

APPROVED

WORKING PLAN

OF

MANSA FOREST DIVISION



(2018-2019 TO 2027-2028)

Prepared by:

**AMRITPAL SINGH, P.F.S.
DIVISIONAL FOREST OFFICER
MANSA FOREST DIVISION, MANSA**

**DEPARTMENT OF FORESTS & WILD LIFE
PRESERVATION**



भारत सरकार
GOVERNMENT OF INDIA

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE
CHANGE



उत्तर क्षेत्रीय कार्यालय, चंडीगढ़ /Northern Regional Office, Chandigarh

File No: 13-6(19)/2018-ROC

Dated: 29/04/2020

To

The Principal Secretary (Forests),
Government of Punjab, Punjab
Civil Secretariat, Chandigarh.

Sub: **Approval of working plan of Mansa Forest Division, Mansa for the period from 2018-19 to 2027-28 :- reg.**

Ref: Submission of Final Working Plan vide CCF (Working Plan), Government of Punjab email dated 18.04.2020.

Sir,

The working plan of Mansa Forest Division, Mansa for the period 2018-19 to 2027-28 has been examined in accordance with the provisions of Forest (Conservation) Act, 1980 as amended till date. National Working Code 2014, guidelines issued by Government of India, Ministry of Environment, Forests and Climate Change, New Delhi from time to time, National Forest Policy 1988 as well as order dated 12.12.1996 of Hon'ble Supreme Court of India in PIL WP(C) 202 of 1995 read with WP(C) 171 of 1996. The draft working plan was discussed in the meeting of Standing Consultative Committee meeting held on 13.03.2020 where in it was agreed to approve the draft working plan subject to incorporation of certain information. The information has now been provided and final copy submitted to this office.

2. After careful consideration of the proposed Working Plan document and incorporating the suggestions made in the Standing Consultative Committee meeting, approval of the competent authority is hereby conveyed under section 2 of the Forest (Conservation) Act, 1980 subject to observance of the following conditions:

- i. The approval shall be deemed effective with retrospective effect from 01.04.2018 till 31.03.2028.
- ii. The earlier Working Plan was valid/applicable upto 2017-18 and there was no approved plan for the period from 2018-19 to 2019-20, hence prescribed yield with a volume of 10309.68 cum for 2018-19 and 2019-20 could not be extracted. However, volume of 3306.75 cum during the said period have been extracted for which approval under FC Act was accorded by the Government of India. Therefore, the leftover prescribed yield with a volume of 7002.93 cum may be carried over and adjusted in the corresponding years 2020-21 and 2021-22 of the plan as per State Govt's existing Felling Policy.
- iii. All the provisions of the Forest (Conservation) Act, 1980 of various rules, instructions and guidelines issued under the act shall be strictly enforced.

continued at p.2/..

बेजन.24-25, सेक्टर-31ए, चंडीगढ़-160030 / Bays No. 24-25, Sector-31 A, Chandigarh-160030
दूरभाष/Tel No : 0172-2638061 Fax No : 0172-2638135 Email : ronz.chd-mef@nic.in

- iv. Yield obtained from dead, dry and salvaged timber shall form part of prescribed yield and in case prescribed yield has been achieved from dead and dry volume, no further felling will be carried out. Yield from dead, dry and salvaged timber must not exceed the prescribed yield in the working plan.
- v. All the felling must be commensurate with regeneration and no felling would be permitted unless funds for regeneration are available. In this regard order of Hon'ble Supreme Court of India shall be strictly complied with.
- vi. Intensive protection measures against fire, biotic interference and encroachment in forest land shall be taken up.
- vii. All the prescriptions prescribed in the working plan regarding plantation, protection and development of forest area will be strictly followed and any change in the prescriptions shall be treated as deviation for which prior approval of competent authority will be obtained.
- viii. Sufficient budgetary allocation shall be ensured for timely implementation of various prescriptions regarding protection, regeneration and development of the forest.
- ix. Mid term review of the Working Plan will be taken up on expiry of 5th year of the plan period i.e. in the year 2023-24.
- x. The work on revision of the plan shall be taken up well in advance so that the revised plan is ready before the expiry of the current Working Plan.
- xi. Copy of the final printed and signed document should be forwarded to this office for record as well as to MoEFCC New Delhi, ICFRE, IGNFA & FSI Dehradun.
- xii. Soft copy of the working plan may be copied in a Compact Disc and kept inside tieback cover of each copy of the final document and may also be uploaded on the website of the Department.

