CHAPTER– IX

BASIS OF PROPOSALS

CHAPTER –IX

BASIS OF PROPOSALS

9.1 In accordance with the Forest policy of the State of J&K, the objectives for future management are laid down as follows.

9.2 GENERAL OBJECTS OF MANAGEMENT

9.2.1 To conserve, preserve and improve the forest cover for soil and water conservation and to maintain the health of the forest vegetation and forest soils for augmenting water supplies through recharge of underground aquifers and regulation of surface water flow.

9.2.2 To manage the forests in accordance with Silvicultural requirements of the crop.

9.2.3 To take adequate measures for promoting natural regeneration of Chir and other indigenous species in regeneration deficient areas and to supplement it with artificial regeneration wherever necessary.

9.2.4 To rehabilitate poorly stocked forests close to habitations to meet the requirements of local population for fodder and small timber.

9.2.5 To seek involvement of local population in JFM, making them stakeholders in protection, management and sharing of the usufructs of forests.

9.2.6 To conserve and scientifically manage biodiversity of the area.

9.2.7 To take measures to improve the condition of chir forests.

9.2.8 To develop the ecotourism potential of the area.

9.2.9 To improve the productivity of the areas that are used for grazing and to prevent their over exploitation.

9.3 METHODS OF TREATMENT

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

9.3.2 Chir forests shall be managed with required interventions for further improvement of condition of the crop and to promote regeneration naturally and artificially in regeneration deficient areas.

9.3.3 All forest areas which are poorly stocked and close to habitations shall be taken up for rehabilitation by planting species that meet the livelihood requirements of local people.

9.3.4 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.

9.3.5 Areas infested with alien invasive species shall be improved by replacing them with indigenous species through intensive management.

9.3.6 The areas subject to excessive grazing shall be managed to increase their productivity by introduction of suitable fodder species, weed control, and regulating grazing.

9.3.7 Wildlife rich areas shall be managed for protection, preservation and improvement of biodiversity of the area.

9.3.8 Areas having tourism potential shall be identified and developed from the point of view of ecotourism.

9.3.9 Strict fire control measures on scientific lines shall be taken to prevent damage due to fire.

9.4 CONSTITUTION OF WORKING CIRCLES

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

i.Protection cum Rehabilitation Working Circle.

ii.Oak Working Circle.

iii.Non-Timber Forest Produce (Overlapping) Working Circle.

iv.Ecotourism (Overlapping) Working Circle.

v. Joint Participatory Forest Management (Overlapping)

vi.Wildlife Management Working Circle.

9.4.2 The compartment wise area allotment of the above working circle have been listed and given in the annexure I. However the crop wise area statement for all the working circles is given in the annexure IIa,b,c.

9.5 PROTECTION CUM REHABILITATION WORKING CIRCLE

9.5.1 This working circle is constituted to treat those areas which have degraded over the years due to increasing biotic pressure, frequent fires, illicit damages and encroachment. These areas were productive earlier but have degraded due to lack of proper management. It consists mainly of chir and broadleaved species, dense or sparse shrubs and open areas which have eroded are prone to erosion.

9.5.2 On the basis of their present condition and the treatment needed, these areas have been divided into two substrata. The first substratum shall include those areas which have dense or sparse chir crop with scattered broadleaved trees and blank areas. A large percentage of the area of the division comes under this

category thereby requiring special attention for treatment. As majority of this area falls predominantly under chir, management interventions should specifically focus on the regeneration of chir crop, keeping in mind its Silvicultural characteristics. As there is a preponderance of young crop in this substratum, adequate protection should be provided from biotic pressure.

9.5.3 The second substratum includes those areas which have satisfactory presence of broadleaved species. This also includes the natural gaps and forest fringe areas where due to excessive biotic pressure varying degree of degradation has taken place. The objective shall be to protect and rehabilitate such areas where the crops is in satisfactory condition and to raise native species in the natural gaps and forest fringe areas that are useful for local people . These areas are proposed to be managed under participatory forest management model making people stakeholders in the protection and development of such areas and in sharing the usufructs of the forests. Cottage industry can be encouraged in the fringe villages and the people shall be provided the raw material from the forests under cooperative structure to sustain these units. This shall be in tune with the stated objective of poverty alleviation as envisaged in the State Forest Policy 2011.

9.6 OAK WORKING CIRCLE

9.6.1 The area chiefly having oak trees and bearing scattered growth in that vicinity of the area included in the working circle. The area covered under this working circle though located close to inaccessible area, the seasonal migration of nomads over years have altered the general composition of the crop. Moreover, the heavy lopping of oak trees for firewood by the local population has further deteriorated the situation. This area needs to be closed for grazing or any kind of land use for times to come. The role of oak forests in regulation of water region over the smaller areas needs to be accounted for in watershed initiative. Some of the objectives of management of this working circle are given below:

a) To conserve the water region by means of total protection wherever possible.
b) To regenerate the badly deteriorated areas by means of artificial regeneration or assisted natural regeneration.
c) 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.
d) To raise, wherever possible nursery stock of oak species near to the planting area.

9.7 NON-TIMBER FOREST PRODUCE (OVERLAPPING) WORKING CIRCLE

9.7.1 Reasi Forest Division is a habitat for many medicinal plants which are used by the local people for treatment of various ailments. The forest tract is suitable for cultivation of many of these species.

9.7.2 The non-timber forest produce plays an important role in revenue and employment generation in rural areas. If the present ecological fragility and forest policies are considered it is clear that in future foresters have to generate revenue mainly through non timber forest produce. Planting of multipurpose tree species in fragile ecosystem is desirable as, non-timber forest produce can be extracted without cutting down the trees.

9.7.3 This helps in maintaining vegetal cover in ecological sensitive areas. Further non timber forest produce yielding plants can also be planted in private lands.The intention of constitution of this working circle is to inventories the non-timber forest produce yielding species of Reasi Forest division and to provide guidelines for their conservation, development and sustainable exploitation. The broad objectives of management shall be:

a) To conserve the medicinal plant diversity of the region and to utilize them on sustainable basis.
b) To cultivate commercially important medicinal plants in forest and non-forest areas.
c) To provide employment to the people living adjacent to the forests on sustained basis.

9.7.4 A large number of plants yield non timber forest produce and are widely distributed all over the Division thus necessitating the constitution of an overlapping working circle. Some of the important non timber forest produce of the area are enlisted as under:

a) Resin and gums c) Grasses and Fodder e) Fibre
b) Medicinal Plants d) Fruits

9.7.5 This working circle shall be discussed under two headings:
a) Resin extraction.
b) Other Non-timber Forest produce.

9.7.6 The prescriptions for these have been discussed in detail in the main draft of the plan.

9.8 ECO-TOURISM WORKING CIRCLE

9.8.1 To tap the Eco tourism Potential of Reasi Forest Division.Due to increase in population both permanent and floating in an around Katra town, the Reasi Forest division faces lot of pressure. Therefore protection of forests is most critical activity of this division.

9.8.2 At the time of revision of Working Plan of Reasi Forest Division by Sh. I.A. Khan in July 1980 there were four territorial Ranges of Reasi Forest Division as under:

Table 9.1

Range	Compartment Nos.		Total number of compartment/sub-compartments.
	From	To	
Arnas	1	134	147
Gulabgarh	1	103	108
Reasi	10	97	97
Thakrakote	1	67	79
Total			**461**

9.8.3 Thereafter the Ranges of Old Reasi Forest Division were first reconstituted at the time of Reorganisation vide Govt. Order No. 34/FST of 1981 dated 20-02-1981 as under:

a)Arnas Range.
b)Reasi Range
c)Thakrakote Range
d)Soil Conservation Range (Budhan Mahore).
e)Katra Soil Conservation Range.

9.8.4 Thereafter the Range of Reasi Forest Division were again re-constitued vide CCF's Forest Order No. 317 of 1981-82 dated 26-8-1981 as under:

Table 9.2

Existing Range	Re-constituted Range	Compartments
1. Reasi Range	i. Reasi Range with HQTS at Reasi	Co. 28 to the end of the catchment of Angi Nala i.e. whole of Angi catchment will fall in Reasi Range.
2. Arnas Range	ii. Gool Range with HQTS at Gool.	Co. 1 to 90 Arnas Block
3. Thakrakote Range	iii. Thakrakote Range with HQTS at Pouni.	As it exists at present comptt. 1 to 67.
4. Gulabgarh Range	iv. Gulabgarh Range with HQTS at Dharmari	Co. 9 to 72 Gulabgarh
	v. Katra Range with H.Qôs at Katra	1. The remaining compartment of Reasi Range. 2. Entire catchment of Bomyal. 3. Entire Catchment of Junglegali Nalla of Udhampur Forest Division
	vi. Mahore Forest Range with HQTS at Arnas for the time being.	a. Co. 1 to 8 Gulabgarh. b. Co. 91 to 123 Arnas Block. c. Co.73 to the last of Gool Gulabgarh block.

9.8.5 Reasi Forest Division was further bifurcated vide Govt. Order No. 185 FST of 1981 dated 26-10-1981 as under:

a) Mahore Territorial Forest Division for the time being HQT at Reasi.
b) Reasi Territorial Forest Division with HQT at Reasi.

Table 9.3

i.	Mahore Forest Division	2. Reasi Forest Division
ii.	Gool Range	i. Thakrakote Range

Iii	Mahore Range	ii. Reasi Range
iv.	Gualbgarh Range	iii. Katra Range
v.	Soil Conservation Range Budhan	iv. Soil Conservation Range Katra

9.8.6 As a result of the whole re-organization, at present there are three territorial Ranges and one overlapping Soil Conservation Range in the reconstituted Reasi Forest Division and their position of Compartments is as under:

Table 9.4

S.No.	Range	Comptt. No.		Total No. of Comptt.Sub-Compartments	Remarks
		From	To		
1	Reasi	10	75/R	74	Compartments 19 to 115 Reasi Range of Sh. M.S. Bahriôs Working Plan have been renumbered as compartments 1 to 97 without disturbing the sequence in Sh. I.A. Khanôs Plan. Compartments 19 to 27 of Sh. Bahariôs Plan i.e. plan were transferred from Reasi Range to Pancheri Range Udh. CCFôs F.O. No. 74 of comaprtmetns 76 to 97/R of Sh. I.A. Khanôs Plan i.e.e, Co. 94 to 115/R of Bahriôs Plan, have been annexed from Reasi Range and clubbed with Katra Range vide CCFôs No. 317 of 1981-82 dated 26-8-1981.
2	Thakrakote	1	67/Tkt	80	As it exists in Sh. I.A. Khanôs Working Plan.
3	Katra	76 9 20	97/R 12/Jammu 33/Udh	43	Katra Range is newly created vide CCFôs F.O. No. 317 of 1981-82 dt. 26-8-1981 comprising of comptts. 76 to 97/R, 9 to 12/Jammu, 20 to 33/Udh clubbed with Reasi Range Jammu Range and Udh Range of Reasi, Jammu and Udhampur Forest Divisions respectively.
4	Soil Conservation Range				Overlapping in whole Reasi Forest Division.
Total				197	

Table 9.5: Range wise distribution of newly constituted Working Circle

NAME OF WORKING CIRCLE	RANGE	COMPTTS.	TOTAL NUMBER OF COMPTS.	AREA IN HA.
OAK WORKING CIRCLE	REASI	-	-	-
	KATRA		-	-
	THAKRAKOTE	1b/Th. To 4/Th., 8/Th to 24/Th.	19	6510.83
TOTAL:			**19**	**6510.83**

PROTECTION CUM REHABILITATION WORKING CIRCLE	REASI	10/R to 49a/R, 57/R, 59/R, 60a/R, 61/R, 68/R to 70/R, 75/R	51	10503.03
	KATRA	9j/K to 12j/K, 20u/K to 33u/K, 76/K to 97/K	43	9544.00
	THAKRAKOTE	1a/Th., 5 to 7/Th., 9 to 13/Th., 25 to 67/Th.	61	15305.01
TOTAL			**155**	**35352.04**
WILDLIFE MANAGEMENT WORKING CIRCLE	REASI	49b/R to 56/R, 58/R, 60b/R,62a/R to 67/R, 71/R to 74/R	22	3176.13
	KATRA	-	-	-
	THAKRAKOTE	-	-	-
TOTAL			**22**	**3176.13**
G.TOTAL			**196**	**45039.00**

Table 9.6: Crop wise distribution of area of all Working Circles

S. No	Working Circle	Area in Ha. Under							Total
		Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	
1	Protection cum Rehabilitati -on Working Circle	0	323.69	17793.3	287.1	9586.33	1355.96	6006.41	35352.79
2	Oak Working Circle	93.94	981.28	2905.11	1621.18	145.4	167.95	595.96	6510.82
3	Wildlife Manageme nt Working Circle	10	1559.43	897.66	151.98	8.45	228.06	320.52	3176.10
Total:		**103.94**	**2864.4**	**21596.07**	**2060.26**	**9740.18**	**1751.97**	**6922.89**	**45039.71**

9.8.7 As a result of re-organization there has been large scale changes in the constitution of territorial blocks and beats in this division. The blocks and beats have now been formed of smaller area then those under the past plan to ensure effective protection and intensive management of the Forests. Old compartment numbers as per Sh. I.A. Khan's Reasi Plan Sh. S.P. Sharma's Udhampur Plan and Sh. J.B. Singh's Jammu Plan have been retained. In Katra Range which is a newly created Range, old compartment numbers have been retained and special reference has been made about the Katra Range i.e., compartments from Reasi

have been named as Katra and of Jammu and Udhampur as Jammu Katra and Udhampur Katra respectively.

9.8.8 The Range wise breakup of the territorial blocks and beats with their constitutent compartments as it stood on 31-3-1992 is given in Chapter IV which gives break up of three Ranges, eleven blocks and thirty six beats. The blocks and beats have been named after name of prominent villages, drainage or places. The boundaries of the compartments and sub-compartments remain unchanged except in compartment 65, 66, 67 Thakrakote and Delhari Range of Nowshera Forest Division. Also in previous management map and compartment histories etc., Kansi Patta Forest has been delineated and numbered as Compartment 49 c as this area is between Co. 49b and Co. 50 Thakrakote. Hence, these discrepancies after due correction now stand rectified and transferred correctly on the management Working Plan map.

9.8.9 While laying out the compartments the name of the Range has been indicated at the top of compartment number either in full or as an abbrevation represented by the first, middle and the last alphabet of the name of the Range i.e.

a) Katra Co. 95.(Katra Range Compartment 95)
b) Tkt. Co. 7.(Tkt. Range Compartment 7)
c) Reasi Co. 36(Reasi Range Compartment 36)

9.8.10 As usual, sub-compartments are denoted by small alphabet a,b,c after the compartment number in chronological order. Compartment/sub-compartment number and usual symbols for boundary/features have been carved and coaltarred at breast height on suitable tree trunks at the base, middle and top of the compartment as well as at important features such as roads, paths saddle crossing etc. Boards depicting demarcation etc., have also been carved. Due care has been exercised in depicting the symbols for compartment line and compartment number with reference to the actual position of boards on tree trunks. At prominent places these boards have been supplemented by displaying small tin tablets depicting the compartment Nos. or boundaries alongwith requisite physical features.

9.8.11 A single “Coaltar ring” of 10 cm width, in the center of 50 cms wide dry ring, on the trunk of suitable trees at breast height visible from two consecutive points denotes compartmental/sub-compartmental boundary. Similarly a double coaltar ring indicates the Range boundary and a triple coaltar ring indicate the Divisional boundary. These rings along ridges and spurs follow the slope linearly, where as along nallas, paths and roads, coaltar rings have been put alternately on both the sides in a staggered way, of course, being mutually inter visible. Lack of proper demarcation, however, created difficulties in layout of the boundaries of the compartments properly and consequently in the preparation of management map and stock maps of each compartment.

9.9 PERIOD OF THE PLAN AND NECESSITY FOR REVISION

9.9.1 This plan shall remain in force for a period of 10 years. The period of this plan shall be from 2014-15 to 2023-24 A.D. There is no necessity for intermediate revision during the above plan period.

CHAPTER – X

PROTECTION CUM REHABILITATION WORKING CIRCLE

CHAPTER - X

WORKING PLAN FOR PROTECTION CUM REHABILITATION WORKING CIRCLE

10.1 GENERAL DESCRIPTION

10.1.1 The Protection cum rehabilitation working circle proposed in the present working plan consists of the compartments under Chir Working circle and the compartments under Rehabilitation working Circle of B.K Bhagat's Plan (1994-95 to 2003-04, extended up to 2014-15).

10.1.2 During the preparation of the present working plan, the Chir Working Circle of the previous plan was maintained but it was found out that the crop in the compartments under the previous Chir working circle has undergone considerable degradation due to various reasons like indiscriminate and excessive resin tapping, frequent and intense forest fires, overgrazing and diversion of forest land for non-forestry purposes etc.

10.1.3 The no. of stems in the compartments of the erstwhile Chir Working Circle has considerably come down with the consequent fall in the growing stock. This has also been accentuated by the increase in the blank areas and also increases areas under shrubs and other broad leaved spp. This called for a different set of management prescriptions that shifted the emphasis more towards the protection and rehabilitation of the degraded crop. **Hence the erstwhile Chir working Circle was amalgamated into the compartments designated for Protection cum Rehabilitation working Circle and these are treated under substratum – I of this working circle and the compartments under the Protection cum Rehabilitation Working Circle of the previous plan are treated under substratum-II of this Working Circle**.

10.1.4 However, an encouraging sign to be seen is the good degree of regeneration that has come up in some of these areas. This has accounted for a lot of young, un-exploitable stems in the lower dia classed of 10-20, 20-30 and 30-40 cm, which gives a good prognosis for the future, despite the fact that the overall regeneration status of the compartments included in this working circle remains to be poor.

10.2 GENERAL CONSTITUTION OF THE WORKING CIRCLE

10.2.1 The Forests constituting this working circle consist mainly of Chir crop which is found to be mixed with broad leaved species on lower slopes and is in pure patches towards higher reaches. These forests are covered under type 9 – subtropical Pine forests as per the classification by Champion and Seth in Survey of Forests Types in India. The type is 9 / C1 Himalayan subtropical Pine forest and

subtype is 9 / C1 a Lower Shiwalik Chir Pine Forest. The main associates of Chir on lower slopes are *Acacia catechu, Zizyphus spp. Acacia arabica, Emblica offcinalis, and Ficus spp.*etc. in upper story, *Dodonea viscosa, Woodfordia fruticosa, Adhatoda vasica, Colebrookiaoppositifolia, Carrissa spinarum*etc. as shrubs and bushes and *Rumex hastatus, Cymbopogon etc* as ground flora and grasses.

10.2.2 The general condition of the crop on the whole is poor. The crop is mostly of young to middle age and the trees are mostly stunted malformed and twisted. As mentioned above, at a few places the regeneration is pretty good but at most of the places, the regeneration is very poor, or totally absent barring some isolated patches. The biotic pressure especially in forest fringe areas is high and forests fires are a common phenomenon.

10.2.3 Significant area of this working circle is under broad leaved trees and shrubs which are usually found mixed with Chir and are occasionally found in pure patches. They are confined mostly to shady and moist localities in depression and along the banks of nallas. The intensity of under growth is usually low to moderate.

10.3 AREA ALLOTMENT

10.3.1 Detail statement of area of compartment/sub compartment allotted to this working circle is given below:

Table 10.1

RANGE	COMPARTMENTS	TOTAL NUMBER OF COMPARTMENTS	AREA IN HA.	REMARKS
Thakrakote	1a/Th., 5 to 7/Th., 9 to 13/Th., 25 to 67/Th.	61	15305.16	33 compts. have been taken from Protn. W.C, 16 compts from Rehab. W.C and 34 compts have been taken from Chir W.C of the previous plan.
Katra	9j/K to 12j/K, 20u/K to 33u/K, 76/K to 97/K	43	9544.20	
Reasi	10/R to 49a/R, 57/R, 59/R, 60a/R, 61/R, 68/R to 70/R, 75/R	51	10503.43	
Total:		**155**	**35352.79**	

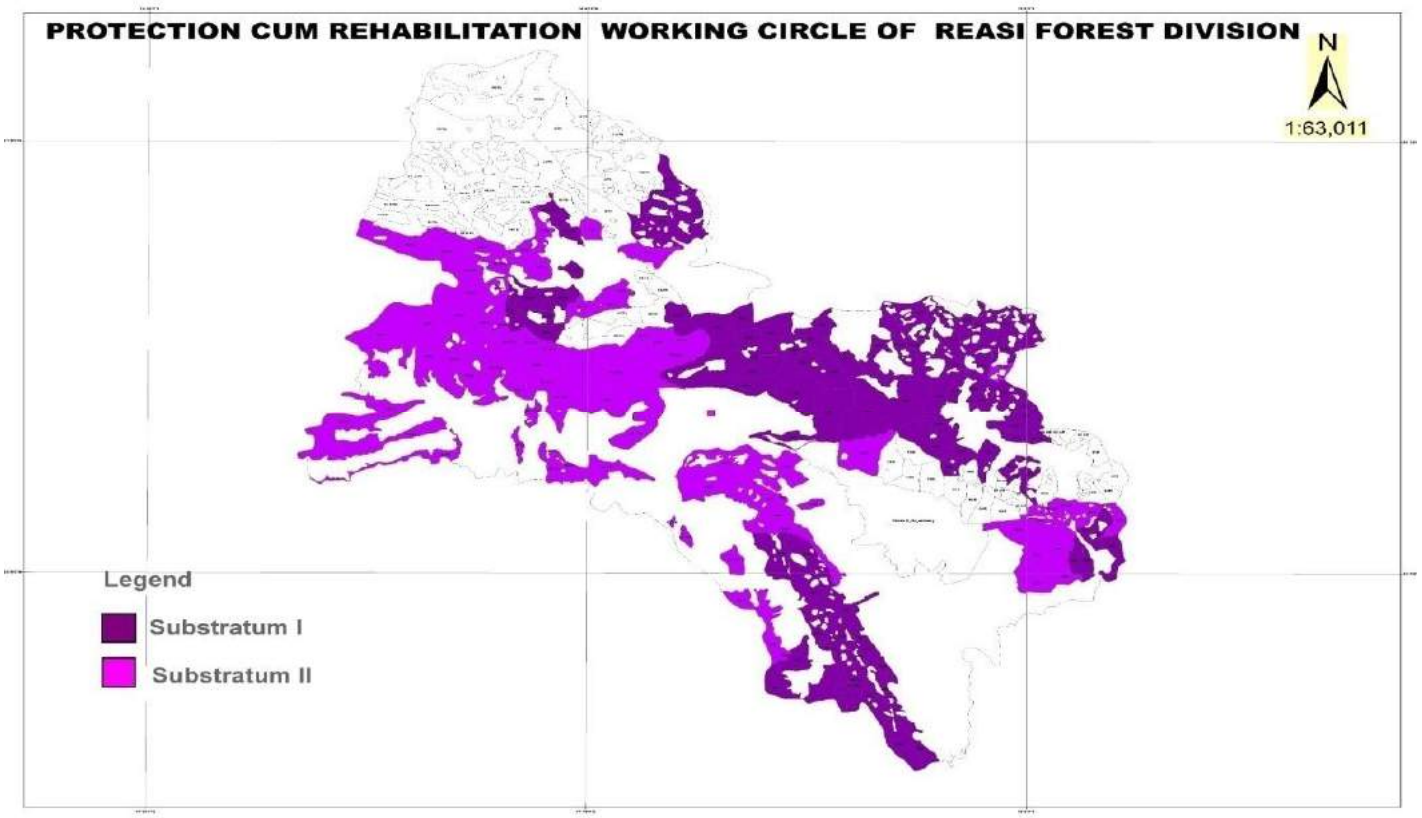
10.3.2 Species wise distribution of area of this Working Circle is given in full detail in Annexure No. – I (a) to I (c).

10.4 SPECIAL OBJECTIVES MANAGEMENT

10.4.1 To create conditions conducive for establishment of natural regeneration of chir through suitable silvicultural interventions. These areas either have natural

regeneration of Chir coming up in patches or areas where the natural regeneration is capable of coming up on its own.

10.4.2 To supplement natural regeneration of Chir with artificial sowing and planting of Chir from known provenance along with its close broad leaved associates.


PROTECTION CUM REHABILITATION WORKING CIRCLE OF REASI FOREST DIVISION
N
1:63,011
Legend
Substratum I
Substratum II

10.5 SILVICULTURAL CHARACTERISTICS OF CHIR

10.5.1 Chir is a strong light demander and attains best growth under conditions of overhead light. However on hot exposed south facing slopes, protection from sun may be needed in early stages.

10.5.2 The root system of Chir being extensively developed both laterally as well as downwards, makes Chir trees wind firm in general.

10.5.3 Chir Pine is frost hardy.

10.5.4 Chir Pine comes up on almost any type of soil. It is least exacting of all Himalayan conifers. Very often Chir manages to establish itself on bare rock conditions. However it is intolerant to poorly drained and richly calcareous soil.

10.5.5 Even though Chir pine is fire hardy species, there is considerable fire damage to it because of needle shedding that occurs during the hot season and due to resin tapping which involves removal of protective bark and leaves the basal portion of tree exposed to fire damage.

Table 10.2 Results of Statistical analysis for Protection cum Rehabilitation Working Circle

Working	Variable	Sample	Mean	Variance	Standard	Standard	Coefficient	Confidence limits (95%)		Confidence	Lower limit as
Circle	(Per ha.)	Points			Deviation	Error	of variation	(X ± t x S.E.)		Interval	% of mean
		(n)	(X)	(S^2)	(S)	(S.E.)	(%)	Lower limit	Upper limit	(C.I.)	(%)
Chir Working Circle								t=	1.9659273		
	No. of Stems	400	88.40	6451.10	80.32	4.02	90.86	80.50	96.30	15.79	91%
	Volume	400	31.65	1766.73	42.03	2.10	132.80	27.52	35.78	8.26	87%

Table 10.3 Statement showing species and diameter(cm) class wise tree count of Protection cum Rehabilitation Working Circle

Tree count per hectare (Mean Value)

Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	0.38	0.53	0.15	0.25	0.19	0.06	0.06	0.02	0.01	0.00	1.65
Fir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chir	10.05	8.46	6.66	6.44	4.14	1.69	0.50	0.23	0.05	0.06	38.28
B.L.	30.00	12.50	4.24	1.04	0.40	0.18	0.13	0.03	0.00	0.00	48.52
Total	40.43	21.49	11.05	7.73	4.73	1.93	0.69	0.28	0.06	0.06	88.45

Total tree count over the entire commercial area of Protection cum Rehabilitation Working Circle (Area = 35353 hectares)

Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0	0	0	0	0	0	0	0	0	0	0
Kail	13434	18737	5303	8838	6717	2121	2121	707	354	0	58332
Fir	0	0	0	0	0	0	0	0	0	0	0
Chir	355296	299085	235450	227672	146361	59746	17676	8131	1768	2121	1353305
B.L.	1060584	441910	149896	36767	14141	6364	4596	1061	0	0	1715317
Total	1429313	759731	390648	273277	167219	68231	24393	9899	2121	2121	3126954

Table 10.4 Statement showing species and diameter(cm) class wise volume(m^3) of Conifers in Protection cum rehabilitation Working Circle

Volume of conifers per hectare (Mean Value).											
Spp.	-	-	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	-	-	0.11	0.34	0.43	0.20	0.27	0.11	0.06	0.00	1.52
Fir	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chir	-	-	3.20	7.28	9.15	5.98	2.44	1.43	0.35	0.45	30.27
Total	-	-	3.31	7.62	9.58	6.18	2.70	1.53	0.41	0.45	31.78
Total volume of conifers over the entire commercial area of Protection cum Rehabilitation Working Circle(Area =35353hectares)											
Spp.	-	-	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	-	-	0	0	0	0	0	0	0	0	0
Kail	-	-	4030	12020	15248	7085	9376	3783	2171	0	53711
Fir	-	-	0	0	0	0	0	0	0	0	0
Chir	-	-	113016	257269	323457	211502	86084	50413	12356	15866	1069963
Total			117046	269289	338704	218586	95460	54196	14526	15866	1123674

Table 10.5 Distribution of stems and volume (m^3) in Protection cum Rehabilitation working circle computed at lower confidence interval.

											Lower limit
Total tree count of commercial area (35352.79 ha) at lower interval for Protection cum Rehabilitation Working Circle											91%
Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0	0	0	0	0	0	0	0	0	0	0
Kail	12225	17051	4826	8043	6112	1930	1930	643	322	0	53082
Fir	0	0	0	0	0	0	0	0	0	0	0
Chir	323319	272167	214259	207181	133188	54369	16086	7399	1609	1930	1231507
B.L.	965131	402138	136405	33458	12868	5791	4182	965	0	0	1560939
Total	1300675	691356	355490	248682	152169	62090	22198	9008	1930	1930	2845528
											Lower limit 87%
Total volume of conifers over the entire commercial area (35352.79 ha) at lower interval for Protection cum Rehabilitation Working Circle											
Spp.	-	-	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	-	-	0	0	0	0	0	0	0	0	0
Kail	-	-	3506	10457	13265	6164	8157	3291	1888	0	46729
Fir	-	-	0	0	0	0	0	0	0	0	0
Chir	-	-	98324	223824	281407	184006	74893	43859	10750	13804	930868
Total			101830	234282	294673	190170	83050	47150	12638	13804	977597

10.7 ANALYSIS AND VALUATION OF THE CROP OF PROTECTION CUM REHABILITATION WORKING CIRCLE

10.7.1 The quantitative assessment of growing stock and preparation of its inventory in this working circle has been made on the basis of data collected and analyzed separately from 227 sample points in substratum I which represent predominantly Chir areas and 173 sample plots in substratum II which represents degraded mixed Chir Forests with other Broad leaved species These sample points/plots selected at random were located surveyed and analyzed in the field by adopting point sampling technique in substratum I by using wedge prism of suitable Basal area factor and by laying of plots of 0.1 ha. in substratum II and conducting total enumeration of growing stock in those plots. The methodology adopted has been described in detail earlier on.

10.7.2 In chir areas mean values of 2 variables i.e number of trees per ha. and volume per ha have been separately calculated for both the substrata by the arithmetic averages of two variables from the data drawn from all the sample points surveyed in each substratum. These variables have been put to due statistical scrutiny and tests. The results thereof are summarized in a tabular statement given in Table.8.1

10.7.3 The growing stock of Protection cum Rehabilitation Working Circle (including areas under Chir Working Circle and Protection cum Rehabilitation Working Circle of previous pla**n** has reduced drastically as compared to previous working plan, because of following reasons:

a) Although the area under Chir Forests has increased by 8% from 37% in the previous plan to 45% (approx.), the growing stock has reduced due to huge number of young diameter classes dominating the Chir stratum. Stems belonging to diameter class 10 -20 cm and 20-30 cm account for approx. 70% of the total trees count.

b) Reduction in density of the crop despite the increase in spread.

c) Acute shortage of trees of higher diameter classes in the stratum.

d) Diversion of approx. 400 ha of Forest land (primarily Chir forests) under Forest Conservation Act for non-forestry purposes. As a result 73000 no. of trees have so far been extracted as road markings out of which approx. 12000 trees belong Chir species and most of these trees fall in the higher diameter classes. The detail are given in **Annexure I (d).**

e) Due to over exploitation of crop for resin extraction. The forests became more prone to forest fires and the subsequent spreading of blanks areas. Over exploitation of trees for resin extraction has primilarly affected the higher and

exploitable dia classes resulting in their drying up and subsequent death and fallage?

10.8 CALCULATION OF GROWING STOCK AND YIELD

10.8.1 The quantitative assessment of growing stock in this working circle has been made on the basis of data collected and analyzed separately from 227 Sample points and 173 Sample plots. The estimation of growing stock of chir was done by the point sampling technique of Bitterlich. The results of statistical analysis are prepared in the tables discussed before.

10.8.2 However for the entire working circle (consisting of substratum I & II) the average number of trees per ha. work out to be 88.45 and the volume per ha. works out to be 31.78 cu.m. From the analysis of data of average number of trees and volume falling under different dia classes, it was found that there is preponderance of trees in lower dia class upto dia class of 30-40 which form an overwhelming of the crop.

10.8.3 The total no. of stems up to 20-30 cm dia in the entire working circle (including B.L spp.) account for 70% of the entire stem count. In conifers (within the working circle) stems up to 30-40 cm dia class account for 65.6% of the total conifer stem count. The commercially exploitable volume which could be extracted from higher dia classes is negligible. **Due to this reason, no commercial extraction has been prescribed, no commercial felling is to be carried out during the plan period and accordingly yield has neither been calculated nor prescribed.** Result of the analysis clearly indicates the compartment of this working circle have presence of high proportion of regenerated crop.

10.9 DIVISION OF WORKING CIRCLE INTO TWO SUB-STRATA

10.9.1 As indicated in general constitution of the working circle general characters of vegetation and special objectives of management the working circle can be divided into two distinct substrata. The treatments for both the substrata are being proposed accordingly.

10.10 SUB-STRATUM – I

10.10.1 **Characteristics of the sub Stratum:** This sub stratum covers area where regeneration of Chir is coming up well in patches and is capable of establishing on its own provide adequate measures are taken. In these area the biotic pressure is low.

10.10.2. **Statistics of Growth and yield:**

Table 10.6 Statement showing species and diameter(cm) class wise tree count of Sub Stratum I of Protection Cum Rehabilitation working circle

Tree count per hectare (Mean Value).

Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	0.22	0.32	0.14	0.13	0.02	0.02	0.02	0.04	0.02	0.00	0.93
Fir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chir	14.89	10.28	7.86	5.53	3.31	1.39	0.43	0.13	0.04	0.01	43.87
B.L.	17.27	8.15	1.88	0.52	0.08	0.00	0.00	0.00	0.00	0.00	27.90
Total	32.38	18.75	9.88	6.18	3.41	1.41	0.45	0.17	0.06	0.01	72.700

Total tree count over the entire commercial area of Chir Working Circle(Area =16129hectares)

Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	3548.38	5161.28	2258.06	2096.77	322.58	322.58	322.58	645.16	322.58	0.00	14999.97
Fir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chir	240160.81	165806.12	126773.94	89193.37	53386.99	22419.31	6935.47	2096.77	645.16	161.29	707579.23
B.L.	278547.83	131451.35	30322.52	8387.08	1290.32	0.00	0.00	0.00	0.00	0.00	449999.10
Total	522257.02	302418.75	159354.52	99677.22	54999.89	22741.89	7258.05	2741.93	967.74	161.29	1172578.30

Table 10.7 Statement showing species and diameter(cm) class wise volume(m3) of Conifers in Sub Stratum I of Protection Cum Rehabilitation working circle											
Volume of conifers per hectare (Mean Value).											
Spp.	-	-	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	-	-	0.11	0.18	0.05	0.07	0.09	0.21	0.12	0.00	0.82
Fir	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chir	-	-	3.77	6.25	7.32	4.92	2.09	0.81	0.28	0.07	25.51
Total			3.88	6.43	7.36	4.99	2.18	1.02	0.40	0.07	26.33
Total volume of conifers over the entire commercial area of Sub Stratum I of Protection Cum Rehabilitation working circle											
Spp.	-	-	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	-	-	1716.13	2851.61	732.26	1077.42	1425.80	3451.61	1980.64	0.00	13235.46
Fir	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chir	-	-	60851.49	100788.51	117985.25	79364.36	33775.74	12999.97	4509.67	1206.45	411481.44
Total			62567.62	103640.12	118717.50	80441.77	35201.54	16451.58	6490.31	1206.45	424716.89
Table 10.8 Distribution of stems and volume (m^3) in Sub Stratum I of Protection Cum Rehabilitation working circle computed at lower confidence interval.											
											Lower limit
Total tree count of commercial area (16129 ha) at lower interval											86%
Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	3051.61	4438.70	1941.93	1803.22	277.42	277.42	277.42	554.84	277.42	0.00	12899.97
Fir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chir	206538.30	142593.26	109025.59	76706.30	45912.81	19280.61	5964.50	1803.22	554.84	138.71	608518.14
B.L.	239551.13	113048.16	26077.37	7212.89	1109.68	0.00	0.00	0.00	0.00	0.00	386999.23
Total	449141.04	260080.13	137044.89	85722.41	47299.91	19558.03	6241.92	2358.06	832.26	138.71	1008417.34

10.10.3 **Analysis of crop:** The average number of trees per hectare works out to be 72.7 and the volume per hectare is 26.33 cu.m in sub-stratum-I. The no. of conifer stems up to 30-40 cm dia. account for 75% of the total conifer stem count in the substratum I, which shows the overwhelming majority of young and regenerated crop spread across the entire sub-stratum.

10.10.4 **Methods of Treatment:**

i. These areas shall be developed with the sole intention of promoting natural regeneration of Chir and by supplementing the natural regeneration with artificial sowing and planting of Chir seedlings wherever necessary.
ii. Natural regeneration of Chir is hampered by the presence of thick layers of needles on forest floor. Therefore, periodic cleaning of forest floor is proposed in the areas after the needle shedding season is over.
iii. Adequate protection against forest fires is proposed in these areas as the young crop may be completely wiped out as a result of fire.
iv. Grazing and grass cutting are also detrimental for regeneration. Therefore grazing and grass cutting are proposed to be regulated in these areas.

10.10.5 **Thinning:**There is no need of any thinning in these areas as the intensity and the occurrence of regeneration is not dense, rather it is spread over large areas. However if due to proper management practices, the area regenerates completely, thinning may be required after sometime. It is difficult to perceive this kind of situation coming up in near future. If required, old and over matured trees which are liable to wind fall because of deep gashes of cup and lip method can be removed selectively.

10.10.6 **Closing of Areas:**

i. The areas that constitute this sub-stratum of the forests of the Division are subjected to lesser biotic pressure. Therefore it is neither essential nor advisable to close the entire area of this sub stratum. Some of the compartment of this working circle that is recommended for closing for short duration is given below.

    a) **Thakrakote Range:** Co.10a/Th., 26/Th, 38/Th, 48a/Th, 48b/Th, 49c/Th, 50/Th, 51/Th., 53/Th., 54/Th. 64b/Th and 65/Th.
    b) **Reasi Range:** Co.13/R, 20/R, 23/R, 25/R, 29/R, 30/R, 33/R, 34/R, 35/R, 37/R, 38/R, 43/R, 48/R, 50a/R, 60b/R.
    c) **Katra Range: Co:** 10j/K, 11j/K, 21u/K, 22u/K, 24u/K, 26au/K, 26bu/K, 27u/K, 30u/K, 32u/K, 87/K, 94/K, 97/K.

ii. The sequence of closing is left to the discretion of the territorial DFO. Taking into an account, the availability of requisite funds for the purpose and social constraints.

iii. Some of the compartments of this working circle which have been closed partially have already started giving good result.

10.11 SUB-STRATUM-II

10.11.1 **Characteristics of Sub Stratum:** This substratum constitutes areas where regeneration of Chir is inadequate or totally absent. These areas are found in the buffer and outer zone of Chir forests, where Chir crop is mostly found mixed with broad leaved trees and shrubs. Being close to habitation, biotic pressure in these areas for fuel wood and fodder is high.

10.11.2 **Statistics of growth and yield:**

Table 10.9 Statement showing species and dia (cm) class wise tree count of sub stratum II of Protection cum Rehabilitation Working Circle

Tree count per hectare (Mean Value).

Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	0.38	0.53	0.15	0.25	0.19	0.06	0.06	0.02	0.01	0.00	1.65
Fir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chir	10.05	10.46	6.66	6.44	4.14	1.69	0.50	0.23	0.05	0.06	40.28
B.L.	30.00	12.50	4.25	1.04	0.40	0.18	0.13	0.03	0.00	0.00	48.53
Total	40.43	23.49	11.06	7.73	4.73	1.93	0.69	0.28	0.06	0.06	90.46

Total tree count over the entire commercial area of sub stratum II of Protection cum Rehabilitation Working Circle (Area = 19223 hectares)

Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0.00	0	0	0	0	0	0	0	0	0	0
Kail	862.98	10188	2883	4806	3652	1153	1153	384	192	0	25276
Fir	0.00	0	0	0	0	0	0	0	0	0	0
Chir	22823.55	201073	128025	123796	79583	32487	9612	4421	961	1153	603935
B.L.	68130.00	240288	81698	19992	7689	3460	2499	577	0	0	424332
Total	91816.53	451548	212606	148594	90925	37100	13264	5382	1153	1153	1053543

Table 10.10 Statement showing spp. and dia.(cm) class wise volume(m^3) of Conifers in sub stratum II of Protection cum Rehab. Working Circle

Volume of conifers per hectare (Mean Value).

Spp.	-	-	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	-	-	0.11	0.34	0.43	0.20	0.27	0.11	0.06	0.00	1.52
Fir	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chir	-	-	3.20	7.28	9.15	5.98	2.44	1.43	0.35	0.45	30.27
Total			3.31	7.62	9.58	6.18	2.70	1.53	0.41	0.45	31.78

Total volume of conifers over the entire commercial area of sub stratum II of Protection cum Rehabilitation Working Circle											
Spp.	-	-	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	-	-	0	0	0	0	0	0	0	0	0
Kail	-	-	2191	6536	8291	3852	5098	2057	1180	0	29206
Fir	-	-	0	0	0	0	0	0	0	0	0
Chir	-	-	61452	139890	175879	115004	46808	27412	6718	8627	581790
Total			63644	146425	184170	118856	51906	29469	7899	8627	610995

Table 10.11 Distribution of stems and volume (m^3) in Protection cum Rehabilitation working circle computed at lower confidence interval.

											Lower limit
Total tree count of commercial area (19223 ha) at lower interval for Protection cum Rehabilitation Working Circle											**89%**
Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.		0	0	0	0	0	0	0	0	0	0
Kail		9067	2566	4277	3251	1027	1027	342	171	0	21728
Fir		0	0	0	0	0	0	0	0	0	0
Chir		178955	113942	110179	70829	28913	8554	3935	855	1027	517189
B.L.		213856	72711	17793	6843	3080	2224	513	0	0	317020
Total	0.00	401878	189220	132248	80923	33019	11805	4790	1027	1027	855937
											Lower limit
Total volume of conifers over the entire commercial area (19223 ha) at lower interval for Protection cum Rehabilitation Working Circle											**77%**
Spp.			30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.			0	0	0	0	0	0	0	0	0
Kail			1687	5033	6384	2966	3925	1584	909	0	22488
Fir			0	0	0	0	0	0	0	0	0
Chir			47318	107715	135427	88553	36042	21107	5173	6643	447978
Total			49006	112748	141811	91519	39968	22691	6082	6643	470466

10.11.3 **Analysis and valuation of the crop:** The average number of trees per hectare works out to be 90.46 and the volume per hectare is 31.78 cu.m in sub-stratum-II.

10.11.4 **Methods of Treatment:**

i. These areas shall be development with the sole intention of raising chir crop of good and known provenance along with its close broad leaved associates by plantations in easily accessible area and by direct sowing in difficult areas.

ii. These area shall be closed rotationally for raising plantations. The sequence of closing of the area for a period of 10 years is given in below.

10.11.5 **Sequence of Closing of Forest Area:**

Table 10.12

S.No	YEAR	AREA TO BE TAKEN (Ha.)	LOCATION
1	1st	390	Co. 10/Th, 13/R, 20/R, 10j/K, 11/j/K
2	2nd	640	Co. 26/K,2 3/R, 25/R, 21u/K, 22u/K
3	3rd	540	Co. 38/Th, 29/R, 30/R, 24u/K
4	4th	990	Co. 48a/Th, 48b/Th, 33/R, 26/a/u/K, 26/b/u/K
5	5th	800	Co., 49/c/Th., 34/R, 35/R, 27/u/K.
6	6th	480	Co. 50/Th, 51/Th., 37/R, 38/R, 30/u/K
7	7th	260	Co. 53/Th., 43/R, 32/u/K
8	8th	240	Co. 54/a/Th, 48/R, 87/K
9	9th	300	Co. 64/b/Th. 50/a/R, 94/K
10	10th	420	Co. 65/Th., 60/b/R, 97/K

10.11.6 **Nursery Techniques for Chir:** Nursery techniques though well-known are given in brief for Chir as under. Nursery techniques for its other broad leaved associates are given in following chapters.

10.11.7 **Collection of Seeds:** Ripened cones of length 10 Cm and more are collected from healthy vigorous trees of good form and better growth, free from twist during February to April. These cones are sun dried and seeds are shaken out. An average healthy cone gives about 45 seeds and hundred cones yield about 0.45 Kg of clean seeds, a quantity capable of producing about 1200 seedlings. After 2 years storage in gunny bags kept in well ventilated rooms, a germination capacity of 40-60 % can be expected.

10.11.8 **Seed Treatment:** The seeds are first immersed in saline water and those which float are rejected. Heavier seeds are mixed with cow dung and kept wrapped in gunny bags inside a pit. Water is regularly sprinkled to keep them moist. After about 19 days of storage, bags are examined daily for about a week and sprouted seeds are taken out for sowing. Seeds which fail to sprout within this time are rejected. A sprouted seed is planted in each polythene bag.

