring	Rain fed
29	Sathra	482	1793	All	25	1446	Leopard	Spring	Rain fed
30	Jhandrala	528	2143	All	17	1584	Leopard	Spring	Rain fed
31	Galinag	726	2974	All	19	2178	Leopard	Spring	Rain fed
32	Dinga-Dhoolam	296	723	All	21	888	Leopard	Spring	Rain fed
33	Timbra	329	1384	All	20	987	Leopard	Spring	Rain fed
34	Chaktra	448	1806	All	14	1344	Leopard	Spring	Rain fed
35	Narad	341	1121	All	22	1023	Nil	Spring	Rain fed
36	Galipindi	356	858	All	16	1068	Nil	Spring	Rain fed
37	Bawli	724	2734	All	18	2172	Nil	Spring	Rain fed
38	Baila	466	1545	All	19	1398	Nil	Spring	Rain fed
39	Araan	285	996	All	22	855	Leoprad	Spring	Rain fed
40	Fatehpur	618	2484	All	19	1854	Nil	Spring	Rain fed
41	Kaneera	324	1252	All	21	972	Nil	Spring	Rain fed
42	Kilani	428	1688	All	24	1284	Nil	Spring	Rain fed
Surankote									
S.No.	**Name of Village**	**No. of Household**	**Total Population**	**%ge of families using only fuelwood**	**Average firewood for house hold/day(Kg)**	**Timber required annually(cft)**	**Man-animal conflict**	**Drinking water**	**Irrigation**
1	Fazlabad(A)	456	1826	All	16	1368	Nil	Spring	Rain fed
2	Fazlabad(B)	371	1513	All	23	1113	Nil	Spring	Rain fed
3	Chittibathi	297	1156	All	21	891	Nil	Spring	Rain fed
4	Poiter	331	1084	All	18	993	Nil	Spring	Rain fed
5	Danasangla	289	1124	90% (10% Gas)	15	867	Leoprad	Spring	Rain fed

6	Daraba	526	2154	90% (10% Gas)	16	1578	Leopard	Spring	Rain fed
7	Bafliaz	1239	5120	60% (40% Gas)	10	1824	Leopard	Spring	Rain fed
8	Jarhanwali	726	2878	All	21	2178	Bear,Leopard	Spring	Rain fed
9	Lassana	365	1186	All	26	1095	Nil	Spring	Rain fed
10	Maddana	452	1735	All	20	1356	Nil	Spring	Rain fed
11	Dumpuk	288	962	All	23	864	Leopard	Spring	Rain fed
12	Haribudha	355	1436	All	19	1065	Leopard	Spring	Rain fed
13	Harimarhoot	402	1624	All	21	1206	Leopard	Spring	Rain fed
14	CHawnibela	295	1187	All	20	861	Leopard	Spring	Rain fed
15	Mastandara	199	723	All	18	597	Leopard	Spring	Rain fed
16	Bahramgala	385	1575	All	24	1155	Leopard	Spring	Rain fed
17	Marha	422	1744	All	21	1266	Leopard	Spring	Rain fed
18	Dehragali	206	912	All	22	618	Bear,Leopard	Spring	Rain fed
19	Potha	376	1377	80% (20% Gas)	14	1128	Nil	Spring	Rain fed
20	Gursai(upper)	212	867	All	22	636	Nil	Spring	Rain fed
21	Surankote	2472	18420	15% (85% Gas)	4	378	Nil	Spring	Rain fed
22	Damadope	168	621	All	20	504	Nil	Spring	Rain fed
23	Dugram	226	932	All	19	678	Nil	Spring	Rain fed
24	Chamdimarh	728	2833	85% (15% Gas)	15	2184	Leopard	Spring	Rain fed
25	Poshana	226	949	All	21	678	Nil	Spring	Rain fed
26	Sallian	425	1064	All	24	1275	Leopard	Spring	Rain fed
27	Bhumikhate	384	1460	All	25	1152	Leopard	Spring	Rain fed
28	Traranwali	221	896	All	22	663	Leopard	Spring	Rain fed
29	Azamtabad	392	1241	All	21	1176	Leopard	Spring	Rain fed
30	Fagla	246	1424	All	20	738	Leopard	Spring	Rain fed

Appendix XVIII. List of Plants in the Negative List of Exports (including in the Appendices of CITIES)

TO BE PUBLISHED IN THE GAZETTE OF INDIA EXTRAORDINARY

PART II SECTION 3, SUB-SECTION (ii)

GOVERNMENT OF INDIA

MINISTRY OF COMMERCE

NOTIFICATION NO. 2(RE-98)/1997-2002

NEW DELHI, DATED THE 13TH APRIL, 1998

S.O. (E): Attention is invited to Schedule 2 Appendix 1 of the book titled "ITC(HS) Classifications of Export and Import Items 1997-2002" specifying the terms and conditions for export of items indicated therein. Attention is also invited to Schedule 2 Appendix 2 of the book titled "ITC (HS) Classifications of Export and Import Items 1997-2002" relating to export of plants, plant portions and their derivatives and extracts obtained from the wild.