3. The Central Government reserves the right to review/modify or withdraw its approval at any point of time depending upon the management needs and any guidelines of Ministry of Environment, Forests and Climate Change, Government of India or directions of Hon'ble Supreme Court of India.

Yours faithfully,


(CD Singh)

Dy. Director General of forest (C)


Copy to:

1. The Addl. Director General of Forests (FC), Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, Aliganj, New Delhi.
2. The DIGF, (ROHQ), Ministry of Environment, Forest and Climate Change, Agni, C-Wing, 3rd Floor, Indira Paryavarn Bhawan, Jor Bagh Road, Aliganj, New Delhi.
3. The Principal Chief Conservator of Forests, Government of Punjab, Forest Department, Forest Complex, Sector-68, SAS Nagar Mohali, Punjab 160062
4. The Chief Conservator of Forests (Working Plan) , Government of Punjab, Forest Department Forest Complex, Sector-68, SAS Nagar Mohali, Punjab 160062
5. Conservator of Forests, South Circle, Patiala
6. Divisional Forest Officer, Mansa, Punjab
7. Guard File


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Sh. Jitendra Sharma, IFS.,
Principal Chief Conservator of Forest (HoFF)
Punjab, SAS Nagar



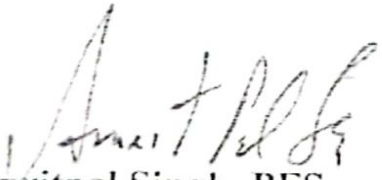
Smt. Pratima Srivatsava, IFS.,
Chief Conservator of Forest (WP)
Punjab, SAS Nagar



Sh. Tushar Kranti Behera, IFS.,
Chief Conservator of Forest (Plains)
Punjab, SAS Nagar



Sh. K. Kannan, IFS.
Conservator of Forest (South Circle)
Punjab, Patiala.