10.11.9 **Raising of Seedlings in Nursery:**Roots of Chir being sensitive it is sown directly in polythene bags filled with a mixture of sifted forest soil and decomposed manure in proportion of 2:1. Mycorrhiza containing soil is added in the soil mix in the bag.Addition of 5 gm of super phosphate and 5 gm calcium, ammonium sulphate per bag is also recommended to improve growth. Fertilizers are mixed thoroughly in soil before filling the bag. If soil is clayey, sand is also mixed to make the texture light. The optimum size of perforated bag recommended for this purpose on the basis of cost and performance is 15cm X 9 cm.

10.11.10 **Nursery Sites:**

i. The site of nursery should be as close to the plantation site as possible.
ii. The area of the nursery should be about 0.4 ha for every 1 lac seedlings.
iii. The site must have perennial water supply of about 200 lts per day for every 1000 plants. The water should have pH between 5.5 to 7.5 and salt less than 400 ppm.
iv. The soil should be well drained and fertile. Loam to sandy loam texture with good structure is preferred.

10.12 NEW PLANTATION AND METHOD OF ESTABLISHMENT

10.12.1 **Time of Planting:** Planting of about 15 months old seedlings should be done in July. The ideal height of seedlings for planting in the field is 25-30 cms. Considering the erratic nature of monsoons in the tract and the risk of seed being devoured by rodent and birds, planting is a surer and more popular method. Care should be taken so as to ensure that the roots are not damaged while transplanting.

10.12.2 **Pit Size and Spacing:** The most suitable pit size for plantation of Chir in the tract is 45cm X 45cmX 45cm. planting should be done in the 2nd week of July. A spacing of 3m X 3m recommended for planting which ensures closing of the canopy within the shortest time as well as production of saleable material from the first thinning.

10.12.3 **Direct Sowing:** This method being simple and cheap is recommended for inaccessible areas. Seeds are soaked in cold water for a day or two and then either broadcast or dibbled in holes, notches or on trench ridges. It is further recommended that seeds should not be buried to a depth exceeding 0.6 cm. sowing should be done 1 or 2 weeks before the expected time of monsoon or on the onset of rains as late sowing reduces the chance of success.

10.12.4 **Subsidiary Silvicultural Operations:** The first thinning should be done in the August 5th and 15th years to remove surplus stems from the patch, if the plantation has been raised by direct sowing. Cleanings and thinning are left to the discretion of the territorial staff that should follow the procedure for naturally regenerated crop. In twisted Chir areas, weeding plays an important role as invasion of natural seedling of twisted origin is to be kept under check. This can be secured by cutting away all such natural seedling annually for the first 5 years and then once in 2 years for next 5 years.

10.13 SILVICULTURAL SYSTEM

10.13.1 As fellings are not recommended in this working circle, no defined silvicultural system is proposed for the working circle. However for the academic reasons only

the exploitable diameter can be fixed at 60 cm dbh. The chir crop of quality III takes 120 years to reach this dia.

10.14 PROTECTION AGAINST FOREST FIRES

10.14.1 In spite of the fact that the Chir forests of the division have been continuously experiencing forest fires this aspect of management has been neglected. Only limited fire protection measures worth the name have taken place during the past decade. Frequent fires have been one of the major causes responsible for failure of regeneration in these forests. The frequency and extent of forest fires has been more in years when resin extraction has taken place. Dry needles resinous wood and resin channels make these forests more prone to forest fires. Most of these forest fires are caused due to negligence. Apart from damage to young crop, these fires have many other harmful effects on the soil, the ground flora and fauna of these forests. Therefore protection against forest fires is of high significance in the scientific management of these forests. Following measures are recommended to have effective control and protection against fires:

10.15 CREATION OF FIRE LINES

10.15.1 Creation of fire lines is of utmost importance in Chir areas having continuous unbroken belts of Chir forests. The network of foot path already existing in these areas should be extended and maintained to serve as fire lines.

10.15.2 Areas either bearing young and unestablished regeneration, steep with shallow soil covers or where artificial regeneration is being induced should be separated from the rest of area by providing fire lines all around them.

10.15.3 Temporary fire lines of width 20m to 30m should be created wherever required. In these temporary fire lines the felling of trees need not be done to clear up the area but these areas should be control burnt every year.

10.16 CONTROL BURNING

10.16.1 Following consideration should be kept in mind while carrying out control burning in forest area:

10.16.2 The control burning operation should always start from the top portion of the area and should be extended downwards on the slope. Control burning proceeding upwards damages the crop.

10.16.3 In area having established regeneration. Control burning should take place once in two years.

10.16.4 Small patches of unestablished regeneration should be strictly guarded against any damage during control burning operation.

10.16.5 The control burning operation should take place during the period Dec to Feb and even earlier on hotter aspects.

10.16.6 The worked out area should not be controlled burnt till is thoroughly cleared off slash / debris and felling refuse.

10.16.7 Inspection observation posts should be located at strategic point to keep a close watch over any forest fires during the hot season.

10.16.8 Adequate number of fire watchers should be engaged for the protection of these forests from fire.

10.17 IDENTIFICATION OF VULNERABLE COMPARTMENTS

10.17.1 On the basis of information available in the records of division office, many compartments have been identified where incidences of forest fire have been more frequent in recent year. These compartments require special attention against forest fires. Some of these vulnerable compartments as listed below.

Table 10.13

S.No.	Range	Compartment
1.	Reasi Range	22/R, 23/R, 24/R, 25/R, 26/R,27/R, 30/R, 33/R, 34/R, 35/R, 37/R, 38/R, 39/R,
2.	Thakrakote Range	47/Th, 48a/Th, 48b/Th, 49a/Th, 49b/Th, 54 to 55/Th. 62/Th & 65/Th.
3.	Katra Range	9J/K, 10J/K, 21u/K, 22u/K, 23u/K, 76/K, 80/K, 82/K, 84/K, 85/K, 86/K, 93/K, 94/K, 95/k

10.18 GRAZING REGULATION

10.18.1 The pressure of grazing by both local and migratory livestock population has been a major factor adversely affecting regeneration and general health of the growing stock in these areas. There is an utmost need to protect these forests from uncontrolled, unscientific unregulated grazing that has been going on from time immemorial. Some of the regulation measures have been provided within the chapter Protection Working Circle. However in areas under this Working Circle, areas of unestablished regeneration and areas taken up artificial regeneration should be closed for grazing.

10.19 METHOD OF TREATMENT

10.19.1 Deeply eroded areas will be taken up in a phased manner along the contour and slope stabilization structures will be constructed at intervals. The area available between structures shall be taken up for planting. The choice of the species for afforestation shall be hardy perennials, Bamboo, Dodonea etc.

10.19.2 The areas affected by the invasive weeds i.e. lantana, parthenium, eupatorium shall be treated in a phased manner. To remove lantana from the area falling under this working circle, the FRI techniques will be followed.

10.19.3 Keeping in view the nature of soil and pattern of rainfall, high density plantation will be taken up especially along the areas lying close to villages or human habitation. The proportion of species in the planting scheme shall be on the higher side for indigenous fodder species followed by species of local importance.

10.19.4 Soil and water conservation initiatives shall be commenced along the streams where the treatment will be given from base to the top. To improve the water availability of water during dry season, moisture conservation techniques shall be followed during preparation of pits, dressing and creation of localized water harvesting structures.

10.20 AGENCIES OF FOREST DAMAGE

10.20.1 The major factors responsible for Forest damage in Reasi Forest Division are:

a)Grazing and Browsing.

b)Encroachments.

c)Illicit Damage and Smuggling of Forest Produce.

d)Forest Fire.

10.21 GRAZING AND BROWSING

10.21.1 The Grazing is the major reason for forest degradation and is a formidable challenge to the entire ecosystem. It has grown into a socio-economic problem with vast ramifications. Apart from usual damages due to overgrazing the following problems are cropping up.

10.21.2 Encroachment of forest area by Nomadic graziers who have established semi-permanent to permanent structures in forest area.

10.21.3 The local landlords also feel encouraged to encroach forest land.

10.21.4 The heavy lopping of forest trees and overgrazing of grasses is inhibiting seed formation and thereby natural regeneration is hampered.

10.21.5 Repeated grazing of same area year after year depletes vegetative cover and causes denudation of forest area which results in soil erosion.

10.21.6 The measures to regulate grazing are as under:

i. Plantation of fodder trees is to be promoted in the community forests and forest fringes.
ii. Grazing permits to the migratory graziers should be issued after proper enumeration of livestock and the existing rates of grazing fee may be increased reasonably.
iii. Allotment area to the nomadic graziers may be changed every year as per the number of animals and the productivity of the area. No permanent allotment may be made to the same area every year. This will provide rest to overgrazed areas on rotational basis.
iv. A Consultative mechanism with the involvement of the panchayats to integrate nomadic graziers and the local community to address grazing issues may be evolved.
v. New forest areas for grazing to nomadic graziers will be allotted on the recommendation of concerned gram panchayat, grazing committee and forest field staff keeping in view the carrying capacity of the area.
vi. Programme for augmenting the productivity of grazing lands / areas will be implemented through introduction of better quality nutritious grasses and legumes, rotational closures and eradication of obnoxious weeds and shrubs. The forest department may work in close coordination with the Animal Husbandry and Agriculture Department in this regard.

10.21.7 The other aspects of damage associated with grazing occurs mainly due to negligence of forest staff. The Jammu and Kashmir Forest Act provides sufficient powers to the D.F.O and the staff to prevent these offences. The legal provisions should be implemented sincerely.

10.22 ENCROACHMENT

10.22.1 Of all the forest offences, encroachment poses the greatest threat to the forests in present day and age. Encroachment threatens the most important resource on which the very existence of forests depends - Land. Rising population, expanding cities and towns and the consequent rising prices of land have given encroachers the incentive to try their hands on encroaching forest land. The connivance of revenue and forest staff with organized land mafia coupled with discrepancies in the records of forest and revenue dept., missing land records, lack of political will etc have led to a crusade on forest land.

10.22.2 The following are the reasons for encroachment problem in Reasi Forest Division:

a)Poor status of boundary pillars and Demarcation line.
b)Incomplete Demarcation records.
c)Discrepancies in revenue and forest records.
d)Negligence on part of Forest staff and Revenue staff.
e)Rising land prices.

10.22.3 The Jammu & Kashmir Forest Act provides adequate legal powers to DFO to control encroachments. The J&K Public premises (Eviction of Unauthorised Occupants) Act. 1959 provides for summary eviction of encroachers by DFO. The notification SRO-403 of 1962 appoints DFO as an Estate Officer for exercising this power.

10.23 MODUS OPERANDI OF ENCROACHERS

10.23.1 The encroachers normally start construction work during night hours and on holidays. Whenever the Forest field staff reaches the spot to stop the work they present revenue papers and demand for Nishandehi, which is a tedious process and takes time to complete.

10.23.2 In some cases they ask poor nomads to construct *Kullas* later on the *Kullas* are converted into Pacca houses. In some cases temporary structures are made at different locations in the large chunk of forest land and after a few years they are made as permanent structures. This kind of honey combing in forest land will eventually result in loss of forest area.

10.23.3 In few cases the land mafia with full man power erects the structure overnight and manages to get stay orders or restraining order from the Courts.

10.24 ACTION PLAN NEEDED

10.24.1 The following steps are suggested to minimize the problem of encroachments:
The forest areas near to the city which are highly vulnerable to encroachments with missing Demarcation files and boundary pillars are to be taken on priority for the reconstruction of boundary pillars and the demarcation files on war footing. For the said purposes a specialized team of Officers comprising of Divisional Forest Officer Demarcation-I, Revenue Officers at the rank of Assistant Commissioner Revenue need to be constituted and the Boundary pillars of new design are to be placed on grounds as early as possible.

10.24.2 In most vulnerable areas Toe wall fencing/ Chain link fencing needs to be erected.

10.24.3 In many places in this Division, the Boundary pillars that have been displaced or removed need to be re-fixed as per new design of boundry pillars alongwith their Geo-coordinates which are to be mentioned in *Tashree- Burjiaat* or Description of boundary pillars.

10.24.4 There is an imminent need to book the prominent habitual land mafia for encroaching forest land under Public Safety Act. This step will serve as deterrent against the further encroachments.

10.24.5 The records of Revenue Department and Forest Department should be brought in agreement.

10.24.6 The Nomadic graziers should not be allowed to construct semi permanent/permanent structures in compartments allotted for grazing. If anybody makes any attempt to do this, his allotment be cancelled forever in whole of the Division.

10.24.7 A dedicated cell of territorial as well as forest Protection Force staff be constituted in each Range which will work under close supervision of Range Officer to thwart any attempt of encroachment without any delay and report be sent to higher officials immediately.

10.24.8 Regular day and night patrolling is to be done to curb the problem of encroachment, because encroachment of forest land takes place mostly in odd hours.

10.25 ILLICIT DAMAGE AND SMUGGLING

10.25.1 The Reasi Forest Division has important species like khair, chir, shisham, bamboo, semal, mango and many other broad leaved species. The Illicit damage takes place in most of the cases for bonafide use by local people. But with the mushrooming of saw mills and furniture making units, the illicit damage has increased over the years for commercial reasons. The major illicit damage is occurring in forest because of demand by saw mills and furniture units and demand for firewood.

10.25.2 To prevent the illicit damage the following measures are suggested.

a) Intensive patrolling of the area.
b) Whenever cases are registered they should be pursued vigourously till a logical conclusion in the court.
c) Periodic checking of saw mills and other wood based industries.
d) Creation of mobile check posts along (Khads) points, during the main smuggling season temporary huts may be constructed at these khads with 2-4 guards on duty.
e) The important compartments with good khair and shisham crop to be listed. These compartments should be provided special protection and checked at least once in a month by RFO/Foresters and report should be submitted to the D F O.
f) The combing of forest compartments by specially formed squads of territorial and FPF staff is to be done periodically.

10.26 STRENGTHENING OF EXISTING CHECK POSTS

10.26.1 **Jyotipuram Check Post:** This check post is located just above Jyotipuram town on the road that connects Reasi and jyotipuram to Bhomag Block. Many of the populated villages like Salal, Kanthan, Arnas etc are connected to Reasi through this route. Therefore the importance of this checkpost of checking smuggling of timber and other forest produce is great. However, due to some reasons this checkpost is lying in shambles for the past many years and is non-functional. This needs repair and should be made functional again.

10.26.2 **Bansan Check Post:** This is another very important check post owing to its critical location that needs to be revived. It is located at the critical junction of Reasi and Udhampur Forest Divisions, in Janglegali Block of Katra range. As new roads are being constantly made catering to the needs of populations living in the fringe areas of forests, the chances of smuggling of timber and other forest produce also increased many folds. This check post shall serve to check these activities in the Charai-Muttal and Other areas of Katra Range

10.26.3 The good will of people has to be earned not merely by publicity but also be earned by easy and quick supply of forest produce in form of rights and concessions and meeting their genuine demands. Concentrated efforts both by Department as well as forest fringe people have to make to remove the misconception of the villagers who think of forests to be an inexhaustible public resource. By constant publicity they need to be explained that the illicit felling and encroachment would decrease the forest land as well as forest cover gradually which will have adverse effect on environment and their socio-economic conditions.

10.27 FOREST FIRE

10.27.1 Fire is a major factor that causes considerable damage to the forests of this division. The fires both accidental and intentional are very common in this tract due to the reason that majority of forests are easily approachable by roads/Paths and State Highways and other roads. Also most of the forests lie in dry/hot areas. As most of the forests are either chir or scrub forests, fire incidences are common.

10.27.2 Fire has an adverse effect on soil, water and ecological balance of the affected area. Soil becomes vulnerable to erosion and its structure gets affected, thereby retarding plant growth. The soil building flora are destroyed and the area is ultimately rendered susceptible to erosion and decreasing productivity. The young regeneration is wiped out, growth of surviving vegetation is adversely affected, the yield of forest produce is immensely reduced and the vegetation damaged by fire becomes vulnerable to insect and fungal attack. In the fire burnt

forests composition of crop changes, resulting in mixed crop in the forests. The Chir forests in this division are highly susceptible and are subject to frequent fires in the months of April to June. Because of all these reasons prevention and control of forest fire assumes great importance in Reasi Forest Division and there is an urgent need to take effective steps to counter the menace of forest fires, with the aim of:-

a) Protecting forests from damaging fires by taking up all preventive measures like administrative, technical, social, legal etc.

b) Preparing adequately and taking appropriate action for controlling, suppressing and extinguishing forest fires, in order to minimize the loss caused by them;

c) Educating local people about fire damage and eliciting their cooperation in preventing, controlling and extinguishing fires.

Chapter XI

OAK WORKING CIRCLE

Chapter - XI

OAK WORKING CIRCLE

11.1 GENERAL DESCRIPTION

11.1.1 Oak (Quercus spp), 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.

11.1.2 *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.

11.1.3 In the Jammu and Kashmir State, the genus Quercus of which five spp. are known, occurs in the following forest divisions: Kishtwar, Marwah, Jehlum valley (at Uri), Ramban, Udhampur, Reasi and Jammu. *Q. dilatata* 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 been recorded.

11.2 GENERAL CONSTITUTION OF WORKING CIRCLE

11.2.1 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. incana* is the most prevalent oak species in Reasi Forest division. However, due to proximity to the villages nearby or having crisscrossed by nomadic tracked during seasonal migration of their cattle these forest heavily exploited, sustained and fresh regeneration is invariable.

11.3 GENERAL CHARACTER OF VEGETATION

11.3.1 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 on slaught of nomads due inaccessibility. This forests occur most extensively in the upper catchment of Rud, Anji Nallah in Katra Range and in very small portion in Jungalgali block.The oak forests of this working circle are covered under Banj Oak Forest type 12/C1a as per the classification by champion and seth. The composition of the forests varies according to its proximity to human habitations or degree of biotic pressure.

11.3.2 The under story of this working circle includes *Rubus species, Berbris aristata, Vibernum* species. 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 sp, Vibernum spp, Indigofera spp, and Frageria spp.* had covered the ground substratum. The middle story is occupied by *Quercus lucotrichophora, Pinus roxgburghii, Pinus wallichaiana, Machilus duthei, Machilus ganibei, Rhododendron arboreum, Pyrus pashia*. The under story consists of *Vibernum* spp. *Desmodium tiliaefolium, Sarcacocca saligna, Indigoferra pulchella, Rubus ellipticus, Hedra nepalensis, Rosa brunonii, Smilax aspera*. The ground floor is invariably *Fragaria vasica, Plantago tibetica, Viola canescens* etc.

11.4 AREA ALLOTMENT

11.4.1 The detail statement of area of compartment/sub compartment allotted to this working circle is given as under.

Table 11.1

RANGE	COMPARTMENTS	TOTAL NUMBER OF COMPARTMENTS	AREA IN HA.	Remarks
Thakrakote	1b/Th. To 4/Th., 8/Th to 24/Th.	19	6510.83	6 compts. have been taken from Rehab W.C and 14 compts from Prton. W.C of the previous plan
Katra	Nil	Nil	Nil	
Reasi	Nil	Nil	Nil	
Total:		**19**	**6510.83**	

11.4.2 The detail species wise and compartment wise distribution of area under Oak Working Circle is given in Annexure IV.

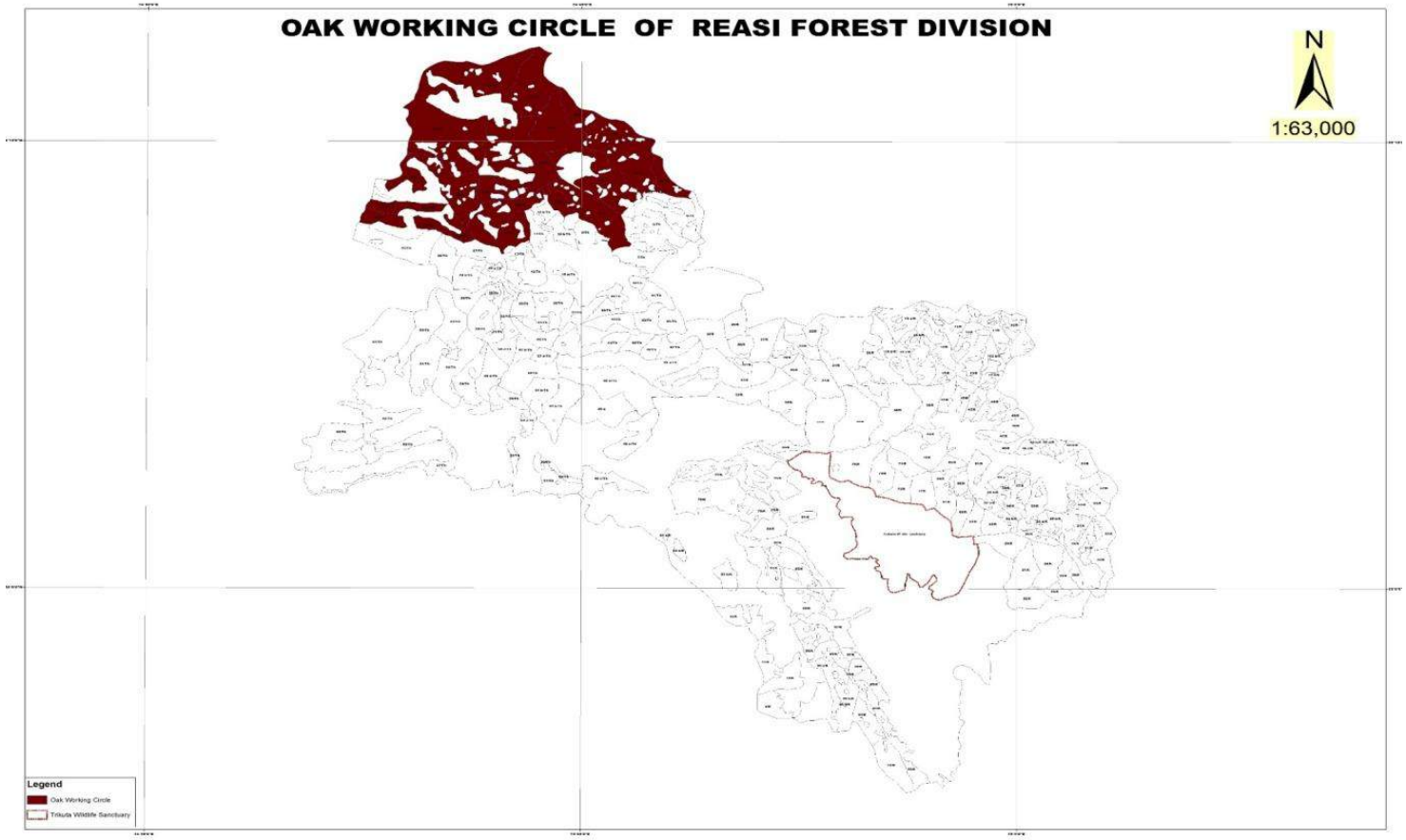
11.5 SPECIAL OBJECTIVE OF MANAGEMENT

11.5.1 To conserve the water regime by means of total protection wherever possible.

11.5.2 To regenerate the badly deteriorated areas by means of artificial regeneration or assisted natural regeneration.

11.5.3 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.

11.5.4 Toraise, wherever possible nursery stock of oak species near to the planting area.


OAK WORKING CIRCLE OF REASI FOREST DIVISION
N
1:63,000
Legend
Oak Working Circle
Trikuta Wildlife Sanctuary

11.6 ANALYSIS AND VALUATION OF THE CROP

11.6.1 The quantitative assessment of growing stock in this working circle has been made on the basis of data collected and analysed separated from 68 sample plots. The sample points were allotted to each compartment based on random lot by way of generating random numbers and subsequent plotting of the same over the stock map of the area. The sample plot are of 0.1 ha. is laid in each compartment and enumeration of trees were carried out. The methodology adopted has been described in detail in para.

11.6.2 Result analysis of the crop indicates presence of regeneration crop in good proportion. The average number of trees per ha. in the strata works out to be 137.95 stems per hectare. The presence of regeneration crop over the oak working circle indicates that the crop is slowly recovering from biotic pressure and other disturbances. However, the rate of regeneration is not as satisfactory as it should be. Also the drastic reduction in the area under Oak (as compared to the previous plan) demonstrate that the spp. is under attack from human for their daily needs by means of illicit felling. The absence of mature crop or its absence is due to illicit felling of trees for fodder and fuel wood is a major concern and is the primary reason for the decrease in area under oak forests from the previous plan.

11.6.3 The details of the statistics of growth are given below in table 10.2

11.7 REALIZATION OF YIELD

11.7.1 No marking for commercial purpose has been prescribed in this working circle, therefore no yield is prescribed for this working circle.

11.8 GRAZING REGULATION

11.8.1 The area covered under this working circle though located close to inaccessible area, the seasonal migration of nomads over years have altered the general composition of the crop. This area needs to be closed for grazing or any kind of land use for times to come. The role of oak forests in regulation of water regime over the smaller areas needs to be accounted for in watershed initiative. Rotational grazing should be regulated in order to overcome the biotic pressure so that effective regeneration can come up.

11.9 ANALYSIS OF GROWING STOCK

11.9.1 The details of statistics of growth of Oak working circle are provided as under

Table 10.2 Results of Statistical analysis for Oak Working Circle

Working Circle	Variable (per ha.)	Sample Points	Mean	Variance	Standard Deviation	Standard Error	Coefficient of variation	Confidence limits (95%) (X ± t x S.E.)		Confidence Interval	Lower limit as % of mean
		(n)	(X)	(S^2)	(S)	(S.E.)	(%)	Lower limit	Upper limit	(C.I.)	(%)
Oak Working Circle								t=	1.9960084		
	No. of Stems	68	148.97	6304.90	79.40	9.63	53.30	129.75	168.19	38.44	87%
	Volume	68	10.84	1242.15	35.24	4.27	325.13	2.31	19.37	17.06	21%

Table 10.3 Statement showing species and diameter(cm) class wise tree count of Oak Working Circle											
Tree count per hectare (Mean Value).											
Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	0.29	2.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.09
Fir	0.00	1.18	1.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	2.65
Chir	0.15	0.44	0.88	1.76	1.18	0.44	0.44	0.00	0.00	0.00	5.29
B.L.	51.76	37.65	30.74	12.65	3.97	0.59	0.59	0.00	0.00	0.00	137.95
Total	52.20	41.3300	33.39	14.85	5.15	1.03	1.03	0.00	0.00	0.00	148.98
Total tree count over the entire commercial area of Oak Working Circle (Area = 6510.8 hectares)											
Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0	0	0	0	0	0	0	0	0	0	0
Kail	1888	13412	4818	0	0	0	0	0	0	0	20118
Fir	0	7683	6706	2865	0	0	0	0	0	0	17254
Chir	977	2865	5730	11459	7683	2865	2865	0	0	0	34442
B.L.	337001	245133	200143	82362	25848	3841	3841	0	0	0	898169
Total	339865.33	269093	217397	96686	33531	6706	6706	0	0	0	969983
Table 10.4 Statement showing species and diameter(cm) class wise volume(m^3) of Conifers in Oak Working Circle											
Volume of conifers per hectare (Mean Value).											
Spp.			30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail			0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
Fir			0.88	0.69	0.00	0.00	0.00	0.00	0.00	0.00	1.56
Chir			0.42	1.99	2.61	1.56	2.14	0.00	0.00	0.00	8.72
Total			1.86	2.68	2.61	1.56	2.14	0.00	0.00	0.00	10.84
Total volume of conifers over the entire commercial area of Oak Working Circle (Area = 6510.83 hectares)											
Spp.			30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.			0	0	0	0	0	0	0	0	0
Kail			3662	0	0	0	0	0	0	0	3662
Fir			5700	4469	0	0	0	0	0	0	10169
Chir			2750	12949	16979	10141	13951	0	0	0	56771
Total			12112	17418	16979	10141	13951	0	0	0	70601

Table 10.5 Distribution of stems and volume (m^3) in Oak working circle computed at lower confidence interval.											
											Lower limit
Total tree count of commercial area (6510.83 ha) at lower interval for Oak Working Circle											87%
Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0	0	0	0	0	0	0	0	0	0	0
Kail	1643	11669	4192	0	0	0	0	0	0	0	17503
Fir	0	6684	5834	2492	0	0	0	0	0	0	15011
Chir	850	2492	4985	9969	6684	2492	2492	0	0	0	29965
B.L.	293190	213265	174124	71655	22488	3342	3342	0	0	0	781407
Total	295683	234111	189135	84117	29172	5834	5834	0	0	0	843886
											Lower limit
Total volume of conifers over the entire commercial area (6510.83 ha) at lower interval for Oak Working Circle											**21%**
Spp.			30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.			0	0	0	0	0	0	0	0	0
Kail			769	0	0	0	0	0	0	0	769
Fir			1197	938	0	0	0	0	0	0	2136
Chir			578	2719	3566	2130	2930	0	0	0	11922
Total			2544	3658	3566	2130	2930	0	0	0	14826

11.10 ANALYSIS OF CROP:

11.10.1 The quantitative assessment of growing stock in this working circle has been made on the basis of data collected and analysed separately from 68 plots.

11.10.2 The sample plots, selected at random located surveyed and trees/poles falling under the plots were enumerated for gbh and height and recorded in the respective diameter class.

11.10.3 The average number of trees per ha. Works out to be 148.98 i.e. 149 trees per ha. The volume of conifers per hectare within the Oak working circle comes to 10.48 cu.m. From the analysis of the data of average number of trees falling under different dia classes it was found that there is substantial preponderance of trees in lower dia class upto dia class of 20 to 30 cm. Result of the analysis clearly indicates the compartment of this working cirlcle have presence of high proportion of regenerated crop.

11.11 METHODS PRESCRIBED FOR IMPROVEMENT OF DEGRADED OAK FORESTS:

11.11.1 Oaks are the climatic climax species and are important for the rural hill economy and are believe to be associated with natural water regimes due to their long tap root systems. These ecologically important forests are severely exploited for meeting the fodder, fuelwood and minor timber requirements of the communities inhabiting the fringe areas. The reduction in the area under Oak species as compared to the previous plan is 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. The following measures are prescribed for the improvement of these forests:

11.11.2 This plan proposes the treatment of about 60% of the total area of the working circle over next 20 years out of which 30% area shall be treated under Artificial Regeneration, 20% under Aided Natural Regeneration & 10% under Silvicultural Operation.

11.11.3 The area under consideration shall be treated in systematic manner covering soil and water conservation measures combined 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 shall be carried out.

11.11.4 To improve the natural regeneration of the area, the compartment covered in this working circle shall be taken up under artificial regeneration scheme or Assisted Natural Regeneration scheme depending upon accessibility for such operations.

11.11.5 Under Assisted Natural Regeneration scheme, wherever possible *insitu* 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.

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

11.11.7 The importance of Oak nurseries for successful replenishment of Oak species cant 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 of Narla and Bambal.

11.11.8 Establishment of energy plantations/MPTs of fast growing endemic and exotic species to divert the biotic pressure on the oaks. Some of the important substitute species are as follow:

a) *Alnus nitida.*
b) *Celtis australis.*
c) *Robinia pseudoacacia.*
d) *Pyrus pashia.*
e) *Ficus roxburghii.*
f) Arundanaria faclata.
g) Sarcococca saligna.
h) Lyonia ovlifolia.
i) Machillus dutehi.
j) Chrysopogon gryllus.

CHAPTER XII

WILD LIFE MANAGEMENT WORKING CIRCLE

CHAPTER - XII

WILD LIFE MANAGEMENT
WORKING CIRCLE (OVERLAPPING)

12.1 GENERAL DESCRIPTION & THE PRESENT CONDITION OF THE WILD LIFE:

12.1.1 A Variety of fauna is found in this division because of varied climatic conditions and altitudinal zonation prevailing in the tract. There were number of Rakhs (game reserves) in the Reasi Forest Division i.e., Bhimgarh Rakh Co. 36 R adjoining Anji Nalla and Reasi Town at Thallangar Rakh Co. 48 c Tkt. Adjoining Talwara. Sidhini Rakh Co. 66 Tkt adjoining Sidhini Gondla Rakha Co. 9 JK adjoining Batla. A brief Survey of Wildlife found in the division is given in Chapter II B.

12.1.2 The over increasing pressure of human population is responsible for sharp decline of wildlife population in this division. Excessive interference by graziers 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.

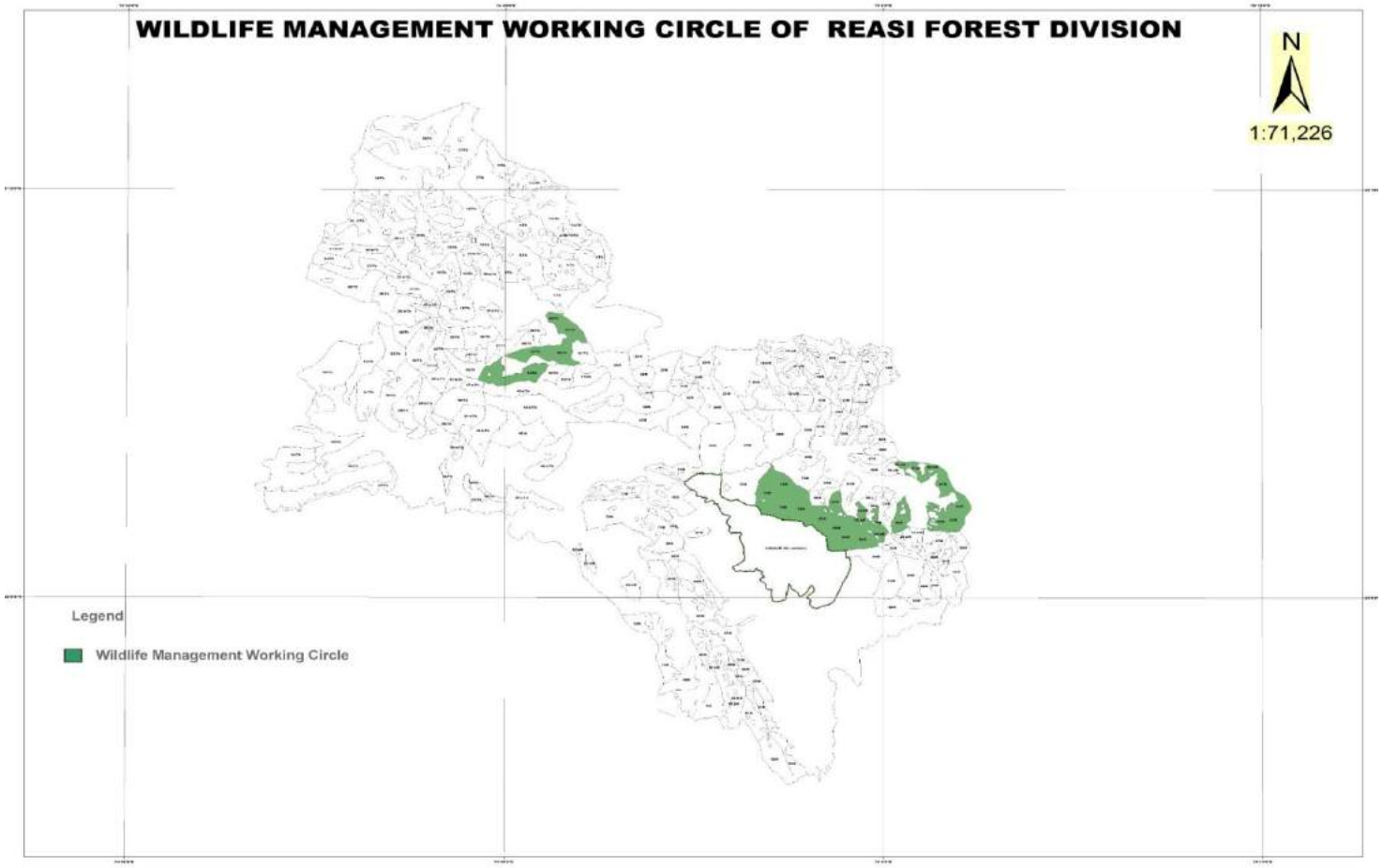
12.2 AREA ALLOTMENT

12.2.1 Range wise distribution of areas under Wildlife Management Working Circle is given as under.

Table 12.1

RANGE	COMPARTMENTS	TOTAL NUMBER OF COMPARTMENTS	AREA IN HA.	Remarks
Thakrakote	40/Th to 44/Th. (overlapping)	-	-	14 Compts. taken from Protn. WC, 3 Compts. from Chir W.C and 5 Compts. Have been tken from Rehab. W.C of the previous plan
Katra	Nil	Nil	Nil	
Reasi	49b/R to 56/R, 58/R, 60b/R,62a/R to 67/R, 71/R to 74/R	22	3176.13	
Total:		**22**	**3176.13**	

12.2.2 The detail of species wise and compartment wise distribution of area under Wildlife Management Working Circle is given in **Annexure VI.**


WILDLIFE MANAGEMENT WORKING CIRCLE OF REASI FOREST DIVISION
N
1:71,226
Legend
Wildlife Management Working Circle

12.3 STATISTICS OF GROWTH AND YIELD

Table 12.2 Results of Statistical analysis for Wildlife Management Working Circle											
Working Circle	Variable (per ha.)	Sample Points	Mean	Variance	Standard Deviation	Standard Error	Coefficient of variation	Confidence limits (95%) (X ± t x S.E.)		Confidence Interval	Lower limit as % of mean
		(n)	(X)	(S^2)	(S)	(S.E.)	(%)	Lower limit t=	Upper limit 2.0066468	(C.I.)	(%)
Wildlife Management Working Circle	No. of Stems	53	71.89	2782.90	52.75	7.25	73.38	57.35	86.43	29.08	80%
	Volume	53	96.70	7411.75	86.09	11.83	89.03	72.97	120.43	47.46	75%

Table 12.3 Statement showing species and diameter(cm) class wise tree count of Wildlife Management Working Circle											
Tree count per hectare (Mean Value).											
Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	3.25	4.06	6.02	4.75	3.23	2.83	1.94	0.81	0.21	0.00	27.10
Fir	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.00	0.04	0.00	0.42
Chir	0.00	1.51	3.72	5.11	5.57	4.45	1.51	0.83	0.57	0.00	23.27
B.L.	3.58	7.40	6.45	2.11	0.57	0.57	0.19	0.00	0.19	0.00	21.06
Total	6.83	12.97	16.19	11.97	9.37	8.04	3.83	1.64	1.01	0.00	71.85
Total tree count over the entire commercial and broad leafed area of the Working Circle (Area = 3176.13 Hectares)											
Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	10322.42	12895.09	19120.30	15086.62	10258.90	8988.45	6161.69	2572.67	666.99	0.00	86073.12
Fir	0.00	0.00	0.00	0.00	0.00	603.46	603.46	0.00	127.05	0.00	1333.97
Chir	0.00	4795.96	11815.20	16230.02	17691.04	14133.78	4795.96	2636.19	1810.39	0.00	73908.55
B.L.	11370.55	23503.36	20486.04	6701.63	1810.39	1810.39	603.46	0.00	603.46	0.00	66889.30
Total	21692.97	41194.41	51421.54	38018.28	29760.34	25536.09	12164.58	5208.85	3207.89	0.00	228204.94

Table 12.4Statement showing species and diameter(cm) class wise volume(m^3) of Conifers in Wildlife Management Working Circle									
Volume of conifers per hectare (Mean Value).									
Spp.	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deodar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kail	4.58	6.46	7.33	9.45	8.57	4.33	1.29	0.00	42.02
Fir	0.00	0.00	0.00	0.93	1.30	0.00	0.38	0.00	2.61
Chir	1.79	5.77	12.31	15.75	7.35	5.15	3.98	0.00	52.11
Total	6.36	12.23	19.64	26.14	17.23	9.48	5.65	0.00	96.73

Total volume of conifers over the entire commercial area of Wildlife Management Working Circle(Area =3176.13hectares)									
Spp.	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deodar	0	0	0	0	0	0	0	0	0
Kail	14531	20518	23288	30021	27235	13764	4095	0	133452
Fir	0	0	0	2957	4134	0	1194	0	8285
Chir	5671	18340	39097	50034	23356	16344	12655	0	165497
Total	20203	38858	62385	83012	54725	30108	17944	0	307234

Table 12.5 Distribution of stems and volume (m^3) in Wildlife Management working circle computed at lower confidence interval.

Total tree count of commercial and broad leaf area(3176.13 at lower interval for Wildlife Management Working Circle										Lower limit 80%
Spp.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.	0	0	0	0	0	0	0	0	0	0	0
Kail	8258	10316	15296	12069	8207	7191	4929	2058	534	0	68858
Fir	0	0	0	0	0	483	483	0	102	0	1067
Chir	0	3837	9452	12984	14153	11307	3837	2109	1448	0	59127
B.L.	9096	18803	16389	5361	1448	1448	483	0	483	0	53511
Total	17354	32956	41137	30415	23808	20429	9732	4167	2566	0	182564

Total volume of conifers over the entire commercial area (3176.13 ha) at lower interval for Wildlife Management Working Circle											Lower limit 75%
Spp.			30-40	40-50	50-60	60-70	70-80	80-90	90-100	100 <	Grand Total
Deo.			0	0	0	0	0	0	0	0	0
Kail			10899	15388	17466	22516	20426	10323	3071	0	100089
Fir			0	0	0	2218	3100	0	896	0	6214
Chir			4253	13755	29323	37525	17517	12258	9491	0	124123
Total			15152	29143	46789	62259	41044	22581	13458	0	230426

12.4 OBJECTS OF MANAGEMENT

12.4.1 Wildlife in general and the species which stand on the threshold of extinction in particular, will be preserved and protected for scientific, recreational, aesthetic, cultural, educational and ecological values. Any species of wildlife is a unique creation of nature with its own specialized mode of life, organic structure and individual behaviour. It is impossible to reconstruct an extinct life form. This plan specifically aims at preservation of the flora and fauna of the area.

12.5 WILDLIFE MANAGEMENT PLANNING

12.5.1 Wildlife management is more difficult than forest management for trees. For preparation of scientific management of wildlife following five steps, shall help in preparation of wildlife plan formulation.

12.6 INVENTORY

12.6.1 It is a pre requisite of any developmental management plan formulation. Inventory determines the species present, their geographic and ecological distribution in the area and analysis of wild life environment viz. food water, cover, plant association etc.

12.7 CENSUSING

12.7.1 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.

12.8 YIELD DETERMINATION

12.8.1 Next step is the determination of various environment factors e.g., cover types, food availability, covering capacity etc.

12.9 DIAGNOSIS

12.9.1 After completion of above three steps it shall be decided what shall be the wildlife population. If wildlife population characteristics are other than desired, environmental factor should be studied and limiting factors must be identified. In order to select out limiting factor, through knowledge of each of the environmental factors their interaction and past history, present trend and future

probabilities must be considered. Diagnosis consist of modification of wildlife environment.

12.10 CONTROL

12.10.1 Control is the last step to decide the actual status of the wildlife and future management strategy in the harmony of the wilderness. It is suggested that J&K Wildlife Protection Department shall prepare a comprehensive management plan taking into consideration all the steps mentioned above.

12.11 AREA IDENTIFIED FOR WILDLIFE CONSERVATION

12.10.1 Area identified for conversion into wildlife centuries.

12.12 TRIKUTA HILLS

Table 12.6

RANGE	REASI AND MATA VAISHNO DEVI JI SHRINE BOARD AREA
Compartments	63, 64, 65, 67/Reasi and Mata Vaishno Devi Shrine Board area
Area	Reasi Range 738 ha.
	Mata Vaishno Devi Ji area = 800 ha
	Total 1538 ha.
Altitude	1400-2500 Mts.
Location	Area adjoining top of trikura hills Suraj Kund.
	North:Panchari Gali
	South: Sanji Chat
	East: Loler Khad
	West: Upper catchmetn of Pei Nala
Drainage	Upper catchmetn of Pei nala, Balganga nala and Lolar Khad
Composition	Upper top portion of the Reasi Range Forest Area near Suraj Kund comprise of Fir. From upper reaches to middle comprise of Kail, Chir occurs in very small quantity in the lower portion. The Mata Vaishno Devi Ji Shrine Board area comprises of scattered Chir and Broad leaved.
Remarks	The area hold special significance due to the close vicinity of cave of Mata Vaishno Devi Ji.

12.13 JHUNGIDHARNAMAL FOREST

Table 12.7

RANGE	Thakrakote
Compartments	44 to 48c
Area	2764 ha.
Altitude	375-2000 mts.
Location	Area of Jhungidhar and Namal Forests
	North: Namal, Sarden, South: Talwara Forests. East: River Chenab West: Kanthila
Drainage	Sehar and Sarden draining into River Chenab
Composition	Upper reaches of the Forest comprises of Chir, middle portion comprises of Broad leaved. The lower protion adjoining river Chenab comprise of Scrub with scattered Broad leaved.
Remarks	The area holds special significence due to the close vicinity of Salal Dam Reasi, Tawara and Jyotipuram towns.

12.14 AREAS IDENTIFIED FOR DEER PARKS

Table 12.8

RANGE	KATRA
Compartments	95
Area	10 HA.
Altitude	600 MTS.
Location	Katra Domel road on the 8 Km from Domel.
Remarks	The area will be closed by deer proof fence, deers will be omported, two watch towers, on open cafteria with space in front to accommodate the visitors, two huts for the staff two picnic portions are suggested.

Table 12.9

RANGE	KATRA
Compartments	75
Area	10 HA.
Altitude	500 MTS.
Location	On Katra, Reasi Road adjoining Sula park
Remarks	The area will be closed by deer proof fence, deers will be omported, two watch towers, on open cafteria with space in front to accommodate the visitors, two huts for the staff two picnic portions are suggested. It is suggested that in old Rakhs i.e. Sala, Bhimgarh Co. 36h, Sidhini Co. 66 Tkt, Condla Co. 9 JK wild life should be developed.