2. In exercise of the powers conferred under Section 5 of the Foreign Trade Development & Regulation Act, 1992 (No. 22 of 1992) read with Paragraph 4.1 of the Export and Import Policy 1997-2002, the Central Government hereby makes the following amendment in Schedule 2 Appendix 1 and Schedule 2 Appendix 2 of the book titled "ITC(HS) Classifications of Export and Import Items 1997-2002":-

3. The entries appearing at following Serial Numbers of Schedule 2 Appendix 1 of the book titled "ITC(HS) Classifications of Export and Import Items 1997-2002" shall be amended as under:-

a. The entry appearing at Sl. No. 3 relating to Black Pepper (Asta
b. Quality MG-1) shall be deleted;
c. The word "DGFT" appearing in condition No. (i) against the entry at Sl. No. 6 relating to Cotton Yarn shall be amended to read as "Government";
d. The condition No. (ii) against the entry at Sl. No. 12 (i) & (ii) relating to wheat and wheat products and grain and flour of Barley, Maize, Bajra, Ragi and Jower (excluding Hybrid Jower grown as Kharif crop) shall be deleted;
e. The condition against the entry at Sl. No. 21 relating to Samples shall be amended to read as:

   "Samples of goods including those in Parts II & III of the Negative List of Exports and this Appendix, except items at Sl. No. 1,2,17&19 of this Appendix and items at Sl. No. 2,5,24, 28,30&31 of Part II of the Negative List of Exports, may be exported without a licence if the value of the samples so exported, taken together does not exceed US$ 2000 (two thousand) in any licensing year. However export of physician samples not for sale/free samples of medicines or pharmaceutical formulations by a firm, whether accompanying the commercial quantity or being exported separately, shall be permitted upto 1% of their export of medicines/pharmaceutical formulations in the preceding licensing year. DGFT shall be the licensing authority in this behalf".

f. The condition No. (i) against the entry at Sl. No. 30 relating to export of Tea to Russia under the Rupee Debt Repayment Mechanism shall be deleted; and
g. The entry at Sl. No. 33 relating to Sandalwood Oil shall be amended to read as under:

"Sandalwood Oil	Quantitative ceilings may be notified by theDirector General ofForeign Trade from time to time".

4. The Schedule 2 Appendix 2 of the book titled "ITC(HS) Classifications of Export and Items 1997-2002" relating to export of plants, plant portions and their derivatives and extracts obtained from the wild shall be amended as under:-

"The export of Plants, Plant portions and their derivatives and extracts obtained from the wild as under is prohibited:-

1. Beddomes cycad (Cycas beddomei).
2. Blue vanda (Vanda coerulea).
3. Saussurea costus.
4. Ladies slipper orchid (Paphiopedilium species).
5. Pitcher plant (Nepenthes khasiana).
6. Red vanda (Renanthera imschootiana).
7. Rauvolifia serpentina (Sarpagandha).
8. Ceropegia species.
9. Frerea indica (Shindal Mankundi).
10. Podophyllum hexandurm (emodi)(Indian Podophyllum).
11. Cyatheaceae species (Tree Ferns).
12. Cycadacea species (Cycads).
13. Dioscorea deltoidea (Elephant's foot).
14. Euphorbia species (Euphorbias).
15. Orchidaceae species (Orchids).
16. Pterocarpus santalinus (Redsanders).
17. Taxus Wallichiana (Common Yew or Birmi leaves).
18. Aquilaria malaccensis (Agarwood).
19. Aconitum species.
20. Coptis teeta.
21. Coscinium fenestrum (Calumba wood).
22. Dactylorhiza hatagirea.
23. Gentiana kurroo (Kuru, Kutki).
24. Gnetum species.
25. Kampheria Galenga.
26. Nardostachys grandiflora.
27. Panax pseudoginseng.
28. Picrorhiza kurrooa.
29. Swertia chirata (Charayatah).

(ii) Plant and Plant portions, derivatives and extracts (including value added herbal formulations) of the cultivated varieties of the above species (excluding Sl. No. 16) will be allowed for export subject to production of a Certificate of Cultivation from the Regional Deputy Director (Wildlife), or Chief Conservator of Forests or Divisional Forest Officers of the State concerned from where these plants and plant portions have been procured. However in respect of the cultivated varieties of the species as covered by Appendix 1 (Sl. No. 1 to 6 of Paragraph 2 above) and Appendix 2 (Sl. No. 7 to 18 of Paragraph 2 above) of CITES, a CITES Permit for export will also be required.