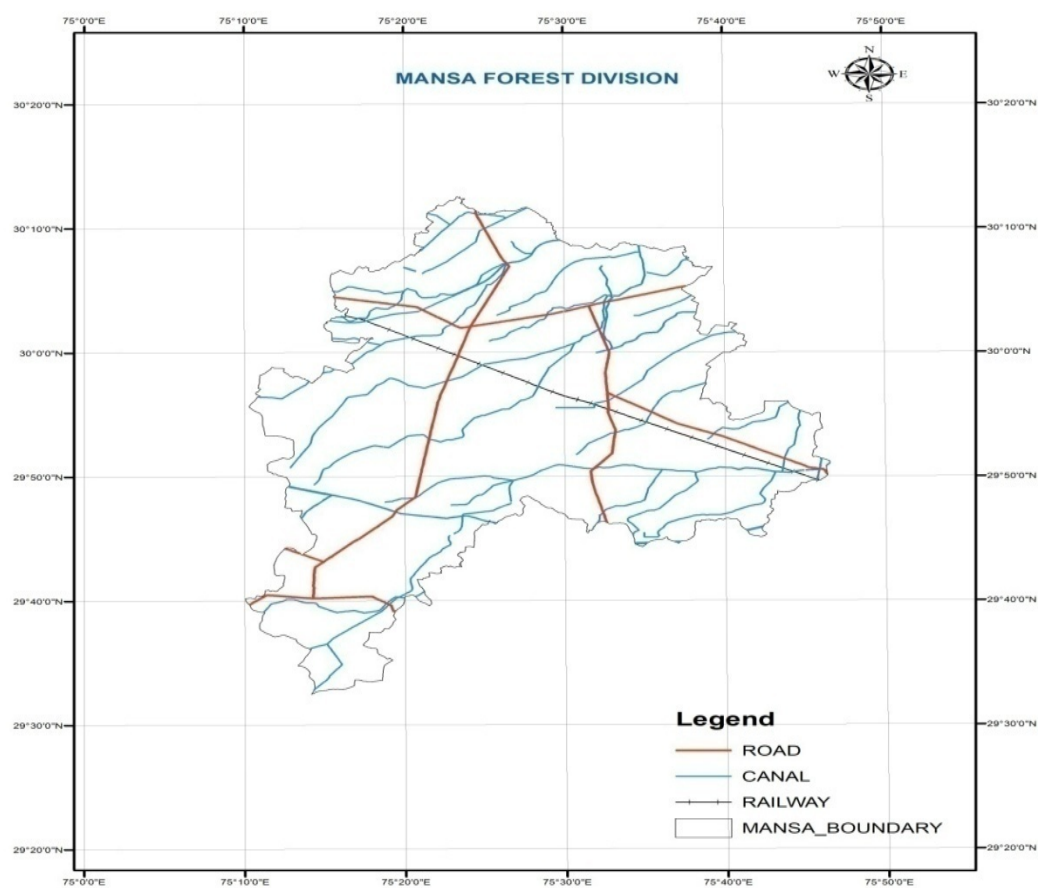


Amritpal Singh, PFS.
Divisional Forest Officer,
Mansa Forest Division

Chapter-4

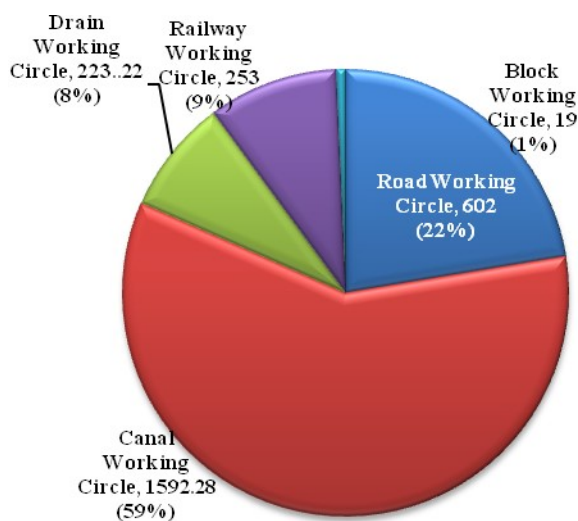
Road Working Circle

Map of Road Working Circle



4.1 General Constitution

The Road Working Circle comprises the National Highways, State Highways, major and minor roads present in the jurisdiction of the Mansa Forest Division. However, District Board roads and the link roads having no plantable strips have not been included in this plan. It contributes 22% to the total Forest Division of Mansa as is clear from the graph on the right hand side. The lengths and areas of various categories of roads are given in Graph 4.1 which is reproduced again.



Graph 4.1: Area of different Working Circles

The vegetation falls under **5B/C2** i.e. **Northern Dry Mixed Deciduous Forest** as per classification of forests types in India by **Champion and Seth**. The density is 0.1 to 0.3. The area of Road Working Circle is 602 ha.

Table 4.1: List & Area of Road Strips in Road Working Circle

Sr. No.	Name of strips of forest		Total Length (Kms)			Mansa	Budhla da	Net width	
			From	To	Total KM			Left side	Right side
1	2		3	4	5	6	7	8	9
1	N.H.W.								
	Nil	KM	Nil	-	-	-	-	-	-
	<u>State Highways</u>								
1	Dakha Raikot Barnala-Mansa-Sardulgarh-Sirsa road No.13	KM	102	173.200	71.200	102-150	150-173.200	10.36	10.36

2	Bathinda-Talwandi Sabo-Rori Sardulgarh road No. 17	KM	162	166.67 0	4.670	-	162- 166.67 0	10.50	10.50
	Total	KM			75.870				
	<u>Main Districts Road</u>								
3	Moonak-Jakhal-Budhlada Road No. 19	KM	14	39.500	25.500	-	13- 39.500	6.00	6.00
4	Bhikhi-Budhlada-Ratia-Sardulgarh Road No. 20	KM	0	35	35.000	0-5	5-35	9.00	9.00
5	Bhawanigarh-Kotshamir road No. 35	KM	46	83	37.000	46-83	-	10.50	10.50
	Total				97.500				
	<u>District Roads</u>								
6	Mansa-Mussa-Jagga road	KM	0	25	25.000	0-25	-	8.70	8.70
	Total	KM			25.000				
	<u>Link Roads</u>								
7	Mansa-Manbibrian road	KM		4.45	4.450			1.00	1.00
8	Mansa link road	KM	0	1	1.000	0-1	-	1.50	1.50
9	Mansa-Phaphre Bhaike-Gurney-Budhlada road	KM	0	19.400	19.400	0-15	15- 19.400	1.00	1.00
10	Mansa-Jawaharke-Kulehri-Ahmadpur-Budhlada road	KM	0	17.450	17.450	0- 12.450	12.450- 17.450	1.00	1.00
11	Tamkot (accorising paint Mansa-Burj Hari Pirkot road	KM	2.75	15	12.250	2.750- 15	-	1.00	1.00
12	Bareh link road	KM	0	5	5.000	-	0-5	1.00	1.00
13	Mal Singh wala road	KM	0	7.200	7.200	-	0-7.200	1.00	1.00
14	Budhlada-Kulana road	KM	0	7	7.000	-	0-7	1.00	1.00
15	Budhlada-Dharamgarh Sunam road	KM	0	18	18.000	-	0-18	2.50	2.50
16	Breta Mandi Mander-Kulrian road	KM	0	10	10.000	-	0-10	1.00	1.00
17	Dhaipai-Hodla road	KM	0	4	4.000	0-4	-	1.00	1.00
18	Bhikhi-Dhanaula road	KM	0	8	8.000	-	0-8	6.00	6.00
19	Samaon (Bhikhi Atla road)	KM	0	10.320	10.320	0- 10.320	-	1.00	1.00