12.15 STAFF

12.15.1 The Wildlife Protection Department has its staff posted only in some limited areas. In Reasi Forest Division there is no activity of Wildlife Department. Hence wildlife Department must start its activities in Reasi Forest Division. Posts for additional staff especially meant for the purpose of wildlife protection be created.

12.16 BUDGET

12.16.1 In order to conserve and protect the wildlife adequate provision be made in the budget for this purpose.

12.17 POLICY OF THE STATE AND THE RULES AND LAWS

12.17.1 For the protection and control of wildlife, rules and regulations were passed as early as samvat 1898 in the form of J&K Wildlife Preservation Act No. XXIV of 1898. The latest Act passed by the State legislature on this issue in the J&K Wildlife protection Act 1978 AD. The said act came into force in the whole J&K State w.e.f. 10th January, 1979 A.D. in terms of Govt. notification SRO 219 of 10.1.79 issued in exercise of powers conferred by the section 67 of the act.

12.18 RECOMMENDATION FOR PROTECTION OF WILDLIFE

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

12.18.2 The activities of the Wildlife wing of this state should be extended to this area and the provision of wildlife protection Act 1979 are enforced in letter and spirit.

12.18.3 Wildlife protection committees be 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 be genuine persons and to take stern action against those who misuse these fire arms.

12.18.4 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.

12.18.5 Staff shall remain vigilant against any major fire.

12.18.6 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.

12.18.7 Adequate publicity measures such as displaying attractive boards, posters, pamphlets and brouchers at important places showing the benefits of wildlife will cultivate in people the love for the wildlife.

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

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

12.19 ANALYSIS AND VALUATION OF CROP

12.19.1 The quantitative assessment of growing stock in this working circle has been made on the basis of data collected and analyzed separately from 53 plots.
The sample plots, selected at random located surveyed and trees/poles falling under the plots were enumerated for gbh and height and recorded in the respective diameter class.

12.19.2 The average number of trees per ha. works out to be 71.85 i.e. 72 trees per ha. From the analysis of the data of average number of trees falling under different dia classes it was found that there is substantial preponderance of trees in lower dia class up to dia. class of 30 to 40 cm. Result of the analysis clearly indicates the compartment of this working cirlcle have presence of high proportion of regenerated crop.

CHAPTER – XIII

NON-TIMBER FOREST PRODUCE

(OVERLAPPING)

WORKING CIRCLE

CHAPTER-XIII

NON - TIMBER FOREST PRODUCES (OVERLAPPING) WORKING CIRCLE

13.1 GENERAL DESCRIPTION

13.1.1 FAO defines NWFP as being "goods of biological origin other than wood derived from forests, other wooded land and trees outside forests". Different terms like secondary, minor or non-timber forest products (NTFP) are also being used by governments, institutions and academics. The Non-Wood Forest Products (NWFP) plays an important role in revenue and employment generation, particularly in rural areas. In the 1960s NWFP contributed only 2 % of forest revenue and now this has increased to 36% at the National Level.

13.1.2 Planting of multipurpose tree species in fragile eco-systems is desirable as NWFP can be extracted without cutting down the trees. This helps in maintaining vegetal cover in ecologically sensitive areas (like Reasi Forest Division). Further NWFPs can also be cultivated in private lands.

13.2 GENERAL CONSTITUTION OF THE WORKING CIRCLE

13.2.1 This working circle shall overlap all other working circle of the Division. The working circle shall be discussed under two headings.

i.Resin Extraction.

ii.Other Non-Wood Forest Products / Medicinal Plants.

13.3 RESIN EXTRACTION: Past History:

13.3.1 Extraction of resin from Chir started in Reasi Forest Division in 1971-72. The extraction was initially done by Cup and Lip method by giving channels on standing tree. However due to short sightedness at that point of time unrealistic targets of production came to be fixed year after year. This heavy tapping resulted in deep and wide gashes extending into heartwood of pine trees affecting their mechanical strength. Drying and snapping due to wind of affected trees became a common feature.

13.3.2 The manner in which blazes were made, no consideration was kept of the interspaces between the blazes thus affecting the future tap able age of the trees. Setting up of large number of industrial units during this period also increased the pressure for more and more resin extraction.

13.3.3 Extraction by this method continued till 1988-89 when it was decided in consultation with then Chief Conservator of forests, Jammu & Kashmir Govt. to give the crop rest from resin extraction due to deteriorating condition of the crop. Resin extraction started again by rill method in 1992-93 after giving rest to the crop for three years.

13.4 PAST RESIN EXTRACTION DETAILS

13.4.1 The table 13.1 given below indicates number of Channels total quantity of resin extraction resin yield per channel from 1997-98 to 2013-14.

Table 13.1

S.No	Year	Number of Blazes	Resin extracted (Qtls)	Yield % blaze (KG)
1	1997-98	280689	8557.44	3.04
2	1998-99	283662	11642.82	4.10
3	1999-2000	252417	8911.12	3.53
4	2000-2001	227991	8507.02	3.73
5	2001-02	236261	8257.38	3.49
6	2002-03	247471	8686.67	3.51
7	2003-04	226435	8304.0	3.66
8	2004-05	111900	3166.52	2.82
9	2005-06	152398	3768.85	2.47
10	2006-07	107669	3727.99	3.46
11	2007-08	97958	3228.86	3.29
12	2008-09	73051	2101.22	2.87
13	2009-10	11000	461.71	4.19
14	2010-11	Nil	Nil	Nil
15	2011-12			
16	2012-13			
17	2013-14			

13.5 ANALYSIS

13.5.1 Table indicates that the condition of the crop became so poor in 2009-10 after extracting mere 461.7 qtls the crop was given an indefinite rest. A careful perusal of the resin extraction history of Reasi Forest Division from 1997 an even before 1997 tells us that Reasi Forest Division had been sustaining high yield of resin consistently for a long period of time. As a result the chir crop burnt out with respect to resin output which in fact was a result of over exploitation of chir crop.

13.5.2 The number of blazes remained consistently high up to 2003-04 at a level of about 25000-30000 blazes. It is worthwhile to mention that during the decades of 1970s and 1980s the number of blazes per year touched a staggering 10 to 11 lakh blazes. Even throughout the decades of 1990 the average number of blazes per year remained between 2.5 to 3 lakhs. This unabated resin extraction caused a grave an irreparable loss to the Chir forests of Reasi Forest Division.

13.5.3 Ironically the resin yield per channel remained consistently high ranging from 3.5 to 4 Kgs, with an exception of few years i.e. 1986 to 1991 when the average weight per blaze was about 2 Kgs.

13.5.3 As for as healing of the blazes is concerned, it is quite poor in cup and lip method as the cuts have created so deep gashes that it apprehended that %age of mortality will be increased if incidences of heavy fire/wind storm occurred in near future, whereas healing in case of Rill method is marginally better.

13.6 CROP IMPROVEMENT WORKS UNDERTAKEN DURING PAST DECADE

13.6.1 No Significant development works have been undertaken in chir areas of the Division during past decade to promote regeneration.

13.6.2 No significant Silvicultural operations have taken place to improve the condition of the crop during the past decade.

13.6.3 No specific fire protection measures have been taken in the division during the past decade except routine firefighting operations.

13.7 RESIN CHANNEL SURVEY:

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

13.7.2 **Methodology:**

a. 132 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 785 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.

f. If the effective area available was enough to accommodate further blaze(s), keeping in mind the standard size of and distance between blazes, the tree is declared ‘fit’ for resin tapping, otherwise ‘unfit’.

g. The decision to declare the plot fit or unfit for resin tapping in future was made on the basis of majority of trees in belonging to ‘fit’ or ‘unfit’

13.7.3 **Results of Resin Channel Survey Exercise:** Resin channel survey exercise was undertaken by the field parties during the course of this revision of the plan a total of 132 samples were surveyed in chir areas of the Division. This exercise was conducted along with the point sampling exercise in chir areas of the Division. A total of 785 trees in all dia classes over the entire division were surveyed and number of old channels / rills were counted. The result of the exercise is given in Table given below

Table 13.2. Abstract of result of Resin Channel Survey

Range	No. of plots	Total no. of trees	Fit plots	Unfit plots
Katra	**39**	**229**	**16**	**23**
Thakrakote	**20**	**105**	**9**	**11**
Reasi	**73**	**451**	**7**	**66**
Total	**132**	**785**	**32**	**100**

13.7.4 **Findings:**

a) The crop has been over exploited for resin tapping.

b) Blazes have been indiscriminately placed on the trees leading to virtual girdling of trees in many cases.

c) Most of the trees exploited for resin tapping were found to have been affected badly by fire.

d) 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.

e) No. of trees in exploitable dia. classes which have still not tapped for resin is very less.

f) 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.

13.7.5 **Conclusion & Prognosis:** Based on the results of the Resin Channel Survey, it can safely be concluded that Chir crop of Reasi Forest Division is not fit for Resin extraction at present. Though 32 out of 132 plots have been declared fit, yet they are so sporadically spread across that resin extraction would be economically unviable and unpropitious. Moreover, it would be very difficult administratively to keep a check on the wage mates in order to stop any exploitation of adjoining crop because of the spatially sporadic distribution of those areas. Therefore, 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 2015-16 to 2024-25), 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.

13.8 OTHER NON-WOOD FOREST PRODUCTS / MEDICINAL PLANTS

13.8.1 The Reasi Forest Division is a habitat for many medicinal plants which are being used by the local people for treatments for various ailments from time immemorial. The forest tract is suitable for cultivation of many of these species. The ban on extraction of Medicinal plants was imposed in the year 2004 vide Government Order No: - 290 FST of 2004 Dated: 14-07-2004 except Guchhi, Anardana and conifer seeds. Subsequently in the year 2013, State Government vide order No.154-FST of 2013 dated 24-04-2013 lifted the ban on those which are not included in Schedule-VI of J&K wildlife (Protection) Act of 1978 (as amended till date). Further, the order also says that the extraction shall be subject to the provisions of Biological Diversity Act 2002(as amended till date).

13.8.2 There is urgent need to survey the resource of minor forest produce in quantity as well as in quality, so that a comprehensive MFP policy can be framed regarding the extraction of MFP from the forest on sustainable basis in near future keeping in view of the provisions of J&K Wildlife Act, 1978 and Biological Diversity Act, 2002 as well as commercial viability.

13.9 OBJECTIVES OF MANAGEMENT

13.9.1 To conserve the medicinal plant diversity of the region and to utilize them on sustainable basis.

13.9.2 To cultivate commercially important medicinal plants in non-forest areas.

13.9.3 To explore and document the ethno botanical knowledge of local species from the forest fringe people for commercial exploitation.

13.10 STRATEGIES

13.10.1 **Management in Natural Forests:** At present none of the medicinal plants mentioned in the list are commercially exploitable due to low stocking. Most of them occur naturally in forests. While managing the forests for various other objectives the attempts should be made to retain these species in adequate quantity. As most of them are shrubs, herbs and vines their retention will not interfere in the management practices prescribed for any working circle.

13.10.2 **Cultivation of Important Species**:

(i) *Dioscorea composite, Withania somenifera.*
(ii) *Terminalia bellerica, Terminalia chebula, and Terminalia arjuna.*

13.11 *Dioscorea composita:*

13.11.1 The Dioscorea species yields tubers from which a steroid hormone Diosgenin is extracted. This is used in treatment of rheumatism, ophthalmic ailments and in preparation of contraceptive pills.

13.11.2 The experiments conducted in Jammu Region by MFP Project of Forest department have shown that *D.composita* can be raised under partial shade of broad leaved species. These trials indicated that *D.composita* can be cultivated on a large scale in sub-tropical Jammu region including Reasi Forest Area.

13.11.3 **Propagation Method:** Vegetative propagation using Rhizome cuttings is found successful.

13.11.4 **Nursery Practices:** Rhizome cuttings should be raised in nursery beds. The two months old rooted plants should be transplanted in field.

13.11.5 **Spacing:** A spacing of 60 cm X 75 cm is recommended. The seedlings should be planted on ridges in 30 cm*30 cm*30cm pits.

13.11.6 **Weeding:** The weeding and watering should be done till the plant (vine) attains height and establishes itself. The loosening of soil near plant base is also necessary. The vines should be supported by Bamboo poles or other stake.

13.11.7 **Harvesting and Yield**: The plants can be harvested after completion of three years. On an Average 2.85 Kg tubers / vine can be obtained.

13.14 *Withaniasomnifera* (Ashvagandha)*:*

13.14.1 It is the most popular medicinal plant internationally. Paipalada Samhita quoted its root in the treatment of infertility. Charaka considered this as balya(tonic) and brimhana (nourishing). Ashvagandha is also known for its aphrodisiac property and for its efficacy in male infertility.

13.14.2 Today it is world over utilized for its anti-arthritic, anti-oxidant, immunomodulatory, aphrodisiac and tranquilizing effects.

13.14.3 **Distribution:** It is an erect under shrub, which is found throughout the drier and sub-tropical part of India. It is cultivated extensively throughout India at present.

13.14.4 **Chemical Constituents:** Withaferin A, withanone, withanolide WS-1, withanolide A to Y, Sominirol, sominitol, withasomniferin A, nicotine, withasomnine, sominone, sominolide etc.

13.14.5 **Part Used:** Root

13.14.6 **Cultivation Technology:** Sandy loam or light red soils with pH between7.5-8 are ideal. It is a Kharif crop. Propagated either by direct sowing or by transplantation. Seeds are sown directly in the field and plants thinned out 25 days after sowing (20000-25000) or 2kg seeds are sown per hectare to provide seedlings which are transplanted after 6 weeks in 60cm wide furrows at 60cm apart.

13.14.7 **Harvesting and Yield:**It can be harvested after 150-170 days after sowing. Maturity of crop is judged by drying of leaves and red berries. Plant uprooted and root is cut- separated in 7-10cm pieces and dried. About 400-500kg roots and 50 kg of seeds are obtained per hectare.

13.15 *Terminalia chebula* (Harad)

13.15.1 A moderate-sized, sometimes large deciduous tree. It is capable of growing on different soils ranging from poor rocky ground to sandy, clayey, deep or shallow loam, lateritic loam, and gravelly fertile alluvial soils. The plant thrives best in areas with an annual rainfall varying 100-150cm. It requires maximum temperature in range of 36-47°c and minimum temperature in range from 0 to 17.5°c.

13.15.2 **Propagation Method:** Vegetative propagation has been found advantageous over seed propagation as the former technique reduces the juvenile period and subsequently facilitates early maturing.

13.15.3 **Part used**: Dried Fruits

13.15.4 **Nursery Technique:** For raising seedling in the nursery, pre-treatment of seeds is common. The depulped seeds should be treated by fermentation process and then sown in the nursery bed. The nursery should be shaded against the sun. Ordinary clayey loam or sandy loam will suffice and no manuring is required. The young plants may require watering during the first hot season. Plants suitable for transplanting are obtained in the second rains. Shelter is required in the early stages of growth. Optimum spacing in nursery is around 15 cm X 15 cm

13.15.5 **Weeding:** Regular weeding is carried out for the first 3 years or until the plants are successfully established.

13.15.6 **Harvesting and Yield:** The fruits fall on the ground soon after ripening. The crop yield varies from year to year. The astringent principle is found in the outer pulp of the fruit. January is considered the best time for collection of Chebilic myrobalan in many areas, the later collection are slightly inferior. The collection however starts in December and continuous up to the end of March in India. The annual yield of fruits nearly 15-17 tons per year, per hectare

13.15.7 **Medicinal Uses:** Used in Triphala, Chwanprash, Blumin Syrup, Amrit Haritaki, Sudershan Churan, Sanjivani vati. Effective against chronic ulcers and mouth inflammations, acts as laxative. Also cures sore eyes, acidity, liver troubles, blood pressure, diarrhea, dysentery, piles, vomiting etc.

Table No. 13.3Some important Medicinal plants found in Reasi Forest Division:

S.No	Scientific Name	Local Name	Parts used and Uses
1	Acacia catechu	Khair	Bark paste used in conjunctivitis and haemoptysis. Flowers top with Cumic, Milk and Sugar used in Gonorrhea Katha used in treatment of dysentery. Piles uterine haemorrhages, leucorrhoea gleet, atonics dyspepsia, Bronchitis etc.
2	*Acorus calamus*	Bach	Root tuber is used to improve the quality of voice.
3	*Acacia modesta*	Phulai	Twigs used as tooth brush
4	*Achyranthes aspera*	Put Kanda	Flowers used in renal dropsy and Bronchial disorders
5	*Adiantum capillusveneris*	Hans Raj	Leaves used as diuretic and febrifuge
6	*Aegle marmelos*	Billan	Fruits used in chronic diarrhoea and dysentery
7	*Aloe barbadensis*	Kuwad Kandal	Leaves used in treatment of fever liver and spleen ailments skin diseases. Gonorrhoea constipation piles and jaundice
8	*Azadirachta Indica*	Neem	Green twigs used as tooth brush leaves and fruits and bio pesticides. Used in nervous problems. Skin disorders and as an antiseptic.
9	*Alstonia scholaris*	Devils tree	Bark used as a remedy for chronic diarrhoea and dysentery
10	*Adhatoda vasica*	Bhrainkar	Flowers, leaves and roots are considered antispasmodic and are used in case of Asthma, cough and fever
11	*Butea monosperma*	Plah	Astringent, gum obtained from the tree is used in medicine
12	*Calotropis procera*	Daryee Akk	Flowers used in treatment of cold, cough and asthma
13	*Cannabis sativa*	Bhang	Leaves and flowers used as sedatives and aphrodisiac
14	*Cyperus rotundus*	Deela	Trichip oil is prepared which is used for treatment of Alopecia, Dandruff and to prevent hairfall

S.No	Scientific Name	Local Name	Parts used and Uses
15	*Cassia fistula*	Amaltash	The pulp of pods is used as purgative especially for children
16	*Cassia tora*	Elma	Has many uses
17	*Dioscorea composite*	Tarar	The steroid hormone obtained from tubers is used in treatment of Rheumatism, ophthaimic ailments and in preparation of contraceptive pills
18	*Voila odorata*	Banafsha	Flower is used as cough expectorant. Good for chest also.
19	*Emblica Officinalis*	Amla	Fruits are rich source of vitamin C used as laxative and in the treatment of piles, liver and stomach complaints
20	*Holarrhaena antidysentrica*	Ivory tree	Bark is used for treatment of dysentery piles diarrhoea and leprosy
21	*Jatropha curcas*	Physic nut	Seeds are purgative. Oil from seeds in a strong purgative
22	*Mallotus philipinensis*	Kamla	Fruits used in treatment of tape worms and skin ailments. Kamla oil is used in hair fixers and ointments
23	*Moringa Oleifera*	Drumstick	Leaves have Ephedrine which is used in aphrodiasic medicines
24	*Murraya Koenigii*	Curry leaf	Leaves used in cases of dysentery and nausea.
25	*Pueraria tuberose*	Badad	Tubers used in medicinal preparations
26	Pinus roxburghii	Chirpine	Turpentine is obtained, resin has many pharmaceutical uses
27	Ricinus cuminus	Castor	Oil from seeds used as a purgative
28	Solanum nigrum	Black night sha de	Used in treatment of liver cirrhosis
29	Syzygium cumini	Jamun	Fruits are antidiabetic and syrup used in treatment of Kidney stones.
30	Terminalia bellerica	Bahera	Fruits are used to treat dropsy piles diarrhoea, leprosy and cough
31	Vitex negundo	Banna	Used in preparation of antirheumatic and anti arthritics Dazzle caspsules alongwith boswellia and withania
32	Terminalia chebula	Harar	Used in preparation of Triphala, cough syrups etc.
33	Terminalia arjuna	Arjun tree	Bark used for high Blood pressure & Diabeties etc.

13.16 CULTIVATION OF MEDICAL PLANTS ON PRIVATE LAND

13.16.1 The medicinal plants can be cultivated by farmers as part of Agro-Forestry. The medicinal plants like Dioscorea and Amla can generate revenue. Many other plants are useful for treatment of common ailments.

13.16.2 In towns and village the people other than farmers can also grow medicinal plants in house compounds and kitchen gardens. This needs to be encouraged as it will serve as a secure conservation method of medicinal plant diversity apart from immediate benefits to the grower e.g Aloe vera, Tulsi & Sada bahar etc.

13.17 ROLE OF FOREST DEPARTMENT

13.17.1 The forest department can provide technical knowhow and supply seeds / seedlings of medicinal plants free of cost e.g. MFP Project raises medicinal plants and provide it to public on nominal rates.

13.17.2 Farmers who cultivate commercially important species like Dioscorea, Harad, and Ashavgandha etc. require market linkage so that they get proper price for their produce.

13.17.3 Public awareness should be created about medicinal plants.

13.17.4 The ethno botanical knowledge of locals regarding medicinal plants should be documented and used for commercial cultivation and marketing.

13.17.5 Special VFC's to be formed in the Division for cultivation of medicinal plants in collaboration with locals for the upliftment of their economic level by earning livelihood.

13.18 OTHER NWFP YIEDING SPECIES

13.18.1 The following are some of the potential NWFP yielding species found in the division. They have full potential for cultivation also.

13.18.2 **Fruit Trees:** *Zizyphus Jujuba* (Ber) *Mangifera indica* (Wild mango) *Emblica officinalis* (Amla) *and Moringa oleifera* (Drum stick)

13.18.3 **Fibre Plants:** *Agave sisliana* is an important fiber yielding plant which can be cultivated in the division. This species comes up under very dry conditions.

13.18.4 **Oil Yielding Plants:** Many species that yield oil from their seeds occur in this division. Most of them are unexploited oil seeds although their uses have been identified. For record the species are mentioned below in Table 13.4

Table 13.4: Some Unexploited Oil Seeds of Reasi Forest Division.

S.No	Oil Seeds	Oil Content (%Seeds/Kernel)
1	*Adhatoda vasica*	25.8
2	*Cannabis sativa*	30-35
3	*Holarrhena antidysenterica*	19-30
4	*Mallotus philippensis*	20
5	*Melia azaderack*	40
6	*Bombax ceiba*	22.3

13.19 AREA FOR CULTIVATION OF NTFP

13.19.1 The NTFP species can be cultivated in compartments proposed for different working circles as per their occurrence/habitat. The specific sites for each species should be identified by the field staff in collaboration with local panchyats. It will be the discretion of territorial DFO as well as actual availability of funds and area.

13.20 EXTRACTION

13.20.1 Since the ban on extraction of medicinal plants has been lifted by the State Government, before a comprehensive MFP policy is framed regarding the extraction of medicinal plants, the extraction can be done by adopting below mentioned formal guidelines:

a) The DFO will furnish the compartment wise availability of different MFPs.
b) Then CCF in consultation with concerned Conservator shall fix the ceiling of annual quantity to be extracted division wise. To ensure extraction on scientific and sustained basis the extraction work shall be taken up on rotation so that a particular Forest Range or Forest Division is put to rest after carrying out extraction for one or two consecutive years.
c) Wherever possible, the extraction work should be allotted to VFCs/ Village Panchayats so that people are directly benefitted from this activity and have stakes in conservation of NWFP.

CHAPTER-XIV

ECO-TOURISM WORKING CIRCLE

CHAPTER-XIV

ECO-TOURISM WORKING CIRCLE

14.1 INTRODUCTION

14.1.1 Ecotourism means responsible travel to natural areas that conserves the environment and improves the well-being of local people. Eco-tourism is considered the fastest growing market in the tourism industry. Eco-tourism is more than a catch phrase for nature loving travel and recreation. Eco-tourism is consecrated for preserving and sustaining the diversity of the world's natural and cultural environments. It accommodates and entertains visitors in a way that is minimally intrusive or destructive to the environment and sustains and supports the native cultures in the locations it is operating in. According to travel and tourism competitiveness' report 2009 by the World Economic Forum, India is Ranked 11th in the Asia pacific region and 62nd overall on the list of world's attractive destination.

14.1.2 According to the World Tourism Organization, the tourism industry is estimated to comprise US$ 5890 billion, or 9.9% of the total world GDP. Tourism in India is the largest service industry, with a contribution of 6.23% to the national GDP and 8.78% of the total employment in India

14.1.3 Indian tourism industry is expected to be the second largest employer in the world by 2019. The international Ecotourism society defines ecotourism as "responsible travel to natural areas that conserves the environment and improves the welfare of local people".Responsible Eco-tourism includes programs that minimize the adverse effects of traditional tourism on the natural environment, and enhance the cultural integrity of local people. Therefore, in addition to evaluating environmental and cultural factors, initiatives by hospitality providers to promote recycling, energy efficiency, water reuse, and the creation of economic opportunities for local communities are an integral part of Eco-tourism.

14.1.4 In Reasi Forest Division, there are many areas with good prospects of ecotourism they includes the historic Bhimgarh Fort which is the iconic heritage building of Reasi Distt. Located in the heart of city in Bhimgarh Rakh in Comptt. No. 36/R. There is high scope for development of tourism potential by means of creation of infrastructure through Eco-restoration societies we shall provide guided tours to the tourists as well as take care of their boarding lodging. Another great region that promises huge eco-tourism potential includes the scenic and religious sites of Naag Devta, Sankhpal Devta and Pangal Devta in Bhomag Block and Tote Block respectively. Originally being sacred groves and endowed with prestine natural beauty, these areas can proves great attraction for eco tourists from across the

region. Only these sites boast of having a Deodar plantation within an exclusively Chir Forests. Presence of infrastructure and avenue of guided tourism/nature trails is virtually insignificant and hence opens up a world of opportunities to develop the same.

14.1.5 Another area that can arise to national and international prominence is the area around the under construction Bakkal Railway Bridge. Touted to be the highest Railway Bridge in the world, this place shall attract tourist from across the country which shall also open up opportunities for the local communities to earn a livelihood from tourism sector. But to maintain the pristine glory of the place, any tourism in the region has to be an ecotourism for which the department has to develop the necessary infrastructure and involves the local community as per the guidelines mentioned below in detail.

14.1.6 Of the other areas, Baba Dansar, Nau Devi, Aghar Jitto, Peer Baba Simbal Choa, Deva Mai (all in Katra Range) and Kans Patta Temple and Sihar Baba (in Thakrakote Range), all being religious places experiences a huge influx of religious tourists throughout the year. The aim of the department should be to convert these religious tourists into religious eco-tourists.

14.2 GENERAL CHARACTER OF VEGETATION

14.2.1 The vegetation of this working circle falls under (type B /C2) and siwalik chirpine forests (9c / 1 Ca). The surrounding forests are rich in indigenous vegetation. The important species include Chir, Bamboo, Khair, Phulai, Kembal, Sisham, Kakoa, Bear, Kasangal, Bilan, Plah, kikhar, Jamun, Mango. Almost all the representative shrubs and herbs of this forest type are found in this area. The age class is young to middle. The crown density is. 0.4 to 0.6

14.3 SPECIAL OBJECTIVES

14.3.1 Conservation of environment and Bio-Diversity of the tract.

14.3.2 Creating Public Awareness about the importance of flora and fauna.

14.4 STRATEGIES, CONSERVATION OF ENVIRONMENT AND BIO DIVERSITY

14.4.1 The key players in the ecotourism business are governments at both level, the local authorities, the developers and the operators, the visitors, and the local community. Each one of them has to be sensitive to the environment and local traditions and follow a set of guidelines for the successful development of ecotourism. In addition, non-governmental organisations and scientific and research institutions also have to play a key role in the development of ecotourism.

14.4.2 A management plan for each ecotourism area should be prepared by professional landscape architects and urban planners, in consultation with the local community as well as others directly concerned. Integrated planning should be adopted to avoid inter-sectorial and cross-sectorial conflict.

14.4.3 The architectural program for ecotourism centres should include controlled access points, roads, self-guided nature trails, transportation options, interpretation centres, signs, observation towers and adequate but unpretentious lodging and dining facilities, docks, garbage disposal facilities and other utilities as needed. If required, suitable living quarters and facilities for project personnel should be provided.

14.5 AREA AND ALLOTMENT

Table 14.1

S.No.	RANGE	SIGNIFICANCE/PROMINENCE
	Range: REASI	
1	36/R	BHIMGARH FORT
2	43/R, 62/R, 63/R	PANGAL DEVTA, SUKHALGATI
3	18a/R, 18b/R 15/R	NAAG DEVTA, SANKHPAL DEVTA
4	21/R, 30/R	BAKKAL BRIDGE, SALAL DAM
S.No.	**RANGE**	**SIGNIFICANCE/PROMINENCE**
	Range : KATRA	
5	82/K	BABA DHANSAR, NAU DEVI, AGHARJITO
6	76/K	SULA PARK
7	77K,78/K	PEER BABA SIMBAL CHOA
8	87/K	DEVA MAI
	Range: THAKRAKOTE	
9	49C/TH	KANS PATTA TEMPLE
10	48a/TH, 48b/TH	SIHAR BABA

14.6 ROLE AND RESPONSIBILITY OF FOREST DEPARTMENT

14.6.1 Regulate structures that create visual pollution, unaesthetic views and are non-compatible architecture; and encourage use of local building material and structures befitting the local environment.

14.6.2 Exclude developments in geologically unstable zones and define development and buffer zones after proper environmental impact assessments.

14.6.3 Establish and enforce standards, building codes and other regulations.

14.6.4 Specify environmental, physical and social carrying capacities to limit development.

14.6.5 Ensure continuous monitoring of adverse effects of tourism activities and initiate suitable corrective measures.

14.6.6 Recognise and award quality by accreditation of ecotourism operators.

14.6.7 Provide visitor information and interpretation services covering particularly:

(i) What to see; (ii) how to see it and (iii) how to behave. This can be by way of brochures, leaflets, specialised guides, visitor information centres and such.

14.6.7 Prepare and distribute codes of conduct to all visitors.

14.6.8 Launch training programs on ecotourism for tourism administrators, planners, operators and the general public.

14.7 ROLE AND RESPONSIBILITY OF ECO TOURISM DEVELOPERS AND OPERATORS:

14.7.1 Respect and follow the planning restrictions, standards and codes provided by the government and local authorities.

14.7.2 Implement sound environment principles through self-regulation.

14.7.3 Undertake environmental impact assessment for all new projects and conduct regular environment audits for all ongoing activities, leading to development of environmental improvement programs.

14.7.4 Be aware of, and sensitive to, protected or threatened areas, species and scenic amenity; undertake landscape enhancement wherever possible.

14.7.5 Ensure that all structures are unobtrusive and do not interfere with the natural ecosystem to the extent possible.

14.7.6 Recognise the optimal environmental capacity and sociological use-limits of the site in creating tourist facilities; also take into account the safety and convenience of tourists.

14.7.7 Design buildings strictly on functional and environmental considerations and avoid over-construction.

14.7.8 Use local material and designs to the extent possible in construction.

14.7.9 Employ eco-friendly physical planning, architectural design and construction of tourist facilities, for example use solar energy, capture and utilise rainwater, recycle garbage, use natural cross-ventilation instead of air conditioning, ensure a high level of self-sufficiency in food through orchards, ecological farms, aquaculture and such.

14.7.10 Employ energy and water-saving practices to the extent possible; freshwater management and controlled sewage disposal should also be practised.

14.7.11 Control air emissions, chemical pollutants and noise.

14.7.12 Control and reduce environmentally unfriendly products such as asbestos, CFCs, pesticides and toxic, corrosive, infectious, explosive or flammable material.

14.7.13 Respect and support historic or religious objects and sites.

14.7.14 Provide information and interpretive services to visitors especially on attractions and facilities, safety and security, local customs and traditions, prohibitions and regulations and expected behaviour.

14.7.15 Ensure adequate opportunities for visitors to commune with nature and native cultures.

14.7.16 Provide correct information in marketing ecotourism products, as visitors who appreciate ecotourism products usually belong to environmentally- aware groups.

14.7.17 Include training and research programs on environmental issues for company staff.

14.7.18 Prepare tourists before their visit to minimise possible negative impacts while visiting sensitive environments and cultures.

14.7.19 Ensure safety and security of visitors and inform them of precautions to be taken.

14.7.20 Exercise due regard for the interest of the local population, including its history, tradition and culture and future economic development.

14.7.21 Involve the local community to the extent possible in various activities and vocations.

14.8 IN-SITU CONSERVATION BY DEVELOPING

14.8.1 **Sacred Groves:** The part of comptt. 43/R, 62/R and 63/R of Tote Block and Comptt. 18a/R, 18b/R, 15/R corresponding to Pangal Devta, Sukhalghati, Nag Devta, SankhPal Devta respectively in Reasi Range are all religious places and can be maintained as Sacred Groves and biotic intervention should be limited to the least possible extent and only in the interest of conservation. Similar approach has to be adopted for compartment 82/K, 76/K, 77/K, 78/K, 87/K in Katra Range (given in detail the table above) as all of them can be conserved best if the motive of conservation are tiedup with a religious sentiments and feeling of the general public.

14.9 EX- SITU FIELD CONSERVATION:

14.9.1 **Botanical Garden and Nakshatra Van:** In this garden the samples of all the indigenous trees, shrubs, herbs and medicinal plants climbers and grass shall be grown. At least five plants of each species occurring in the area should be planted and maintained with full taxonomical description. A sufficient nursery back up should be maintained for causality beating in respect of each species planted. The garden should be closely monitored by the management till establishment and thereafter of protection should be ensured.

14.9.2 In ancient Indian texts some trees have been considered sacred and are associated with zodiac signs (Rashi) and star constellations (Nakshatras) Out of 26 tree species associated with Nakshatras 16 are can be grown in the agro climatic zone of Reasi Forest Division which are indicated in the Table 14.2

14.9.3 This garden can be developed on the anology of several nakshatra van developed around temples in south India.

14.10 CREATING PUBLIC AWARENESS

14.10.1 The programs of Forest department shall be publicised by print and electronic media and through permanent sign boards at various places in and around Pangal Devta, Nag Devta, Sukhalghati, Deva Mai, Peer Baba Simbal Choa, Nau Devi, Baba Dansar, Sehar Baba etc. shall also depict do's and don'ts in and around the holy areas.

Table: 14.2 List of Trees and Lords Associated with Nakshatras.

S.No	Constellation	Associated Tree	English Name / Common Name	Loard	Occurance in Area
1	Ashwani	Strychnos nuxvomica	Poison nut	Ketu	Not Found
2	Bharni	Emblica officinalis	Indian geooseberry, Amla	Venus	Found
3	Kruttika	Ficus racemosa	Cluster fig, gufar	Sun	Found
4	Rohini	Syzigium cumini	Java Plum	Moon	Found
5	Mrigswina	Acacia Catechu	Cutch Trees, Khair	Mars	Found
6	Ardsa	Diospyros Melanoxy	Black Eboney, Tendu	Rahu	Not Found
7	Punarvasu	Bambusa arundinacca	Bamboo	Jupiter	Found
8	Pushya	Ficus religiosa	Sacred Fig, Peepal	Saturn	Found
9	Ashlesha	Calophyllum inophyllum	Alexandrain layral	Mercury	Not Found
10	Magha	Ficus bengalensis	Banyan tree, Bargod	Ketu	Found
11	Poorva Phalguni	Butea Monosperma	Parrot tree, Palash	Venus	Found
12	Uttara Phalguni	Ficus arnottiana	Paras pipal	Sun	Not Found
13	Hasta	Jasminum gradiflora	Jaai	Moon	Found
14	Chitra	Aegle marmelos	Golden apple, Bael	Mars	Found
15	Swati	Terminalia arjuna	Arjun Myrobalan	Rahu	Found
16	Vishakha	Mesua ferrea	Iron wood, tree, Nagkesar	Jupiter	Not Found
17	Anuradha	Mesua ferrea	Iron wood, Nagkesar	Saturn	Not Found
18	Jyeshtha	Bombax ceiba	Red silk cotton tree, semal	Mercury	Found
19	Moola	Boswellia serrata	Indian olibanum salai	Ketu	Not Found
20	Poorva Shada	Calamus spp.	Rattan Cane	Venus	Not Found
21	Uttara Shada	Artocarpus heterophyllus	Jack fruit Dheu	Sun	Not Found
22	Shravan	Calotropis gigantea	Crown flower	Moon	Found
23	Dhanishtha	Prosopis cineraria	Indian mesquite khejri	Mars	Not Found
24	Shatbhisha	Anthocephalus kadamba	Common bur flower, Kadam	Rahu	Found
25	Poorva Bhadrapad	Mangifera indica	Mango tree	Jupiter	Found
26	Uttara Bhadrapad	Azadirachta indica	Margossa tree, Neem	Saturn	Found
27	Revati	Madhuca latifolia	Butter tree, Mahua	Mercury	Not Found

14.11 ESTABLISHMENT OF ECO-RESTORATION COMMITTEE

14.11.1 Such committee shall be framed involving officials of Forest department, temple management and prominent locals. This committee shall involve the chairman of temple/Sacred Groves Management as Presiding Officer, Block officer of the concerned Block as Member Secretary, local Sarpanch, Panches and prominent locals as members. The committees shall work for addressing the following concerns.

14.12 Problems

14.12.1 Large scale import of non-biodegradable products.

14.12.2 Lack of proper mechanism for waste disposal.

14.12.3 Lack of sufficient civic amenities.

14.12.4 Dependence on adjoining forest for fuel wood.

14.13 SUGGESTED CORRECTIVE MEASURES

14.13.1 A ban on import of non Bio -degradable items in the area.

14.13.2 A proper mechanism for waste collection and disposal.

14.13.3 Creation of a firewood and Timber depot in the area.

14.13.4 Creation of proper areas for performing last rituals and bathing etc.

CHAPTER-XV

PARTICIPATORY FOREST MANAGEMENT

CHAPTER-XV

PARTICIPATORY FOREST MANAGEMENT

WORKING CIRCLE (OVERLAPPING)

15.1 BACKGROUND

15.1.1 Recent years have seen a number of changes in the management of forests. There is a major shift towards a more decentralized and people oriented forestry. Responding to scarcities, villagers have started organizing themselves to reverse degradation and restore productivity. The result has been a renewal of degraded ecosystems. The various initiatives have led to greater access and control of forest resources by local people, in turn resulting in improvement in forest protection and management and reducing pressure on resources. Substantial areas of degraded forests have been rehabilitated and new forests planted. Local people have started supporting forest conservation where they have been able to reap financial returns from benefit-sharing schemes.

15.1.2 In India Joint Forest Management (JFM) has emerged as an important intervention in management of forest resources. In many parts of India, small village groups have started to protect and reclaim degraded forestlands through collective action. The Joint Forest Management Programme seeks to develop partnerships between local community institutions and state forest departments for sustainable management and joint benefit sharing of public forest lands. The primary objective of JFM is to ensure sustainable use of forests to meet local needs equitably while ensuring environmental sustainability. The central premise is that local women and men who are dependent on forests have the greatest stake in sustainable forest management.

15.1.3 The official ground for JFM was prepared by the National Forest Policy of 1988 which envisaged people's involvement, particularly of women, in meeting their basic forest related needs and in managing their local resources. This was followed in 1990 by a circular from Ministry of Environment and Forests providing guidelines for involvement of Village Communities and Voluntary agencies in regeneration of degraded forests. The National Forest Policy of 1988 and the JFM resolution of 1990 combined with state level resolutions acknowledged the need to give greater rights and authority to community groups. The policy envisages a process of joint management of forests by the state government and the local people, who would share the responsibility for managing the resource and the benefits accruing from this.

15.1.4 Under Joint Forest management (JFM) village communities are entrusted with the protection and management of nearby forests. These communities are required to organize forest protection committees, village forest committees, village forest

conservation and development societies. The guidelines provide for rights to usufruct and non-wood forest products and percentage share of final harvest to organized communities willing to help regenerate depleted forest and waste lands.The 1988 policy put the people demand in front and advocated for management of forests near villages with involvement of people and they will have first charge on the forest products to meet their bonafide requirements. As a result GOI issued guidelines in June 1990 and till date 28 states have issued their own JFM resolutions. Forest policy of J&K state 2011 has also laid emphasis on:

i) Active involvement of every citizen in forestry activities in forest as well as in non-forest areas.

ii) Creating livelihood opportunities for forest dependent communities and their institutionalized involvement in the decision making process. Focus of the employment generation shall be on youth from local community and tribal communities.

iii) Keeping, provision for creating corpus as a mandatory component, and put adequate money in the same to cater watch and ward, fire protection and maintenance needs of the assets created, during and after the project period.

iv) Women folk from the local communities shall be involved in development of degraded forest fringe areas into highly productive tree strips incorporating appropriate proportion of fast growing tree and plant species. Cent percent share of produce will flow to the participatory community.

15.1.5 The involvement of local communities in rehabilitation and management of degraded forest areas is perceived to be vital for conservation of forest resources and now a days is a precondition imposed by funding agencies. The jammu and Kashmir Government through SRO 17 of 12-1-1999 has amended (RDF and village plantation) Rule, 1992. The amendment provides for constitution of village (Rehabilitation of Degraded Forests) committee for each village or group of villages for the purpose protection and management of degraded forests. In these rules the detailed organizational structure of village (RDF) committee, its functions , mode of working , agreement to be executed between the committee and Forest Department, mutual responsibilities and usufructory benefits distribution etc. have been given. Therefore, all the legal provisions necessary for operating JFM are adequately available.If successfully implemented, JFM will lead to environmental protection and sustainable development of the village as well as forest resources, which is the top most priority as per the J and K State Forest Policy – 2011.

15.2 BROAD OBJECTIVES

15.2.1 Protection and rehabilitation of degraded forest of the Division situated near the villages.

15.2.2 To create additional income generating activities and employment opportunities.

15.2.3 To increase the yield of products needed to meet people's requirements.

15.2.4 To improve the socio-economic status of people living in forest fringe villages by way of planning and implementing development works and operationalizing FDA.

15.2.5 To improve productivity of fringe forest so that local people can obtain goods and services on a sustained basis.

15.3 SOCIO-ECONOMIC PROFILE OF REASI FOREST DIVISION

15.3.1 The present study socio-economic aspects of Reasi Forest Division bring to light the immense importance of Forests in the daily life of the rural population. District Reasi extending over an area of 1707 Sq. Kms comprises of 253 Villages including 2 Un-inhabited Villages. It has 3, 14,667 Population as per census 2011. The District Population is mostly rural which 91.42 % of the total population is and only 8.57 % of it resides in towns. The District having ST population 28.08 % and SC population is 12 %. As the terrain of this Distt. is highly mountainous, most of the villages depend on one way or the other on Forests. Most of the agriculture is rain fed for obvious reasons and only 9% of the gross area is irrigated.

15.3.2 Livestock rearing is an important occupation of the village folks in general & migratory proportion in particular. As per 2007-08 Census, the District accounts for 205117 lacs of Sheep & 180576 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.

Table 15.1: Socio-economic survey of Rural villages falls in the Territorial jurisdiction of Reasi Forest Division (Tehsil wise)

Tehsil		No. of Households	Cropped areas (ha) (District Wise & year wise)		Total area irrigated (in ha.) year wise		Departmental Forest Timber/Firewood sale depots.
Reasi	Rural	7300	2007-08	37660	200	2370	02/02
	Urban	21871	2008-09	39450	200	2900	01
	Total	94871	2009-10	36642	200	2927	05
Pouni	Rural	40676	2010-11	37561	201	4174	02/0
	Urban	5125	2011-12	38065	201	2667	01
	Total	45801	2012-13	39711	201	2679	03
Arnas	Rural	58582					
	Urban	0					
	Total	58582					

15.4 EFFECTS OF SOCIO-ECONOMIC STATUS ON FORESTS

15.4.1 The socio economic status of forest fringe population is an indicator of dependence of local population on forest resources.

15.4.2 After analyzing the same it emerges that the socio-economic condition of areas falling under Reasi Forest Division is not very encouraging. 91.42% of the population is rural living in and around the forests nearby creating lot of biotic pressure on the already degraded Forests of the Division. However, an encouraging fact is the electrification of 95% of all the households in the Distt. This has gone a long way in relieving the pressure off the forests for fuelwood and energy requirement of the local population which was not the case before.

15.4.3 Socio-economic status of people of the rural population of Reasi Distt. Can improve by providing employment by starting development works i.e. plantation work, soil and moisture conservation works in **CAMPA** and other JFM schemes.

15.5 JFM IN REASI FOREST DIVISION

15.5.1 The Forest Development Agencies (FDA) will provide tremendous opportunity to the Department and the people to work together.

15.5.2 Keeping in view the present funds position of the department in FDA and geographical situation of the tract the following suggestions are made regarding JFM.

6 If funds are available in a limited way it is recommended that RDF activities be planned in compact contiguous areas.

7 Further the subsequent plantation works should be taken up adjacent to the previous year's plantations so that monitoring and protection is effective.

8 The flow of usufructory benefits to the villagers is vital to win their co-operation. It is suggested that mature plantations be harvested in phases and benefits be shared as per the rules.

9 The species planted should be of fast growing, multipurpose trees which yield fodder, fuel wood and small timber. The shisham, bamboo, dhamman etc. are the potential species around which successful JFM can be built especially in the initial years. Bamboo can be harvested within 6-8 years. It is a multipurpose plant, dhamman is also a multipurpose tree and preferred by villagers for various purposes. Further the local species which supplement the raw material requirement of cottage industries be given preference e.g mango, jamun, sohanjana, aloe vera, dheu and mulbery etc.