(iii) The value added herbal formulations made out of imported species of plants and plant portions as specified in Paragraph 2 above will be allowed freely without any restriction subject to furnishing of an affidavit to the Customs authorities at the time of

export that only the imported plant species as above have been used for the manufacture of value added herbal formulation being exported. In the event of affidavit proving to be false, on the basis of random sample tests, action would be initiated against the firm under the Foreign Trade (Development & Regulation) Act, 1992.

(iv) Exports allowed only through the ports of Mumbai, Calcutta, Cochin, Delhi, Chennai, Tuticorin and Amritsar.

5. This issues in public interest.

(N.L. LAKHANPAL)
DIRECTOR GENERAL OF FOREIGN TRADE

Copy to all concerned;
By orders etc;

(ASHUTOSH MISHRA)
DY. DIRECTOR GENERAL OF FOREIGN TRADE
FOR DIRECTOR GENERAL OF FOREIGN TRADE

(Issued from F. No. 23/1/97-PC.III)

Appendix XIX. Statement showing Name of Divisional Forest Officers who headed the Poonch Forest Division

S.No.	Name	From	To
Soil Conservation Division			
1.	Sh. M.S. Bari	01-02-1963	15-07-1965
2.	Sh. S.L. Nagpal	18-07-1965	0-03-1968
3.	Sh. R.N. Sharma	0-03-1968	31-07-1968
4.	Sh. G.H. Nagesh	01-08-1968	16-01-1973
5.	Sh. G.R.Malik	17-01-1973	01-06-1975
6.	Sh.M.R. Sofi	02-06-1975	03-08-1977
7.	Sh.M.S. Bari	03-08-1977	02-08-1980
8.	Sh.S.I.H. Kazmi	28-08-1980	28-02-1981
Forest Division			
9.	Sh.S.I.H. Kazmi –SFS	01-03-1981	04-03-1983
10.	Sh.Jagdish Kishwan-IFS	04-03-1983	17-07-1985
11.	Sh.Vinod Ranjan- IFS	17-07-1985	22-10-1986
12.	Sh.M.R. Samyal-SFS	22-10-1986	21-07-1987
13.	Sh.Mohd. Shafi-SFS	21-07-1987	13-02-1989
14.	Sh. Mohd. Hussain Shah-SFS	13-02-1989	24-01-1990
15.	Sh.Manzoor Ahmed-SFS	25-01-1990	28-06-1990
16.	Sh.Abdul Razzak Khan-IFS	29-06-1990	07-06-1993
17.	Sh.M.M. Gupta-SFS	07-06-1993	14-07-1994
18.	Sh.M.B. Mughal-SFS	14-07-1994	30-04-1997
19.	Sh. Asif M. Sagar-IFS	30-04-1997	20-05-1999
20.	Sh.S.C. Sharma-IFS	20-05-1999	21-11-1999
21.	Sh.P.K. Singh-IFS	21-11-1999	24-07-2000
22.	Sh.H.S. Salathia-IFS	24-07-2000	18-10-2000
23.	Sh.T. Rabikumar-IFS	18-10-2000	23-12-2000
24.	Sh. M.N. Kaul-SFS	23-12-2000	31-01-2002
25.	Sh.Gurdeep Singh Rein-SFS	31-01-2002	05-06-2003
26.	Sh.V.S. Beloria-SFS	05-06-2003	08-08-2005
27.	Sh.R.K.Tiwari-IFS	08-08-2005	13-02-2006
28.	Sh.Preetpal Singh-IFS	14-02-2006	15-02-2006
29.	Sh. M. Barkat Ali Qureshi-SFS	15-02-2006	19-06-2006
30.	Sh.A.K. Gupta-IFS	19-06-2006	07-08-2006
31.	Sh.B.M. Sharma-IFS	07-08-2006	04-01-2008
32.	Sh.Preetpal Singh-IFS	04-01-2008	21-06-2009
33.	Sh.S.A. Qureshi-SFS	22-06-2009	31-10-2011
34.	Sh. Harmohinder Singh-SFS	31-10-2011	29-04-2013
35.	Sh.R.R. Sharma-SFS	29-04-2013	12-07-2014
36.	Sh.Naveed Iqbal-SFS	12-07-2014	02-02-2015
37.	Dr.Syed Nadeem Hussain Shah-IFS	02-02-2015	12-09-2016
38.	Syed Anwar Aftab Shah	12-09-2016	Present