20	Jawaharke Nangal road	KM	0	3	3.000	0-3	-	1.00	1.00
21	Chak Bhaik road	KM	0	2.340	2.340	-	0-2.340	1.00	1.00
22	Sardulgarh-Rorki road	KM	0	2.600	2.600	-	0-2.600	1.00	1.00
23	Jhanda Kalan road	KM	0	3	3.330	-	0-3.330	1.00	1.00
24	Bhunder Road	KM	0	4	4.000	-	0-4	1.00	1.00
25	Jatana-Kusla Main Kanchian road	KM	0	11	11.000	-	0-11	1.00	1.00
26	Fatta Maluka-Tibbi road	KM	0	3	3.000	-	0-3	1.00	1.00
27	Jhunir-Burj Bhalai Natheha road	KM	0	10	10.000	-	0-10	1.00	1.00
28	Fatta Maluka-Jhanduke road	KM	0	5	5.000	-	0-5	1.00	1.00
29	Khaire wala Sango road	KM	0	16	16.000	-	0-16	2.00	2.00
	Total				184.340				
	G.TOTAL				382.710				

4.2 General Character of Vegetation

The description of vegetation has already been given in chapter II of this working plan. The crop in general is irregular in respect of age, density and composition except in some areas. The crop of roads is a mixture of Shisham, Kikar and Eucalypts. At some stretches Eucalyptus has been grown in pure stands as well as mixture in filling the gaps. Shisham crop is mostly pole to middle aged and scattered mature trees are mixed up with other species like Eucalyptus, Kikar and miscellaneous species. Regeneration of Shisham at favorable sites by root suckers exist which can be maintained. Most of the planting in previous years has been done with Eucalyptus and Kikar. There are some sites where plantations have not shown encouraging results due to biotic pressure. These areas need to be tackled by planting tall plants with specific inputs.

4.3 Felling series, Cutting, Section and JFM:

This working circle has been split up into two series. The areas falling within refractory zone, habitation, town, and villages or otherwise prone to ribbon development have been put in the unregulated series. All other areas which can be treated under natural silvicultural treatment have been put under the regulated series.

4.4 Blocks, Compartment and JFM area:

The nomenclature of compartments as explained in this working plan, has been used. Each strip has been treated as a separate block of forest. In case of strip forest 5 km of rail /road strip constitute a compartment.

4.5 Special Objectives-

- a. To create avenue line of long rotation trees spp that have not only economic value but are also ecologically valuable.
- b. To grow economically important species to meet the demand of timber of local people and industries.
- c. To provide food and shelter to the avian fauna.
- d. To improve the status of non-timber forest produce
- e. It is suggested that if possible 20% of the plantations undertaken annually may be of Shisham and Kikar and native species.