15.6 PRESENT STATUS OF JFM IN REASI FOREST DIVISION

15.6.1 The Reasi Forest Division has been at the forefront of participatory forest management in the state. It was one of the first couple of Forest Divisions in the state to start Joint Forest Management activities and hence has been a pioneer in the participatory forest management activities in the state. A total of 38 VFC have been formed across the division till date and most of them have been functional too. But since the Formation of State forest Development Agency (SFDA) in 2010-2011, the funding has been relatively curtailed and each year some of the 38 VFC are active on rotational or priority basis.

15.7 FDA IN REASI FOREST DIVISION

15.7.1 38 JFMCs were formed in Reasi Forest Division under National Afforestation Programme, out of which 20 JFMCs are functional for the last couple of years due to non-availability of funds and other constraints. The activities undertaken in these JFMC,s are rehabilitation of degraded forests through Aided Natural Regeneration(ANR), Artificial Regeneration(AR), Sowing and Planting (SP), Entry Point Activities(EPA) and other soil & moisture conservation works. Detail of JFMCs formed under JFM scheme in Reasi Forest Division is as under in the table 15.2.

Table.15.2: VFC of Reasi Forest Division.

S. No.	Range	Name of VFC	Comptt. No.	Name of Revenue Village	Present Status of VFC
1	Katra	Jangalgali	31u/K	Jangalgali	Non functional
2		Kund	33/K	Kund	
3		Khalda	25/K	Khalda	Functional
4		Sarna	94/K	Sarna	Functional
5		Tanda	84/K	Tanda	Functional
6		Pangal	82/K	Pangal	Functional
7		Karwa	84/K-II	Karwa	Functional
8	Thakrakote	Laiter	66/Th.	Laiter	
9		Bharakh	61/Th.	Bharakh	Functional
10		Mari Pouni	58/Th.	Mari Pouni	Functional
11		Saloon	52/Th.	Saloon	Functional
12		Kheral	48c/Th.	Kheral	Functional
13		Talwara	48b/Th.	Talwara	Functional
14		Kans Brahmana	49c/Th.	Kans Brahmana	Functional
15		Matah	32/Th.	Matah	Functional
16		Thakrakote	35/Th.	Thakrakote	
17		Chandi	30/Th.	Chandi	
18		Kakra	6/Th.	Kakra	
19		Bandhar	11/Th.	Bandhar	
20		Jij	4/Th.	Jij	
21		Thanole	15/Th.	Thanole	
22		Chinkah	7/Th.	Chinkah	
23		Gari	5/Th.	Gari	
24		Gabber	5/Th.	Gabber	
25		Samhar	31/Th.	Samhar	
26		Dub Khalsa	67/Th.	Dub Khalsa	Functional
27	Reasi	Mari Reasi	34/R	Mari Reasi	Functional
28		Agar Ballian	33/R	Aghar Ballian	Functional
29		Pounsali	31/R	Pounsali	Functional
30		Sujandhar	18/R	Sujandhar	Functional
31		Kothroo	15/R	Kothroo	
32		Dangakote	41/R	Dangakote	
33		Ladda II	55/R	Ladda II	
34		Sukhalghati	60/R	Sukhalghati	Functional
35		Phagori	41/R	Phagori	Functional
36		Dharangali	43/R	Dharangali	
37		Kothari	47/R	Kothari	Functional
38		Devigarh	72/R	Devigarh	

15.7.3 During the field survey and inspection of JFM works in the Jurisdiction of ReasiForest Division, it was observed that there is need to further convince and involve the local population. Special VFC should be formed in each Range of Reasi Forest Division for protection and development of local Medicinal Plants.

15.7.5 SFDA wise detail of all works done since the inception of this scheme are enclosed as **Annexure XIV (1) to Annexure XIV (52).**

Table 15.3

Plan	Area treated (Ha.)	Plants planted (in lakh)	Financial implications (in lakh)
Xth Plan	2760	12.096	372.87
XIth Plan	2850	17.10	478.84
XIIth Plan	505	1.01	164.8
Total	**6115**	**30.20**	**1016.5**

Table15.4 FDA achievements of the Reasi Forest Division

Year	Area treated in Ha.	Plantation in Nos.	EPA works	Fin. achievement/outlay
2003-04	730	--	Details of VFC wise Entry Point Activities are given in detain in Annexures é ..	45.18
2004-05	400	490000		93.14
2005-06	1065	375600		91.64
2006-07	565	344000		106.91
2007-08	950	--		159.55
2008-09	950	570000		151.13
2009-10	950	570000		146.56
2010-11	--	570000		44.515
2011-12	--	--		13.09
2012-13	255	51000		87.64
2013-14	250	50000		77.16
Total	**6115**	**3020600**		**1016.5**

Table 15.5: CAMPA achievements of the Reasi Forest Division

Year	Area treated in Ha.	Plantation in Nos.	Fin. achievement/outlay
2010-11	200	145000	73.00/73.00
2011-12	144	86000	65.20/64.59
	Revalidated amount utilized under Survey & Demarcation	0.45/0.45	
2012-13	260	195000	117.80/116.95
2013-14	200	150000	134.49/129.639
	Revalidated amount utilized under Infrastructure	6.01/6.01	

15.8 FUTURE STRATEGIES WITH JFM

15.8.1 Village Forest Committees are to be framed in these areas in which forest fringe people especially women folk who are stake holders should be involve at each level i.e. planning, execution and monitoring level for better protection and development of forests. Care and share method is to be adopted for sharing of usufructs of forests e.g. fodder, fuel wood, small timber and other NTFP can be shared between Forest Department and forest fringe people. A sort of revolving fund can be created by selling grasses, fuel wood and NTFP to locals or in the market by which socio-economic condition of the people can be uplifted.

15.8.2 Development of an institutional mechanism to inform and educate people about increasing productivity and produce of their land holdings.

15.8.3 Promotion of Agro forestry and village forests in all areas particularly in rural areas having less landholding.

15.8.4 Imparting job oriented training in utilizing and in value addition of NTFP obtained from forests while implementing FDA works.

15.8.5 Promoting cultivation of, in demand NTFP species yielding higher economic returns on their farmlands in comparison to traditional but low yielding crops.For fruitful results of above mentioned strategies following things to be adhered effectively:

a) To strengthen the JFMC's / VFC's with good results.
b) To lay more stress on the areas where it failed to show results.
c) To understand the reasons of failure.

d) To build up rapport with people.
e) To conduct motivational visits to the areas where JFMC's have shown good results.
f) To keep provision of funds under training and awareness.
g) To take up the new potential areas as given:

i. **Reasi Range:** Village Sujandhar (c.o no. 18/R), Village Devigarh (co. no. 72/R), Village Mari Reasi (c.o. no. 34/R)
ii. **Katra Range:** Village Junglegali (co.no. 31/u/k), Kund (co.no. 33/u/k), Khalda (c.o. no. 25/u/k)
iii. **Thakrakote:** Village Bharakh (co.no.61/Th), Saloon (co.no. 52/Th), Thakrakote (co. no.35/Th), Dab khalsa (c.o. no. 67/Th)

It is just a proposal, rest it is left to the discretion of territorial DFO for the selection of area in consultation with local people.

h) Care to be taken that only motivated people make it to executive body through democratic process.

15.9 ACTIVITIES TO BE TAKEN UP IN THE OLD/NEW VFCS

15.9.1 Construction of Bridle Path cum permanent fire lines.

15.9.2 Construction of seasonal fire lines.

15.9.3 Construction of Water Conservation/Harvesting Structures.

15.9.4 Plantation.

15.9.5 Carrying out Entry Point Activities like construction of Bathrooms, water tanks, passenger sheds, platforms, maintenance of sacred groves.

15.9.6 Carrying out awareness programmes/organizing training camps for common villagers.

CHAPTER –XVI
PLANTATION WORKING CIRCLE (OVERLAPPING)

CHAPTER – XVI

PLANTATION WORKING CIRCLE

16.1 GENERAL CONSTITUTION OF THE WORKING CIRCLE

16.1.1 This Working Circle will overlap all other Working Circles and is constituted for the first time in Reasi Forest Division as mandated by the Working Plan Code. This will include all the degraded forests areas of those compartments which are situated near habitations and are prone to heavy biotic interference and poorly stocked. The main aim of creating this working circle is to pay special attention to the rehabilitation of degraded areas keeping in view the bonafide requirement of the local people

16.2 GENERAL CHARACTER OF VEGETATION

16.2.1 Since this circle is an overlapping working circle, the general character of vegetation has been already discussed in major working circles. However, due to excessive biotic interference the density of these areas has decreased drastically. Due to excessive lopping and browsing fodder yielding species have become malformed and stunted growth. The regeneration is negligible. The palatable bushes and grasses have been replaced by unpalatable thorny bushes and grasses.

16.3 SPECIAL OBJECTS OF MANAGEMENT

16.3.1 Plantation working circle has been constituted keeping in view the following objects:

a) To conserve and preserve soil and moisture contents.

b) To rehabilitate the degraded fringe forest areas.

c) To increase the green cover around the habitations.

d) To meet the local demand of fuel, fodder and small timber.

e) To reduce the pressure on natural forests by creating buffer zones between villages and natural forests.

16.4 AREA OF TREATMENT

16.4.1 The working circle wise area proposed to be treated annually is tabulated in table 16.1.

Table16.1

S.No.	Working Circle	Area in hectares
1	Protection cum rehabilitation working circle	80
2	Oak Working Circle	20
3	Wildlife management working circle Working Circle	-
	Total	**100**

16.4.2 The annual treatment plan is left at the discretion of Divisional Forest Officer.

16.5 TREATMENTS PROPOSED

16.5.1 A multidimensional approach is required to be initiated with a missionary vision in order to rehabilitate these forests and bring them back to their old glory by involving the habitants who reside in vicinity of these forests. The main focus of rehabilitation is to increase the vegetal cover of existing forest, conserve and preserve soil and moisture contents, besides fulfilling the day to day requirements of fuel and fodder of local inhabitants. These degraded forests can be treated keeping in view both short and long term measures, so that local inhabitants who get involved in rehabilitation of these forests gets immediate benefits such as fuel, fodder, collection of NTFP raised in these areas (especially shoot/fruit portion) and small timber. The long term benefits such as sharing of major forest produce. The measures proposed to the adopted are as follows:

a) Closing of area by barbed wire with P.C.C. posts or / chain link fencing with angle iron.

b) Planting of exotic / local fast growing fodder yielding species.

c) Planting of conifers after two to three years depending upon the site.

d) Planting of medicinal herbs, shrubs and trees.

e) Planting/ sowing of grasses having good fodder value.

f) Construction of dry rubble stone missionary (DRSM) check walls, stone filled mesh wire crates and water harvesting structures in order to conserve, preserve and increase soil and moisture contents of the area.

g) Construction of permanent fire lines around the plantation areas.

16.6 CHOICE OF SPECIES

16.6.1 Since Reasi Forest Division has a vast altitudinal variation so a wide range of flora from sub-tropical to temperate zone are existing. The species such as Kail, Fir, Chir, *Acacia catechu* (wood used for extraction of katha), *Aesculus indica* (good fodder tree of temperate zone), *Berberis lycium* (rasount), *Buxus wallichiana* (timber used for making toys and wood carving), *Dalbergia sissoo* (Timber value), *Dioscorea deltoidea*(Medicinal value), *Grewia optiva* (best fodder yielding tree of sub-tropical zone), *Olea cuspidata* (Fodder tree of sub-tropical and temperate zone), *Punica granatum* (Fruit edible having medicinal value also), *Quercus species*(Fodder value timber used for agricultural implements and fuel wood), *Rubina pseudoacacia* (Fodder value), *Trifolium pretense* (Red clover grass, good fodder value), *Trifolium repens* (white clover grass, good fodder value).

16.7 REGENERATION PROGRAMME

16.7.1 The success of any treatment given to the crop, depends largely on the efforts put in to regenerate the forests in due course of time. It is very difficult to regenerate these forests naturally, except in a very limited area where biotic interference is either minimum or absent. Almost all the forests are under heavy biotic pressure. The heavy uncontrolled and unrestricted grazing is one of the two main reasons for failure of the forest areas to regenerate. Every passing year, the areas deficient in young regeneration are expanding.

16.7.2 Effective closure and strict fire protection, till the regeneration is established are the two most important measures for the success of any regeneration programme. In most of the areas bearing scant crop, a mere effective closure along with adequate protection against fire will be sufficient to regenerate such area. The crop in such areas can be supplemented withartificial sowing or planting. The areas which are unlikely to respond to the close, should be taken up for direct sowing in patches and planting of seedling raised naked rooted/ polythene bagged plants.

16.8 NURSERY AND PLANTATION TECHNIQUE OF SOME IMPORTANT SPECIES

16.8.1. *Dalbergia sissoo* (shisham)

a. **Occurrence:** It occurs in sub-Himalayan tract upto an altitude of 900 meters.
b. **Seed:** The pods ripen from end of November to early January.
c. **Seed Weight:** It weighs 53 seeds per gram.
d. **Nursery Technique:** Seeds are sown in nursery beds in drills in February / March, if plantation is to be carried out in ensuing monsoon and in July when the plantation is to be carried out in next monsoons. During summer proper weeding and watering is carried out.

e. **Planting Technique:** The plants are planted in pits of size 45 cm x 45 cm x 45 cm at a spacing of 3 m x 3 m. In earlier stages it is sensitive to drought but at later stages it is drought resistant. It is a good coppicer and produce root sucker freely.

16.8.2. *Dendrocalamus strictus* (Bamboo)

a. **Occurrence:**It occurs in North India upto 900 meters; it is frost hardly and extremely drought resistant.
b. **Seed:** Seed ripen from April to June.
c. **Seed Weight:** It weighs 32 seeds per gram.
d. **Nursery Technique:** The seed is sown in nursery beds in drills made 15 to 20 cm apart in June and covered with soil lightly. The germination starts in a week. The 8 cm seedlings are transplanted in poly bags which contain mixture of farm yard manure (FYM) and Soil. Proper weeding and watering is carried out during summer.
e. **Planting Technique:** One year old poly bagged plants are planted in the field in pits of size 45cm x 45cm x 45cm at a spacing of 3cm x 3cm.

16.8.3 *Populus Species*

a. **Occurrence:** Popular is a genus mostly found in Northern hemisphere. It is fast growing, reproduce vegetatively and hybridize freely. It is a strong light demander and requires moisture.
b. **Nursery Technique:** Popular cuttings of about 20 cm in length are planted at of 80 cm x 60 cm in nursery beds in December – January and nursery beds are flooded with water. Periodically weeding and watering is carried out.
c. **Planting technique:** The entire plants with naked roots are planted in pits of size 45 cm x 45 cm x 45 cm at a spacing of 2m x 2m.

16.8.4 *Robinia pseudoacacia* (kikar)

a. **Occurrence:** It is native of North America and can grow at an elevation between 1500 to 2000 meters.
b. **Seed:** The seed ripen in the month of October-November.
c. **Seed Weight:** It weighs about 33 to 77 seeds per gram.
d. **Nursery Technique:** Seed is sown in Nursery beds by broad casting or in lines 20 cm apart. Depth of sowing should be about 1.5 cm. Germination starts in a week. Proper watering and weeding is done.
e. **Planting Technique:** After 8-9 months entire plants can be planted in pits of size 45 cm x 45 cm x 45 cm at a spacing of 2.5 m x 2.5 m and plantation area be closed for grazing.

16.8.5 *Aesculus indica* **(Horse Chest Nut)**

a. **Occurrence:** It occurs at an altitude between 1200 to 2700 meters in moist shady locations.
b. **Seed:** It ripens in September-November.
c. **Seed Weight:** It weighs about 640 seeds per kilogram.
d. **Germination Capacity***:* 70 to 90 percent.
e. **Nursery Technique***:* Seed sowing is done in shady and cool nursery beds. Sowing is done 5cm below the soil in drills 15 - 30 cm apart. Periodic weeding and watering is done.
f. **Planting Technique:** Seedlings with naked roots are transplanted during winter in pits of size 45 cm x 45 cm x 45 cm at a spacing of 2 m x 2 m in moist and shady areas.

16.8.6 *Terminalia chebula*

a) Artificial regeneration is generally brought about by sowing. The seeds are soaked in moist manure for 3-4 days, prior to sowing. Thereafter, sowing is done in mounds in patches or lines. Germination may take about three weeks or even more.

16.8.7 *Acacia catechu*

a) **Direct sowing:** Seeds are soaked for about 24 hours in water or kept in cowdung. Broadcast or line or patch sowings are carried out.

b) **Planting:** Six to eight month old Khair seedlings which have been raised in the nursery are transplanted in the rainy season.

16.9 COMPARTMENTS THAT NEED TO BE TAKEN UP FOR PLANTATION PROGRAMME IN REASI FOREST DIVISION

16.9.1 **Thakrakote Range**:
48a/Th,49/Th,50/Th,51/Th, 64/Th,65/Th, 52/Th,56/Th,59/Th
48b/Th,48c/Th,65/Th, 15/Th,16/Th,17/Th,48a/Th,49a/Th.

16.9.2 **Reasi Range**: 16/R,17/R,18a/R,18b/R,19/R,20/R,32/R,34/R,37/R,40/R,41/R,43/R 44/R,45/R,47/R,48/R,49a/R,50/R-55/R.

16.9.3 **Katra Range**:
11/J/K,12/J/K,33/U/K,95/K,87/K,9/J/K,23/U/K,76/K,
97/K,78/K,10/J/K77/K,85/K,90a/K

16.10 DETAILS OF THE AREAS TO BE TAKEN UP FOR PLANTATION YEAR WISE/RANGE WISE

Table 16.2

Thakrakote Range		
Compartment	**Area (In Ha)**	**Year**
48/Th,49/Th,50/Th,51/Th, 64/Th,65/Th	120	2015
52/Th,56/Th,59/Th	60	2016
48b/Th,48c/Th,65/Th	60	2017
15/Th,16/Th,17/Th,48a/Th,49a/Th	100	2018
18/Th,19/Th,64/Th,66/Th	80	2019
20/Th,21/Th,24/Th	60	2020
33/Th-36/Th	80	2021
48b/Th,49c/Th	20	2022
48b/Th,48c/Th,65/Th	60	2023
57/Th,58/Th,59/Th	60	2024
Total	700	

Table 16.3

Katra Range		
Compartment	**Area (in ha.)**	**Year**
11/J/K,12/J/K,33/U/K,95/K	80	2015
87/K,9/J/K,23/U/K,76/K 79/K	100	2016
97/K,78/K,10/J/K	60	2017
77/K,85/K,90a/K	60	2018
30/U/K,90b/K,97/K	60	2019
84/K,86/K,29/U/K	60	2020
80/K,95/K,30/U/K	60	2021
88/K,76/K	50	2022
83b/K,88/K	50	2023
12/J/K,23/U/K,92/K	75	2024
78/K,86/K,94/K,33/U/K	90	
TOTAL	745	

Table 16.4

Reasi Range		
Compartment	**Area (In Ha)**	**Year**
40/R,25/R,34/R	60	2015
37/R,18a/R,32/R	70	2016
41/R,18b/R,33/R	60	2017
43/R,17/R,35/R	70	2018
44/R,16/R,45/R	60	2019
45/R,19/R,47R	60	2020
48/R,17/R,32/R	70	2021
49a,20/R,49b/R	80	2022
50/R,19/R,51/R	60	2023
52/R,53/R,54/R,55/R	90	2024
Total	680	

CHAPTER-XVII

FOREST PROTECTION WORKING CIRCLE (OVERLAPPING)

CHAPTER-XVII

WORKING PLAN FOR FOREST PROTECTION WORKING CIRCLE (OVERLAPPING)

17.1 GENERAL CONSTITUTION OF WORKING CIRCLE AND CHARACTER OF VEGETATION

17.1.1 This Working Circle has been introduced for the first time as mandated by the National Working Plan Code. This shall be an overlapping Working Circle focusing on the areas which experience the outbreak of forest fires along with others issues like encroachments, illicit felling, illegal transport of forest produce, Uncontrolled grazing, pest and disease control.

17.2 SPECIAL OBJECTIVES OF MANAGEMENT

17.2.1 The major objectives are:-

a) To protect the forests against damage by fire.
b) To protect the forests from encroachments.
c) To prevent the illicit damage of trees
d) The prevent the smuggling/illicit transportation of forest produce
e) To protect the forests against the damage caused by pests and diseases.

17.3 PROTECTION AGAINST DAMAGE BY FIRE

17.3.1 Forest fires are common during summer months, especially in the Chir forests and cause considerable damage to the young regeneration. Even light fires in Chir areas destroy the recruits completely. Extraction of resin during summer months further aggravates the problem. Fire penetrates deep inside the living tissue through the wound made on the tree's pole for extraction of resin. This causes dehydration and end result is the death of the trees.In the forests subjected to annual fire, the soil becomes dry and its fertility declines. The intensity of soil erosion also increases in these forest types as the leaf litter and humus is burnt annually leaving the soil with a bare surface. The Oak forests adjoining Chir areas also affected by fire.

17.3.2 Almost all the fires are caused by human beings. At many places people set fire in order to get a good grass in the following season and also to extend their encroachment over the forest land.

17.3.3 Forest fires in the Division; especially in Chir forests are very common during the summer months. Perusal of the fire damage records provided by the Divisional Forest office indicates that fire incidences were reported, at least once, from all Chir bearing compartments during the period of 2000-01 to 2012-13. Therefore, it can be said that all Chir bearing compartments are vulnerable to forest fires.

17.3.4 However, it is not possible to undertake fire protection measures in all Chir bearing areas keeping in view infrastructural, budgetary and other resource constraints. It is therefore suggested that the department should concentrate its resources in some selected compartments where from frequent fire incidences have been reported in the past. . Because of all these reasons prevention and control of forest fire assumes great importance in Reasi Forest Division and there is an urgent need to take effective steps to counter the menace of forest fires, with the aim of:

a) Protecting forests from damaging fires by taking up all preventive measures like administrative, technical, social, legal etc.

b) Preparing adequately and taking appropriate action for controlling, suppressing and extinguishing forest fires, in order to minimize the loss caused by them;

c) Educating local people about fire damage and eliciting their cooperation in preventing, controlling and extinguishing fires.

17.4 PREVENTIVE MEASURES

17.4.1 **Education, Publicity and Involvement of The Local People**: As the majority of forest fires are caused by man's negligence or his deliberate action it is necessary to educate the people through the press and radio, posters, films, lectures, demonstrations and personal contact. The way to prevent deliberate fire is to deny the benefits of grazing in such areas. The provisions of section 7 of J&K Forest Act should be invoked to close burnt areas on demarcated forests for exercise of all rights and concessions so that it can act as a deterrent to the villagers. Efforts should be made to involve local people in fire protection works by forming Forest Protection Committees and giving them reward for their cooperation and assistance in organizing preventive measures. Before the beginning of fire season arrangement should be made to put up notices in all conspicuous places, in every village, in vicinity of forests and also on roads passing through or leading to forests, that kindling and carrying of fire in forests is prohibited. The staff should hold regular meetings with local villagers in their areas to create awareness.

17.4.2 **Early Prediction of Dangerous Days:** Record of temperature, wind speed and humidity should be kept and analyzed to predict dangerous burning days. A temperature above 37°c is considered to be critical, above which the possibility of outbreak of fire increases.

17.4.3 **Burning of Fallen Needles and Inflammable Material:** The most economical and the surest way to prevent fire is to burn the inflammable material such as fallen needles, wood, shrubs, grass etc. before the onset of the hot weather. This operation should be repeated twice before the commencement of hot weather. In Chir areas, control burning should be carried out every year in February before the start of resin tapping operation. If it is not possible to carry out control burning in the entire fire sensitive areas, a belt of sufficient width should be control burned around important natural regeneration areas and other hazardous areas such as road sides, camp sites or recreational sites.

17.4.4 **Control Burning:** The Chir forms a thick bark at an early age, by virtue of which it can resist the effects of slow fire and this property is of great advantage and development of control burning. The burning should be thoroughly planned and organized and should be carried out under the supervision of competent officials.

17.4.5 All the forests must be isolated by clearing a strip of 1metre width of all inflammable material, leaves, bushes etc. to act as fire barrier during the fire season. Grazing by cattle, should be permitted, in order to reduce inflammable material in the forests. It is most essential, that forests, allotted to Chir Working Circle are adequately protected against fire. The control burning is the most important operation and should never be neglected, the triennial programme for control burning is the most important operation and should never be neglected. The forest areas have been prescribed in full, however it is laid done that all the forest areas planted should not be controlled burnt, until the plants attain a height of 1.5 Meter, The detailed instructions on control burning are given under:

a) The control burning should always be done during winters in January-February.

b) Burning should progress from uphill to downhill in calm weather and special care should be taken, to keep the line of fire as straight as possible and under control.

c) The fire should start along the ridge, a cleared path or especially cleared lines.

d) Chir needles and other inflammable material should be fully raked to ensure through burning.

e) In forests under resin tapping, it must be ensured that all chips, fallen resin, needles, etc. are cleared about 1.5 m away from the base of the trees by the resin labourers.

f) Cleanings and early thinning in young regeneration areas must be completed before the control burning.

g) Burning shall be done always under strict supervision and control of the executive staff and shall never be left to the engaged labour.

h) The existing fire lines should be properly maintained and kept clear. The roads, bridle and inspection paths etc. must be kept clear of all inflammable material, so as to act as fire lines.

i) Sufficient number of trained fire watchers should be employed during the fire season to help the field staff and provided with necessary equipment's. No felling operations, even to the right holders, should be allowed during the fire season. It is, however, to be noted that areas under regeneration should not be control burnt, until the regeneration reaches a height of about 2.5 m. In such areas, however, the grass cutting/needle collection by right holders is encouraged.

ii) The control burning will also form a part of control forms and deviation reflected therein should be explained very clearly giving valid reasons. In order to protect the forests, against fire risk, burning, and to maintain the sanitation of the forests, the following guidelines/steps are laid down:

a) The inflammable/fire hazard material from the forests should be collected and disposed off during the winters.

b) The job should be got done preferably, through the regular forest workers of concerned ranges.

c) Collection of humus and other inflammable material should began by raking from top of the forest and working downhill.

d) Stacking in moderate heaps in open places or suitable Nallahs.

e) Burning the heaps downhill so that the smoke does not interfere with men working below and reduces the risk of fire.

f) Burning the heaps in rotation to reduce the heat.

g) Burning operation should be carried out under the supervision of forest guard concerned.

h) Steps should be taken to make it mandatory for right holders and Forest Corporation, to collect the felling refuse after felling trees into heaps or its removal from the forest should be specified.

17.4.6 **Fire Lines:** The existing fire lines be properly maintained and kept clear of all bushes, needles etc. to avoid any chance of fire, This Division has a very good network of State Roads, Link roads, bridle/inspection paths passing along or through the majority of forests. Hence, it is proposed that all such roads/paths and fire lines should be cleared off all inflammable material especially during the fire season, besides creation of temporary / permanent fire lines. On all the ridges and prominent spurs in Chir areas a 15 m wide fire line should be maintained.

17.4.7 **Restriction on Tarring of Roads:** During fire season, tarring of roads in forest areas should be banned, as P.W.D staff/labour burns fire underneath drums of bitumen leading to wild fires.

17.5 REMEDIAL MEASURES

17.5.1 Rapid detection is essential for quick suppression of fire. Vigil should be round the clock and for this at least three fire watchers are required to work in shifts of eight hours to man look out places on high ridges. The lookout observer should be equipped with binoculars, maps and record books. The occurrence of fire should be communicated to the headquarters quickly. . He should also inform the Sarpanch of the local Panchayat immediately, as well. In case of alarming situations, immediate help of various organizations like FPF, Army Cantonment Head Quarters, Fire Brigade, N.C.C., N.S.S. situated near the vicinity of each range can be availed.

17.5.2 A Vehicle fitted with wireless set should be maintained at control/station to rush firefighting crew to the spot. Tools required for firefighting like sickles, axes, spades and iron rakes should be arranged in sufficient numbers. It is suggested to have one firefighting station at each Range headquarter. Each station should be equipped with fire extinguishers, axes; iron rakes sickles and a gang of laborers for the purpose of extinguishing fire.

17.5.3 To mobilize local man power provision of section 48 of J&K Forest Act should be invoked.The labour force should be organized in sections of suitable strength each under the order of one man and given definite task. A couple of men should be kept in waiting to take messages and instructions to the various sections. In case the fire goes beyond control, it is necessary to localize it by counter firing.

17.5.4 Counter fire should only be done under order of a senior officer in charge of operations and attempted from a defined line such as road or ridge or fire line. A line is formed along the ridge by clearing the forest floor and cutting bushes and from this fire is started, so as to consume the fuel in advance of the oncoming fire. Wind direction and gradient should always be kept in mind, while counter fire. Roads/Paths are useful, provided, enough manpower is present. After the fire has been brought under control, the shouldering stumps should be extinguished by putting the dug earth on them and strict vigilance be kept till all dangers of fire spreading are taken care of.

17.5.5 Arrangement for the transport of food; water and adequate firefighting tools are essential. The rolls of right holders, who helped to fight the fire, should be kept in record, so that the rights of defaulting right holders can be suspended.

17.6 FIRE REPORT

17.6.1 After the fire is extinguished completely the burnt area should be surveyed and a map of the burnt area should be prepared on a scale of 1:50,000 and area computed. The cause of the fire should be investigated and damage assessed in detail. Then the fire report along with the map of the burnt area should be submitted to the Divisional Forest Officer, mentioning name of Block and Compartment in which the fire incidence took place. It should also include the correct area damaged by fire, cause of fire and the efforts made to trace the offender, if any.

17.7 LEGAL PROVISION

17.7.1 J&K Forest Act have two types of provisions viz.:-

a) For those who set fire to or kindle or carry fire in a demarcated forest area, and
b) For those who are bound to assist in extinguishing fire but do not discharge their duty.

17.7.2 The provision of section 6a & b of J&K Forest Act should be invoked to deal with the first category of offenders and section 49 for the second category of offenders. Section 50 of J&K Forest Act empowers the Deputy Commissioner to take summary action in fire cases. At the time of fire in a forest, the attendance of Zamindars who assemble to put it out should be marked on the spot and a certificate of attendance to be given to those present (Section 8 of Jammu Notice). A list of absentees should be prepared then and there.

17.8 PROTECTION OF FOREST LAND FROM ENCROACHMENT

17.8.1 Encroachment of forest lands is the single biggest cause of destruction of forests and is formidable problem in the State. It is a common tendency of the people living either on the outer boundary of demarcated forests to displace or altogether remove boundary pillars to grab as much forest land as possible for cultivation.

17.8.2 Encroachment is done in a very surreptitious and planned manner. Firstly the standing trees are removed by illicit felling or killing them by girdling and burning. This is the first indication of encroachment. Then the area is ploughed and some agricultural crop is raised. This goes on for some years. Often the encroacher in collusion with the *Patwari* gets the piece of land recorded in his name in revenue records. If the area is large, the encroacher makes a hut as well to live in it.

17.8.3 The absence of clearly demarcated boundary line is the most important factor responsible for encouraging encroachment. In such a state of affairs, the Forest

Guard responsible for protection does not exactly know as to where the boundary line is. The lack of proper inspection of boundaries adds another dimension to the problem of encroachment. Absence of footpath along the boundary makes inspection of the boundary more difficult.

17.8.4 The condition has deteriorated to such an extent that the Range Officers do not exactly know the number of encroachments in their range and the area involved.Absence of alternate employment for the land less or the people with very little land are the other factors responsible for encroachment. Delay in the detection of offence compounds the problem as it becomes difficult to prosecute the offender.

17.8.5 The process is still going on without fear. The net result is the shrinkage of forest land. Because of poor condition or the absence of demarcation line, it was not possible to make any estimate regarding forest area under encroachment. However major portion of the forest blanks around habitations are possibly under encroachment. The territorial staff should initiate the following preventive and remedial measures to identify and evict the encroachments.

17.9 PREVENTIVE MEASURES

17.9.1 The following preventive measures should be taken to reduce the chances of encroachment:-

a) The forest areas near to the habitation which are highly vulnerable to encroachments with missing Demarcation files and boundary pillars are to be taken on priority for the reconstruction of boundary pillars and the demarcation files on war footing.

b) In most vulnerable areas Toe wall fencing/ Chain link fencing needs to be erected.

c) On the boundary serially numbered RCC pillars should be erected in such a way that the boundary between two successive pillars is a straight line and they are visible from one another. The description in Form-1 should give bearing from one pillar to the next and its distance. The boundary should be properly inspected by the Forest Guards at least twice a year, by Block Foresters at least once a year and the Range Officer must annually inspect one fourth of the boundary of his Range. The Range Officer should further submit a consolidated report on the basis of the inspection to the DFO.

d) The DFO should as far as possible also inspect the boundary. Drastic action should be taken against defaulting officials. In order to ensure that inspection is regulary done, the difficulties of the staff in carrying out inspection should be removed by adopting the following measures:-

I. The area of the beat should be so much that Forest Guards should be able to inspect the boundary at least twice a year after attending to all other works

II. To enable the Forest Guards and other staff to inspect the boundary an inspection path should be constructed all along the boundary. It will act as a deterrent for possible encroachment

17.10 REMEDIAL MEASURES

17.10.1 In order to get the encroached land vacated the following remedial measures should be adopted:-

17.10.2 The cases of encroachment should be promptly detected. The forest Guards should immediately report the matter to his superiors who must take steps to inquire about the case and prepare a final report. Often the report of encroachment comes in the form of a complaint to some senior official. Because of the extreme miserable condition of the demarcation line, the Forest Guard does not know where exactly the boundary line is. In this situation, the Range officer usually writes to the revenue officials to ascertain, whether the land in question is a forest land or not. In this process a great delay is caused in initiating any action against the offender. For prompt detection of the offence, the boundary line should be districts and the records pertaining to the forest land should be complete in all respects. If the offender does not vacate the land, the case should be sent to the court within a month of detection.

17.10.3 Any person encroaching upon the forest land or any person who erects a fence of an enclosure of any sort for cultivation or any other purpose should be prosecuted under section 6(f) of the J&K Forest Act. If the boundary pillars have also been altered or damaged the offender should be prosecuted under section 6(f) and or Section 35(c) of the J&K Forest Act.

17.10.4 The sub- section 1 of section 48-A of J&K Forest Act empowers the Forest Officer not below the rank of DFO, to evict the encroacher, provided that the person supposed be evicted is given reasonable opportunity of showing cause as to why such order should not be passed. Any person aggravated by an order of the Forest Officer under sub-section1 of section 48-A may, within such period and in such manner as may be prescribed, appeal against such an order to the Government Vide Forest Department Notification SRO 778/dated 1st November 1972. Government has made the provisions of section 48-A of J&K Forest Act applicable to the whole State. Vide Forest Department Notification SRO 777 the Government has authorizes the Chief Conservator of Forests to hear the appeal against the eviction order of DFO.

17.11 PROTECTION AGAINST ILLICIT DAMAGE

17.11.1 Illicit damage of trees is caused by locals to either meet their domestic requirements or smuggle the timber to cater to the ever increasing timber market of the cities. No reliable data is available regarding the extent of the menace.It is the lack of willingness on part of everyone concerned, which has resulted in the sorry state of affairs. No effort has been made to stiffen the spine of Forest Guards. It is ironic that Forest Guards do not have a head-quarter in their beats. Most often they keep shuttling from their home place. This has resulted into poor patrolling of the forests. Since the Forest Guards have not been provided with weapons to defend themselves, it makes them vulnerable to threat from smugglers. Poor infrastructure of the department compounds the problem of forest protection. The illicit damages are confined to forests situated at fringe areas and its impact is more in the areas adjoining the thickly populated villages and least in the deep Forests. The Broadleaved trees are illicitly felled for firewood purpose. Oak trees are heavily lopped for fodder purpose.

17.12 PREVENTIVE MEASURES

17.12.1 The following preventive measures should be taken to reduce the chances of Illicit damage to the forests:-

17.12.2 Intensive patrolling of the area.

17.12.3 The important compartments with species of high economic value such as Deodar forest and other forest which are prone to illicit damages should be listed up. These compartments should be periodically checked by Divisional Forest Officer / Range Officer.

17.12.4 The combing of forest compartments prone to illicit damage by specially formed squads of territorial field staff and Forest Protection Force periodically.

17.12.5 Concentrated efforts have to be made to the misconception of the villagers who think of forests to be an un-exhaustible natural resource. By constant publicity they need to be explained that the illicit felling wood eventually decrease the forest cover to a large extent in course of time which will have an adverse impact on their prosperity.

17.12.6 The goodwill of people has to be earned, as mere publicity of the advantages of forests will not help. This goodwill of the people can be earned, by easy and quick supply of forest produce in form of rights and concessions and meeting the genuine demand of villagers.

17.12.7 The illegal activity should not be encouraged as a mean of livelihood.

17.13 REMEDIAL MEASURE

17.13.1 The remedial measure involves legal action against the offender as per the J&K Forest Act.

17.14 PROTECTION AGAINST THE DAMAGE CAUSED BY PESTS & DISEASES

17.14.1 The pests and diseases form an important part of biotic factors affecting forest tree species. They cause damage to forest trees and also to the seedlings in nursery. Usually forest managers ignore the pests and disease. But the recent epidemics of Sal borer in Madhya Pradesh and Deodar defoliator in Himachal Pradesh are stern warnings to forest managers. It is very important to monitor forest pests and diseases in each division. In nurseries and plantations the insect pests causes serious damage and is a common occurrence every season. The negligence leads to loss of precious resources and time. In Reasi Forest Division Insect attack is not so common in this Division.

17.15 CONTROL MEASURES

17.15.1 The following control measures can be taken to prevent the damage:-

17.15.2 **Silvicultural Control:** It involves right choice of species, crop composition, thinning, hygienic fellings and fire.

17.15.3 **Biological Control**:-

i. By use of natural enemies of pests and insects

ii. By use of species which improve environmental resistance to pests. This method consists of release of parasites and predators which feed on the insect pest.

17.15.4 **Mechanical Control** – It involves

i) Hand collection and destruction

ii) Trapping

17.15.5 The disease management is nothing but the selection and use of appropriate techniques to suppress diseases to a tolerable limit. The management aims at increasing productivity and reducing cost of production. The main management practices employed for the control of forest diseases are. Quarantine regulations choice of planting site, sanitation, removal of alternate hosts, silvicultural and other cultural practices, solar sterilization, chemical control measures and use of resistant plant material, species, choice

17.15.6 **Chemical Control**: - Involves the use of chemicals to kill the pests.

Table 17.1

S.No.	Name of the Post	Control Measures
1	Chirpine defoliator (*Lebeda nobilis*)	Aerial spray of fenitrothion @ 1 liter per hectare.
2	Termites (Sissoo, khair, Siris, Phulai etc)	Spray seedling, young plants with 0.0.2% Aldrin or HC in water or incorporate 300 g of 1% dust per cum soil at the time of planting.
3	Chafers	Dipping roots of seedlings in 1% Aldrin before planting
4	Poplar defoliators (*Pygaera species*)	0.1 % carbyl or fenitrothien or 0.04% enclosulton in water should be sprayed on leaves.
5	Sissoo defoliater (*Plectoptrera reflexa*)	0.1 % carbyl or fenitrothien spray on foliage.
6	Semal shoot borer (*Tonica Niviferana*)	Young plant should be sprayed with systematic insecticides like Rogar bidrin

17.16 COMPARTMENTS OF REASI FOREST DIVISION THAT NEED SPECIAL FOREST PROTECTION MEASURES

17.16.1 ***Thakrakote Range****:* 1a/Th,1b/Th,1c/Th,2/Th,3/Th,4,th,5/Th,6/Th,7/Th,8/Th,9/Th.

17.16.2 ***Reasi Range***: 68/R,69/R,70/R,71/R,72/R,73/R,75/R

17.16.3 ***Katra Range***:87/K,93/K,94/K,95/K,96/K,97/K,76/K,77/K,79/K,80/K,83a/K,83b/K.

CHAPTER – XVIII

PASTURE LAND DEVELOPMENT

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PASTURE LAND DEVELOPMENT

18.1 GENERAL DESCRIPTION OF INCIDENCE OF GRAZING

18.1.1 There are large number of cattle including Sheep and Goats grazing in these Forests, thus seriously inhibiting the regeneration of the Forests.

18.1.2 The incidence of grazing in the Forests of this Division is roughly estimated on the basis of the total number of livestock grazing in these forests.

18.1.3 An area of two hectares is considered suitable for each animal of carrying capacity of these forests. Following conversion factors are adopted for working out animal units:

Table 18.1

1	Cattle (Cow/Ox etc.)	1 Animal cattle unit
1	Calf (less than one year old)	½ Animal cattle unit
1	Horse or pony	1 Animal cattle unit
1	Sheep or Goat	1 ½ Animal cattle unit
1	Buffalo	2 Animal cattle unit
1	Others	1 Animal cattle unit

18.1.4 The total area of this Division is 45039 ha. The carrying capacity works out to be 23000 Animal cattle unit. Against these the grazing incidence of livestock population as per livestock census the year 2007-08 collected from animal Sheep and Wood Husbandry Department is given as follows"

Table 18.2

S.No.	Category of live stock	Number	A.C.U.
1.	Cattle	171596	171596
2.	Buffalo	114149	228298
3.	Sheep	205117	307675
4.	Goat	180576	270864
5.	Others	64406	64406
Total:		**735844**	**1042839**

18.1.5 Thus it is seen the forest area to the tune of 23000 animal cattle units is to afford the livestock population of 1042839 animal cattle units with a pressure of about 45 times more than the optimum grazing incidence. This comparison make it obvious that the forest of this division have been heavily grazed beyond their

carrying capacity. The livestock includes large number of sheep and goat whereas the major portion of remaining population is made up of unproductive cattle. The area suffering from soil erosion even if closed and planted for soil and water conservation, is likely to be abandoned because of excessive incidence of grazing.

18.1.6 As already discussed that the grazing in these forests has been unrestricted, uncontrolled and unscientific with the result many forest area have lost their inherent capacity of carry even optimum number of grazing animals. Hence these areas need rest from grazing for some time.

18.2 DISTRIBUTION OF AREA

18.2.1 The compartment wise distribution of area under scrub, other blanks and rocky stony waste land has been indicated in area statement of the respective working circle. However the Range wise abstract of the area under the above categories is reproduced as under:

Table 18.4

S. No.	Range	Area in Hectares		
		Scrub	Blanks	Total
1	Katra	32.37	2116.86	2149.23
2	Reasi	737.31	2301.32	3038.63
3	Thakrakote	982.98	3004.71	3987.69
Total		**1752.66**	**7422.89**	**9175.55**

18.3 MEASURES PRESCRIBED

18.3.1 For better management following measures shall be adopted:

a) Extensive study on scientific lines and coordinated effort on behalf of Forests, Animal and Sheep Husbandry, Agriculture (Agrostology), Horticulture, Forage development and biological sciences (University) departments, together with representatives of graziers have to be formulated.
b) A detailed Survey of these grass lands should be conducted to know their present condition trend and future potential. The proper grading of these areas should be done. So that every site receives the best scientific treatment, it needs.
c) Research-cum-demonstration should be introduced on rotational closures and regulated grazing.
d) Carrying capacity of these areas should be increased by adding fertilizers and introducing leguminous species, forge producing species.
e) Local people would have to be motivated to join the programme of cattle improvement stall feeding rotational grazing etc. also for raising grasses and fodder yielding tree species on their private lands.
f) All efforts should be made to culminate the uneconomical cattle by encouraging the introduction of better varieties of the cattle and castrations of the scrub types of cattle.

g) Grazing fee should be revised and raised in order to persuade the local people to reduce the cattle by discarding useless cattle.
h) The pasture lands at present require much intensive management on scientific lines for the overall betterment of the forests.

CHAPTER XIX

MISCELLANEOUS REGULATIONS

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MISCELLANEOUS REGULATIONS

19.1 FOREST DEMARCATION

19.1.1 The demarcation boundaries of these forests are mostly non-existent. Most of the boundary pillars have been removed and displaced by the local villagers as a result of which demarcation pillars line is not existing over large tracts. Hence it is impossible to locate and identify the boundary line of these forests. One reason for this is the irresponsible attitude of the sub-ordinate territorial staff towards maintenance of the demarcation line.

19.1.2 The State Forest Department should give top priority and right attention at all the levels of territorial staff. The beat guard while on its routine visit should attend to this job as well. He should do the minor repairs if any on spot and also report the matter to his Block Forester. The block forester should conduct the inspection of such spot on priority basis and submit the report to Range Officer with his recommendations. The Range Officer should study the case on spot and make the purposeful decision regarding future course of action. The maintenance of the "following return" should form a part of the Animal Report submitted by the Range Officers.

Table 19.1

Total length of boundary line in Kms.	Total No. of boundary pillars	Total length boundary checked in Km.	Total No. of pillars repaired or replaced	Remarks & suggestions etc

19.1.3 It is recommended that fresh demarcation should be conducted and permanent masonry (cement concrete) boundary pillars erected. The demarcation division should take work in this division or special funds be allotted to territorial division. It is also recommended that at the time of handing over the charge of a beat the beat guard should only be relived after physical verification of boundary pillars and by taking (noting) the number of these boundary pillars on the guard book.
Beruneline Forests which have not been demarcated as yet should also be demarcated, in consideration with the Revenue Department and mutated in favour of the Forest Department.

19.2 FOREST ENCROACHMENT

19.2.1 The Forests of this division are under a great pressure of encroachments. The encroachment is heavy around the 'Chaks'. Increase in population of Human beings as well as animals are the main cause of encroachments. Low productivity of agricultural fields and land hunger are the other reasons. The other factors responsible for this encroachment upon Forest Land are:

a) The lack of proper boundary inspection and thus delay in detection of cases of encroachment.
b) Absence of alternative employment for landless or the people with very little land.
c) No clear policy of Govt. and other legal difficulties.
Some encroachments have taken place under the grab of growing more food programmes.

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

19.2.3 The other legal difficulty is that even after the detection of encroachment and prosecution of offender in the Court of Law, he continues to cultivate the land and from its earning. Keeps on pursuing the case in the Court. Thus he does not lose anything even if he pursues the case for several years.

19.2.4 In order to minimize the incidence of encroachment the sub-ordinate staff should inspect the boundary regularly. In case any encroachment is detected, it should be immediately reported to higher authorities so that prompt action is taken against the offenders.

19.2.5 Any attempt for fresh encroachment should be dealt with heavy hand. The RPC has now been amended and a new section 447-A added which lays down two years rigorous imprisonment as maximum punishment for such offences. The offence under section 447-A is also cognizable by police. The Forest Conservation Act needs to be enforced.

19.2.6 It is suggested that the small chaks inside the Forest should be taken over by Forest Department and the displaced people can be given land on the periphery of the forests. Some peripheral forest area suitable for agriculture can be cleared and allotted to the people evicted from the forest. All this will mean drastic changes but in the end is the only solution. Hence it will involve land reforms. Fresh settlement forest boundaries, rehabilitation of the landless and fresh demarcation of forests. It is as such recommended that the Govt. should take up this matter on priority basis.

19.3 FIRE PROTECTION

19.3.1 Protection against fires is one of the most important needs of the forest area. The chir forest falling in the sub-tropical zone is highly susceptible towards catching fires especially during the long dry spells in summer as well as autumn. The regeneration of Chir forests in this division is very much dependent upon a strict fire conservancy especially in area where the crops open with inadequate established regeneration. For this purpose, the various measures including maintenance of fire lines, control burning etc. as already recommended under Chapter VIII Para 8.12 of this plan should be implemented vigorously.

19.4 FOREST ILLICIT DAMAGE

19.4.1 With the rapid rate of urbanization, increase in population and standard of living of the people there has been corresponding increase in the demand for the timber and fuel wood resulting illicit damage. The incidence of illicit damage can be minimized by granting liberal timber concessions to the local and making timber available at reasonable rates in the open market in the division.

19.5 TIMBER AND FIREWOOD REQUIREMENT OF THE LOCAL POPULATION

19.5.1 With the increase in population and the pace of development, the needs of the people in respect of food, fodder for the livestock, timber for housing and agricultural implements and raw material for various agro based and forest based industries has increased many folds. The gap between demand and supply is widening year by year.

19.5.2 The annual timber and firewood requirement from forests of Reasi Forest Division have been estimated vide para 3.1.9 to 3.1.12 chapter III of this plan. The timber requirement is approximately 19200 cubic meters and firewood requirement is 900000 Qtls. annually from forest area of fallen dead trees only. It is recommended that timber for the concessionists should be granted liberally from the nearest area subject to availability. The requirement should be meet out of dry fallen dead trees only. If these trees are not available then silviculturally available trees will be issued to the concessionists.

19.5.3 No marking will done for firewood and brick and charcoal kiln. Timber should be issued to the needful inhabitants of Katra, Reasi, and Pouni etc. in B Class concession rates from forest timber depots. The local population be allowed to fulfill their requirements of firewood as usual from the available dead and dry material having least timber value.

19.5.4 In the meantime the people should be encouraged, guided, technically helped by distributing free seedlings for raising of fuelwood, fodder and other suitable species on all the available Govt. land and their private land for meeting their

own needs under the implementation of Social Forestry, energy plantations and Agro Forestry, village wood lot, waste land development programmes etc. The locals should get their share through committees as per law.

19.6 FOREST CLOSURES

19.6.1 The area under regeneration and plantation will have to be closed against biotic interface such areas have been suggested in the chapter VIII, IX, XI, XII, effective and strict vigilance should be observed.

19.7 SOCIAL FORESTRY

19.7.1 In order to lessen ever increasing pressure of human and animal population for their multifarious demand of fuel, fodder, food and timber etc. On the conventional forests the various Social Forestry programmes of extending the tree cover on the conventional forests and mostly on Non-Forests area including agricultural lands, wastelands and strip along the road side etc. can play an important role. The Social Forestry Scheme is already under implementation in this division and has taken Forest and Non Forest areas for planting.

19.7.2 In order to realize full benefit of Social Forestry a complete package of technology needs to be developed for various agro-climatic zones taking into consideration the needs and customs of the local population. It, as such, requires multi-disciplinary approach and research efforts of the specialists from various disciplines like Agronomy, Extension, Soil Science Forestry, Horticultural economic and Social Sciences.

19.8 M.F.P. DEVELOPMENT

19.8.1 A general description of the Minor Forest Produce found in the division has already been given in Chapter III. The division has considerable potential for the development of the MFP resources. It is recommended that MFP cultivation should be taken up immediately on the suitable site available throughout the division by the M.F.P Project.

19.8.2 The following suggestion are made in this regard:

a) Proper schemes need to be drawn up for artificial as well as natural propagation of Minor Forest Produce and medical herbs.
b) The technique for cultivating, harvesting and storage of the Minor Forest Produce and medicinal plants needs to be developed.
c) There is an urgent need for amending The Kuth Act to promote the cultivation of medicinal plants covered under Kuth Act in the private farms

19.9 FOREST NURSERIES

19.9.1 The detail of existing nurseries in the division have been already discussed. Reasi territorial Forest Division has about 8 ha area under nurseries having plant potential of about 4 lac plants per year. The nurseries for Deodar, Kail and Bunj Oak, Moru Oak shall be preferably raised in their own altitudinal zones. The nursery journals shall be properly maintained and all operations done in a nursery shall be entered in the nursery journal.

19.9.2 Important points to be kept in view for selecting new nursery site.

a) The nursery should be established keeping in view the future availability of area to be planned and funds required for such plantation in advance. There is no use in raising huge planting stock in the nursery if these are not planted in time in the field for want of funds and proper planning.
b) The suitable site for raising nursery should be selected as near to the area to be planted as possible.
c) The seed having origin from genetically superior trees should be used.

19.9.3 Some of the sites near the vicinity of which nurseries should be established preferably inside the closures or near the plantation sites to cope up the various plantation schemes under the plan are mentioned as under:-

Table 19.2

Range	Nursery site	Compartment.
Reasi	Ladha	57
	Sukhalghati (Thalwal)	60,61
	Sirmega	26
	Sugandhar	18
Thakrakote	Thandapani Between Co. 52&54(a) At the bifrucation boundary of	48a & 48b, 5
	Chakalsatha	4
		23, 25
	Panigali	17,18
Katra	Sukhalgali	25
	Between	
	Base of	21

19.10 SEED DEVELOPMENT

19.10.1 The seed development division should established seed production areas and candidate plus trees for seed collection in this division. Following type of seeds production areas should be given preference.

Table 19.3

Range	Type of seed Orchard	Compartment No.
Katra	*Anogeissus latifolia*	81
	Dalbergia sissoo	83a
Thakrakote	*Quercus leucotrichophera*	3
	Pinus roxburghii	50

19.11 FOREST RESEARCH

19.11.1 The Forest Research Division should establish artificial plantation research plots. In case of inconvency by Research Division the funds be allotted to territorial division for such activities. Following type of artificial plantation research plots should be given preference.

Table 19.4

Range	Type of research plantation plot	Compartment No.
Reasi	*Cedrus deodara*	Co. 51, 54, 55, 56, 18a,18b,19,20,21
Katra	*Cedrus deodara*	Co. 26 UK.
Reasi	*Quercus dilatata*	Co. 51, 54, 55, 56
Tkt.	*Quercus dilatata*	Co. 17 & 18
Katra	*Tectona grandis*	Co. 77
Katra	*Shorea robusta*	Co. 77

19.11.2 DFO Research should initiate action on preservation plots in the representative areas to provide the statistical data regarding crop.

19.12 METEOROLOGICAL DATA

19.12.1 Rain gauge apparatus should be installed at Katra, Reasi, Pouni Chinkah and Tote etc. Besides maximum and minimum thermometers should be maintained at these places.

19.13 SOIL CONSERVATION

19.13.1. In this division the problem of soil erosion is gaining momentum day by day. The more vulnerable areas are the foot hill the main reason for soil erosion is fact reduction in tree cover, unchecked spread of cultivations over the encroached slopes and faulty method of agriculture being followed. In case of high, steep and precipitous mountain slopes the main reason for soil erosion are the unfavorable climatic conditions.

19.13.2. The erosion prone areas of the tract have already been identified in the previous Chapter of this Plan. There treatment has also been prescribed as per their needs under Rehabilitation and Protection Working Circle. In addition to above retaining walls and breast walls shall be constructed along the roads, wherever needed. A separate Directorate of Soil Conservation has already been created for the

purpose of preparing the Soil Conservation Schemes on watershed management basis.

19.14 COMPARTMENT BOUNDARIES

19.14.1 Fresh divisional, range, compartment and sub-compartment boundaries have been delineated in the field in accordance with the conventions. The territorial field staff should look after (preserve) the lay out boards and coal tar rings on boundaries so that they are not disfigured, erased or tempered. The field staff should repair/renovate the same if needed in future.

19.15 MAPS

19.15.1 The following maps have been prepared.

a) Stock maps for each compartment/sub-compartment for all the three Ranges Katra, Reasi and Thakrakote.
b) Consolidated stock map for the Reasi Forest Division (digitized).
c) Consolidated management map for the Reasi Forest Division (digitized).
d) Separate management maps of each working circle.
e) Density classification map.
f) Digitized map of G.T. sheets.

19.16 COMPARTMENT DESCRIPTIONS

19.16.1 Three sets of compartment descriptions have been written up for each compartment and sub-compartment separately, are being submitted, with the draft plan for the reference and record of Conservator of Forests, Working Plan & Research Circle, Divisional Forest Officer and Range Officer. Three extra blank leaves are appended with each compartment/sub-compartment descriptions for maintaining year wise record of the major happenings that shall be taking place in compartment/sub-compartment during the currency of this Plan.

19.20 WORKING PLAN DRAFT

19.20.1 The draft of the Working Plan is being submitted in duplicate.

CHAPTER XX

FINANCIAL FORECAST AND COST OF THE PLAN

CHAPTER – XX

FINANCIAL FORECAST AND COST OF THE PLAN

20.1 FUTURE REVENUE

20.1.1 **Timber:** No timber yield has been prescribed from this division for the plan period hence no revenue will be possible from timber.

20.1.2 **Resin:** No resin yield has been prescribed from this division for the plan period hence no revenue will be possible from resin for a period of at least next 10 years.

20.1.3 **Miscellaneous:** Revenue on account of grazing, grass and fodder, other MFP's compensations, fires and other miscellaneous items is expected at Rs.45.00 lakh. The year wise revenue of Reasi Forest Division has been given in Chapter V Para 5.13. However Revenue of Reasi Forest Division for the year 2013-14 was Rs2440.90 lakh.

20.2 FUTURE EXPENDITURE

20.2.1 The estimated expenditure of Reasi Forest Division for next 10 years (keeping in concentration the escalation involved) is worked out as under:

Table 20.1

Items	Amount (in Lacs)
Salary, TE, OE, POL, Buildings, Firewood, Timber, Miscellaneous	4104.8

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

20.2.3 **Future Expenditures over next 20 years for forestry development schemes**

a) For Protection & Rehabilitation Working Circle (60% of the total area to be treated)

Table 20.2

Component	Area in hectares	Average expenditure per hectare (in Lacs)	Amount required (in Lacs)
Artificial Regeneration (AR) @ 20% of the working circle's area	7070	1.00	7070
Aided Natural Regeneration (ANR) @ 20% of the working circle's area	7070	0.45	3182
Silvicultural Operation @ 20% of the working circle's area	7070	0.25	1768
Total (60% of the total area)	**21210**	--	**12020**

b.For Oak Working Circle

Table 20.3

Component	Area in hectares	Average expenditure per hectare (in Lacs)	Amount required (in Lacs)
Artificial Regeneration (AR) @ 30% of the working circle's area	1953	1.00	1953
Aided Natural Regeneration (ANR) @ 20% of the working circle's area	1302	0.45	586
Silvicultural Operation @ 10% of the working circle's area	651	0.25	163
Total (60% of the total area)	**3906**		**2702**

20.2.4 **Hence total expenditure =23130 lakhs (including Rs. 8408 lakhs for miscellenous purposes and Rs. 14722 lakhs for forestry purposes over 20 years)**

20.2.5 The year wise expenditure of Reasi Forest Division has been given in Chapter V para 5.13. However expenditure of Reasi Forest Division for the year 2013-14 was Rs. 2440.90 lakh.

20.2.6 Thus for future management estimated expenditure is almost three times than the estimated revenue of Reasi Forest Division. As Salal Hydro Electric Project situated at Dhayangarh and Mata Vaishno Devi Ji Shrine located in Trikuta hills also fall in Reasi Forest Division and these are improving the power and economy especially of J&K State respectively.

20.2.7 In this Working Plan care has been taken of intengable indirect benefits of Forests to conserve out climate, soil, water, flora and fauna. As these indirect benefits of Forests together with their recreational values are difficult to quantify.

20.3 COST OF THE PLAN

20.3.1 The expenditure incurred on the revision of the Working Plan of Reasi Forest Division is 26.43 lakh rupees. Total area covered = 45039 hactare. The total expenditure per hectare works out to Rs. 58.68 out of which Rs**.**

CHAPTER XXI

CONTROL

CHAPTER – XXI

CONTROL FORMS

21.1 The following current control forms are prescribed for maintenance.

21.1.1 Control form 'A' to be maintained for major markings and all other subsidiary markings in the regeneration Block of Chir Working Circle .In this form volume marked and prescribed yield shall be noted and the plus minus account shall be shown in the annual abstract. The balance shall be brought forward or carried forward or carried forward as the case may be.

21.1.2 Control Form 'B'. It shall be maintained for thinning cum improvement fellings in the unallotted block of the Chir conversion Working Circle.

21.1.3 Control form 'C' to be maintained for the record of progress of regeneration works in respect of areas taken up for artificial regeneration. Such areas are to be written off from this form only after they carry adequate and established regeneration with the formal approval of the Chief Conservator of Forests.

21.1.4 Control Form 'D' This shall be submitted annually by the territorial Divisional Forest Officer to the Conservator of Forests, Working Plan & Research Circle giving proposal for futures markings/ resin tapping in the Forests for next three years. Markings/Resin tapping shall be done only if the control Form 'D' is sanctioned.

21.1.5 Control Form R may be designed in the Working Plan and Research Circle for maintaining resin tapping.

21.1.6 Control Form A & B be maintained only if the emergency fellings have to be carried out from this division.

21.2 COMPARTMENT HISTORIES

21.2.1 These are in fact the most important records of all the important events that happen in each compartment. Thus each year after carrying out each operation in a particular compartment Range Officer, shall in his own handwriting briefly record in the compartment history books a details of the operation conducted sign it and send an extract copy to the Divisional Forest Officer. The Divisional Forest Officer shall prepare the compartment histories on the basis of information received from the Range Officer as above. It is better to write no work done then to leave the space blank particular compartment against that year. The DFO shall be complete in all respects and shall send copies of the same

annually to Conservator of Forests, Working Plan & Research Circle for his reference and record.

21.3 DIVISIONAL JOURNAL

21.3.1 The Divisional Forest Officer will maintain a "Divisional Journal" in which he will record all the important information pertaining to the Division. Among other things it shall contain information regarding regeneration/ plantation, Soil Conservation Works e.g. area planted each year their success failure reasons there of statistics & out –turn of age/volume relationship by ring counting sample plots, plus trees, Forest fires, record of sale rates timber and other Minor Forest Produce suggestion for future working. Seed years diseases, insect or fungal attacks, out- turn of timber, fuel wood, resin roads, bridges, buildings, meteorological data and problem data and problem of the division etc. On the analogy of the Divisional Journal, record must be maintained at Range and Block levels.

21.4 PLANTATION JOURNALS

21.4.1 A separate plantation journal is to be maintained for each plantation. It will include in it the map of the area, area fenced, type of fencing used, and length of fencing in running meters. No. of fence posts, area planted each year. No. of seedlings (species wise) planted. No. of patches (specie wise) sown, quantity of seed (species wise) sown, and other rehabilitation works under taken besides expenditure incurred year wise. The survival percentage of the plantation should be recorded in the said journal with the detailed reasons of failure, if any. The plantation journal will be maintained by the concerned Range Officer. Any officer visiting/ checking the plantation should record his observations in the plantation journal.

21.5 GUARD BOOKS

21.5.1 Guard books are to be maintained by the beat guards and should contain enlarged map of the beat, compartment numbers and chaks, number of boundary pillars. The beat guards should maintain a detailed record of the illicit damages in this book and send a copy of the same to the Range Officer for necessary action. The Guard books must be maintained properly checked frequently by the Range Officers at least once in a month and by the DFO at least once in six months.

CHAPTER-XXII

SUMMARY OF PRESCRIPTIONS

CHAPTER - XXII

Summary of Prescription

S.No.	Prescription		
1	**Protection cum Rehabilitation Working Circle**		
	Total area of the Working Circle = 35352.79 hectares	10.3	
	Total number of Stems per hectare (mean value) = 88.45	10.6.1	
	Total number of stems = 3126954/1411637	10.6.1	
	Total volume of Conifers per ha. = 31.78 cum	10.6.2	
	Annual Yield = Not prescribed	10.8	
	Size of Annual Coupe = NA	10.8	
	Felling Series = NA	10.8	
	Allowable cut per hectare = NA	10.8	
	Division of Working Circle into Two Sub-strata	10.9	
	Substratum-I	10.10	
	Substratum-II	10.11	

2	**Oak Working Circle**	
	Total area of the Working Circle = 6510.83 hectares	11.3
	Total number of Stems per hectare = 148.98	11.8
	Total volume of the growing stock (of conifers per ha). = 10.84	11.8
	Total number of stems = 969983/71814	11.8
	Annual Yield = Not prescribed	11.9
	Allowable cut per annum = Not prescribed	11.9
3	**Wildlife Management Working Circle**	
	Total area of the Working Circle= 3176.13hectares	12.2
	Special objects of Management	12.3
	Management Planning	12.4
4	**NTFP (Overlapping) Working Circle**	
	Special objects of Management	13.5.1
	Management of NTFPôs	13.5.2
5	**Eco-Tourism Working Circle (Overlapping)**	
	Total area of Working Circle = Overlapping	
	Special objects of Management	14.4
	Strategies, conservation of environment and Bio-diversity	14.5
6	**Participatory Forest Management Working Circle (Overlapping)**	
	Objectives	15.1
	JFM In Reasi Forest Division	15.4
	Future Strategies With JFM	15.5
	Plantation Working Circle (Overlapping)	
	Special objects of Management	16.3
	Treatments proposed	16.5
	Regeneration Programme	16.7

	Nursery and Plantation Technique	16.8
7	**Forest Protection (Overlapping) Working Circle**	
	Special objects of Management	17.2
	Preventive and Protective measures against forest damages	17.4

ANNEXURES

Annexure I

The details of Beats, Blocks and Ranges of Reasi Forest Division as on 1-6-2014 are as follows:

Range	Block	Beat	Compartment	Area in Ha.
Katra	Bhaga	Bhaga	76 to 81/K	1729
		Bhabber (II)	82 to 84/K	617
		Bhabber (I)	83/a & 83/b	220
		Butan	85 & 86/K	551
		Kangli	11 & 12/J	517
	Katra	Nomain	87 to 89 & 96 to 97	755
		Sarna	90 to 95	1521
		Bamyal	9 to 10/J/K	875
	Junglegali	Junglegali I	20 to 26/U/K	1821
		Junglegali II	27 to 33/u/K	937
Reasi	Bhamag	Nagote	10 to 18	1522
		Bakal	19 to 26	1683
		Salal	27 to 31	846
	Reasi	Mari	32 to 36	2427
	Tote	Paras	37 to 44	1836
		Tote	45 to 52/R	1033
		Devigarh	53 to 67	2219
		Anji	68 to 75/R	2094
Thakrakote	Chinkah	Chinkah I	1 to 3	1926
		Chinkah II	4 to 6	1151
		Panassa-I	7 to 10	701
		Panassa-II	11 to 14	587
		Narkote I	14 to 17	1384
		Narkote II	18 to 19	1744
	Thakrakote	Narla	20 to 24	944
		Chilli II	25 to 29	1222
		Chilli I	30 to 36	1267
		Thakrakote I	37 to 42	882
		Thakrakote II	43 to 47	1078
	Talwara	Talwara I	48a, 48b, 48c, 49a	2367
		Talwara II	49b, 49c	836
	Pouni	Malhad	50 to 53	629
		Pouni	54 to 59	1841
		Bharakh	60 to 64	2027
		Sadhini	65	830
		Dab	66 & 67	401
Soil Conservation Reasi	Katra		Overlapping Range	
	Reasi			
	Pouni			

Annexure II
Estate Area statement of Reasi Forest Division

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	Oak	Other	Total				
Th.Ko	1a/Th	0.00	0.00	136.62	136.62	0.33	18.97	19.30	3.01	9.07	168.00	Protection cum rehabilitation
	1 b/Th	0.00	17.67	208.92	226.60	213.65	8.16	221.81	43.87	47.73	540.00	Oak Working Circle
	1 c/Th	0.00	49.21	268.29	317.50	0.00	0.00	0.00	4.69	18.81	341.01	Oak Working Circle
	2/Th	0.00	20.19	199.98	220.17	0.00	0.00	0.00	0.00	11.83	232.00	Oak Working Circle
	3/Th	0.00	306.18	294.11	600.29	0.00	0.00	0.00	0.88	42.84	644.01	Oak Working Circle
	4/Th	0.00	4.31	224.52	228.83	0.00	24.31	24.31	39.76	19.10	312.00	Oak Working Circle
	5/Th	0.00	0.00	305.09	305.09	0.00	85.48	85.48	0.00	50.43	441.00	Protection cum Rehabilitation
	6/Th	0.00	0.00	229.29	229.29	0.00	155.41	155.41	1.03	12.28	398.01	Protection cum rehabilitation
	7/Th	0.00	0.00	36.42	36.42	0.00	153.91	153.91	0.00	5.67	196.00	Protection cum rehabilitation
	8/Th	0.00	0.00	69.66	69.66	0.00	122.38	122.38	10.65	6.31	209.00	Oak Working Circle
	9/Th	0.00	0.00	78.97	78.97	0.00	46.38	46.38	1.15	2.50	129.00	Protection cum rehabilitation
	10 a/Th	0.00	0.00	3.61	3.61	0.00	58.13	58.13	5.95	13.32	81.00	Protection cum rehabilitation
	10 b/Th	0.00	0.00	81.54	81.54	0.00	2.88	2.88	0.10	1.47	86.00	Protection cum rehabilitation
	11/Th	0.00	0.00	79.12	79.12	0.00	14.07	14.07	21.07	8.74	123.00	Protection cum rehabilitation
	12/Th	0.00	0.00	45.38	45.38	0.00	109.10	109.10	3.47	11.05	169.00	Protection cum rehabilitation
	13/Th	0.00	0.00	114.69	114.69	0.00	7.07	7.07	2.40	9.84	134.00	Protection cum rehabilitation
	14/Th	0.00	0.00	134.60	134.60	0.00	2.63	2.63	4.46	19.32	161.00	Oak Working Circle
	15/Th	0.00	0.00	126.74	126.74	0.00	100.35	100.35	6.25	21.66	255.01	Oak Working Circle
	16/Th	0.00	61.52	350.25	411.77	0.00	10.53	10.53	4.59	77.11	504.00	Oak Working Circle
	17/Th	0.00	339.97	143.11	483.08	2.15	0.00	2.15	32.25	107.53	625.01	Oak Working Circle
	18/Th	44.26	26.15	400.65	471.06	478.53	0.00	478.53	17.00	3.41	970.01	Oak Working Circle
	19/Th	49.68	112.65	224.43	386.76	227.44	3.64	231.08	1.60	154.56	774.00	Oak Working Circle
	20/Th	0.00	10.73	112.19	122.92	14.76	20.66	35.42	0.88	67.78	227.00	Oak Working Circle
	21a/Th	0.00	42.77	45.29	88.06	53.15	0.69	53.83	0.00	29.10	171.00	Oak Working Circle
	21b/Th	0.00	18.06	46.70	64.76	39.62	0.96	40.58	0.00	30.67	136.00	Oak Working Circle
	22a/Th	0.00	0.10	66.04	66.13	7.79	0.77	8.56	0.27	2.82	77.78	Oak Working Circle
	22b/Th.	0.00	0.00	26.07	26.07	0.00	0.96	0.96	0.52	7.45	35.00	Oak Working Circle
	23/Th	0.00	7.97	65.87	73.84	6.95	9.64	16.59	0.98	21.61	113.01	Oak Working Circle

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	oak	Other BL	Total				
Th.Ko	24/Th	0.00	55.89	26.34	82.23	44.44	0.00	44.44	0.00	57.33	184.00	Oak Working Circle
	25/Th	0.00	63.46	154.01	217.47	91.10	0.77	91.87	10.74	92.93	413.00	Protection cum Rehabilitation Working Circle
	26/Th	0.00	0.82	124.21	125.03	3.28	0.00	3.28	0.03	25.65	154.00	Protection cum Rehabilitation Working Circle
	27/Th.	0.00	0.00	117.89	117.89	0.00	54.54	54.54	13.82	17.75	204.00	Protection cum Rehabilitation Working Circle
	28a/Th	0.00	0.00	24.83	24.83	0.00	2.40	2.40	0.00	0.77	28.00	Protection cum Rehabilitation Working Circle
	28b/Th	0.00	0.00	163.75	163.75	0.00	11.90	11.90	6.58	6.65	188.88	Protection cum Rehabilitation Working Circle
	29/Th	0.00	0.00	167.64	167.64	0.00	3.84	3.84	27.22	35.32	234.01	Protection cum Rehabilitation Working Circle
	30/Th.	0.00	0.00	169.67	169.67	0.00	51.52	51.52	4.17	54.65	280.01	Protection cum Rehabilitation Working Circle
	31/Th	0.00	0.00	138.74	138.74	0.00	1.76	1.76	10.60	7.90	159.01	Protection cum Rehabilitation Working Circle
	32/Th.	0.00	0.00	139.22	139.22	0.00	3.49	3.49	1.18	5.11	149.00	Protection cum Rehabilitation Working Circle
	33/Th	0.00	0.00	158.52	158.52	0.00	0.00	0.00	3.67	1.80	164.00	Protection cum Rehabilitation Working Circle
	34/Th	0.00	0.00	114.27	114.27	0.00	0.00	0.00	0.00	3.73	118.00	Protection cum Rehabilitation Working Circle
	35/Th	0.00	0.00	121.82	121.82	0.00	0.00	0.00	13.25	14.95	150.02	Protection cum Rehabilitation Working Circle
	36/Th	0.00	0.00	128.18	128.18	0.00	114.95	114.95	0.00	3.88	247.00	Protection cum RehabilitationWorking Circle
	37/Th.	0.00	0.00	125.89	125.89	0.00	0.00	0.00	0.00	102.69	228.58	Protection cum Rehabilitation Working Circle
	38/Th.	0.00	0.00	104.92	104.92	0.00	0.00	0.00	0.00	10.99	115.91	Protection cum Rehabilitation Working Circle
	39/Th	0.00	0.00	67.62	67.62	0.00	26.77	26.77	0.00	1.61	96.00	Protection cum rehabilitation W.C

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	oak	Other BL	Total				
Th.Ko	41/Th	0.00	0.00	108.91	108.91	0.00	94.80	94.80	0.00	15.30	219.00	Protection cum rehabilitation Working Circle
	42/Th	0.00	0.00	12.89	12.89	0.00	132.86	132.86	0.00	10.25	156.00	Protection cum Rehabilitation Working Circle
	43/Th	0.00	0.00	68.60	68.60	0.00	125.38	125.38	0.00	8.04	202.01	Protection cum Rehabilitation Working Circle
	44/Th	0.00	0.00	177.28	177.28	0.00	134.10	134.10	38.62	116.01	466.00	Protection cum Rehabilitation Working Circle
	45/Th	0.00	0.00	92.08	92.08	0.00	26.67	26.67	0.00	2.26	121.00	Protection cum Rehabilitation Working Circle
	46/Th	0.00	0.00	90.51	90.51	0.00	21.38	21.38	0.00	6.11	118.00	Protection cum Rehabilitation Working Circle
	47/Th	0.00	0.00	78.33	78.33	0.00	52.28	52.28	0.00	40.39	171.00	Protection cum Rehabilitation Working Circle
	48a/Th	0.00	0.00	166.89	166.89	0.00	229.64	229.64	99.02	210.47	706.02	Protection cum Rehabilitation Working Circle
	48b/Th	0.00	0.00	148.39	148.39	0.00	561.52	561.52	1.94	89.15	801.00	Protection cum Rehabilitation Working Circle
	48c/Th	0.00	0.00	137.58	137.58	0.00	227.71	227.71	0.00	15.72	381.01	Protection cum Rehabilitation Working Circle
	49a/Th	0.00	0.00	67.67	67.67	0.00	348.04	348.04	0.84	62.47	479.01	Protection cum Rehabilitation Working Circle
	49b/Th	0.00	0.00	61.22	61.22	0.00	217.44	217.44	51.22	126.13	456.00	Protection cum Rehabilitation Working Circle
	49c/Th	0.00	0.00	15.32	15.32	0.00	279.78	279.78	0.00	84.91	380.00	Protection cum Rehabilitation Working Circle
	50/Th	0.00	0.00	7.61	7.61	0.00	55.71	55.71	0.00	4.70	68.01	Protection cum Rehabilitation Working Circle
	51/Th	0.00	0.00	29.20	29.20	0.00	163.09	163.09	0.00	64.71	257.00	Protection cum Rehabilitation Working Circle
	52/Th	0.00	0.00	164.00	164.00	0.00	10.00	10.00	30.00	30.00	234.00	Protection cum RehabilitationWorking Circle

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	Oak	Other BL	Total				
Th.Ko	53/Th	0.00	0.00	5.13	5.13	0.00	53.71	53.71	0.00	11.16	70.01	Protection cum Rehabilitation Working Circle
	54a/Th	0.00	0.00	8.22	8.22	0.00	61.72	61.72	0.00	9.06	79.00	Protection cum Rehabilitation Working Circle
	54b/Th	0.00	0.00	73.31	73.31	0.00	45.24	45.24	57.33	76.13	252.01	Protection cum rehabilitation Working Circle
	55/Th	0.00	0.00	7.94	7.94	0.00	99.99	99.99	4.81	8.28	121.01	Protection cum Rehabilitation Working Circle
	56/Th	0.00	0.00	195.07	195.07	0.00	183.13	183.13	0.00	9.80	388.00	Protection cum Rehabilitation Working Circle
	57a/Th	0.00	0.00	84.72	84.72	1.35	0.00	1.35	5.64	11.30	103.01	Protection cum Rehabilitation Working Circle
	57b/Th	0.00	0.00	51.66	51.66	0.00	36.71	36.71	30.30	4.34	123.01	Protection cum Rehabilitation Working Circle
	58a/Th	0.00	0.00	34.04	34.04	0.00	79.74	79.74	43.14	9.08	166.01	Protection cum rehabilitation Working Circle
	58b/Th.	0.00	0.00	39.22	39.22	0.00	180.08	180.08	24.72	22.97	267.00	Protection cum Rehabilitation Working Circle
	59/Th	0.00	0.00	95.65	95.65	0.00	198.75	198.75	29.09	19.51	343.00	Protection cum Rehabilitation Working Circle
	60/Th	0.00	0.00	141.84	141.84	0.00	206.07	206.07	54.86	20.27	423.03	Protection cum Rehabilitation Working Circle
	61/Th	0.00	0.00	177.92	177.92	0.00	217.74	217.74	0.68	4.66	401.00	Protection cum Rehabilitation Working Circle
	62/Th	0.00	0.00	165.82	165.82	0.00	109.77	109.77	47.24	30.18	353.00	Protection cum Rehabilitation Working Circle
	63/Th	0.00	0.00	73.45	73.45	0.00	114.67	114.67	103.76	93.67	385.55	Protection cum Rehabilitation Working Circle
	64/Th.	0.00	0.00	239.56	239.56	12.88	26.46	39.34	40.18	144.92	464.00	Protection cum Rehabilitation Working Circle
	65/Th	0.00	0.00	91.55	91.55	0.00	254.32	254.32	2.47	251.67	600.01	Protection cum Rehabilitation Working Circle

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	Oak	Other BL	Total				
Th.Ko	66/Th	0.00	0.00	150.32	150.32	0.00	301.25	301.25	19.04	101.38	573.00	Protection cum Rehabilitation Working Circle
	67/Th.	0.00	0.00	9.28	9.28	0.00	35.25	35.25	0.00	13.47	58.00	Protection cum Rehabilitation Working Circle
Total:		**93.94**	**1137.65**	**9263.64**	10495.23	**1198.43**	**6135.65**	7334.08	**982.98**	**3004.71**	**21817.00**	
Katra	9/J/K	0.00	0.00	221.98	221.98	0.00	266.91	266.91	2.89	122.24	614.01	Protection cum Rehabilitation Working Circle
	10/J/K	0.00	0.00	85.65	85.65	0.00	71.48	71.48	0.00	103.88	261.00	PProtection cum Rehabilitation Working Circle
	11/J/K	0.00	0.00	119.75	119.75	0.00	24.30	24.30	0.00	47.96	192.00	Protection cum Rehabilitation Working Circle
	12/J/K	0.00	0.00	109.23	109.23	0.00	105.04	105.04	0.00	110.75	325.02	Protection cum Rehabilitation Working Circle
	20/U/K	0.00	24.00	154.00	178.00	0.00	0.00	0.00	15.00	186.00	379.00	Protection cum Rehabilitation Working Circle
	21/U/K	0.00	0.54	281.57	282.12	0.00	0.00	0.00	0.00	102.89	385.01	Protection cum Rehabilitation Working Circle
	22/U/K	0.00	0.00	125.94	125.94	0.00	0.00	0.00	0.00	82.07	208.01	Protection cum Rehabilitation Working Circle
	23/U/K	0.00	0.00	124.90	124.90	0.00	0.00	0.00	0.23	40.87	166.00	Protection cum Rehabilitation Working Circle
	24/U/K	0.00	10.12	227.41	237.53	0.00	0.00	0.00	0.00	131.47	369.00	Protection cum Rehabilitation Working Circle
	25/U/K	0.00	27.24	26.87	54.12	0.00	0.00	0.00	0.00	30.89	85.01	Protection cum Rehabilitation Working Circle
	26a/U/K	0.00	1.25	79.41	80.66	0.00	0.00	0.00	0.00	43.34	124.00	Protection cum Rehabilitation Working Circle

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	Oak	Other BL	Total				
Katra	26b/U/k	0.00	8.47	36.51	44.98	0.00	0.00	0.00	0.00	60.02	105.00	Protection cum Rehabilitation Working Circle
	27/U/K	0.00	8.70	94.30	103.00	0.00	0.00	0.00	0.00	83.01	186.01	Protection cum Rehabilitation Working Circle
	28/U/K	0.00	0.00	89.63	89.63	0.00	0.00	0.00	0.00	26.37	116.00	Protection cum Rehabilitation Working Circle
	29/U/K	0.00	0.00	126.26	126.26	0.00	0.00	0.00	0.26	59.48	186.00	Protection cum Rehabilitation Working Circle
	30/U/K	0.00	0.00	29.61	29.61	0.00	0.00	0.00	0.00	43.39	73.00	Protection cum Rehabilitation Working Circle
	31/U/K	0.00	0.09	97.95	98.04	0.00	0.00	0.00	0.00	11.97	110.01	Protection cum Rehabilitation Working Circle
	32/U/K	0.00	0.00	72.20	72.20	20.88	0.00	20.88	0.00	36.92	130.00	Protection cum Rehabilitation Working Circle
	33/U/K	0.00	0.00	128.10	128.10	0.00	0.00	0.00	0.00	7.90	136.00	Protection cum Rehabilitation Working Circle
	76/K	0.00	0.00	5.80	5.80	0.00	257.01	257.01	0.00	165.20	428.01	Protection cum Rehabilitation Working Circle
	77/K	0.00	0.00	9.23	9.23	0.00	215.42	215.42	0.00	98.35	323.00	Protection cum Rehabilitation Working Circle
	78/K	0.00	0.00	13.27	13.27	0.00	238.86	238.86	0.00	142.88	395.01	Protection cum Rehabilitation Working Circle
	79/K	0.00	0.00	25.49	25.49	0.00	254.60	254.60	0.00	42.92	323.01	Protection cum Rehabilitation Working Circle

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	Oak	Other BL	Total				
Katra	80/K	0.00	0.00	56.39	56.39	0.00	115.45	115.45	0.00	20.16	192.00	Protection cum Rehabilitation Working Circle
	81/K	0.00	0.00	14.81	14.81	0.00	47.00	47.00	0.00	6.20	68.01	Protection cum Rehabilitation Working Circle
	82/K	0.00	0.00	236.88	236.88	0.00	34.19	34.19	0.00	38.94	310.02	Protection cum Rehabilitation Working Circle
	83a/K	0.00	0.00	0.00	0.00	0.00	9.82	9.82	0.00	61.18	71.00	Protection cum Rehabilitation Working Circle
	83b/K	0.00	0.00	12.62	12.62	0.00	134.83	134.83	0.00	1.55	149.00	Protection cum Rehabilitation Working Circle
	84/K	0.00	0.00	187.77	187.77	0.00	95.82	95.82	0.00	23.41	307.00	Protection cum Rehabilitation Working Circle
	85/K	0.00	0.00	112.52	112.52	0.00	52.96	52.96	0.00	13.53	179.01	Protection cum Rehabilitation Working Circle
	86/K	0.00	0.00	191.99	191.99	0.00	167.44	167.44	0.00	12.58	372.01	Protection cum Rehabilitation Working Circle
	87/K	0.00	0.00	147.02	147.02	0.00	37.80	37.80	0.00	29.19	214.01	Protection cum Rehabilitation Working Circle
	88/K	0.00	0.00	152.31	152.31	0.00	66.60	66.60	1.45	18.63	239.00	Protection cum Rehabilitation Working Circle
	89/K	0.00	0.00	102.17	102.17	0.00	59.73	59.73	0.46	3.65	166.01	Protection cum Rehabilitation Working Circle

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	**Kail**	**Chir**	**Total**	**Oak**	**Other BL**	**Total**				
	90a/K	0.00	0.00	142.79	142.79	0.00	95.31	95.31	0.00	0.90	239.00	Protection cum Rehabilitation Working Circle
	90b/K	0.00	0.00	174.42	174.42	0.00	114.90	114.90	2.72	4.96	297.01	Protection cum Rehabilitation Working Circle
	91/K	0.00	0.00	112.87	112.87	0.00	51.14	51.14	3.26	1.74	169.01	Protection cum Rehabilitation Working Circle
	92/K	0.00	0.00	96.63	96.63	0.00	20.91	20.91	0.57	17.90	136.01	Protection cum Rehabilitation Working Circle
	93/K	0.00	0.00	111.73	111.73	0.00	49.37	49.37	0.00	30.90	192.00	Protection cum Rehabilitation Working Circle
	94/K	0.00	0.00	62.43	62.43	0.00	8.82	8.82	0.04	6.72	78.01	Protection cum Rehabilitation Working Circle
	95/K	0.00	0.00	47.98	47.98	0.00	0.24	0.24	0.00	9.79	58.01	Protection cum Rehabilitation Working Circle
katra	96/K	0.00	0.00	142.79	142.79	0.00	95.31	95.31	0.00	0.90	239.00	Protection cum Rehabilitation Working Circle
	97/K	0.00	0.00	174.42	174.42	0.00	114.90	114.90	2.72	4.96	297.01	Protection cum Rehabilitation Working Circle
Total		**0.00**	**80.40**	**4581.96**	4662.36	**20.88**	**2711.71**	2732.59	**32.37**	**2116.86**	**9544**	

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	Oak	Other BL	Total				
Reasi	10/R	0.00	0.00	34.16	34.16	35.47	22.79	58.26	0.00	13.58	106.00	Protection cum Rehabilitation Working Circle
	11/R	0.00	0.00	29.47	29.47	20.08	22.01	42.09	1.51	27.93	101.00	Protection cum Rehabilitation Working Circle
	12a/R	0.00	0.00	104.42	104.42	45.12	0.00	45.12	0.00	16.48	166.01	Protection cum Rehabilitation Working Circle
	12b/R	0.00	0.00	51.93	51.93	18.34	0.00	18.34	0.00	2.73	73.00	Protection cum Rehabilitation Working Circle
	13/R	0.00	0.00	155.90	155.90	0.14	21.90	22.04	7.31	48.75	234.00	Protection cum Rehabilitation Working Circle
	14/R	0.00	0.00	149.38	149.38	0.00	0.42	0.42	2.57	21.64	174.01	Protection cum Rehabilitation Working Circle
	15/R	0.00	0.00	133.11	133.11	0.00	5.69	5.69	0.00	33.41	172.21	Protection cum Rehabilitation Working Circle
	16/R	0.00	0.00	122.51	122.51	0.00	4.80	4.80	0.84	13.58	141.73	Protection cum Rehabilitation Working Circle
	17/R	0.00	0.00	77.21	77.21	0.00	8.50	8.50	25.66	11.91	123.29	Protection cum Rehabilitation Working Circle
	18a/R	0.00	0.00	137.11	137.11	0.00	0.00	0.00	0.90	10.00	148.01	Protection cum Rehabilitation Working Circle

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	Oak	Other BL	Total				
Reasi	18b/R	0.00	0.00	77.96	77.96	0.00	2.25	2.25	0.00	3.79	84.00	Protection cum rehabilitation Working Circle
	19a/R	0.00	0.00	90.71	90.71	0.00	42.60	42.60	0.00	42.70	176.01	Protection cum rehabilitation Working Circle
	19b/R	0.00	0.00	204.43	204.43	0.00	17.98	17.98	19.88	14.63	256.93	Protection cum rehabilitation Working Circle
	20/R	0.00	7.51	43.89	51.40	0.00	0.00	0.00	11.28	35.32	98.00	Protection cum rehabilitation Working Circle
	21/R	0.00	0.00	245.28	245.28	0.00	0.00	0.00	0.00	16.72	262.00	Protection cum rehabilitation Working Circle
	22/R	0.00	0.00	62.51	62.51	0.00	29.58	29.58	0.00	23.91	116.01	Protection cum rehabilitation Working Circle
	23/R	0.00	0.00	127.40	127.40	0.00	3.33	3.33	0.00	13.27	144.00	Protection cum rehabilitation Working Circle
	24/R	0.00	0.00	261.06	261.06	0.00	0.00	0.00	0.00	25.95	287.01	Protection cum rehabilitation Working Circle
	25/R	0.00	0.00	111.31	111.31	0.00	0.00	0.00	0.00	19.70	131.01	Protection cum rehabilitation Working Circle
	26/R	0.00	0.00	155.31	155.31	0.00	12.99	12.99	0.00	43.71	212.01	Protection cum rehabilitation Working Circle
	27/R	0.00	0.00	78.99	78.99	0.00	36.05	36.05	0.00	50.96	166.00	Protection cum rehabilitation Working Circle
	28/R	0.00	0.00	103.57	103.57	0.00	21.19	21.19	0.00	21.25	146.01	Protection cum rehabilitation Working Circle
	29/R	0.00	0.00	52.17	52.17	0.00	47.42	47.42	0.00	34.42	134.01	Protection cum rehabilitation Working Circle

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	Oak	Other BL	Total				
Reasi	30/R	0.00	0.00	130.99	130.99	0.00	31.10	31.10	6.86	151.06	320.02	Protection cum Rehabilitation Working Circle
	31/R	0.00	0.00	58.91	58.91	0.00	8.96	8.96	0.00	12.13	80.00	Protection cum Rehabilitation Working Circle
	32/R	0.00	0.00	82.81	82.81	0.00	415.32	415.32	1.25	259.62	759.01	Protection cum Rehabilitation Working Circle
	33/R	0.00	0.00	104.56	104.56	0.00	194.20	194.20	0.00	109.24	408.00	Protection cum rehabilitation Working Circle
	34/R	0.00	0.00	323.22	323.22	36.99	0.00	36.99	0.00	105.80	466.01	Protection cum rehabilitation Working Circle
	35/R	0.00	0.00	380.81	380.81	0.00	73.15	73.15	0.00	121.04	575.00	Protection cum rehabilitation Working Circle
	36/R	0.00	0.00	11.99	11.99	0.00	127.86	127.86	0.00	79.16	219.01	Protection cum rehabilitation Working Circle
	37/R	0.00	0.00	223.32	223.32	0.00	277.83	277.83	0.00	188.85	690.00	Protection cum rehabilitation Working Circle
	38/R	0.00	0.00	108.20	108.20	0.00	92.06	92.06	0.04	41.70	242.00	Protection cum rehabilitation Working Circle
	39/R	0.00	0.00	66.79	66.79	0.00	81.56	81.56	0.00	17.65	166.00	Protection cum rehabilitation Working Circle
	40/R	0.00	0.00	32.75	32.75	0.00	43.65	43.65	0.00	26.61	103.00	Protection cum rehabilitation Working Circle