4.6 Analysis and Evaluation of the Crop

The growing stock of the Division was enumerated in 2015-16, as per the enumeration instructions above 30 cms gbh in case of Eucalyptus and 60 cms gbh in case of other species has been enumerated. The increment from above is not carried out while

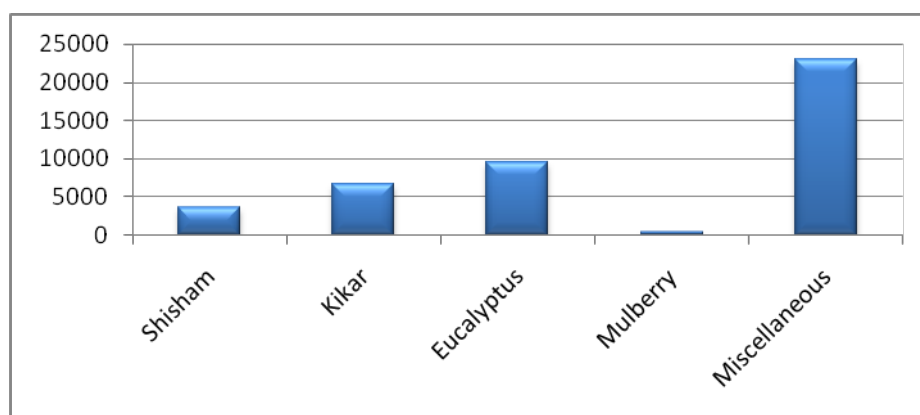
calculating the yield and growing stock .This additional volume will be available in future.

Detail of growing stock specie wise in this working circle is given in following Table 4.2.

Table 4.2 Growing Stock Year 2015-16 in Road Working Circle									
Species	V	IV	III	II-A	II-B	I-A	I-B	Total	Cmt
Shisham	150	1291	1373	947	480	133	67	4441	3564.9
Kikar	181	1405	1969	1976	914	355	123	6923	6728.85
Euc	24	250	941	1491	1239	841	689	5475	9440.65
Mulberry	51	405	241	112	22	3	5	839	388.95
Misc	4112	22071	13952	5460	1567	569	316	48047	23029.05
Total	4518	25422	18476	9986	4222	1901	1200	65725	43152.4

Source : Mansa Forest Division, Mansa

Volume of Growing Stock of Road Working Circle



Graph 4.2: Growing Stock (cmt) Year 2015-16 in Road Working Circle

The crop consists of Eucalyptus 40.24% and miscellaneous consisting mainly of musquite is 36.52%. The native species like Kikar and Shisham are only 3.72% and 12% respectively.

4.7 Silvicultural system :

The selection cum improvement felling system is suggested because most of the stock of the strip is uneven. In this system, the only uneven-aged system, mature timber is removed either as single scattered individuals or in small groups at relatively short intervals, repeated indefinitely, where an uneven-aged stand is maintained, trees removed are such that overall stock condition is improved. Regeneration should occur throughout the life of the stand with pulses following harvest entries.

This system depends on recruitment of trees into successive age classes over time and the predictable yield from merchantable age classes. Yield will be obtained by thinning clumps, harvesting individual trees, or by harvesting whole groups of the most mature age class to create small openings scattered throughout the stand.

4.8 Method of Treatment

The area under this working circle will be managed intensively according to silvicultural requirements and its potential capacity. There will be no green felling of Shisham in this working circle. Ordinarily no felling will be done in avenue line and areas allotted to un-regulated series except as mentioned in marking rules. While planting the avenue line will be planted with shade producing trees. The various treatments/operations to be carried out in three years for new planting sites.

4.9. Rotation Period and Harvestable Diameter

The rotation of various species along with expected diameter is given below-

Table 4.10 The Rotation Age of Various species alongwith diameters			
Sr.No.	Species	Rotation in Years	Expected Dis at Breast Height at the end of Rotation
1	Shisham	60	180
2	Kikar	30	105
3	Eucalyptus	25	130
4	Mulberry	15	180

These are prescribed species wise according to their site quality and correspond to maximum volume/ growth production i.e., the average rate of growth or volume increment reaches a maximum. These would be different in case of technical rotation.

4.10 Calculation of the Yield of Road Working Circle

As per Simon's modification of Von Mantel's formula, the yield for Shisham, Kikar, Eucalyptus & Miscellaneous species is

$$Y = V \times \frac{2r}{r^2 - x^2}$$

Where,

V = Total standing volume in **cubic metres**

r = Rotation period in **years**

x = Age in years corresponding to **30 cm diameter** up to which enumeration has been done

Y = Annual Yield calculated in **m³**

Table 4.4 Annual Yield for Road Working Circle						
Species	Shisham	Kikar	Euc	Mulberry	Misc.	Total
V	3564.9	6728.85	9440.65	388.95	23029.05	43152.4
R	60	30	25	15	60	
x	20	15	10	5	20	
Y	133.684	598.12	899.11	58.3425	863.589	
Average annual yield prescribed for felling in the working plan as per G.O.I.'s Instructions	66.841	299.06	449.554	29.171	431.494	1276.42