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	Oak	Other BL	Total				
Reasi	41/R	0.00	0.00	43.01	43.01	0.00	71.46	71.46	1.24	20.29	136.00	Protection cum rehabilitation Working Circle
	42/R	0.00	0.00	29.08	29.08	0.00	58.86	58.86	5.53	24.55	118.01	Protection cum rehabilitation Working Circle
	43/R	0.00	0.00	25.61	25.61	0.00	76.63	76.63	0.00	26.76	129.01	Protection cum rehabilitation Working Circle
	44/R	0.00	0.00	195.31	195.31	0.00	22.53	22.53	0.00	34.18	252.02	Protection cum rehabilitation Working Circle
	45/R	0.00	0.00	68.89	68.89	0.00	0.00	0.00	0.00	7.12	76.01	Protection cum rehabilitation Working Circle
	46/R	0.00	0.00	145.22	145.22	0.00	0.00	0.00	5.35	8.45	159.02	Protection cum rehabilitation Working Circle
	47/R	0.00	0.00	86.88	86.88	0.00	0.00	0.00	18.03	8.11	113.02	Protection cum rehabilitation Working Circle
	48/R	0.00	0.00	38.00	38.00	0.00	0.00	0.00	77.41	35.59	151.00	Protection cum rehabilitation Working Circle
	49a/R	0.00	0.00	14.36	14.36	0.00	0.00	0.00	49.04	22.60	86.00	Protection cum rehabilitation Working Circle
	49b/R	0.00	0.00	3.25	3.25	0.00	0.00	0.00	7.16	15.60	26.01	Wildlife Management Working circle
	50a/R	0.00	0.00	8.86	8.86	0.00	0.00	0.00	16.67	24.47	50.00	Wildlife Management Working circle
	50b/R	0.00	0.00	62.54	62.54	2.70	0.00	2.70	15.48	27.27	107.99	Wildlife Management Working circle
	51/R	0.00	0.00	7.60	7.60	72.93	0.00	72.93	5.36	30.11	116.00	Wildlife Management Working circle

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	Oak	Other BL	Other				
Reasi	52/R	0.00	65.06	16.09	81.14	63.02	0.00	63.02	0.00	11.84	156.01	Wildlife Management Working circle
	53/R	0.00	59.19	21.88	81.07	2.82	0.07	2.89	0.00	24.04	108.00	Wildlife Management Working circle
	54/R	0.00	127.86	23.68	151.54	0.00	0.00	0.00	0.00	13.46	165.00	Wildlife Management Working circle
	55/R	10.00	122.00	0.00	132.00	8.00	0.00	8.00	0.00	0.00	140.00	Wildlife Management Working circle
	56/R	0.00	144.12	45.91	190.03	0.00	0.00	0.00	0.27	8.79	199.09	Wildlife Management Working circle
	57/R	0.00	81.07	25.83	106.90	0.00	0.00	0.00	0.15	4.94	112.00	Protection cum rehabilitation Working Circle
	58/R	0.00	100.80	7.98	108.77	0.00	0.00	0.00	0.00	1.22	109.99	Wildlife Management Working circle
	59/R	0.00	46.81	9.38	56.19	0.00	0.00	0.00	1.99	0.85	59.03	Protection cum rehabilitation Working Circle
	60a/R	0.00	3.43	55.26	58.69	0.00	0.00	0.00	33.38	16.93	109.00	Protection cum rehabilitation Working Circle
	60b/R	0.00	21.72	10.50	32.22	0.00	0.00	0.00	0.18	17.61	50.02	Wildlife Management Working circle
	61/R	0.00	11.53	56.28	67.81	0.00	0.00	0.00	96.66	37.54	202.01	Protection cum rehabilitation Working Circle
	62a/R	0.00	62.03	5.26	67.29	0.00	0.00	0.00	0.04	5.67	73.00	Wildlife Management Working circle
	62b/R	0.00	44.73	17.27	62.00	0.00	0.00	0.00	0.00	6.02	68.02	Wildlife Management Working circle
	63/R	0.00	163.81	14.49	178.30	0.00	0.00	0.00	0.00	5.70	184.00	Wildlife Management Working circle
	64/R	0.00	129.79	28.30	158.09	0.68	0.00	0.68	0.00	20.26	179.03	Wildlife Management Working circle

Range	Comptt	Conifer				Broad leaved			Scrub	Blank	Total	Working Circle
		Fir	Kail	Chir	Total	Oak	Other BL	Total				
Reasi	65/R	0.00	108.82	69.52	178.34	1.83	0.00	1.83	6.25	12.57	199.00	Wildlife Management Working circle
	66/R	0.00	16.92	8.62	25.55	0.00	0.00	0.00	47.22	23.23	96.00	Wildlife Management Working circle
	67/R	0.00	127.67	9.49	137.15	0.00	0.00	0.00	23.00	15.85	176.00	Wildlife Management Working circle
	68/R	0.00	28.66	8.49	37.15	1.14	0.00	1.14	58.52	11.19	108.00	Protection cum rehabilitation Working Circle
	69/R	0.00	0.00	50.87	50.87	0.00	0.00	0.00	71.45	8.68	131.00	Protection cum rehabilitation Working Circle
	70/R	0.00	0.00	352.62	352.62	0.00	13.72	13.72	12.36	29.30	408.00	Protection cum rehabilitation Working Circle
	71/R	0.00	0.94	150.23	151.17	0.00	0.00	0.00	74.30	26.52	251.99	Wildlife Management Working circle
	72/R	0.00	203.69	31.10	234.80	0.00	2.19	2.19	14.70	10.30	261.98	Wildlife Management Working circle
	73/R	0.00	60.30	104.17	164.48	0.00	0.00	0.00	16.67	12.86	194.00	Wildlife Management Working circle
	74/R	0.00	0.00	250.90	250.90	0.00	6.19	6.19	0.76	7.15	265.00	Wildlife Management Working circle
	75/R	0.00	0.00	393.23	393.23	0.00	56.26	56.26	0.00	24.51	474.00	Protection Working circle.
Total		10.00	1738.44	6630.12	8378.56	309.25	1953.05	2262.30	737.31	2301.32	13678.00	
G. Total		103.90	2956.49	20475.72	23536.15	1528.56	10800.41	12328.97	1752.66	7422.89	45039.00	

Annexure – II a

SPECIES WISE AND RANGE WISE DISTRIBUTION OF AREA UNDER PROTECTION CUM REHABILITATION WORKING CIRCLE

THAKRAKOTE RANGE

Working circle	Comptt	Fir	Kail	Chir	Oak	Other	Scrub	Blank	Total
Protection cum Rehabilitation	1a/Th	0.00	0.00	136.62	0.33	18.96	3.01	9.06	168.00
Protection cum Rehabilitation	5/Th	0.00	0.00	305.09	0.00	85.48	0.00	50.42	441.00
Protection cum Rehabilitation	6/Th	0.00	0.00	229.29	0.00	155.40	1.02	12.27	398.00
Protection cum Rehabilitation	7/Th	0.00	0.00	36.42	0.00	153.91	0.00	5.67	196.00
Protection cum Rehabilitation	9/Th	0.00	0.00	78.96	0.00	46.38	1.15	2.49	129.00
Protection cum Rehabilitation	10 a/Th	0.00	0.00	3.60	0.00	58.12	5.95	13.31	81.00
Protection cum Rehabilitation	10 b/Th	0.00	0.00	81.54	0.00	2.88	0.10	1.47	86.00
Protection cum Rehabilitation	11/Th	0.00	0.00	79.11	0.00	14.06	21.07	8.74	123.00
Protection cum Rehabilitation	12/Th	0.00	0.00	45.38	0.00	109.10	3.46	11.04	169.00
Protection cum Rehabilitation	13/Th	0.00	0.00	114.68	0.00	7.07	2.40	9.83	134.00
Protection cum Rehabilitation Working Circle	25/Th	0.00	63.46	154.00	91.09	0.77	10.73	92.92	413.00
Protection cum Rehabilitation Working Circle	26/Th	0.00	0.81	124.21	3.28	0.00	0.03	25.65	154.00
Protection cum Rehabilitation Working Circle	27/Th.	0.00	0.00	167.89	0.00	4.54	13.81	17.74	204.00

Working circle	Comptt	Fir	Kail	Chir	Oak	Other	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	28a/Th	0.00	0.00	24.83	0.00	2.40	0.00	0.76	28.00
Protection cum Rehabilitation Working Circle	28b/Th	0.00	0.00	163.74	0.00	11.90	6.57	6.64	188.88
Protection cum Rehabilitation Working Circle	29/Th	0.00	0.00	167.64	0.00	3.83	27.21	35.31	234.01
Protection cum Rehabilitation Working Circle	30/Th.	0.00	0.00	269.66	0.00	1.51	4.17	4.65	280.00
Protection cum Rehabilitation Working Circle	31/Th	0.00	0.00	138.74	0.00	1.76	10.59	7.90	159.000
Protection cum Rehabilitation Working Circle	32/Th.	0.00	0.00	139.22	0.00	3.49	1.17	5.10	149.00
Protection cum Rehabilitation Working Circle	33/Th	0.00	0.00	158.52	0.00	0.00	3.67	1.80	164.00
Protection cum Rehabilitation Working Circle	34/Th	0.00	0.00	114.27	0.00	0.00	0.00	3.72	118.00
Protection cum Rehabilitation Working Circle	35/Th	0.00	0.00	121.81	0.00	0.00	13.24	14.94	150.01
Protection cum Rehabilitation Working Circle	36/Th	0.00	0.00	228.17	0.00	14.94	0.00	3.87	247.00
Protection cum Rehabilitation Working Circle	37/Th.	0.00	0.00	225.89	0.00	0.00	0.00	2.68	228.58
Protection cum Rehabilitation Working Circle	38/Th.	0.00	0.00	104.92	0.00	0.00	0.00	10.98	115.91

Working circle	Comptt	Fir	Kail	Chir	Oak	Other	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	39/Th	0.00	0.00	67.62	0.00	26.77	0.00	1.60	96.00
Protection cum Rehabilitation Working Circle	40/Th	0.00	0.00	24.79	0.00	21.65	0.00	19.56	66.00
Protection cum Rehabilitation Working Circle	41/Th	0.00	0.00	108.90	0.00	94.79	0.00	15.29	219.00
Protection cum Rehabilitation Working Circle	42/Th	0.00	0.00	12.89	0.00	132.85	0.00	10.24	156.00
Protection cum Rehabilitation Working Circle	43/Th	0.00	0.00	68.59	0.00	125.37	0.00	8.03	202.01
Protection cum Rehabilitation Working Circle	44/Th	0.00	0.00	377.27	0.00	34.09	38.62	16.00	466.00
Protection cum Rehabilitation Working Circle	45/Th	0.00	0.00	92.07	0.00	26.66	0.00	2.25	121.00
Protection cum Rehabilitation Working Circle	46/Th	0.00	0.00	90.51	0.00	21.37	0.00	6.10	118.00
Protection cum Rehabilitation Working Circle	47/Th	0.00	0.00	78.33	0.00	52.27	0.00	40.39	171.00
Protection cum Rehabilitation Working Circle	48a/Th	0.00	0.00	166.89	0.00	229.64	99.01	210.46	706.01
Protection cum Rehabilitation Working Circle	48b/Th	0.00	0.00	448.38	0.00	261.51	1.94	89.14	801.00

Working circle	Comptt	Fir	Kail	Chir	Oak	Other	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	48c/Th	0.00	0.00	137.58	0.00	227.71	0.00	15.71	381.00
Protection cum Rehabilitation Working Circle	49a/Th	0.00	0.00	67.67	0.00	348.03	0.83	62.46	479.00
Protection cum Rehabilitation Working Circle	49b/Th	0.00	0.00	61.21	0.00	217.43	51.21	126.13	456.00
Protection cum Rehabilitation Working Circle	49c/Th	0.00	0.00	15.31	0.00	279.77	0.00	84.90	380.00
Protection cum Rehabilitation Working Circle	50/Th	0.00	0.00	7.60	0.00	55.70	0.00	4.69	68.01
Protection cum Rehabilitation Working Circle	51/Th	0.00	0.00	29.19	0.00	163.09	0.00	64.70	257.00
Protection cum Rehabilitation Working Circle	52/Th	0.00	0.00	164.00	0.00	10.00	30.00	30.00	234.00
Protection cum Rehabilitation Working Circle	53/Th	0.00	0.00	5.13	0.00	53.71	0.00	11.16	70.00
Protection cum Rehabilitation Working Circle	54a/Th	0.00	0.00	8.22	0.00	61.71	0.00	9.05	79.00
Protection cum Rehabilitation Working Circle	54b/Th	0.00	0.00	73.30	0.00	45.23	57.32	76.13	252.01
Protection cum Rehabilitation Working Circle	55/Th	0.00	0.00	7.93	0.00	99.98	4.80	8.27	121.01
Protection cum Rehabilitation Working Circle	56/Th	0.00	0.00	295.06	0.00	83.13	0.00	9.80	388.00

Working circle	Comptt	Fir	Kail	Chir	Oak	Other	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	57a/Th	0.00	0.00	84.71	1.35	0.00	5.64	11.29	103.01
Protection cum Rehabilitation Working Circle	57b/Th	0.00	0.00	51.65	0.00	36.70	30.29	4.34	123.00
Protection cum Rehabilitation Working Circle	58a/Th	0.00	0.00	34.04	0.00	79.74	43.14	9.08	166.01
Protection cum Rehabilitation Working Circle	58b/Th.	0.00	0.00	39.22	0.00	180.08	24.72	22.97	267.00
Protection cum Rehabilitation Working Circle	59/Th	0.00	0.00	95.65	0.00	198.75	29.08	19.50	343.00
Protection cum Rehabilitation Working Circle	60/Th	0.00	0.00	141.83	0.00	206.06	54.85	20.26	423.03
Protection cum Rehabilitation Working Circle	61/Th	0.00	0.00	177.92	0.00	217.73	0.67	4.66	401.00
Protection cum Rehabilitation Working Circle	62/Th	0.00	0.00	165.81	0.00	109.76	47.23	30.18	353.00
Protection cum Rehabilitation Working Circle	63/Th	0.00	0.00	73.45	0.00	114.67	103.75	93.66	385.55
Protection cum Rehabilitation Working Circle	64/Th.	0.00	0.00	239.55	12.88	26.45	40.18	144.91	464.00
Protection cum Rehabilitation Working Circle	65/Th	0.00	0.00	191.54	0.00	254.31	2.46	151.67	600.00
Protection cum Rehabilitation Working Circle	66/Th	0.00	0.00	351.31	0.00	101.25	19.04	101.38	573.00

Working circle	Comptt	Fir	Kail	Chir	Oak	Other	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	67/Th.	0.00	0.00	9.28	0.00	35.25	0.00	13.46	58.00
Total		**0.00**	**64.27**	**7478.88**	**108.94**	**4929.97**	**814.34**	**1908.75**	**15305.16**

Annexure-II (b)

SPECIES WISE AND RANGE WISE DISTRIBUTION OF AREA UNDER PROTECTION CUM REHABILITATION WORKING CIRCLE

KATRA RANGE

Working Circle	Comptt	Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	20/U/K	0.00	24.00	154.00	0.00	0.00	15.00	186.00	379.00
Protection cum Rehabilitation Working Circle	21/U/K	0.00	0.54	281.57	0.00	0.00	0.00	102.89	385.01
Protection cum Rehabilitation Working Circle	22/U/K	0.00	0.00	125.94	0.00	0.00	0.00	82.06	208.00
Protection cum Rehabilitation Working Circle	23/U/K	0.00	0.00	124.89	0.00	0.00	0.23	40.86	166.00
Protection cum Rehabilitation Working Circle	24/U/K	0.00	10.11	227.41	0.00	0.00	0.00	131.47	369.00
Protection cum Rehabilitation Working Circle	25/U/K	0.00	27.24	26.87	0.00	0.00	0.00	30.88	85.00
Protection cum Rehabilitation Working Circle	26a/U/K	0.00	1.24	79.40	0.00	0.00	0.00	43.34	124.00
Protection cum Rehabilitation Working Circle	26b/U/K	0.00	8.46	36.51	0.00	0.00	0.00	60.02	105.00
Protection cum Rehabilitation Working Circle	27/U/K	0.00	8.69	94.30	0.00	0.00	0.00	83.01	186.00
Protection cum Rehabilitation Working Circle	28/U/K	0.00	0.00	89.63	0.00	0.00	0.00	26.36	116.00
Protection cum Rehabilitation Working Circle	29/U/K	0.00	0.00	126.26	0.00	0.00	0.25	59.47	186.00

Working Circle	Comptt	Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	30/U/K	0.00	0.00	29.60	0.00	0.00	0.00	43.39	73.00
Protection cum Rehabilitation Working Circle	31/U/K	0.00	0.08	97.94	0.00	0.00	0.00	11.97	110.01
Protection cum Rehabilitation Working Circle	32/U/K	0.00	0.00	72.19	20.88	0.00	0.00	36.91	130.00
Protection cum Rehabilitation Working Circle	33/U/K	0.00	0.00	128.09	0.00	0.00	0.00	7.90	136.00
Protection cum Rehabilitation Working Circle	76/K	0.00	0.00	5.79	0.00	257.01	0.00	165.20	428.01
Protection cum Rehabilitation Working Circle	77/K	0.00	0.00	9.23	0.00	215.41	0.00	98.35	323.00
Protection cum Rehabilitation Working Circle	78/K	0.00	0.00	13.27	0.00	238.85	0.00	142.87	395.00
Protection cum Rehabilitation Working Circle	79/K	0.00	0.00	25.48	0.00	254.60	0.00	42.92	323.01
Protection cum Rehabilitation Working Circle	80/K	0.00	0.00	56.38	0.00	115.45	0.00	20.15	192.00
Protection cum Rehabilitation Working Circle	81/K	0.00	0.00	14.80	0.00	47.00	0.00	6.20	68.00
Protection cum Rehabilitation Working Circle	82/K	0.00	0.00	236.88	0.00	34.19	0.00	38.94	310.01
Protection cum Rehabilitation Working Circle	83a/K	0.00	0.00	0.00	0.00	9.81	0.00	61.18	71.00

Working Circle	Comptt	Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	83b/K	0.00	0.00	12.62	0.00	134.82	0.00	1.54	149.00
Protection cum Rehabilitation Working Circle	84/K	0.00	0.00	187.76	0.00	95.81	0.00	23.41	307.00
Protection cum Rehabilitation Working Circle	85/K	0.00	0.00	112.51	0.00	52.96	0.00	13.53	179.00
Protection cum Rehabilitation Working Circle	86/K	0.00	0.00	191.99	0.00	167.44	0.00	12.57	372.00
Protection cum Rehabilitation Working Circle	87/K	0.00	0.00	147.01	0.00	37.79	0.00	29.19	214.00
Protection cum Rehabilitation Working Circle	88/K	0.00	0.00	152.31	0.00	66.60	1.45	18.62	239.00
Protection cum Rehabilitation Working Circle	89/K	0.00	0.00	102.16	0.00	59.73	0.46	3.64	166.01
Protection cum Rehabilitation Working Circle	90a/K	0.00	0.00	180.78	0.00	34.87	4.41	23.91	243.98
Protection cum Rehabilitation Working Circle	90b/K	0.00	0.00	152.80	0.00	80.89	1.07	10.23	245.00
Protection cum Rehabilitation Working Circle	91/K	0.00	0.00	142.79	0.00	95.31	0.00	0.89	239.00
Protection cum Rehabilitation Working Circle	92/K	0.00	0.00	174.42	0.00	114.90	2.71	4.96	297.00
Protection cum Rehabilitation Working Circle	93/K	0.00	0.00	112.87	0.00	51.13	3.26	1.73	169.00

Working Circle	Comptt	Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	94/K	0.00	0.00	96.62	0.00	20.91	0.57	17.89	136.00
Protection cum Rehabilitation Working Circle	95/K	0.00	0.00	111.72	0.00	49.36	0.00	30.90	192.00
Protection cum Rehabilitation Working Circle	96/K	0.00	0.00	62.43	0.00	8.81	0.04	6.72	78.01
Protection cum Rehabilitation Working Circle	97/K	0.00	0.00	47.98	0.00	0.23	0.00	9.79	58.01
Protection cum Rehabilitation Working Circle	9/J/K	0.00	0.00	221.98	0.00	266.90	2.88	122.23	614.01
Protection cum Rehabilitation Working Circle	10/J/K	0.00	0.00	85.64	0.00	71.47	0.00	103.87	261.00
Protection cum Rehabilitation Working Circle	11/J/K	0.00	0.00	119.74	0.00	24.29	0.00	47.95	192.00
Protection cum Rehabilitation Working Circle	12/J/K	0.00	0.00	109.22	0.00	105.04	0.00	110.75	325.02
Total		**0.00**	**80.40**	**4581.96**	**20.88**	**2711.71**	**32.375**	**2116.86**	**9544.20**

Annexure-II (c)

SPECIES WISE AND RANGE WISE DISTRIBUTION OF AREA UNDER PROTECTION CUM REHABILITATION WORKING CIRCLE

REASI RANGE

Working Circle	Compt tt	Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	10/R	0.00	0.00	34.15	35.46	22.78	0.00	13.58	106.00
Protection cum Rehabilitation Working Circle	11/R	0.00	0.00	29.47	20.08	22.01	1.51	27.92	101.00
Protection cum Rehabilitation Working Circle	12a/R	0.00	0.00	104.42	45.11	0.00	0.00	16.47	166.01
Protection cum Rehabilitation Working Circle	12b/R	0.00	0.00	51.92	18.33	0.00	0.00	2.73	73.00
Protection cum Rehabilitation Working Circle	13/R	0.00	0.00	155.90	0.13	21.89	7.30	48.75	234.00
Protection cum Rehabilitation Working Circle	14/R	0.00	0.00	149.38	0.00	0.41	2.56	21.64	174.01
Protection cum Rehabilitation Working Circle	15/R	0.00	0.00	133.10	0.00	5.68	0.00	33.41	172.20
Protection cum Rehabilitation Working Circle	16/R	0.00	0.00	122.50	0.00	4.80	0.84	13.57	141.72
Protection cum Rehabilitation Working Circle	17/R	0.00	0.00	77.21	0.00	8.50	25.66	11.91	123.28
Protection cum Rehabilitation Working Circle	18a/R	0.00	0.00	137.11	0.00	0.00	0.89	9.99	148.00
Protection cum Rehabilitation Working Circle	18b/R	0.00	0.00	77.96	0.00	2.25	0.00	3.79	84.00

Working Circle	Compt tt	Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	19a/R	0.00	0.00	90.70	0.00	42.59	0.00	42.70	176.00
Protection cum Rehabilitation Working Circle	19b/R	0.00	0.00	204.43	0.00	17.98	19.88	14.62	256.92
Protection cum Rehabilitation Working Circle	20/R	0.00	7.50	43.89	0.00	0.00	11.28	35.31	98.00
Protection cum Rehabilitation Working Circle	21/R	0.00	0.00	245.28	0.00	0.00	0.00	16.71	262.00
Protection cum Rehabilitation Working Circle	22/R	0.00	0.00	62.51	0.00	29.58	0.00	23.91	116.00
Protection cum Rehabilitation Working Circle	23/R	0.00	0.00	127.39	0.00	3.33	0.00	13.26	144.00
Protection cum Rehabilitation Working Circle	24/R	0.00	0.00	261.06	0.00	0.00	0.00	25.94	287.00
Protection cum Rehabilitation Working Circle	25/R	0.00	0.00	111.30	0.00	0.00	0.00	19.70	131.00
Protection cum Rehabilitation Working Circle	26/R	0.00	0.00	155.31	0.00	12.98	0.00	43.71	212.01
Protection cum Rehabilitation Working Circle	27/R	0.00	0.00	78.99	0.00	36.04	0.00	50.96	166.00
Protection cum Rehabilitation Working Circle	28/R	0.00	0.00	103.57	0.00	21.18	0.00	21.25	146.01
Protection cum Rehabilitation Working Circle	29/R	0.00	0.00	52.16	0.00	47.42	0.00	34.41	134.00
Protection cum Rehabilitation Working Circle	30/R	0.00	0.00	130.99	0.00	31.09	6.86	151.06	320.01

Working Circle	Compt t	Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	31/R	0.00	0.00	58.90	0.00	8.95	0.00	12.13	80.00
Protection cum Rehabilitation Working Circle	32/R	0.00	0.00	82.80	0.00	415.32	1.25	259.62	759.00
Protection cum Rehabilitation Working Circle	33/R	0.00	0.00	104.56	0.00	194.20	0.00	109.23	408.00
Protection cum Rehabilitation Working Circle	34/R	0.00	0.00	323.22	36.98	0.00	0.00	105.79	466.01
Protection cum Rehabilitation Working Circle	35/R	0.00	0.00	380.81	0.00	73.14	0.00	121.04	575.00
Protection cum Rehabilitation Working Circle	36/R	0.00	0.00	11.98	0.00	127.85	0.00	79.16	219.01
Protection cum Rehabilitation Working Circle	37/R	0.00	0.00	223.31	0.00	277.83	0.00	188.85	690.00
Protection cum Rehabilitation Working Circle	38/R	0.00	0.00	108.20	0.00	92.05	0.04	41.69	242.00
Protection cum Rehabilitation Working Circle	39/R	0.00	0.00	66.79	0.00	81.55	0.00	17.64	166.00
Protection cum Rehabilitation Working Circle	40/R	0.00	0.00	32.74	0.00	43.64	0.00	26.60	103.00
Protection cum Rehabilitation Working Circle	41/R	0.00	0.00	43.01	0.00	71.46	1.23	20.28	136.00
Protection cum Rehabilitation Working Circle	42/R	0.00	0.00	29.07	0.00	58.85	5.52	24.54	118.00
Protection cum Rehabilitation Working Circle	43/R	0.00	0.00	25.61	0.00	76.63	0.00	26.76	129.00

Working Circle	Compt tt	Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	Total
Protection cum Rehabilitation Working Circle	44/R	0.00	0.00	195.30	0.00	22.53	0.00	34.18	252.02
Protection cum Rehabilitation Working Circle	45/R	0.00	0.00	68.89	0.00	0.00	0.00	7.11	76.00
Protection cum Rehabilitation Working Circle	46/R	0.00	0.00	145.21	0.00	0.00	5.35	8.44	159.01
Protection cum Rehabilitation Working Circle	47/R	0.00	0.00	86.88	0.00	0.00	18.02	8.11	113.02
Protection cum Rehabilitation Working Circle	48/R	0.00	0.00	37.99	0.00	0.00	77.41	35.59	151.00
Protection cum Rehabilitation Working Circle	49a/R	0.00	0.00	14.36	0.00	0.00	49.04	22.59	86.00
Protection cum Rehabilitation Working Circle	57/R	0.00	81.07	25.82	0.00	0.00	0.15	4.94	112.00
Protection cum Rehabilitation Working Circle	59/R	0.00	46.80	9.37	0.00	0.00	1.99	0.84	59.02
Protection cum Rehabilitation Working Circle	60a/R	0.00	3.43	55.25	0.00	0.00	33.38	16.93	109.00
Protection cum Rehabilitation Working Circle	61/R	0.00	11.52	56.28	0.00	0.00	96.66	37.53	202.01
Protection cum Rehabilitation Working Circle	68/R	0.00	28.65	8.48	1.14	0.00	58.52	11.18	108.00
Protection cum Rehabilitation Working Circle	69/R	0.00	0.00	50.87	0.00	0.00	71.44	8.67	131.00
Protection cum Rehabilitation Working Circle	70/R	0.00	0.00	352.61	0.00	13.71	12.36	29.30	408.00

Working Circle	Compt t	Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	Total
Protection Working circle.	75/R	0.00	0.00	393.22	0.00	56.26	0.00	24.51	474.00
Total		**0.00**	**179.00**	**5732.45**	**157.27**	**1944.64**	**509.2466**	**1980.80**	**10503.43**

ANNEXURE II (d)

Details of areas diverted and trees extracted under FCA for non-forestry purposes.

S.No	Name of User agency	Total No. of cases requesitioned by the user agencies.	Pending cases					Details of sanctioned cases.							
			Total	At Divn. level	At User Agency level	At Higher Offices.	No. of cases where no forest land involved.	sanctioned cases.	Area diverted (Ha)	Payment due (Rs)	Payment received (Rs.)	Balance payment (Rs.)	No. of trees involved		
													B.L	Conifer	Total
1	Railways	30	1	0	0	1	0	29	153.96	95357089	73355173	22001916	13274	1744	15018
2	PMGSY	23	7	0	3	4	0	16	115.43	135027416	103138944	31888472	14663	7884	22547
3	PWD	18	4	0	4	0	0	14	29.21	42764107	10374546	32389561	3765	380	4145
4	GREF/ Army	8	1	0	1	0	0	7	83.01	67956291	67636013	320278	29781	1514	31295
5	Police	2	2	0	0	2	0	0	0.00	0	0.00	0	0	0	0
6	Other cases	6	4	0	3	1	0	2	7.16	5501855	328	5498570	0	58	58
7	M/s American Hotel Pvt. limited.	1	0	0	0	0	0	1	0.02	100000	100000	0	0	0	0
8	BSNL	1	0	0	0	0	0	1	0.07	52500	52500	0	0	0	0
Total		**89**	**19**	**0**	**11**	**8**	**0**	**70**	**388.89**	**346759258**	**254660461**	**92098797**	**61483**	**11580**	**73063**

ANNEXURE III

Detail of Species wise and Compartment wise distribution of area under OAK WORKING CIRCLE

Working Circle	Comptt	Species composition							Total area
		Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	
Oak Working Circle	1 b/Th	0.00	17.67	308.92	113.65	8.16	43.87	47.73	540.00
Oak Working Circle	1 c/Th	0.00	45.21	168.16	104.13	0.00	4.69	18.81	341.01
Oak Working Circle	2/Th	0.00	20.19	109.94	90.04	0.00	0.00	11.83	232.00
Oak Working Circle	3/Th	0.00	218.09	201.11	181.09	0.00	0.88	42.84	644.01
Oak Working Circle	4/Th	0.00	4.31	122.00	103.21	24.31	39.07	19.10	312.00
Oak Working Circle	8/Th	0.00	0.00	59.66	70.28	62.10	10.65	6.31	209.00
Oak Working Circle	14/Th	0.00	0.00	74.30	60.30	2.63	4.46	19.32	161.00
Oak Working Circle	15/Th	0.00	0.00	125.24	101.50	0.35	6.25	21.66	255.00
Oak Working Circle	16/Th	0.00	61.52	190.13	211.12	10.53	4.59	26.11	504.00
Oak Working Circle	17/Th	0.00	339.97	243.11	152.15	0.00	32.25	7.53	625.01
Oak Working Circle	18/Th	44.26	26.15	700.65	178.53	0.00	17.00	3.41	970.01
Oak Working Circle	19/Th	49.68	112.65	224.43	227.44	3.64	1.60	154.56	774.00
Oak Working Circle	20/Th	0.00	10.73	112.19	14.76	20.66	0.88	67.78	227.00
Oak Working Circle	21a/Th	0.00	42.77	45.29	53.15	0.69	0.00	29.10	171.00
Oak Working Circle	21b/Th	0.00	18.06	46.70	39.62	0.96	0.00	30.67	136.00
Oak Working Circle	22a/Th	0.00	0.10	66.04	7.79	0.77	0.27	2.82	77.78
Oak Working Circle	22b/Th.	0.00	0.00	15.03	11.04	0.96	0.52	7.45	35.00
Oak Working Circle	23/Th	0.00	7.97	65.87	6.95	9.64	0.98	21.61	113.01
Oak Working Circle	24/Th	0.00	55.89	26.34	44.44	0.00	0.00	57.33	184.00
Total		**93.94**	**981.28**	**2905.11**	**1621.18**	**145.40**	**167.95**	**595.96**	**6510.83**

ANNEXURE – IV

Detail of Species wise and Compartment wise distribution of area under WILDLIFE MANAGEMENT WORKING CIRCLE

Working Circle	Compt	Species composition							Total area
		Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	
Wildlife Management Working circle	49b/R	0.00	0.00	3.25	0.00	0.00	7.16	15.59	26.01
Wildlife Management Working circle	50a/R	0.00	0.00	8.86	0.00	0.00	16.66	24.46	50.00
Wildlife Management Working circle	50b/R	0.00	0.00	62.54	2.69	0.00	15.47	27.26	107.98
Wildlife Management Working circle	51/R	0.00	0.00	7.59	72.93	0.00	5.36	30.10	116.00
Wildlife Management Working circle	52/R	0.00	65.05	16.08	63.02	0.00	0.00	11.84	156.00
Wildlife Management Working circle	53/R	0.00	59.18	21.88	2.81	0.07	0.00	24.04	108.00
Wildlife Management Working circle	54/R	0.00	127.85	23.68	0.00	0.00	0.00	13.46	165.00
Wildlife Management Working circle	55/R	10.00	122.00	0.00	8.00	0.00	0.00	0.00	140.00
Wildlife Management Working circle	56/R	0.00	144.11	45.91	0.00	0.00	0.27	8.78	199.09
Wildlife Management Working circle	58/R	0.00	100.79	7.97	0.00	0.00	0.00	1.21	109.98
Wildlife Management Working circle	60b/R	0.00	21.72	10.50	0.00	0.00	0.18	17.61	50.02
Wildlife Management Working circle	62a/R	0.00	62.03	5.26	0.00	0.00	0.03	5.66	73.00
Wildlife Management Working circle	62b/R	0.00	44.72	17.27	0.00	0.00	0.00	6.02	68.02

Working Circle	Compt tt	Species composition							Total area
		Fir	Kail	Chir	Oak	Other BL	Scrub	Blank	
Wildlife Management Working circle	63/R	0.00	163.80	14.49	0.00	0.00	0.00	5.69	184.00
Wildlife Management Working circle	64/R	0.00	129.78	28.30	0.68	0.00	0.00	20.26	179.03
Wildlife Management Working circle	65/R	0.00	108.82	69.52	1.83	0.00	6.25	12.57	199.00
Wildlife Management Working circle	66/R	0.00	16.92	8.62	0.00	0.00	47.21	23.23	96.00
Wildlife Management Working circle	67/R	0.00	127.66	9.48	0.00	0.00	23.00	15.84	176.00
Wildlife Management Working circle	71/R	0.00	0.93	150.23	0.00	0.00	74.29	26.51	251.99
Wildlife Management Working circle	72/R	0.00	203.69	31.10	0.00	2.18	14.70	10.29	261.97
Wildlife Management Working circle	73/R	0.00	60.30	104.17	0.00	0.00	16.66	12.85	194.00
Wildlife Management Working circle	74/R	0.00	0.00	250.89	0.00	6.19	0.76	7.14	265.00
Total:		**10.00**	**1559.43**	**897.66**	**151.98**	**8.45**	**228.06**	**320.52**	**3176.12**

Annexure V (1)

STATEMENT SHOWING MONTH WISE NUMBER OF RAINY DAYS & RAINFALL IS GIVEN OVERLEAF

RAINFALL SUMMARY AT DHYANGARH FOR THE YEAR 2003												
MONTH / **DATE**	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
1	--	3.3	20.3	--	--	--	--	55.1	--	--	--	--
2	--	3.3	105.4	--	--	--	--	24.1	1.5	--	--	--
3	--	--	42.1	1.5	--	--	--	11.4	--	--	--	--
4	--	--	1.5	16.3	--	--	6.9	15.5	16.0	--	--	--
5	--	--	--	--	--	--	8.8	2.5	2.5	--	--	--
6	--	--	--	--	--	--	2.5	--	1.3	--	--	--
7	--	--	--	--	--	--	--	3.0	--	--	--	--
8	--	--	--	--	--	--	--	27.9	--	--	--	--
9	--	--	--	--	--	17.3	8.2	--	67.3	3.0	--	--
10	--	--	--	--	--	--	--	4.3	--	--	--	2.0
11	--	--	3.8	--	--	--	--	--	--	--	--	--
12	--	--	--	--	--	--	31.7	--	2.8	--	--	--
13	--	--	--	--	--	--	14.7	--	5.1	--	--	1.8
14	--	--	--	--	--	--	--	--	--	--	--	24.6
15	--	--	--	--	--	--	46.7	--	6.6	--	--	11.4
16	--	16.9	--	3.8	--	--	58.7	--	--	--	--	32.5
17	--	34.3	7.6	--	--	--	2.5	--	--	--	36.1	--
18	--	83.8	--	--	--	5.0	--	--	--	--	16.0	--
19	--	143.7	--	3.8	--	--	--	73.7	--	--	--	--
20	--	61.0	--	10.2	--	5.1	6.1	49.6	--	--	--	--
21	--	--	--	--	--	5.8	17.8	16.3	19.1	--	--	--
22	--	--	--	--	--	--	17.0	--	--	--	--	--
23	--	6.4	--	--	--	2.0	7.1	--	--	--	--	--
24	--	6.1	--	--	20.1	--	78.7	--	71.9	--	--	--
25	--	--	--	--	--	5.6	--	--	31.8	--	--	--
26	--	1.1	--	--	15.2	--	18.5	76.2	3.8	--	--	--
27	--	--	--	--	--	2.8	18.3	--	--	--	--	--
28	7.6	10.9	--	1.6	--	9.7	--	3.0	--	--	--	--
29	--		16.5	--	--	--	20.3	--	--	--	--	--
30	5.3		21.6	--	--	--	--	2.0	--	--	--	--
31	35.0		--		--		--	--		--		--
TOTAL	**47.9**	**370.8**	**218.8**	**37.2**	**35.3**	**53.3**	**364.5**	**364.6**	**229.7**	**3**	**52.1**	**72.3**
AVERAGE	**1.5**	**12.7**	**7.0**	**1.2**	**1.1**	**1.7**	**11.7**	**11.7**	**7.6**	**0.1**	**1.7**	**2.3**
NO OF RAINY DAYS	**3**	**11**	**8**	**6**	**2**	**8**	**17**	**14**	**12**	**1**	**2**	**5**
CUM	**3**	**14**	**22**	**28**	**30**	**38**	**55**	**69**	**81**	**82**	**84**	**89**

TOTAL RAINFALL DURING THE YEAR = 1850 MM
AVERAGE RAINFALL DURING THE YEAR = 5.07 MM
TOTAL NO OF RAINY DAYS DURING THE YEAR = 89 DAYS

Annexure V (2)

RAINFALL SUMMARY AT DHYANGARH FOR THE YEAR 2004												
MONTH / **DATE**	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
1	4.8	1.8	nil	nil	60.5	Nil	nil	10.9	Nil	Nil	Nil	Nil
2	nil	nil	nil	nil	12.2	3.3	nil	nil	2.8	0.7	Nil	Nil
3	nil	nil	nil	nil	Nil	Nil	7.4	8.9	Nil	16.4	Nil	Nil
4	nil	nil	nil	nil	Nil	Nil	31.8	nil	Nil	Nil	Nil	Nil
5	nil	nil	nil	nil	Nil	Nil	nil	nil	Nil	Nil	Nil	Nil
6	nil	nil	nil	nil	Nil	Nil	nil	2.0	1.4	Nil	Nil	Nil
7	nil	nil	nil	nil	Nil	5.8	3.0	71.1	Nil	Nil	Nil	Nil
8	nil	nil	nil	nil	Nil	nil	1.5	71.9	Nil	Nil	Nil	Nil
9	nil	5.0	nil	nil	Nil	6.4	120.7	70.1	Nil	Nil	Nil	Nil
10	nil	19.1	nil	5.6	Nil	nil	nil	3.8	Nil	12.4	Nil	Nil
11	nil	nil	nil	nil	Nil	nil	nil	17.0	7.2	49.4	Nil	Nil
12	nil	nil	nil	nil	Nil	nil	3.8	nil	Nil	Nil	Nil	Nil
13	nil	nil	nil	nil	Nil	nil	nil	nil	17.6	Nil	Nil	Nil
14	nil	nil	nil	nil	Nil	nil	5.6	nil	Nil	Nil	Nil	Nil
15	nil	nil	nil	nil	Nil	2.5	nil	38.1	24.0	Nil	Nil	Nil
16	nil	nil	nil	nil	Nil	nil	4.3	76.2	2.2	Nil	Nil	Nil
17	3.8	nil	nil	nil	1.8	nil	2.5	7.1	Nil	Nil	Nil	Nil
18	20.3	15.2	nil	nil	Nil	4.1	22.9	8.9	Nil	Nil	Nil	Nil
19	nil	2.5	nil	nil	Nil	nil	nil	nil	4.4	Nil	Nil	Nil
20	nil	nil	nil	nil	Nil	1.3	nil	nil	Nil	Nil	Nil	43.0
21	6.6	nil	nil	nil	Nil	3.0	nil	3.0	14.6	Nil	Nil	Nil
22	69.9	nil	nil	nil	Nil	2.5	nil	nil	Nil	Nil	Nil	Nil
23	43.2	nil	nil	6.6	Nil	nil	3.3	22.6	Nil	Nil	Nil	Nil
24	17.3	nil	nil	nil	Nil	nil	nil	nil	Nil	Nil	Nil	17.4
25	nil	nil	nil	nil	Nil	3.6	nil	24.0	Nil	Nil	Nil	Nil
26	nil	nil	nil	nil	4.3	nil	nil	nil	Nil	Nil	Nil	Nil
27	nil	3.0	nil	nil	Nil	15.2	7.9	nil	Nil	11.0	Nil	Nil
28	nil	2.3	nil	6.9	Nil	nil	3.0	7.2	Nil	Nil	Nil	Nil
29	3.6	nil	nil	nil	Nil	nil	21.6	nil	Nil	Nil	Nil	Nil
30	21.5		nil	58.4	Nil	nil	31.8	5.8	Nil	Nil	37.2	Nil
31	54.6		nil		Nil		3.0	2.8		Nil		3.2
TOTAL	**245.6**	**48.9**	**0**	**77.5**	**78.8**	**47.7**	**274.1**	**451.4**	**74.2**	**89.9**	**37.2**	**63.6**
AVERAGE	**7.9**	**1.6**	**0.0**	**2.5**	**2.5**	**1.5**	**8.8**	**14.5**	**2.4**	**2.9**	**1.2**	**2.0**
NO OF RAINY DAYS	**10**	**7**	**0**	**4**	**4**	**10**	**16**	**18**	**8**	**5**	**1**	**3**
CUM	**10**	**17**	**17**	**21**	**25**	**35**	**51**	**69**	**77**	**82**	**83**	**86**

TOTAL RAINFALL DURING THE YEAR = 1489 MM
AVERAGE RAINFALL DURING THE YEAR = 4.03 MM
TOTAL NO OF RAINY DAYS DURING THE YEAR = 86 DAYS

Source: NHPC, Salal

Annexure V (3)

RAINFALL SUMMARY AT DHYANGARH FOR THE YEAR 2005

Date	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	NIL	Nil	Nil	2.2	1.8	NIL	NIL	NIL	NIL
2	NIL	Nil	Nil	1.3	10.0	NIL	NIL	NIL	NIL
3	NIL	Nil	Nil	NIL	15.0	NIL	NIL	NIL	NIL
4	NIL	4.4	Nil	NIL	4.2	NIL	NIL	NIL	NIL
5	NIL	Nil	Nil	58.0	1.6	NIL	NIL	NIL	NIL
6	NIL	7.2	Nil	25.8	11.0	NIL	NIL	NIL	NIL
7	1.0	Nil	Nil	36.6	12.8	NIL	NIL	NIL	NIL
8	NIL	1.8	14.5	15.4	42.0	2.4	NIL	NIL	NIL
9	NIL	Nil	Nil	NIL	NIL	2.0	NIL	NIL	NIL
10	NIL	Nil	9.0	NIL	NIL	88.2	NIL	NIL	NIL
11	NIL	Nil	Nil	15.0	2.4	24.0	NIL	NIL	NIL
12	NIL	Nil	Nil	50.0	NIL	NIL	12.0	NIL	NIL
13	NIL	Nil	Nil	4.0	NIL	2.6	NIL	NIL	NIL
14	NIL	Nil	Nil	NIL	NIL	1.8	NIL	NIL	NIL
15	NIL	Nil	Nil	3.4	NIL	NIL	NIL	NIL	NIL
16	NIL	Nil	8.4	3.4	67.4	NIL	NIL	NIL	NIL
17	NIL	Nil	Nil	0.6	3.2		4.6	NIL	NIL
18	NIL	Nil	Nil	NIL	NIL	42.0	NIL	NIL	NIL
19	NIL	Nil	1.0	0.6	NIL	NIL	NIL	NIL	NIL
20	NIL	Nil	Nil	4.2	NIL	NIL	NIL	NIL	NIL
21	NIL	Nil	Nil	NIL	11.0	NIL	NIL	NIL	NIL
22	NIL	Nil	Nil	11.0	NIL	4.4	NIL	NIL	NIL
23	4.6	Nil	Nil	8.2	16.0	NIL	NIL	NIL	NIL
24	NIL	2.2	Nil	NIL	NIL	NIL	NIL	NIL	NIL
25	NIL	Nil	Nil	NIL	9.0	NIL	NIL	NIL	NIL
26	15.0	Nil	Nil	2.0	NIL	NIL	NIL	NIL	NIL
27	NIL	Nil	Nil	NIL	34.0	1.2	NIL	NIL	NIL
28	NIL	Nil	2.8	NIL	NIL	NIL	NIL	NIL	NIL
29	NIL	Nil	14.2	55.8	NIL	NIL	NIL	NIL	NIL
30	NIL	Nil	Nil	NIL	NIL	NIL	NIL	NIL	NIL
31		Nil		NIL	NIL		NIL		NIL
No of Days	3	4	6	18	15	9	2	0	0