Total annual average yield of Road Working Circle = 1276.42(cmt)

As per instructions of GOI for preparation of working plan, the annual cut is prescribed on a very conservative side. According to the guidelines issued by Government of India, the prescribed annual yield should be limited to half (50%) of the

calculated yield. Further, according to the Standing Instructions of the Government of Punjab, no green shisham trees are to be felled except by permission under FCA 1980, in the case where a tree is dangerous to life and property. Keeping in view these instructions, yield has therefore been prescribed in such a way that for the Working Circle as a whole, it does not exceed 50% of the calculated yield. In case of shisham, the prescribed yield will be obtained from dead, dry and fallen trees only and no green felling shall be done. For other species, yield will be obtained through felling of dead, dry and fallen trees will be deducted from the prescribed yield and only the balance will be obtained by marking green trees. The marking for felling will be done according to the felling program. As soon as the total prescribed yield is obtained, the felling shall be stopped until the next year. Thus the proposed annual yields are as follows:

4.11 Marking Rules

The following marking rules will be followed

1. All the trees in the annual coupe will be marked except the following:
 - i. Area falling under un-regulated working series.
 - ii. Avenue lines on either side of the road shall not be felled except that thinning may be carried out where necessary.
 - iii. Growth in compact groups of Kikar, Eucalyptus upto 45cm girth.
 - iv. Shisham and Kikar of all age classes.
 - v. All other ornamental plants (Amalts, Gulmohar, Jacranda, Bottle Brush Cassia Spp.) and Fruit trees (Mango, Jamun and Beri) and miscellaneous species (Bohar, Pipal, Pilkhan and Neem) are to be retained.
 - vi. The boundary row adjoining to agriculture field will be marked for felling in case if it is done at least on tree every 100 meters on the last line shall be retained to check encroachment.
2. All dead, dry and fallen trees will be marked. Volume obtained will be adjusted in prescribed yield.

3. Trees creating traffic hazard including in the avenue line will be marked.
4. Green Eucalyptus will be preferred over Mulberry and Miscellaneous.
5. All Mulberry trees over 30cm diameter shall be marked.
6. All Muskat (Prosopis spp) will be marked irrespective of age class.

4.12 Method of Executing Felling

It will be executed in a very scientific manner as under,

- a. While felling care should be taken to avoid damages to transmission and electric line and trees are to be fallen away from the road.
- b. No felling of Eucalyptus is to be done during the hot season from 15th April to 30th June because Eucalyptus does not coppice well in the hot season.
- c. Eucalyptus to be cut 10cm above the ground level to facilitate coppice shoots and to avoid damage to the stump. However, where the stumps are dead or are likely not to sprout shall be removed and fresh planting shall be done.
Pits formed as a result of felling should be filled immediately.
- d. Muskat (Prosopis spp) will be felled and uprooted completely to avoid further regeneration.

4.13 Planting Rules

The plantation activity will follow the following rules:

- a. Economic varieties of Shade bearing and flowering trees will be planted aesthetically in the avenue lines.
- b. In each compartment one particular species will get preferential treatment.
- c. Planting on roads will be done as per inter departmental rules.
- d. Planting of fruit and other useful trees for avian fauna will be done along with economically important tree species.

4.14 Felling & Planting Programme

The Felling program has been prepared as per the priority list prepared and listed in the form of a table. The felling shall proceed in the numerical order of the list. Felling shall stop as soon as the prescribed yield is obtained in the same year.

The process of plantation will be done by choosing suitable season, suitable species and with suitable methods as described in section 13.2.4. The area felled shall be planted in the coming suitable season. The condition of regeneration shall be commensurate with the felling and sufficient budgetary provision for the regeneration will be ensured before felling is done. The choice of species will be made by the Divisional Forest Officer. Shisham should cover minimum of fifty percent of the total planting area followed by the local species which shall be given preference over the others. New regeneration shall be protected with fencing. No plantation of Poplar, Mulberry shall be done on the roads.

The felling and planting program for the Road working circle is given below.

Table 4.5 Compartment Allotment of Road Working Circle

<u>Compartment Description of Road Working Circle</u>											
Sr. No	Name of Range	Name of Strip	KM / RD	Comp Reach	Comp No	Shisham	Kiker	Euc	Mulberry	Misc	Total
1	Mansa	Aklia Rarh Link Road	KM 0 to 4	KM 0 to 4	1 L	2	4.55	0	0	3.65	10.20
				KM 0 to 4	1 R	0	4.55	0	0	0.15	4.70
2	Budhlada	Bareta Bhadurpur Kishangarh Link Road	KM 0 to 8	KM 0 to 8	1 L	5.15	0	0	0	4.1	9.25
				KM 0 to 8	1 R	0.3	1.55	0.25	0	0.7	2.80
3	Budhlada/Mansa	Barnala Sirsa Road	KM 163-183 & 190-234	KM 163-168	1 L	61.5	34.4	0	14.45	147.1	257.45
				KM 168-174	2 L	42.75	19.1	59.3	9.55	619.2	749.90
				KM 174-180	3 L	24.55	29.9	0	18.65	528.05	601.15

			KM 180-183 & 190- 192	4 L	48.85	27.6	14.3	9	435.25	535.0 0
			KM 192-197	5 L	91.85	101.4	0	26.15	330.4	549.8 0
			KM 197-202	6 L	113.2	100	0	0.05	109.4	322.6 5
			KM 163-168	1 R	17.3	44.85	9.55	0	245.55	317.2 5
			KM 168-174	2 R	32.95	16.35	45.75	20.3	516.05	631.4 0
			KM 174-180	3 R	13.95	22.65	0	17.45	504.4	558.4 5
			KM 180-183 & 190- 192	4 R	33.65	13.2	72.75	8.35	462.1	590.0 5
			KM 192-197	5 R	142.7	90.95	1.1	3.6	458	696.3 5
			KM 197-202	6 R	157.0 5	46.6	0	2.45	87.35	293.4 5
			KM 202-207	1 L	1.95	203	0	0.2	297.25	502.4 0
			KM 207-212	2 L	43.5	110.15	52.7	0	223.15	429.5 0
			KM 212-217	3 L	36.6	137.85	0	0	303.65	478.1 0
			KM 217-222	4 L	30.65	165.4	0	7.45	344.75	548.2 5
			KM 222-227	5 L	35.7	26.6	125.3	0.05	167.55	355.2 0
			KM 227-232	6 L	58	111.4	27.05	5.8	449.05	651.3 0
			KM 232-234	7 L	7.1	73.6	0	0	95.55	176.2 5
			KM 202-207	1 R	8.05	185.55	0	1.1	388.3	583.0 0
			KM 207-212	2 R	86.95	143.15	38.5	2.15	255.9	526.6 5
			KM 212-217	3 R	46.65	101.7	96.3	0	311.85	556.5 0
			KM 217-222	4 R	11.5	159.5	2.8	10.6	396.75	581.1 5
			KM 222-227	5 R	13.45	39.55	162.1 5	4.1	169.45	388.7 0
			KM 227-232	6 R	9.15	90.25	157.5	8.05	465.45	730.4 0
			KM 232 to 234	7 R	0.05	85.9	0	0.1	97.1	183.1 5

4	Mansa	Bhawanigar h Kotshamir Road	KM 45.5 to 82	KM 45.5 to 50.5	1 L	30.05	13.95	1392. 4	0.45	151.7	1588. 55
				KM 50.5 to 55.5	2 L	17.95	24.7	455.0 5	0.6	463	961.3 0
				KM 55.5 to 61	3 L	50.85	46.45	340.1 5	1.45	421.7	860.6 0
				KM 61 to 65	4 L	3.9	24	102.4	7.4	340.15	477.8 5
				KM 65 to 70	5 L	56.3	16.65	0	0	607.3	680.2 5
				KM 70 to 75	6 L	8	9.8	269.7 5	21.9	371.9	681.3 5
				KM 75 to 82.5	7 L	44	59.65	118.2 5	0.3	620.25	842.4 5
				KM 45.5 to 50.5	1 R	76.05	34.5	1296. 15	3.65	100.05	1510. 40
				KM 50.5 to 55.5	2 R	25.3	20.35	387.2	1.2	567.65	1001. 70
				KM 55.5 to 61	3 R	30.55	39.1	436.0 5	7.45	352.05	865.2 0
				KM 61 to 65	4 R	8.45	13.35	112.8	0	335.85	470.4 5
				KM 65 to 70	5 R	57.15	14.35	0	0	527.05	598.5 5
				KM 70 to 75	6 R	12.15	18.85	248.6	1.2	178.4	459.2 0
				KM 75 to 82.5	7 R	31.1	30.25	72.45	0	514.35	648.1 5
5	Budhlada	Bhikhi Budhlada Road	KM 4-9	KM 4 to 9	1 L	28.8	27.9	143.6	12.6	292.4	505.3 0
				KM 9 to 15	2 L	52	88.3	73.25	2.85	206.85	423.2 5
				KM 4 to 9	1 R	18.55	21.75	281.2	1.85	269.55	592.9 0
				KM 9 to 15	2 R	80.3	43.75	73.25	2.85	227.65	427.8 0
6	Mansa	Bhikhi Dhanula Road	KM 1-9	KM 1 to 5	1 L	49.4	28.35	76.2	0	322.45	476.4 0
				KM 5 to 9	2 L	14.25	37.5	0	0	110.7	162.4 5
				KM 1 to 5	1 R	153.2 5	10.95	21.2	0	267.85	453.2 5
				KM 5 to 9	2 R	2.55	71.9	0	0	90.45	164.9 0