Source: NHPC, Salal

Annexure V (4)

RAINFALL SUMMARY AT DHYANGARH FOR THE YEAR 2006

MONTH / DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	- -	- -	- -	- -	- -	0.6	- -	18.4	12.8	- -	- -	- -
2	27.2	- -	- -	- -	- -	- -	- -	1.4	129.0		- -	- -
3	57.8	- -	- -	- -	- -	- -	15.0	16.4	100.2	- -	- -	- -
4	1.4	- -	- -	- -	- -	0.6	1.2	21.6	18.8	- -	- -	9.0
5	- -	- -	- -	- -	- -	0.4	- -	71.0	- -	- -	- -	69.2
6	- -	- -	- -		- -	- -	2.2	56.6	- -	- -	- -	41.4
7	- -	- -	- -	- -	- -	- -	3.5	8.0	- -	- -	- -	1.4
8	- -	- -	- -	- -	- -	- -	23.6	21.8	1.8	- -	- -	- -
9	- -	- -	- -	0.2	5.4	- -	- -	1.0	- -	- -	- -	- -
10	- -	- -	- -	26.2	- -	- -	22.6	21.8	2.4	1.0	- -	- -
11	- -	- -	- -		- -	- -	19.6	- -	25.2	- -	- -	12.2
12	- -	- -	- -	- -	- -	- -	120.6	- -	14.6	- -	6.4	- -
13	- -	- -	- -	- -	- -	- -	20.6	9.2	- -	9.6	8.0	- -
14	- -	- -	5.2	- -	- -	2.8	9.2	0.2	- -	- -	- -	- -
15	- -	1.0	33.1	- -	- -	- -	- -	16.6	1.6	- -	- -	- -
16	45.8	- -	27.6	- -	- -	31.0	- -	10.8	- -	- -	2.8	- -
17	57.5	- -	- -	- -	28.8	27.0	- -	- -	- -	- -	5.0	- -
18	85.6	- -	- -	- -	- -	- -	- -	- -	9.6	- -	41.8	- -
19	- -	- -	- -	1.4	10.0	- -	- -	- -	- -	- -	5.0	- -
20	- -	- -	12.0	- -	- -	- -	8.6	0.8	4.8	27.0	- -	- -
21	- -	- -	13.6	- -	3.2	- -	- -	15.4	- -		- -	1.8
22	- -	- -	- -	- -	- -	- -	9.4	- -	1.0	22.8	6.6	- -
23	- -	- -	- -	- -	- -	- -	70.2	0.4	- -	- -	- -	- -
24	- -	- -	- -	- -	- -	- -	54.2	1.4	- -	- -	- -	- -
25	- -	- -	3.0	- -	- -	1.0	6.6	76.0	- -	- -	- -	
26		32.6	45.0	- -	- -	- -	0.4	1.4	- -	- -	- -	2.8
27	- -	18.6	1.6	- -	- -	32.8	62.0	12.4	- -	- -	- -	19.6
28	- -	- -	- -	- -	- -	10.2	129.2	18.2	- -	- -	- -	- -
29	- -		- -	- -	- -	2.0	- -	- -	- -	- -	- -	- -
30	- -		- -	- -	- -	1.0	12.4	- -	- -	- -	- -	- -
31	- -		- -		- -		- -	27.6		- -		- -
TOTAL	**275.3**	**52.2**	**141.1**	**27.8**	**47.4**	**109.4**	**591.1**	**428.4**	**321.8**	**60.4**	**75.6**	**157.4**
Max.	**85.6**	**32.6**	**45.0**	**26.2**	**28.8**	**32.8**	**129.2**	**76.0**	**129.0**	**27.0**	**41.8**	**69.2**
Min.	**1.4**	**1.0**	**1.6**	**0.2**	**3.2**	**0.4**	**0.4**	**0.2**	**1.0**	**1.0**	**2.8**	**1.4**
AVERAGE	**45.8**	**17.4**	**17.6**	**9.2**	**11.8**	**9.9**	**31.1**	**18.6**	**26.8**	**15.1**	**10.8**	**19.6**
NO OF RAINY DAYS	**6**	**3**	**8**	**3**	**4**	**11**	**19**	**23**	**12**	**4**	**7**	**8**

TOTAL RAINFALL DURING THE YEAR = 2288

TOTAL NO OF RAINY DAYS DURING THE YEAR = 108

Source: NHPC, Salal

Annexure V (5)

RAINFALL SUMMARY AT DHYANGARH FOR THE YEAR 2007												
MONTH / **DATE**	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
1		- -	5.5	- -	- -	- -	- -	- -	1.2	- -	- -	7.4
2	- -	- -	0.4	- -	- -	- -	- -	- -	- -		- -	- -
3	- -	- -	- -	- -	12.0	- -	22.2	- -	- -	- -	- -	- -
4	- -	2.2	0.2	- -	- -	- -	- -	- -		- -	- -	- -
5	- -	- -	- -	- -	- -	- -	- -	1.8	15.8	- -	- -	- -
6	- -	- -	- -	- -	- -	- -	32.0	48.4	- -	- -	- -	- -
7	- -	- -	- -	- -	- -	- -	1.4	15.4	- -	- -	- -	- -
8	- -	- -	- -	- -	4.2	- -	15.8	- -	- -	- -	- -	- -
9	- -	- -	- -	- -	1.4	- -	- -	27.4	- -	- -		- -
10	- -	14.4	- -	- -	- -	- -	- -	- -	1.8	- -	- -	0.8
11	- -	35.0	- -	- -	- -	- -	- -	2.2	2.6	- -	- -	1.0
12	- -	72.0	104.0	- -	- -	- -	6.2	- -	- -	- -	- -	5.0
13	- -	7.4	234.4	- -	- -	0.8	- -	13.8	- -	- -	- -	7.2
14	`	3.4	9.6	- -	- -	1.4	- -	50.0	- -	- -	- -	- -
15	- -	8.2	- -	- -	- -	- -	15.2	16.9	- -	- -	- -	- -
16	- -	HOLIDAY	- -	- -	10.0	- -	- -	- -	- -	- -	- -	- -
17	- -	- -	- -	- -	- -	- -	- -	0.8	6.2	- -	- -	- -
18	- -	0.4	- -	2.0	- -	- -	- -	- -	- -	- -	- -	- -
19	- -	0.8	- -	8.4	5.0	- -	0.8	- -	- -	- -	- -	- -
20	- -	- -	47.0	- -	- -	1.4	6.4	36.3	48.0	- -	- -	- -
21	- -	1.0	38.4	- -	- -	- -	12.0	0.3	- -	- -	- -	HOLIDAY
22	- -	16.8	5.8	- -	- -	- -	- -	- -	- -	- -	- -	- -
23	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
24	- -	- -	- -	- -	- -	- -	- -	6.6	- -	- -		- -
25	- -	- -	- -	- -	- -	3.0	- -	6.0	6.8	- -		HOLIDAY
26	- -	2.0	- -	- -	- -	- -	- -	2.5	- -	- -	- -	- -
27	- -	23.0	- -	- -	- -	19.8	6.0	- -	- -	- -	- -	- -
28	- -	44.2	- -	- -	- -	41.0	1.6	1.0	24.6	- -	- -	- -
29	- -		- -	- -	- -	40.0	18.2	- -	- -	- -	- -	- -
30	- -		- -	- -	- -	0.6	- -	- -	- -	- -	9.8	- -
31	- -		- -		- -		- -	7.4		- -		- -
TOTAL	**0**	**230.8**	**445.3**	**10.4**	**32.6**	**108.0**	**137.8**	**236.8**	**107**	**0**	**9.8**	**21.4**
AVERAGE	**0.0**	**8.2**	**14.3**	**0.3**	**1.0**	**3.6**	**4.4**	**7.6**	**3.5**	**0.0**	**0.3**	**0.6**
NO OF RAINY DAYS	**0**	**14**	**9**	**2**	**5**	**8**	**12**	**16**	**8**	**0**	**1**	**5**
CUM	**0**	**14**	**23**	**25**	**30**	**38**	**50**	**66**	**74**	**74**	**75**	**80**

TOTAL RAINFALL DURING THE YEAR = 1339.9 MM
AVERAGE RAINFALL DURING THE YEAR = 3.69 MM
TOTAL NO OF RAINY DAYS DURING THE YEAR = 80 DAYS

Source: NHPC, Salal

Annexure V (6)

RAINFALL SUMMARY AT DHYANGARH FOR THE YEAR 2008

MONTH / DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	- -	NIL	- -	- -	- -	- -	7.2	- -	- -	- -	- -	- -
2	- -	NIL	- -	- -	- -	25.0	- -	- -	- -		- -	- -
3	- -	17.2	- -	3.4	- -	- -	- -	38.6	6.6	- -	- -	- -
4	- -	16.8	- -	5.4	- -	- -	- -	6.4	14.4	- -	- -	- -
5	- -	18.2	- -	24.4	- -	- -	- -	53.2	1.4	- -	- -	- -
6	8.8	1.2		56.0	5.0	- -	69.0	4.6	7.4	21.0	- -	- -
7	5.8	1.0	- -	- -	- -	- -	50.0	- -	0.4	- -	- -	
8	4.2	13.0	- -	- -	- -	29.8	3.0	8.8	1.6	3.4	- -	- -
9	54.4	NIL		- -	- -	6.2	- -	5.0	- -		- -	---
10	82.6	NIL	- -	- -	3.8	1.8	- -	- -	- -	- -	- -	30.4
11	11.6		- -	2.4	1.0	- -	0.4	- -	- -	- -	- -	- -
12	21.4	NIL	- -	- -	- -	3.8	10.6	- -	- -	- -	- -	- -
13	69.0	NIL	- -	- -	31.6	47.8	1.0	29.0	- -	- -		- -
14	- -	NIL	- -	--	- -	24.4	- -	25.6	- -	- -	12.0	- -
15	- -	NIL	- -	2.6	- -	19.2	- -		3.0	8.6	- -	- -
16	- -	NIL	- -	3.2	9.0	22.4	- -	4.6	- -	12.6	- -	- -
17	- -	NIL	- -	- -	- -	- -	3.0	26.0	- -	- -	- -	3.6
18	- -	NIL	- -	- -	- -	68.0	22.0	9.2	28.6	- -	- -	- -
19	- -	NIL	- -	- -	- -	- -	4.0	- -	- -	- -	- -	- -
20	- -	NIL	1.2	- -	8.0	- -	28.4	- -	0.4	- -	- -	9.8
21	- -	NIL	- -	- -	- -	- -	- -	26.8	- -	- -	- -	23.0
22	- -	NIL		- -	- -	- -	- -	60.2	- -	- -	- -	- -
23	- -	2.0	- -	- -	7.0	- -	- -	7.2	20.4	- -	- -	- -
24	- -	3.8	- -	- -	- -	15.0	- -	6.4	- -	- -	- -	- -
25	- -	NIL	- -	- -	9.2	- -	- -	- -	- -	- -	- -	--
26	- -	NIL	- -	- -	- -	- -	9.0	- -	- -	- -	- -	- -
27	- -	NIL	- -	- -	- -	6.0	- -	- -	- -	- -	- -	- -
28	- -	NIL	1.4	- -	- -	110.0	18.2	- -	- -		- -	- -
29	- -		- -	- -	- -	2.6	- -	- -	- -	- -	- -	- -
30	- -		- -	- -	- -	- -	31.2	1.2	- -	- -	- -	- -
31	- -		6.0		- -		79.6	9.0		- -		- -
TOTAL	**257.8**	**73.2**	**8.6**	**97.4**	**74.6**	**382.0**	**336.6**	**321.8**	**84.2**	**45.6**	**12**	**66.8**
AVERAGE	**8.3**	**2.6**	**0.2**	**3.2**	**2.4**	**12.7**	**10.8**	**10.3**	**2.8**	**1.4**	**0.4**	**2.1**
NO OF RAINY DAYS	**8**	**8**	**3**	**7**	**8**	**14**	**15**	**17**	**10**	**4**	**1**	**4**
CUM	**8**	**16**	**19**	**26**	**34**	**48**	**63**	**80**	**90**	**94**	**95**	**99**

TOTAL RAINFALL DURING THE YEAR =1760.6
TOTAL NO OF RAINY DAYS DURING THE YEAR =99

Source: NHPC, Salal

Annexure V(7)

RAINFALL SUMMARY AT DHYANGARH FOR THE YEAR 2009

MONTH / DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	- -	- -	- -	- -	- -			2.0	2.4	- -		
2	- -	- -	- -	- -	- -							
3	- -	- -	- -		- -		31.8	2.8	38.0	- -		
4	5.6	- -	- -	3.0	3.5				13.2	13.4		
5	2.8	4.0	- -	- -	- -			2.2		6.0		
6	- -	20.4	- -	8.6	6.6	3.6				- -		
7	- -	- -	- -	26.0	- -	2.2		9.0		- -		
8	- -	- -	- -	4.0	- -					- -		
9	- -	- -	- -	6.8	- -		8.6			- -		20.0
10	- -	2.4	- -	5.0	- -					- -	26.0	
11	- -	19.4	- -	- -	3.6			8.2	2.0	- -		
12	- -	- -	- -	- -	- -		19.6			- -		
13	- -	- -	- -	- -	- -		87.0			- -		
14	- -	16.4	- -		- -					- -		
15	- -	- -	- -	- -	- -					- -		
16	9.2	- -	- -	- -	- -	7.0		56.4		- -	5.6	
17	16.0	- -	- -	- -	- -			4.2				
18	16.0	- -	- -	- -	- -		21.8			- -		
19	22.0	- -	- -	- -	- -			5.4		- -		
20	- -	1.0	- -	- -	3.0		4.4			- -		
21	- -	- -	11.0	- -	- -					- -		21.0
22	- -	- -	- -	- -	- -		10.4			- -		
23	- -	- -	- -		- -				1.5	- -		
24	- -	7.6	- -	- -	- -		4.6			- -		
25	- -	- -	23.2	- -	5.2				2.4	- -		HOLIDAY
26		- -	4.2	- -	- -			4.4		- -		
27	22.8	- -	- -	- -	- -		1.4			- -		
28	- -	- -	- -	- -	- -		34.6			- -		
29	- -		11.2	- -	- -		40.0			- -		
30	- -		- -	- -	- -	10.0	10.8			- -		
31	- -		- -		- -			2.0		- -		
TOTAL	**94.4**	**71.2**	**49.6**	**53.4**	**21.9**	**22.8**	**275**	**96.6**	**59.5**	**19.4**	**31.6**	**41**
AVERAGE	**3.0**	**2.5**	**1.6**	**1.7**	**0.7**	**0.7**	**8.8**	**3.1**	**1.9**	**0.6**	**1.0**	**1.3**
NO OF RAINY DAYS	**7**	**7**	**4**	**6**	**5**	**4**	**12**	**10**	**6**	**2**	**2**	**2**
CUM	**7**	**14**	**18**	**24**	**29**	**33**	**45**	**55**	**61**	**63**	**65**	**67**

TOTAL RAINFALL DURING THE YEAR =836.4
TOTAL NO OF RAINY DAYS DURING THE YEAR =67

Source: NHPC,

Annexure V (8)

RAINFALL SUMMARY AT DHYANGARH FOR THE YEAR 2010

MONTH / DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	- -	- -	- -	- -	- -			35.6	17.2	- -	- -	
2	- -	- -	7.4	- -	- -	10.4					- -	
3	- -	- -	- -	- -	- -				5.4	- -	- -	
4	11.8	- -	21.0	- -	- -	3.2	16.0			- -	- -	
5		- -	- -	- -	- -	7.4	16.4	24.6		- -		
6	- -	3.2	- -	- -	31.4			109.0		- -	- -	
7	- -	40.2	7.8	- -	1.8			31.2		- -	- -	
8	- -	50.0	- -	- -	- -	25.6			1.3	- -	- -	
9	- -	99.4	- -	- -	- -		16.8	4.0	17.3	- -	- -	22.0
10	- -	31.8	- -	- -	- -	2.4	1.2		1.2	- -	- -	
11	- -	- -	- -	- -	2.8					- -	- -	
12	- -	- -	- -	3.2	- -		6.6	24.0	50.4	- -	- -	
13	- -	- -	- -	2.0	2.0	2.6			105.0	- -	- -	
14	- -	- -	- -		- -			1.4	26.0	- -	- -	
15	- -	- -	- -	- -	- -	6.6				- -	- -	
16		- -	- -	- -	- -			72.0		- -	- -	
17		- -	- -	- -	- -		17.6					
18		- -	- -	- -	- -		19.2	18.2	1.4	- -	- -	
19		- -	- -	16.4	- -		15.8	1.2		- -	12.6	
20	- -	- -	- -	- -	- -		2.6	39.0		- -	- -	
21	- -	- -	- -	9.2	- -		112.0	4.2		- -	- -	21.0
22	- -	- -	- -	13.0	- -	5.2	8.6			26.0	- -	
23	- -	- -	- -		- -	2.0			19.6	1.0	- -	
24	- -	- -	- -	- -	- -	3.0	2.4		11.2	- -	- -	
25	- -	- -	- -	- -	- -	49.0	11.6			- -	- -	
26		1.0	- -	- -	- -	1.4	57.8	1.3		- -	- -	
27		5.2	- -	- -	- -		114.6	5.0		- -	- -	
28	- -	- -	- -	- -	14.6	16.4	9.6			- -	- -	
29	13.4		- -	- -	64.2					- -	- -	
30	12.8		- -	- -	3.2	9.6	5.0	18.2		- -	- -	27.4
31	- -		- -		- -			47.2		- -		30.6
TOTAL	**38**	**230.8**	**36.2**	**43.8**	**120**	**144.8**	**433.8**	**436.1**	**256**	**27**	**12.6**	**101**
AVERAGE	**1.2**	**8.2**	**1.1**	**1.4**	**3.8**	**4.8**	**13.9**	**14.0**	**8.5**	**0.8**	**0.4**	**3.2**
NO OF RAINY DAYS	**3**	**7**	**3**	**5**	**7**	**14**	**17**	**16**	**11**	**2**	**1**	**4**
CUM	**3**	**10**	**13**	**18**	**25**	**39**	**56**	**72**	**83**	**85**	**86**	**90**

TOTAL RAINFALL DURING THE YEAR = 1880.1
TOTAL NO OF RAINY DAYS DURING THE YEAR = 90

Source: NHPC, Salal

Annexure VI (1)

Range wise detail of Resin Channel Survey in the respect of Reasi Forest Division

REASI RANGE

Plot no.	No. of trees	Range	Comptt. No.	Remarks
1	06	Reasi	32/R	unfit for resin tapping
2	08	-do-	-do-	-do-
3	04	-do-	-do-	-do-
4	05	-do-	-do-	-do-
5	10	-do-	-do-	-do-
6	07	-do-	-do-	-do-
7	05	-do-	-do-	-do-
8	03	-do-	-do-	-do-
9	06	-do-	28/R	-do-
10	10	-do-	31/R	-do-
11	07	-do-	18 a/R	-do-
12	04	-do-	27/R	-do-
13	05	-do-	30/R	-do-
14	03	-do-	25/R	-do-
15	07	-do-	25/R	-do-
16	05	-do-	31/R	-do-
17	12	-do-	18b/R	-do-
18	06	-do-	27/R	-do-
19	04	-do-	30/R	-do-
20	06	-do-	30/R	-do-
21	10	-do-	59/R	-do-
22	07	-do-	59/R	-do-
23	09	-do-	59/R	-do-
24	04	-do-	59/R	-do-
25	06	-do-	61/R	-do-
26	03	-do-	61/R	-do-
27	08	-do-	68/R	-do-
28	07	-do-	69/R	-do-
29	10	-do-	70/R	-do-
30	05	-do-	70/R	-do-
31	05	-do-	70/R	-do-
32	08	-do-	17/R	-do-
33	04	-do-	17/R	-do-
34	06	-do-	18/A/R	-do-
35	04	-do-	18/A/R	-do-
36	08	-do-	19/R	-do-
37	04	-do-	19/R	-do-
38	07	-do-	20/R	-do-
39	04	-do-	23/R	-do-
40	06	-do-	25/R	-do-
41	03	-do-	27/R	-do-
42	08	-do-	27/R	-do-
43	07	-do-	28/R	fit for resin tapping
44	09	-do-	28/R	-do-
45	11	-do-	38/R	unfit for resin tapping
46	06	-do-	38/R	fit for resin tapping
47	04	-do-	41/R	-do-
48	05	-do-	41/R	unfit for resin tapping
49	04	-do-	42/R	fit for resin tapping
50	03	-d0-	43/R	unfit for resin tapping
51	09	-do-	44/R	-do-
52	04	-do-	45/R	fit for resin tapping

Plot no.	No. of trees	Range	Comptt. No.	Remarks
53	06	-do-	45/R	unfit for resin tapping
54	08	-do-	45/R	-do-
55	05	-do-	46/R	-do-
56	09	-do-	46/R	fit for resin tapping
57	10	-do-	45/R	Unfit for resin tapping
58	06	-do-	45/R	Un fit for resin tapping
59	04	-do-	45/R	Unfit for resin tapping
60	07	-do-	46/R	-do-
61	07	-do-	46/R	-do-
62	09	-do-	46/R	-do-
63	05	-do-	59/R	-do-
64	04	-do-	59/R	-do-
65	03	-do-	59/R	-do-
66	03	-do-	59/R	-do-
67	06	-do-	61/R	-do-
68	08	-do-	61/R	-do-
69	05	-do-	68/R	-do-
70	04	-do-	69/R	-do-
71	07	-do-	70/R	-do-
72	06	-do-	70/R	-do-
73	08	-do-	70/R	-do-

Annexure VI (2)

THAKRAKOTE RANGE

Plot no	No. Of trees	Range	Comptt. No	Remarks
1	03	Thakrakote	5/Th	Fit for resin tapping
2	05	-do-	6/Th	Unfit for resin tapping
3	05	-do-	5/Th	unfit for resin tapping
4	04	-do-	5/Th	Fit for resin tapping
5	06	-do-	5/Th	Fit for resin tapping
6	08	-do-	5/Th	Fit for resin tapping
7	04	-do-	6/Th	Unfit for resin tapping
8	06	-do-	6/Th	Fit for resin tapping
9	03	-do-	6/Th	Fit for resin tapping
10	07	-do-	5/Th	Fit for resin tapping
11	08	-do-	32/Th	Unfit for resin tapping
12	08	-do-	32/Th	Unfit for resin tapping
13	06	-do-	33/Th	Fit for resin tapping
14	03	-do-	34/Th	Unfit for resin tapping
15	04	-d0-	34/Th	Unfit for resin tapping
16	05	-do-	36/Th	Unfit for resin tapping
17	04	-do-	35/Th	Unfit for resin tapping
18	07	-d0-	-do-	-do-
19	03	-do-	36/Th	Fit for resin tapping
20	06	-do-	-do-	Unfit for resin tapping

Annexure VI (3)

KATRA RANGE

Plot No	No of trees	Range	Comptt. No	Remarks
1	04	Katra	91/K	Unfit for resin tapping
2	06	-do-	95/K	fit for resin tapping
3	06	-do-	96/K	Unfit for resin tapping
4	09	-do-	96/K	fit for resin tapping
5	08	-do-	84/K	-do-
6	10	-do-	87/K	Unfit for resin tapping
7	04	-do-	88/K	fit for resin tapping
8	03	-do-	89/K	-do-
9	07	-do-	94/K	Unfit for resin tapping
10	05	-do-	90a/k	-do-
11	02	-do-	90/K	fit for resin tapping
12	04	-do-	85/K	Unfit for resin tapping
13	03	-do-	85/K	fit for resin tapping
14	06	-do-	86/K	-do-
15	05	-do-	-do-	-do-
16	08	-do-	-do-	-do-
17	03	-do-	90b/K	Unfit for resin tapping
18	02	-do-	94/K	Unfit for resin tapping
19	02	-do-	90b/K	Unfit for resin tapping
20	04	-do-	90b/K	Unfit for resin tapping
21	07	-do-	90b/K	fit for resin tapping
22	08	-do-	94/K	-do-
23	09	-do-	84/K	-do-
24	07	-do-	96/K	Unfit for resin tapping
25	08	-do-	85/k	-do-
26	06	-do-	85/K	-do-

Plot No	No of trees	Range	Comptt. No	Remarks
27	09	-do-	86/K	fit for resin tapping
28	05	-do-	86/K	Unfit for resin tapping
29	04	-do-	96/K	-do-
30	07	-do-	96/K	-do-
31	08	-do-	97/K	-do-
32	06	-do-	97/K	-do-
33	09	-do-	95/K	-do-
34	05	-do-	95/K	Unfit for resin tapping
35	08	-do-	9/J/K	Unfit for resin tapping
36	06	-do-	9/J/K	Unfit for resin tapping
37	07	-do-	10/J/K	fit for resin tapping
38	04	-do-	10/J/k	-do-
39	05	-do-	10/J/K	Unfit for resin tapping

Annexure VII

List of Beruneline Forests in Reasi Forest Division. Handed over on spot by Revenue authorities to Forest Departments as per DFOôs Reasi letter No. 3328 Dated 11-09-1979 addressed to the Conservator of Forests, Chenab Circle Jammu.

Range	S.No.	Name of Beruline Forests	Area Kanal-Marlas
Reasi	1.	Reasi	631-14
	2.	Chiala	291-7
	3.	Dassanu	2259-07
	4.	Shetar	1393-17
	5.	Agharjitto	594-15
	6.	Buttan	1598-00
	7.	Bidda	3743-12
	8.	Salal	42847-13
	9.	Sarotkote	791-15
	10.	Ratnote	21-09
	11.	Sarotekote	27-00
	12.	Nagot	64-14
	13.	Baispat	1157-00
	14.	Kerani	54-00
Thakrakote	1.	Talwara	180-01
	2.	Kanskhasan	84-15
	3.	Kolsar	3633-13
	4.	Pouni	33-05
	5.	Kundkhanyar	566-00
	6.	Khanyari	931-2
	7.	Zarni	51-16
	8.	Lerh	942-9
	9.	Saloon	784-4
	10.	Daroon	1261-6
	11.	Pouni Dasoon	152-12
	12.	Dhanwa	1011-09
	13.	Bharakh	722-12
	14.	Bazote	28923-3
	15.	Kothian	459-15
	16.	Beolian	2076-12
	17	Bharakh	42-12
	18.	Kheralarh	43-2
	19.	Sadhan	4207-10
	20.	Narkote Beat	60-04
	21.	Pattian	3209-2
	22.	Village Gandali	1787-00
	23.	Village Kanotta	3982-4
	24.	Village Beotta	428-11
	25.	Village Bandhar	2071-09
	26.	Bhaloat	1017-03
	27.	Prankote	343542-26
	28.	Narla Beat	566-06
	29.	Dhaklote	5171-5

Annexure VIII

As per records available the following is the list of Beruneline Forests in Reasi Forest Division not handed over to Forest Department.

Range	S.No.	Name of Beruneline Forest	Area Kanals- Marlas
Reasi and Katra	1.	Mori	2612-00
	2.	Mansu	578-1
	3.	Blandda	146-13
	4.	Sersundu	744ð 6
	5.	Kansor	745-6
	6.	Sermaga	560-12
	7.	Sumdkhael	806-14
	8.	Bakal	1073-15
	9.	Lamsura	5516-4
	10.	Karankot	1677-1
	11.	Kottle lofpot	122-2
	12.	Kotru	1023-14
	13.	Airnakot	2454-1
	14.	Horotkot	5664-15
	15.	Saranda	1571-15
	16.	Sahri	7958-16
	17.	Chiralakot	468-7
	18.	Dhatangali	256-
	19.	Phogori	5278-19
	20.	Tot	5301-15
	21.	Dangakot	3972-3
	22.	Rotnote	5020-12
	23.	Devigarh	902-12
	24.	Bidda	4298-9
	25.	Chhopanu	9420-4
	26.	Tanda	892-2
	27.	Kanjli	987-3
	28.	Bhaga	6457-13
	29.	Kren	562-12
	30.	Karwa	2395-15
	31.	Kotli	2345-18
	32.	Panasa	3298-4
	33.	Dhehot	1017-13
	34.	Bandar	2071-9
Th. kot	1.	Thakrakote	530
	2	Lorcha	440-14
	3	Gheona	1233-10
	4	Brigala	906-19
	5	Biota	428-11
	6	Kanatoo	3982-14
	7	Samar	6088-3
	8	Malta	4939-17
	9	Gondali	1787
	10	Jhandi	1736-5
	11	Sujapur	1136-13
	12	Theru	847-13
	13	Alya	870-17
	14	Dheot	341-2
	15	Ramsa	175
	16	Nomal	18342-17
	17	Ghabar	7622-3
	18	Baldhanu	1994
	19	Sailanjan	7229-12
	20	Dharan	1764-8
	21	Parankot	1564-3

Range	S.No.	Name of Beruneline Forest	Area Kanals- Marlas
Th. kot	22	Pattian	931-6
	23	Ladha	2574-6
	24	Chakalawalya	7746-14
	25	Thuh	21139-2
	26	Thanol	5722-14
	27	Dhakikot	4471-5
	28	Narkot	11564-14
	29	Jij	13283-19
	30	Darwoon	1390-6
	31	Kundkhanyari	599-10
	32	Khanyar	931-2
	33	Jereli	51-16
	34	Lerj	1022-9
	35	Bhanwa	1011-19
	36	Kanskhasun	264-16
	37	Trewal	224-6
	38	Gojar	29629-15

Annexure IX

The altitude of the important places of the Reasi Forest Division.

S.No.	Name of Place	Approximate altitude in metres.
1.	Bhabber	400
2.	Bhimgarh Fort(Reasi)	588
3.	Choru Sira	2375
4.	Chinka FRH	445
5.	Dera	360
6.	Dhyangargh Salal Dam	435
7.	Katra	800
8.	Matha(lower-upper)	1300-1422
9.	Mathlani Top	2608
10.	Mulkhumba	2476
11.	Pouni	609
12.	Reasi	508
13.	Saroli	2487
14.	Sangardanda	1810
15.	Sakhwalgali	1974
16.	Suraj-kund	2550
17.	Tote Forest Rest House	1350

Annexure X (a)

ROADS/PATHS

In Reasi Forest Division area the following motrable roads are maintained by P.W.D. and BRO etc.

1. NHIA Domel-Katra-Reasi.
2. NHIA Tikri-Katra-Reasi.
3. Reasi-Pouni-Bhamla (Sunderbani, Nowshera, Rajouri, Poonch).
4. Reasi-Pouni-Bharrakh (Rajouri, Poonch).
5. Reasi Jyotipuram (Arnas-Dharmari-Mahore).
6. Reasi, Talwara, Dhayargarh Thanpal.

The statement showing details of Roads/paths existing in Reasi Forest Division and maintained by Forest Department

Range	S.No.	Name of Road/path and the Comptt.through which it passes	Length in kms. (app),	Width in Mts. (app.)	Remarks.
Reasi	1.	Gran Tote (Co. 35,37,38,40,42 to 46R.	30 K.	2 mts.	Needs repair & renovation.
	2	Tote to Shukhalghati 47,48,49,59, 60,61,62,a, 62b/R	10 km.	1 mt..	Needs renovation
	3	Anji to Shukhalghati thropugh Anji Nallaha 35,37,38,490,42,43,44,46,48,59,60,61R	18 km.	1 mt.	Needs renovation
	4	Sujandhar to Durgali 17, 18a, 19b, 20/R	8 Km.	0.5 mt.	---do----
	5	Naget to Baspati	12 Km.	5 mts.	----do----
	6	Khariket to Baspati then to Saroli Co.10 to 19b, 37 to 46/R 49, to 53/R.	18 Km.	2 mt	Needs repair & renovation.
	7	Sarsandu to Surjandhar	16 Km.	1 mt	Needs renovation
	8	Tote to Seroli 47 to 53	14 Km.	1 mt	-----do-----
	9	Kheritalab to Sersandu 22-25	5 Km.	1 mt.	------do-----
	10	Sujandhar to Bagdhar10, 12a, 12b,14,16,17	7 Km.	1 mt.	-----do------
	11	Darkali gali to Bespth gali via Satoi gali Top of Co. 37,38,39,41,42,43,44,45,46,47	122 km.	10.5 mt.	Needs repair
	12	Darkoli Sail in Sermaga Co. 23,24, 25/R	3 km.	4.50 mt.	-------do-----
	13	Darkali gali to Sersandu Co. 21, 22, 23.	6 km.	1 mt.	Needs repair
	14	Batalgali to Sersundu Co. 20, 27,26, 25,24,23,22	14 km.	1 mt.	------do-----
	15	Khari Grshat to Berkali Co. 38,37,35	6 km.	8.5 mt.	-----do------

Range	S.No.	Name of Road/path and the Comptt.through which it passes	Length in kms. (app),	Width in Mts. (app.)	Remarks.
Thakrakote	1	Chinkah to Chakal Saltha to Malkhan to Panjigali Co. 7, 6, 5, 4, 3, 2, 16, 17.	20 Km (app)	1 mt	Needs repair & renovation.
	2	Chinkah to Thakrakote Co. 7, 10a, 12.	15 Km	1. mt	
	3	Brigala to Bhiram Co. 35, 36, 37, 38	15 Km	1 mt	
	4	Bergala to Chilligala Co. 31., 32.	8 Km	1 mt	
	5	Bimbal to Gaghar Co. 22a, 22b, 23, 24.	13 Km	1 mt	
	6	Gaghar to Jhandi Co. 24, 25, 26, 27, 28a, 28b.	12 Km	1 mt	
	7	Jhandi to Dabha Co. 30, 31.	6 Km	1 mt	
	8	Dhanoo to Biota Co. 39, 40.	5 Km	1 mt	Needs repair & renovation.
	9	Pouni to Chilligala Co. 55, 56, 58a, 58b.	13 km	1 mt	
	10	Barakh to Rolkian Co. 60, 61, 62.	16 Km	1 mt	
	11	Tanda to Sangarmarg (road under Army) Co. 64, 63, 62.	20 km	1 mt	
Katra	1	Nemain to Mori via Sarna Dar Co. 87, 97, 96, 95, 94, 93.	13 km	1 mt	Needs repair & renovation
	2	Nomain to Devi Asthapan Bimyal Co. 87, 88, 89, 90a.	12 km	1 mt	
	3	Nomain to Kangali Co. 87, 88.	6 km	1 mt	
	4	Butan to Kangali Co. 85, 86.	7 km	1 mt	
	5	Mutal to Jangalgali Co. 30, 33.	12 km	1 mt	
	6	Junge-gali to Sukhalgali Co. 28, 27, 26a, 28b 25, 20.	15 km	1 mt	
	7	Sukhal Gali to Pathal Co. 20. 21.	5 km	1 mt	

Annexure X (b)

Table showing existing buildings in Reasi Forest Division

S.No.	Name of Building	Location	Accommodation available	Type of Construction	Distance from Motor able Road	Present condition of the building
1	Divison Quarter Reasi	Reasi	4 Room 1 Kitchen 1 Bath Room 1 Store	Pacca/Tin	0 Km	Good
2	Divisional office Reasi building		5 Room 2 Bath room 1 Store	Pacca/Tin	0 Km	Good
3	Chowkidar Quarter Reasi		3 Rooms	Pacca/Tin	0 km	Needs repair
4	Clerical Quarter Reasi		3 Rooms, 1 Kitchen 1 Bath room	Pacca/Tin	0 km	Needs reconstruction
5	Range office/Soil cum Clerical Quarter No. 2 Reasi		3 Room 1 Kitchen 1 Bath room	Pacca/Tin	0 km	Needs reconstruction
6	Forest Quarter Reasi		2 Rooms 1 Bath room 1 Kitchen	Pacca/Tin	0 km	Needs repair
7	Range office Reasi		3 Rooms 1 bath room	Pacca/Tin	0 km	Good
8	Forest Quarter Reasi		2 Rooms 1 Kitchen 1 Bath room	Pacca/Tin	0 km	Needs repair
9	FRH Katra	Katra	3 Rooms 3 Bath room 1 Kitchen	Pacca	0 km	good
10	Range office/Range Quarter Katra	Katra	6 Rooms 1 Store,2 Bath room, 1 Kitchen	Cement	0 km	good
11	Mali Hut/Seed Store Katra	Katra	3 Rooms 1 Store cum Bath room, 1 Kitchen one barandah	Cement/Mud.	0 km	Needs repairs
12	Mali Hut Panasa	Katra	2 Room 1 Kitchen 1 Bath room	Cement/Mud.	0 km	Needs reconstruction
13	Forest Check Post Moori	Moori	2 Room 1Kitchen 1 Bathroom	Cement/Mud.	On the road side	Under construction
14	Forest Quarter/General store. Transferred to SFP.	Bhabbar	1 Room 1 Kitchen and Varandah	Cement/Mud.	1 Km	Transferred to SFP Katra
15	Forest Quarter/Store Mari	Mari	3 Rooms	Pacca/Tin	400 mts	Good
16	Watcher Hut Mari	Mari	1 Room 1 Kitchen and Stone	R.S. Mosonry Court/Mud	Mari	Needs repairs
17	Check Post Baradari	Baridari	1 Room 1 Kitchen	R.S. Mosonry Court/Mud	On the road side	Needs repairs

S.No.	Name of Building	Location	Accommodation available	Type of Construction	Distance from Motorable Road	Present condition of the building
19	Check Post Talwara	Talwara	2 Room 1 Kitchen 1 Bath room	R.S. Mosonry Court/Mud	On the road side	Needs reconstruction
20	Range Quarter/office	Pouni	4 Rooms 2 bath room 1 Kitchen	R.S. Mosonry Court/Mud	On the road side	Needs reconstruction
21	FRH Chinkah	Chinkah	3 Rooms	Pacca	4 Kms	Good
22	Forest Check post	Jyotipuram	2 Rooms, 1 Kitchen Warandah	Pacca/Tin	on the road	Good
23	Forest Rest House Benigala	Thakrakote	n/a	NA	NA	NA
24	Guard Hut	Prayas	1 Room 1 Kitchen 1 Barandah	Pacca/Tin	17 kms	Good
25	Forest Rest House	Tote	2 Rooms, 1 Kitchen 1 Bath room	Pacca/Tin	27 Kms	Need renovation repair

Annexure XI
Divisional Forest Officer who were in charge of Reasi Forest Division.

S.No.	Name	CHARGE HELD	
		From	To
1.	Sh. S. R. Modi	26-09-27	28-02-30
2.	Sh. Malik Jaggan Nath	01-03-30	29-11-31
3.	L. Mulkh Raj Gandotra	02-12-31	10-11-34
4.	Malik Fateh Mohd. Khan	11-11-34	24-01-35
5.	Sh. G.P. Malhotra	25-01-35	07-12-35
6.	Sh. K.K. Nanda	08-12-35	20-01-35
7.	Sh. Des Raj Malhotra	21-01-36	29-09-37
8.	Malik Fateh Mohd. Khan	01-10-37	13-06-39
9.	Sh. Swerup Singh	14-06-39	10-07-39
10.	Sh. Shiv Des Mengi	11-07-39	27-01-40
11.	Sh. R. Walyat Khan	28-01-40	17-02-40
12.	Sh. Munshi Ram Sharma	18-02-40	28-07-40
13.	Sh. P. C. Gupta	29-07-40	18-05-42
14.	Sh. Balmukund	29-05-42	05-01-46
15.	Sh. Sher Singh Sawhney	16-01-46	07-04-47
16.	Sh. Shanti Sarup	08-04-47	09-11-48
17.	Sh. L. N. Khosla	10-11-48	07-06-53
18.	Sh. Gurbachan Singh	08-06-53	18-05-56
19.	Sh. Shiekh Gulam Khan	19-05-56	12-05-58
20.	Sh. D.N. Khanna	13-05-58	05-07-60
21.	Sh. Ejaz Ahmad Malik, I.F.S.	11-07-60	31-10-64
22.	Sh. R. N. Sharma	01-11-64	17-10-67
23.	Sh. H.L. Abrol	18-10-67	10-08-68
24.	Sh. J.R. Dewan	11-08-68	18-01-69
25.	Sh. Abdul Hamid	19-01-69	18-09-72
26.	Sh. H.L. Mengi	19-09-72	06-07-75
27.	Sh. G.R. Malik	07-07-75	28-02-78
28.	Sh. S. Ahmad Salaria	01-03-78	25-01-82
29.	Sh. M.S. Bahri	25-01-82	06-02-85
30.	Sh. B. K. Sharma	02-06-85	08-09-86
31.	Sh. P. P. Sharma, I.F.S.	08-09-86	12-09-87
32.	Sh. Ruplal Bharti, I.F.S.	14-09-87	12-08-89
33.	Sh. A.K. Srivastava, I.F.S.	12-08-89	19-12-91
34.	Sh. Shiv Kumar Khajuria, I.F.S.	19-12-91	15-07-94
35.	Sh. R. P. Singh, I.F.S	15-07-94	31-01-97
36.	Sh. Sameer Bharti	31-01-97	07-05-99
37.	Sh. N. S. Kala	07-05-99	07-07-2000
38.	Sh. M. M. Gupta	07-07-2000	14-05-2001
39.	Sh. A. K. Gupta	14-05-2001	23-07-2001
40.	Sh. M. M. Gupta	23-07-2001	06-07-2002
41.	Sh. S. K. Sinha, I.F.S.	06-07-2002	23-02-2004
42.	Sh. A. K. Magotra	23-02-2004	10-01-2005
43.	Sh. Shoukat Ali	10-01-2005	14-06-2006
44.	Sh. Nirmal Singh	14-06-2006	14-12-2006
45.	Sh. N.K. Kohli	14-12-2006	25-02-2008
46.	Sh. J. K. Kohli	25-02-2008	01-06-2009
47	Dr. V. S. Senthil Kumar, I.F.S.	01-06-2009	06-07-2010
48.	Sh. Preet Pal Singh, I.F.S.	06-07-2010	15-04-2011
49.	Sh. R.C. Gupta, DCF	15-04-2011	27-08-2012
50.	Dr. Syed Nadeem Hussain, I.F.S	27-08-2012	-present-

Annexure XII

GOVERNMENT OF JAMMU AND KASHMIR.
CIVIL SECRETARIAT FOREST DEPARTMENT.

Subject: Forest Policy ï Ban on felling of trees.
Ref. : Cabinet Decision No.2 Dated: 10-01-1990
Government Order No.24-FST of 1990
Dated: 15-01-1990

It is ordered that all commercial felling of trees in the catchments specified below is banned expect where markings have been conducted and coupes already handed over the State Forest Corporation.

a) Jammu Region :

i.	Poonch	Entire Division.
ii.	Jammu	Entire Division.
iii.	Kathua	Entire Division.
iv.	Billawar	Entire Division.
v.	Nowshara	Entire Division.
vi.	Rajouri	Entire Division except Fir Selection Working Circle.
vii.	Ram Nagar	Entire Division except Basantgarh Range.
viii.	Udhampur	Entire Division except Dudu and Panchari.
ix	Ramban	Entire Division except Mahu Mangat, Pogal and Rajgath.
x	Batote	Entire Division except Lander and Marmat Ranges.
xi	Marwah	Chatroo catchment.
xii.	Bhadarwah	Bhalesh Range and Killar drainage above Bhalla.
xiii.	Reasi.	Entire Division.
xiv.	Doda	Entire Division.
b) Kashmir Region		
i.	Anantnag Division	Deodar Kail Working Circle.
ii.	Lidder Division	Lidder catchment above Batakut.
iii.	Pir Panjal Division and around Yusmarg.	
iv.	JV Division Baramula Range Uri and area around Gulmarg.	
v.	Langat	Entire Division
vi.	Kehmil	Entire Division
vii.	Kamraj	Entire Division
viii.	Bandipur	Guraz and Chitternar Watershed.
ix.	Sindh	Mansbal Range and Singh drainages above bridge.

By order of the Government of Jammu and Kashmir.

Sd/- S.S. BLOWRIA,
Commissioner/ Secretary to Government,
Forest Department.

Annexure XIII

LIST OF SOME COMMON TREES, HERBS AND SHRUBS IN THE REASI FOREST DIVISION.

SPECIES	FAMILY	VERNACULAR NAME
Abies pindrow	Pinaceae	Tung, Budlu, Partal
Acacia catechu	Mimoscae	Katha, Khair
Acacia modesta	Mimoscae	Phulai
Acacia nilotica	Mimoscae	Kiker
Acer caesium	Sapidaceae	
Acer pictum	Sapidaceae	Trikanna
Aegle marmelos	Rulaccae	Bel
Aesculus indica	Sapindaceae	Goon, Bankhor
Albizzia lebbek	Mimoseas	Siris
Alnus nitida	Cupuliferae	Champ
Anogeissus latifolia	Combretaceae	Dheo, Bakli
Bauhinia purpurea	Caesal piniease	Karal
Bauhinia racemosa	Caesal piniease	Jhinjera
Bauhinia retusa	Caesal piniease	
Bauhinia variegate	Caesalpinieae	Karer
Bombax ceiba	Malvaceae	Simbal
Butea monosperma	Papilioneae	Palaeh, Kinjoo, Tatooye
Buxus wallichiana	Euphorbiacere	Chikri
Caeseria tomentosa		Chila
Cassia fistula	Caesalpinieae	Karengal, Karyar, Amaltas
Cedrus deodara	Pinaceae	Dyar, deodar
Cetlis australis	Utricaceae	Kharik
Corylus colurna	Cupuliferae	Thangi, Badam
Crataegus crenulata	Rosaceae	
Cupressus torulosa	Cuperussaceae	
Dalbergiasissoo	Papilionaceae	Tali, Shisham
Ficus bengalensis	Utricaceae	Bar
Ficus racemosa	Utricaceae	Rumbal
Ficus palmata	Utricaceae	Phagwara
Ficus auriculata	Utricaceae	Trembal
Ficus religiosa	Utricaceae	Pipal
Gmelina arborea	Verbenaoeae	Gamber
Grewia optiva	Tilliaceae	Dhaman
Grewia elastic	Tilliaceae	Dhaman
Ilex dipyrena	Iiicaceae	Kanderu
Juglans regia	Juglandaceae	Akhrot
Kydia calycina	Malvaceae	Pula
Lagerstroemia parvifolia	Lythraceae	
Lannea coromandelica	Anacardiaceae	Kembai Simla
Machilus duthiei	Lauraceae	Chandri
Machilus odoratissima	Lauraceae	Chandri
Mallotus philippinensis	Euphorbiaceae	Kamila
Mangifera indica	Anacariaceae	Am
Melia azedarach		Dhrenk
Mitragyna Parvifolia	Bubiaceae	Kalam
Morus Serrata	Urticaceae	Tut
Olea Cuspidata	Pleaceae	Koa
Ougeinia oogenenesis	Papilonaceae	Sandan
Phoenix sylvestris	Palmas	Khajur
Emblica officinalis	Eupborbiaceae	Amla
Erythrina indica		Thum
Pieris ovalifolia	Ericaceae	Ailan
Pinus wallichiana	Pinaceae	Byad , Kail
Pinus roxburghii	,,	Chill, Chir

SPECIES	FAMILY	VERNACULAR NAME
Pistacia integerrima	Anacardiaceae	Kakar
Populus ciliate	Salicaceae	Talunj,Bareta,Safeda
Prunus padus	Rosaceae	Kalkat
Prunus puddum	,,	
Punica granatum	Lythraceae	Anardana, Darooni
Pyrus pashia	Rosaceae	Kainth
Quercus leucotrichophora	Cupuliferaea	Banj
Quercus dilatata	,,	Moru
Quercus glauca	,,	Barin
Quercus ilex	,,	Hiru
Rhododendron arboreum	Ericaceae	Bras, Chahan, Chew
Cotinus coggygria	Anacadiaceae	Bhan, Tung
Salix spp	Caliceceae	
Syzygium Cuminii	Myrtacheae	Jamun
Toona ciliata	Meliaceae	Toon
Toona Serrata	Meliaceae	Dadri
Terminalia balerica	Combretaceae	Behera
Terminalia arjuna	,,	Arjan
Wendlandia heyneii	Rubiaceae	Pansar
LIST OF SHRUBS AND HERBS		
Adhatoda vascia	Acanthaceae	Brenkar
Agave Americana	Amaryllidaceae	
Asparagus adscendens	Lilliaceae	Sahansooud
Atropa belladonna		
Berberis aristata	Berberidaceae	
Berberis lyceum	,,	Kambal, simlu
Berberis chitria	,,	
Calatropis procera	Aselepiadaceae	(Munder), AK
Cannabis sativa	Urticaceae	Pang, Bhang
Capparis aphylla	Capparidaceae	Rosa
Carrisa opaca	Apocynaceae	Gerna
Colebrookia oppositifolia	Labiatae	Swalia
Cotoneaster micriphylla	Rosaceae	Luni
Cotoneaster bacillaris	,,	Rheu
Daphne Cannabina	Thymalaceceae	
Desmodium tiliaefolium	Papilionaceae	Charmra
Diioscorea bulbifera		
Dodonaea viscose	Sapindaceae	Santha
Euphorbia royleana	Euphorbiaciae	Thor
Flacourtia indica	Bixaceae	Kakoa
Girardinia diversifolia	Utricaceae	
Holarrhena antidysenterica	Apocynacease	Keor
Illex dipyrena	Ilicaceae	
Indigofera hamiltonii	Papillionaceae	Kathi
Iris spp.		
Ipomaea cornea		
Lonicera quinqueloeularis	Caprifolieceae	
Milletia auriculata	Papilionaceae	
Myrsine africana	Myrsinaceae	Kukan, Chitria, Guggli
Nerium indicum	Apocyanaceae	Genira
Opuntia dillenii	Cactaceae	Trapor-thor
Parrotiepsis jucqucmontiana	Rosaceae	Pohru, Kellar
Plantage tibitica		Challa
Plectranthus rugosus	Labiatae	Chichhri Salal
Prinsepia utilis	Rosaceae	Jintoi
Randia spinosa		Rara

SPECIES	FAMILY	VERNACULAR NAME
Rauwolfia serpentina	Auocynaceae	Sarogandha
Rosa macrophylla	Rosaceae	
Rubus niveus	ñ	Garcha Akhra
Rumex nepalensis		Urbal
Sarcococca saligne	Euphoroiageae	Deoon
Saxifraga lingulata		
Spiraea lindleyana	Rosaceae	
Thymus serphyllum	Labiatae	Mirchi, Janglijawan
Urtica dioca		
Viburnum nervosum	Capriofoliaceae	Cuch, Tend
Vitex negundo	Bervenaceae	Bana
Woodfordia fruticosa	Sythraceae	Dhai
Zizyphus jujube	Rhamnaceae	Ber
Zanthoxylum alatum		Timru
Stephegyne parvifolia	Rubiaare	Kam/Kaddam tree
Mitragyna parvi folia		

Annexure XIV (1)
Details of VFC wise developmental activities undertaken under FDA in Reasi Forest Division since inception

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Salal Kotli	2002-03	28/R & 29/R	24300	0	81	229000	I) Bridle path from Bagdhar mode to Aus 4 Kms
							ii) Bridle path from Dildar more to Tarmodar Nalla 6 Kms
							iii) Bridle path from Dhaman Kote to Haman Shamshan Ghat 4 Km
							iv) Water Tank at Kotli Mohalla
							v) Formation of Playground
							vi) Pond at Mard Mohalla
							vii) Foot path from Lotti to Shamshan Ghat 2.550 Kms
			24300	**0**	**81**	**229000**	
Salal Kotli	2003-04		18300	36400	61	190000	I) Drain Salal Kotli to Dhaman Kote 2 Kms
							ii) Water tank at Aas.
							iii) B. path from Chandwal to marod 2 Km
							iv) Lane/Foot path from Kotli Bowli to Think Vis Marr 2 Kms
							v) Lane from main road to Divya Bagg via Thanda
							vi) Lane from Padoli more to Charak more
			18300	**36400**	**61**	**190000**	
Salal Kotli	2004-05	28/R & 29/R	17400	25000	58	19000	I) Water tank at PHC Daman kote
							ii) Water Tankki at Nallian
							iii) Pacca lanemain road Kotli-Mohalla Padha
							iv) lane from narsingh Mandhir -Chandwal Mohalla.
			17400	**25000**	**58**	**19000**	
Salal Kotli	2005-06	28/R & 29/R	0	24200	61	19000	I) B. path from Banjo Thara to Ass 3 Kms
							ii) Drain from Kotli road Atta Chakki to Kanal Mat Mohalla
							iii) One Water Tanki Pattia
							iv) Const. of Pond near Baldana Plode
			0	**24200**	**61**	**19000**	
Salal Kotli	2006-07	28/R & 29/R	0	0	58	0	Maintt. work only
			0	**0**	**58**		

Annexure XIV (2)

Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
					Fin.	Phy.
2002-03	25/R & 26/R	24300	0	81	218000	I) Bridle path from Sarli to Sermegha 4 Kms
						ii) Const. of two School rooms at P.S. Sermegha
						iii) Const. of playground at Primary School Sarhanapura.
		24300	**0**	**81**	**218000**	
2003-04		18000	34500	60	181000	I) Water tanki at Moh. Sermegha
						ii) Pond at Serna lehar.
						iii) Pond at Saran Pura
						iv) Water tanki at Sarna Pura
						v) Water tanki at Moh. Sermegha
		18000	**34500**	**60**	**181000**	
2004-05	25/R & 26/R	14700	25000	49	181000	I) Community Hall at Sermegha
						ii) Wooden ceiling to School building Saranapura
		14700	**25000**	**49**	**181000**	
2005-06	25/R & 26/R	0	21600	61	181000	I) B. path from Parala Nalla to Sarnapur
						ii) Protection wall in Sarad Nallah
						iii) Foot path 200 mts.
		0	**21600**	**61**	**181000**	
2006-07	25/R & 26/R	0	0	49	0	Maintt. work only
		0	**0**	**49**		

Annexure XIV (3)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Agharjitto	2002-03	85/K & 86/K	24300	0	81	229000	I) B.path on Pai Nalla with approach road 2 kms
							ii) One room for PS in Chattian Village and one water tank
							iii) Const. of two bathrooms/latrine at Agharjitto Mandir
			24300	**0**	**81**	**229000**	
	2003-04		18300	57400	61	190000	I) Tractor Road (Aghar jitto to Chattian) 2.5 Kms
			18300	**57400**	**61**	**190000**	
	2004-05		17400	27900	58	190000	I) Retaining & breast walls in Aghar jitto of tractor road
							ii) Pacca bridle path from Shopping complex to Aghar jitto road
							iii) Bath room at Nadi
							iv) Bowali at Palli
			17400	**27900**	**58**	**190000**	V) B. path from Pali bad.
	2005-06		0	29200	61	190000	Const of Yatri Hall at Agharjitto temple with GI sheets roof
			0	**29200**	**61**	**190000**	
	2006-07		0	0	60	0	
			0	**0**	**60**		

Annexure XIV (4)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Kotlibajalan	2002-03	87/K & 89/K	24300	0	81	218000	I) Check dam with irrigation channels having length 2 km 2 nos.
							ii) Tractor road Deva Mai Nomain to Drabbi (2 Kms)
							iii) B. path (Drabi-Oli Mandhir) & B. path (Nomain-Sukka talab).
			24300	**0**	**81**	**218000**	
	2003-04		18300	52900	61	182000	I) Create work & fencing of graveyard nomain
							ii) Bowlies at Nomain 3 Nos
							iii) Water reserviour at Kalmd on N.H. near Shiv tample
			18300	**52900**	**61**	**182000**	
	2004-05		14400	27900	48	182000	I) Bowli at Drabi
							ii) Crate work near Lakshmi Mandir Nomain
							iii) Bridle path Nomain Tatian
							iv) Irrigation channel (Manoha Karnathian)
			14400	**27900**	**48**	**182000**	Irrigation channel (Barber mohalla-Gujjar Mohalla & Crate work near HS Nomain
	2005-06		0	26200	61	182000	I) Extension of irrigation channel of Bangal Mohalla Nomain
							ii) Bridle path 6 Kms (Nomain Olhi Mandir
							iii) Crate work at Barber Mohalla Nomain
							iv) Small bowali at Drabi
			0	**26200**	**61**	**182000**	
	2006-07		0	0	60	0	Maintt. work only
			0	**0**	**60**		

Annexure XIV (5)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Bhaga	2002-03	76/K, 78/K, 79/K & 80/K	24300	0	81	229000	I) Const. of bathroom/Latrine at Bhaga 2 nos.
							ii) Bathroom/toilet in Bhaga MS and One in PS Sirla Bhaga
							iii) Const. of 3 Bowlies at Bhaga (Bakkarwal basti)
			24300	**0**	**81**	**229000**	Pond at Lornoo.
	2003-04		18300	52150	61	190000	I) Const. of bridge of 45' span at Ikhani Nalla
							ii) B. path from Pir Bawa Simbal Choa-Lalsan
							iii) B. path (500 m) bold nalla-bakkarwal basti, iv) Const. of bowli at Bhagga
							v) Const. of one bathroom (latrine at Simbal choa).
			18300	**52150**	**61**	**190000**	
	2004-05		17400	30100	58	190000	I) B.path from Bhaga Pai
							ii) Protection wall cum gate at Pir baba Simbal choa
							iii) Bowli at Dera baba
							iv) Bowli at Khu wali keri
			17400	**30100**	**58**	**190000**	v) Bowali at Karli & const. of shed at shamshanghat with 3 kms approach path
	2005-06		0	29200	61	190000	I) Community hall at Bhaga with GI sheets
							ii) 1 Km inspection path from Lornoo to Jawala wali keri
			0	**29200**	**61**	**190000**	
	2006-07		0	0	60	0	Maintt. work only
			0	**0**	**60**		

Annexure XIV (6)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Baldhanoo	2002-03	7/Th. & 8/Th.	19000	0	81	229000	I) B.path 8 kms Baldhanoo Gala-Chinkah
							ii) PS ground at Baldhanoo
							iii) Water harvesting tank at Gundi
			19000	**0**	**81**	**229000**	iv) Pacca bowlies one at Baldhanoo & one at Gundi, Const. of bathroom at PS Baldhanoo.
	2003-04		18300	59200	61	190000	I) B. path (4 kms) Gundi nalla
							ii) Diversion channel 185 mtr
							iii) One Bath room at Khuldi
							iv) Pacci ghali, main road-Mohala Dhangal 300 mtrs & Bowli at Gai
			18300	**59200**	**61**	**190000**	
	2004-05		17400	26300	58	190000	I) Bathroom at Khuldi
							ii) Bowali at Baldhanoo
							iii) Pond at Baldhanoo
							iv) B.path (7 kms) Khuldi-Baldhanoo)
			17400	**26300**	**58**	**190000**	v) Pacci gally main road Khuldi Mohalla
	2005-06		0	31200	61	190000	I) Water tanki & bath room at Baldhanoo
							ii) Inspection path (MS Baldhanoo-Ghai) 2 Kms
							iii) Water tanki & bathroom at Namardar Mohalla
							iv) Pacci galli from main road Mansa Mohalla 100 mtrs, Water tanki at Samouri Mohalla & Water tanki & bathroom at Kulda Mohalla
			0	**31200**	**61**	**190000**	
	2006-07		0	0	60	0	Maintt. work only
			0	**0**	**60**		

Annexure XIV (7)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Gun	2002-03	49/a/Th. & 49/b/Th.	20000	0	81	229000	I) Const. of b. path 6 km (at Gun village)
							ii) Const. of community hall.
							iii) Const. of Kolsar & Gun School compount wall
			20000	**0**	**81**	**229000**	Const. of Bowli at Gun
	2003-04		18000	50200	60	190000	I) Const. of one bowali in Kolsar village, ii) Compound of Gun School, iii) Water channel pacca at Kolsar village iv) Community Hall at Gun village v) Const. of 2 kM b.path (Chanjari Nalla-Kolsar vil
			18000	**50200**	**60**	**190000**	
	2004-05		17700	35000	59	190000	I) Compount wall & Middle School Kolsar
							ii) Const. of Culveet at Kolsar.
							iii) Pacca water channel at Kolsar.
			17700	**35000**	**59**	**190000**	
	2005-06		0	30600	60	190000	I) Inspection path (Khairal-Kolsar) 3 km
							ii) Water tank with bathroom at Gun
							iii) B.path (Gun-Jangidhar)
							iv) Pond at Gun
			0	**30600**	**60**	**190000**	v) Water tanki at M.S. Nagar & Levelling of ground in front of community hall & Govt. Middle School Gun.
	2006-07		0	0	60	0	Maintt. work only
			0	**0**	**60**		

Annexure XIV (8)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Panassa	2002-03	9/Th, 10/a/Th & 10/b/Th.	20000	0	81	229000	I) Const. of two B. path 10 kms ii) Const. of H.S. play ground iii) Const. of bathroom in high school panassa 02 nos.
			20000	**0**	**81**	**229000**	iv) Const. of one pond, Const. of Bowli & Const. of road
	2003-04		18000	59200	60	190000	I) Const. of two Water tank at Panassa, ii) Bath room at H.S. Panassa, iii) B.path 6 kms Lorcha-Thub, iv) Kachi Bowli at Nalla Panassa & Const. of Pacca path 50 mtrs.
			18000	**59200**	**60**	**190000**	
	2004-05		17700	35500	59	190000	Const. of one water tanki and bath room at upper panassa kote. ii) Const. of water tank at Baldha galla iii) Const. of pond at lower panassa. iv) Const. of b. path 2 km (Kakola0 upper panassa), B. path 2 kms (Sarmoli-Singri galla) & const. of b. path 4 km (Paranana-Bogia).
			17700	**35500**	**59**	**190000**	
	2005-06		0	30100	60	190000	I) Water tanki at Lorcha. ii) Plate form at Bhim Devta. iii) B.path (Kote-Khad Nalla) iv) Pond at Bhim Devta
			0	**30100**	**60**	**190000**	v) Water tanki at upper panassa, vi) Water tanki at Gora (S.C. Mohalla).
	2006-07		0	0	60	0	Maintt. work only
			0	**0**	**60**		

Annexure XIV (9)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Nomal	2002-03	43, 44 & 45/Th.	20000	0	81	229000	I) Const. of harvesting tank at Dragli Devta
							ii) Const. of pond at Kafal nallha
							iii) Const. of one School room at PS Nomal
			20000	**0**	**81**	**229000**	Iv) Const. of B.path from Kote to Lal pani
	2003-04		18000	63700	60	190000	I) Const. of two bowli, ii) B. path from Kenthgali-Duwarighala 4 Kms, iii) Const. of community hall at Dargadi devta, iv) B. path from Lodhara to Siarbaga & v) Const. of 1.5 Km B path Nomal to Daragri Devta
			18000	**63700**	**60**	**190000**	
	2004-05		0	37000	59	19000	I) Leveling of School ground and Const. of Varandha
							ii) B.path from Nomal to Siar Nalla 6 kms
							iii) B.path from Khalli Shamshanghat 2 Kms
							Iv) Pond at Village Nomal
			0	**37000**	**59**	**19000**	
	2005-06		0	40600	60	190000	I) Const. of Water tanki at Khalari
							ii) B.path Nomal to Jawal
							iii) Const. of pond near PS Nomal
							iv) Const of B.path Siar Baba Siar Nala 3 kms & Passenger shed with GI sheets at Shamshanghat Nomal
			0	**40600**	**60**	**190000**	
	2006-07		0	0	60	0	Maintt. work only
			0	**0**	**60**		

Annexure XIV (10)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Sersundwan	2002-03	21/R & 23/R	24000	0	80	229000	I) Water tank at Bhassu ii) B.path sersundwan to Sarnaigalla 6 kms iii) B.path from Sersundwan to Shamshanghat 3 kms
			24000	**0**	**80**	**229000**	iv) B. path from Bhassu to Harikote 6 kms & Pond 02 nos in 21/R.
	2003-04		18300	42000	61	190000	I) Levelling of play ground in Govt. H.S. Sersundwan, ii) Water tanki at Sersundwa & Community Shed at Sersundwa.
			18300	**42000**	**61**	**190000**	
	2004-05		0	35400	59	19000	I) Const. of water tanki at Devsthan ii) Water tanki at S.C. Mohalla Balai iii) Water pond at Jalen Mohalla iv) Bath room & protection wall near Ship temple
			0	**35400**	**59**	**19000**	
	2005-06		0	28600	61	190000	I) B. path 4 kms Sersundwan to Burgundli ii) Water tanki at SC Mohalla Badari iii) Water tanki at SC Mohalla Pathia iv) B.path Sersundwa Biada 3 kms
			0	**28600**	**61**	**190000**	Danga work at Bhim Devta
	2006-07		0	0	61	0	Maintt. work only
			0	**0**	**61**		

Annexure XIV (11)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Bakkal	2002-03	20/R & 22/R	24000	0	80	218000	I) Water tank at PS bakkal
							ii) Pond at Banjal Mora
							iii) B path from Kerli to Bensoo 6 Km
			24000	**0**	**80**	**218000**	iv) Passenger shed at Bakkal
	2003-04		18300	58000	61	181000	I) Play ground at PS Bakkal, ii) Bath room and one water tanki & Crate work at Bakkal
			18300	**58000**	**61**	**181000**	
	2004-05		14700	35400	49	181000	I) Const. of Water tanki at Banisoo
							ii) B.path from Kerli to Dansal 2 kms
							iii) B. path from Banjal to Fodhar
							iv) Water tanki at SC Mohalla
			14700	**35400**	**49**	**181000**	
	2005-06		0	25600	61	190000	I) Repairing wall at Dalga Devta
							ii) B.path from Bangal to Pagyal 4 Kms
							iii) B. path from Bakkal Kansar 3 kms
							iv) Water tanki at Pagyal.
			0	**25600**	**61**	**190000**	
	2006-07		0	0	61	0	Maintt. work only
			0	**0**	**61**		

Annexure XIV (12)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Charalakote	2002-03	39/R & 40/R	24000	0	80	229000	I) B. path 12 Kms ii) PS Charalakote one room iii) One pond and one water tank
			24000	**0**	**80**	**229000**	
	2003-04		18300	40500	61	190000	I) Bridle path 2 kms, ii) Const. of community hall at Charalakote & Const of B. path 8 Kms
			18300	**40500**	**61**	**190000**	
	2004-05		17700	35400	59	190000	I) Const. of B.path 10 kms ii) Pond at Charalakote iii) Water tanki 2 nos.
			17700	**35400**	**59**	**190000**	
	2005-06		0	40800	61	190000	I) Water tanki at Kath gali ii) Water tanki at Pordu iii) Levelling of play ground MS Ch.kote iv) Const of pond at Charalakote
			0	**40800**	**61**	**190000**	
	2006-07		0	0	61	0	Maintt. work only
			0	**0**	**61**		

Annexure XIV (13)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Harotekote	2002-03	37/R, 38/R	24000	0	80	218000	I) B. path 13 Kms ii) ater tank & bowli iii) One kacha room in PS Harotekote
			24000	**0**	**80**	**218000**	
	2003-04		18300	35400	61	181000	I) Const. of community hall at harotekote & Const. of Bridle path 10 kms
			18300	**35400**	**61**	**181000**	
	2004-05		14700	32400	49	181000	I) Const. of bridle path 10 kms ii) One pond at Harotekote iii) One bowli at harotekote
			14700	**32400**	**49**	**181000**	
	2005-06		0	40800	61	181000	I) One pond at Kothia ii) Water tanki at Dogall iii) Water tanki at Harotekote iv) Bridle path 3 kms
			0	**40800**	**61**	**181000**	
	2006-07		0	0	61	0	Maintt. work only
			0	**0**	**61**		

Annexure XIV (14)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Planting in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Seela	2002-03	36/R	24300	0	81	229000	I) Water tank 02 Nos. ii) Tractor Road 2.5 Kms iii) Const. of Bowli
			24300	**0**	**81**	**229000**	
	2003-04		18300	33900	61	190000	I) Community Hall at Seela
			18300	**33900**	**61**	**190000**	
	2004-05	36/R	17400	26000	58	190000	I) Const. of tractor road. ii) Const. of passanger shed iii) Water tanki iv) Levelling of play ground
			17400	**26000**	**58**	**190000**	
	2005-06	36/R	0	26200	61	190000	I) Water tanki at SC Mohalla Nagora ii) Water tanki at Barradari iii) Foot paath 1.50 Kms iv) Create work at Anji Nala
			0	**26200**	**61**	**190000**	
	2006-07	36/R	0	0	61	0	Maintt. work only
			0	**0**	**61**		

Annexure XIV (15)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Jungalgali	2007-08	31/K	7500	0	25	25000	I) Const of Water tanki at Jangalgali
			7500	**0**	**25**	**25000**	
	2008-09		0	15000	25	100000	I) Bridle path along with Danga work (Kansar-Bhaboo) 2 Km.
							ii) B. path and Danga work (Bohar-Julana Hind) 2 Km
							iii) Kacha Pond at Bhaboo
							iv) Kacha Pond at Julana Hind
			0	**15000**	**25**	**100000**	
	2009-10		0	15000	25	66200	I) Pond (Kacha) at Sardaira Patti
							ii) B. path (Borh-Bhabbu 1.25 Kms)
							iii) B. path Julana Hind-Duggi Gali 2.5 Km
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (16)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Kund	2007-08	33/K	7500	0	25	25000	I) Const of Bowli at Kund
			7500	**0**	**25**	**25000**	
	2008-09		0	15000	25	100000	I) B. path and Danga work (Kund-Vardhan dhar) 2 Kms ii) B. path along with Danga work Thakar sui-Kansar 2 Kms iii) Kacha pond at Vardhan iv) Kacha Pond at Kund.
			0	**15000**	**25**	**100000**	
	2009-10	30/K	0	15000	25	66200	I) Kacha Pond at Paraina Jangle ii) B. path from Dadas - Lanji 2 Kms iii) B. path Satta-Samole 1.75 Kms
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (17)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Devigarh	2007-08	72/R	7500	0	25	25000	I) B. path 2 Km Devigarh to Shani Kupri with Dangas.
			7500	**0**	**25**	**25000**	
	2008-09	72/R	0	15000	25	100000	I) B path Devigarh to Drabi 5 Kms and Plastic Water tanks 06 Nos.
			0	**15000**	**25**	**100000**	
	2009-10	73/R	0	15000	25	6700	I) Kacha Pond at Nantir, ii) B. path Bharkha gali-Dravi 03 Kms and Plastic Water tankies 02 nos.
			0	**15000**	**25**	**6700**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (18)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Kothari	2007-08	47/R	7500	0	25	25000	I) B. path Kothari-Maniote 3 Kms
			7500	**0**	**25**	**25000**	
	2008-09	47/R	0	15000	25	100000	I) Water tank at MS Kothari, ii) B. path Kothari-Sail 4 Kms, iii) Bowli at Kothari Morha-Khurg.
			0	**15000**	**25**	**100000**	
	2009-10	48/R	0	15000	25	6700	I) Pakki Bowli at Drus, Kacha Pond at Sail, iii) B. path Bharga-Sail 1.5 Kms
			0	**15000**	**25**	**6700**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (19)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Phagori	2007-08	41/R	7500	0	25	25000	I) B. path (2 Km) Satoi-Pangan Devta with Dangas
			7500	**0**	**25**	**25000**	
	2008-09	41/R	0	15000	25	100000	I) Const. of Community Hall at Devstan Pangal Devta
			0	**15000**	**25**	**100000**	
	2009-10	41/R	0	0	25	6700	I) Kacha Pond at Bada Lade, ii) Kachi Bowli at Nadi More, iii) B. path Phagori-Satoyegali 2.5 Kms
			0	**0**	**25**	**6700**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (20)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Dharangali	2007-08	43/R	7500	0	25	25000	I) B. path Boar-Dharangali 03 Kms
			7500	**0**	**25**	**25000**	
	2008-09	43/R	0	15000	25	100000	I) B. path Dharangali-Baispath 3.5 Kms, ii) Bowali at Salad Mohalla, iii) Pond at Bangad, iv) Plastic Tanki 500 ltrs (02 Nos) at Ps. Dhragali
			0	**15000**	**25**	**100000**	
	2009-10	43/R	0	0	25	66200	I) Kacha Pond at Dhrangali, ii) Kachi Bowali at Dhrangali and retaining wall, iii) B. path slade-Zogoria 2.5 Kms
			0	**0**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (21)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Sukalghati	2007-08	60/R	7500	0	25	25000	I) B. path 3 Kms from Sukhalghati to Remindi
			7500	**0**	**25**	**25000**	
	2008-09	60/R	0	15000	25	100000	I) B. path from Parsal to Rruni 2 Kms, ii) Const. of Plateform at Dabbar Sali and Water Tank plastic 6 Nos.
			0	**15000**	**25**	**100000**	
	2009-10	61/R	0	15000	25	66200	I) Const. of Kacha Pond at Bagard, B. path Bargard nalla to Parthay 3 Kms and Purchase of plastic tankies 300 ltrs 02 Nos.
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (22)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Ladda II	2007-08	55/R	7500	0	25	25000	I) Bowali at Karkhankote
			7500	**0**	**25**	**25000**	
	2008-09	56/R	0	15000	25	100000	I) B. path Choutagali to Ragh 4 Kms and Water Tank.
			0	**15000**	**25**	**100000**	
	2009-10	57/R	0	15000	25	66200	I) B. path Thaliya - Rall Khad 2 Kms, Plastic Water tankies 500 ltrs 09 Nos.
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (23)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Dangakote	2007-08	41/R	7500	0	25	25000	I) B. path Dangagali to Padar 3 Kms
			7500	**0**	**25**	**25000**	
	2008-09	41/R	0	15000	25	100000	I) B. path Palyase to Goutan 5 Kms, ii) Bowli at Kui Sai, iii) Bowli at Saini Kul & B. path Sui Nallah to Dugli 3/4 Kms
			0	**15000**	**25**	**100000**	
	2009-10	41/R	0	15000	25	66200	I) B. path Pancharigali to Danga gali 2.50 Kms, ii) Kacha Pond at Kaubali Tali, iii) B. path Panani-Kati Mitti 1.50 Kms
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (24)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Kotharoo	2007-08	15/R	7500	0	25	25000	I) B. path Kothroo-Brote
			7500	**0**	**25**	**25000**	
	2008-09	15/R	0	15000	25	100000	I) Water tank at Morha Bariote, Water tank at Bricla and Extention of B. path Kharsu-Bariote
			0	**15000**	**25**	**100000**	
	2009-10	15/R	0	15000	25	66200	I) 13 Nos. of Plastic tankis 500 ltrs and fixing at sites
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (25)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Sujandhar	2007-08	18/R	7500	0	25	25000	I) Water tanki at Waj Devta
			7500	**0**	**25**	**25000**	
	2008-09	18/R	0	15000	25	100000	I) Const. of Cement concrete path in the form of steps at Nag Devta, ii) Const. of Water tank at Morha Dhar & Const. of Water tank at Morha Dhar
			0	**15000**	**25**	**100000**	
	2009-10	17/R	0	15000	25	66200	I) 13 Nos. of Plastic Tanks
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (26)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Pounsali	2007-08	31/R	7500	0	25	25000	I) Water Tanki at Pounsali
			7500	**0**	**25**	**25000**	
	2008-09	30/R	0	15000	25	100000	I) B. path Sangde Khod-Farrha Talab and B/R Walls, 2.5 Kms
			0	**15000**	**25**	**100000**	
	2009-10	30/R	0	15000	25	66200	I) P13 Nos. of Plastic tanki having 500 ltrs and fixing at the sites.
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (27)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Aghar ballian	2007-08	33/R	7500	0	25	25000	I) Tractor Road 1 Km Aghar Wallian to Nomawal
			7500	**0**	**25**	**25000**	
	2008-09	33/R	0	15000	25	100000	I) Const. of Tractor Road from Aghar-Navabed, Water Tank at Aghar Ballian near Shiv Mandir
			0	**15000**	**25**	**100000**	
	2009-10	32/R	0	15000	25	66200	I) Pakki Water Tanki at Drabi Sarna & Bathroom & 1000 leter plastic tanki near GMS Agharjitto
			0	**15000**	**25**	**66200**	
	2010-11		0	0 0 0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (28)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Mari Reasi	2007-08	34/R	7500	0	25	25000	I) Water tanki at Mari
			7500	**0**	**25**	**25000**	
	2008-09	34/R	0	15000	25	100000	I) Water tank at mohalla Jeela laid near Degree College, ii) Construction of Lane Main Road to Goas Mohalla, iii) Const. of Water tank near Ravi Dass, iv) Const. of Lane Drain Main Road MS Mari
			0	**15000**	**25**	**100000**	
	2009-10	35/R	0	15000	25	66200	I) One Plastic tanki 1000 ltrs at Mohalla Gali & Construction of Retaining Wall & levelling of PS building
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (29)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Dab Khalsa	2007-08	67/Th.	7500	0	25	25000	I) Water tanki at Mata Temple at Dub
			7500	**0**	**25**	**25000**	
	2008-09	67/Th.	0	15000	25	100000	I) Compunt Wall in GPS Dub
			0	**15000**	**25**	**100000**	
	2009-10	67/Th.	0	15000	25	66200	I) Left over work of Compound Wall of GPS Dub
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (30)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Samhar	2007-08	31/Th.	7500	0	25	25000	I) Water tanki at Beri Galla
			7500	**0**	**25**	**25000**	
	2008-09	35/Th.	0	15000	25	100000	I) B. path Samahar-Chandi 5.50 Kms & B. path from Samahar to Matah 5 Kms
			0	**15000**	**25**	**100000**	
	2009-10	35/Th.	0	15000	25	66200	I) Pond at Samahar
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (31)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Gabber	2007-08	5/Th.	7500	0	25	25000	I) B. path Nagali-Gabber 3 Kms
			7500	**0**	**25**	**25000**	
	2008-09	5/Th.	0	15000	25	100000	I) B. path from Gabber-Kaseeri 5 Kms, ii) B. path Gabber-Chakal Salta 5.50 Kms
			0	**15000**	**25**	**100000**	
	2009-10	5/Th.	0	15000	25	66200	I) Kacha Pond at Gabber Gali
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (32)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Gari	2007-08	5/Th.	7500	0	25	25000	I) Water tanki at Palpri (Gari).
			7500	**0**	**25**	**25000**	
	2008-09	5/Th.	0	15000	25	100000	I) B. path from Thalpata to HS Gari 3 Kms, ii) B. path Gari- H.S. Gari 3 Kms, iii) B. path Gari-Chakal Salta 4.50 Kms
			0	**15000**	**25**	**100000**	
	2009-10	5/Th.	0	15000	25	66200	I) Kacha Pond at Gari
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (33)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Chinkah	2007-08	7/Th.	7500	0	25	25000	I) Const. of bathroom at Chinkah
			7500	**0**	**25**	**25000**	
	2008-09	7/Th.	0	15000	25	100000	I) Water tank and Bath room in Village Lal Sing Mohalla, ii) B. path from Chinakh to Kakra 3 Kms & B. path Gai-Kakra 3 Kms
			0	**15000**	**25**	**100000**	
	2009-10	7/Th.	0	15000	25	66200	I) Kacha Pond near Mohalla Kakra
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (34)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Thanole	2007-08	15/Th.	7500	0	25	25000	I) B. path from Gai Badole-Benugali 3 Kms.
			7500	**0**	**25**	**25000**	
	2008-09	15/Th.	0	15000	25	100000	I) B. path Gai Badoke to Binugali 5 Kms & B. path Bagla-Jij 5.5 Kms
			0	**15000**	**25**	**100000**	
	2009-10	16/Th.	0	15000	25	66200	I) Kacha Pond at Gohni to Thanol
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (35)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Jij	2007-08	4/Th.	7500	0	25	25000	I) B. path from Jij to Adha Khumba 3 Kms
			7500	**0**	**25**	**25000**	
	2008-09	4/Th.	0	15000	25	100000	I) B. path Chakal Salta to Jij top 10.50 kms
			0	**15000**	**25**	**100000**	
	2009-10	4/Th.	0	15000	25	66200	I) Grave Yard stone walling & B. path from Panchayat Ghat-Jamia Masjid 3 Kms
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (36)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Bandhar	2007-08	11/Th.	7500	0	25	25000	I) B. path Rud Nalla-Gagote 3 Kms
			7500	**0**	**25**	**25000**	
	2008-09	12/Th.	0	15000	25	100000	I) B. path Bandhar-Gajoti 5 kms, ii) Pond in Comptt. 12/Th near Singri
			0	**15000**	**25**	**100000**	
	2009-10	12/Th.	0	15000	25	66200	I) Kacha pond at Khakote
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (37)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Kakra	2007-08	6/Th.	7500	0	25	25000	I) B. path 3 Kms from kakra to Khuldi
			7500	**0**	**25**	**25000**	
	2008-09	6/Th.	0	15000	25	100000	I) B. path from Kakra to Dub 3.50 Kms, ii) B. path Chinka road-Kakra top 4 Kms & I) Water tanki at Village Nagali
			0	**15000**	**25**	**100000**	
	2009-10	6/Th.	0	15000	25	66200	I) Kacha pond at Kashmiri Basti Kakra
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (38)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Chandi	2007-08	30/Th.	7500	0	25	25000	I) Water tanki at PS Chandi
			7500	**0**	**25**	**25000**	
	2008-09	30/Th.	0	15000	25	100000	I) Pond at Shishu Mata & ii) B. path Chontoo towards Chandi 4.25 Kms
			0	**15000**	**25**	**100000**	
	2009-10	31/Th.	0	15000	25	66200	I) Const. of Pond.
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (39)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Thakrakote	2007-08	35/Th.	7500	0	25	25000	I) Two bathrooms at M. S. Thakrakote
			7500	**0**	**25**	**25000**	
	2008-09	35/Th.	0	15000	25	100000	I) Const. of Concrete plateform at Thakraktoe & B. path from Thakrakote to Smaher 5.5 Kms
			0	**15000**	**25**	**100000**	
	2009-10	36/Th.	0	15000	25	66200	I) Const. of Shed at Devstand Thakrakote with CGI Sheet roof
			0	**15000**	**25**	**66200**	
	2010-11		0	0 0 0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (40)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Matah	2007-08	34/Th.	7500	0	25	25000	I) Levelling of ground at PS Lower Matah
			7500	**0**	**25**	**25000**	
	2008-09	34/Th.	0	15000	25	100000	I) Pond at upper Matah & Bridle path from Lower Matah-upper Matah 4.25 Km.
			0	**15000**	**25**	**100000**	
	2009-10	33/Th.	0	15000	25	66200	I) Const. of Kacha Pond.
			0	**15000**	**25**	**66200**	
	2010-11		0	0 0 0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (41)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Kans Brahmana	2007-08	49/c/Th.	7500	0	25	25000	I) Water tanki in PS Kans Brahmana
			7500	**0**	**25**	**25000**	
	2008-09	49/c/Th.	0	15000	25	100000	I) Water tanki at PS Kansi Patta, ii) Cosnt. Of Bowali in Kansi Patta, iii) B. path from Gungus-Manoa 4.50 Kms
			0	**15000**	**25**	**100000**	
	2009-10	49/c/Th.	0	15000	25	66200	I) Cement concrete lande draine
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (42)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Talwara	2007-08	48/b/Th.	7500	0	25	25000	I) B. path Talwara-Raina
			7500	**0**	**25**	**25000**	
	2008-09	48/b/Th.	0	15000	25	100000	I) B. path Raina-Lodra 5 Kms, ii) B. path Gujjar Kothi-Lower Lodra 5.5 Kms
			0	**15000**	**25**	**100000**	
	2009-10	48/b/Th.	0	15000	25	66200	I) Water tanki at ST Mohalla Zad, ii) B. path Zad-Lodra 4.50 Kms
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (43)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Kheral	2007-08		7500	0	25	25000	I) Const. of Water Tanki at village Kheral
			7500	**0**	**25**	**25000**	
	2008-09		0	15000	25	100000	I) Water tank at Cheater, ii) B. path Patta-Tali Adak 4 Kms iii) B. path Kheral-Jad 3.50 Kms
			0	**15000**	**25**	**100000**	
	2009-10		0	15000	25	66200	I) Repair of Wall.
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (44)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Saloon	2007-08		7500	0	25	25000	I) Const. of water tanki at Bhagat Mohalla
			7500	**0**	**25**	**25000**	
	2008-09		0	15000	25	100000	I) Compound wall in Govt. Middle School Saloon
			0	**15000**	**25**	**100000**	
	2009-10		0	15000	25	66200	I) Const. of pond at Saloon
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (45)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Mari	2007-08	58/Th.	7500	0	25	25000	I) B. path Nalla-Bidra 3 Kms
			7500	**0**	**25**	**25000**	
	2008-09	58/Th.	0	15000	25	100000	I) Pond in Village Bidra & Bridle path from Bidra-Bidragalla 4.25 Kms
			0	**15000**	**25**	**100000**	
	2009-10	56/Th.	0	15000	25	66200	I) Const. of pond at Chaki Theiri
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (46)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Bharakh	2007-08	61/Th.	7500	0	25	25000	I) Const of Bowli at Bharakh
			7500	**0**	**25**	**25000**	
	2008-09	64/Th.	0	15000	25	100000	I) Tin Shed at Devsthan Bharakh
			0	**15000**	**25**	**100000**	
	2009-10	61/Th.	0	15000	25	66200	I) Const. of pond at Maldoia
							ii) Const. of bridle path from Rolkia 2.5 Kms
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			Maintt. work only
			0	**0**			

Annexure XIV (47)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Laiter	2007-08	66/Th.	7500	0	25	25000	I) 200 mts path and plate at Pir Baba Dugi
			7500	**0**	**25**	**25000**	
	2008-09	66/Th.	0	15000	25	100000	I) Lane/Draine in SC-Mohalla
			0	**15000**	**25**	**100000**	
	2009-10	66/Th.	0	15000	25	66200	I) Const. of cemented concrete path from main road duggi to SC Mohalla
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (48)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Karwa	2007-08	84/K-II	7500	0	25	25000	I) Tractor road 0.50 Kms from Kenka - Dabad
			7500	**0**	**25**	**25000**	
	2008-09	84/K-II	0	15000	25	100000	I) Extension of Tractor road Kanka to Dabbar 0.50 Km
							ii) B. path alongwith Danga work from Jula to Dabbar 2.5 Kms
							iii) Kacha pond at julla
							iv) B. path along with Danga work from Kainka to Pehi 2 Kms
			0	**15000**	**25**	**100000**	
	2009-10	84/K-II	0	15000	25	66200	I) B. path from dabbar-Dansot 2.5 Kms
							ii) B. path Dhak-Gharat 1.25 Kms
							iii) Kacha pond at Peer baba Jula
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (49)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Pangal	2007-08	82/K	7500	0	25	25000	I) Tractor Road 0.50 Kms Kun Koderion
			7500	**0**	**25**	**25000**	
	2008-09	82/K	0	15000	25	100000	I) Extension of Tractor road from keon-Koderian ii) B. path Pangal to Kodrian-Badora 2 Kms iii) Kacha Pond at Kodrian iv) Bowli at Khooian
			0	**15000**	**25**	**100000**	
	2009-10	82/K	0	15000	25	66200	I) B. path Koderian - Gona 1 Km ii) Bowali at upper Koderian iii) Bowli at lower Khoian Nalla iv) Bridle path from Koderian-Keon 1 km
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (50)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Tanda	2007-08	84/K-I	7500	0	25	25000	I) Const of Bowli
			7500	**0**	**25**	**25000**	
	2008-09	84/K-I	0	15000	25	100000	I) B path and Danga work from tanda-Jula 2.5 Kms
							ii) Bowali at Tanda
							iii) Kacha Pond at Tanda
							iv) Bridle path and Danga work Nagni Nala-Mansoo 2 Kms
			0	**15000**	**25**	**100000**	
	2009-10	84/K-I	0	15000	25	66200	I) B. path Naroo Keri-Peer Baba Julla 2 Kms
							ii) B. path Gurgi nalla-Julla 1.75 Kms
							iii) Kacha Pond at Tanda
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (51)

Name of VFC	Year	Comptt. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Sarna	2007-08	94/K	7500	0	25	25000	I) Const of Bowli at Bai Nalla
			7500	**0**	**25**	**25000**	
	2008-09	95/K	0	15000	25	100000	I) Const. of Kacha Pond at Prola bans ii) Kacha Pond at Khalka Sarna iii) Dhakki (Mehari-Sarna) 1.5 Kms
			0	**15000**	**25**	**100000**	
	2009-10	94/K	0	15000	25	66200	I) B. path from Sarna-Kalka Naki 3 kms ii) Kacha pond at Songra Kopar iii) Kachi Bowali at Plassor Mohalla
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			

Annexure XIV (52)

Name of VFC	Year	Compt t. No.	Fencing in Rft.	Plantation in Nos.	Area in Ha.	Entry Point Activities (EPA)	
						Fin.	Phy.
Khalada	2007-08	25/K	7500	0	25	25000	I) Const of Water tanki at Khalada
			7500	**0**	**25**	**25000**	
	2008-09		0	15000	25	100000	I) B. path and Danga work Gundi-Lanji (2 Kms)
							ii) B. path alongwith Danga work Khalada-Sheshargali 2 Kms
							iii) Kacha Pond at Khalada
							iv) Kacha Pond at Sheshargali
			0	**15000**	**25**	**100000**	
	2009-10	25/K	0	15000	25	66200	I) Const. of Kacha Pond at Sukhal Gali
							ii) B. path upper Khalada Mandora 1.25 Kms
							iii) B. path Tunu gali-Khawlla 2.5 Kms
			0	**15000**	**25**	**66200**	
	2010-11		0	0	0	0	
			0	**0**	**0**	**0**	
	2011-12		0	0			
			0	**0**			