7	Budhlada	Boha Jhunir Road	KM 0-17	KM 0 to 7	1 L	2.5	28.3	0	0	4.1	34.90
				KM 7 to 12	2 L	15.4	87.05	0	0	79.75	182.20
				KM 12 to 17	3 L	13.4	10.2	0	1.1	60.1	84.80
				KM 0 to 7	1 R	3.15	20.3	0	1.1	9.8	34.35
				KM 7 to 12	2 R	7.75	48.7	0	0	54.45	110.90
				KM 12 to 17	3 R	29.3	44	0	0	26.4	99.70
8	Budhlada	Boha Sher Khan Wala Road	KM 0-6	KM 0 to 6	1 L	5.8	22.85	0	0	8.3	36.95
				KM 0 to 6	1 R	0.7	51.5	0	0	0.6	52.80
9	Budhlada	Budhlada Ahmadpur Road	KM 0-2	KM 0 to 2	1 L	0	19	0	0.3	5.5	24.80
				KM 0 to 2	1 R	0.45	7.95	0	0	3.6	12.00
10	Budhlada	Budhlada Bareh Road	KM 0-5	KM 0 to 5	1 L	0.55	57.85	0	0.3	11.35	70.05
				KM 0 to 5	1 R	0.15	48.6	0	0	2	50.75
11	Budhlada	Budhlada Chakk Bhai Ke Link Road	KM 0-3	KM 0 to 3	1 L	2	13.45	381.05	0	1.65	398.15
				KM 0 to 3	1 R	0	10.05	301.2	0	0	311.25
12	Budhlada	Budhlada Gurne Phaphre Link Road	KM 15-19.4	KM 15-19.4	1 L	0.15	13.1	0	0	13.1	26.35
13	Budhlada	Budhlada Kulana Road	KM 0 to 7	KM 0-7	1 L	0	22.25	0	0	0	22.25
				KM 0-7	1 R	0.3	16.1	0	0	7	23.40
14	Budhlada	Budhlada Jakhal Road	KM 0 to 26	KM 0 to 5	1 L	42.25	65.4	405.3	2	198.35	713.30
				KM 5 to 10	2 L	19.6	59.6	17.65	0.55	93.55	190.95
				KM 10 to 15	3 L	8.6	81.85	0	0	68.9	159.35
				KM 15 to 18	4 L	1.65	22.75	1.25	0.2	37.05	62.90
				KM 18 to 22	5 L	23.6	30.4	0	4	161.5	219.50
				KM 22 to 26	6 L	4.25	28.9	0	43	191.65	267.80
				KM 0 to 5	1 R	188.7	126.65	392.2	0.55	244.25	952.35

				KM 5 to 10	2 R	31.25	79.3	16.8	0	71.7	199.05
				KM 10 to 15	3 R	10.4	65.8	0	0.15	138	214.35
				KM 15 to 18	4 R	0	23.7	0	0	31.75	55.45
				KM 18 to 22	5 R	8.35	45.7	0	35.85	134.45	224.35
				KM 22 to 26	6 R	5.1	33.95	0	8.15	210.4	257.60
15	Budhlada	Budhlada Ratia Road	KM 0 to 34	KM 15 to 20	1 L	10	11	349.7	0	43.65	414.35
				KM 20 to 25	2 L	52.65	51.1	2.7	0	156.2	262.65
				KM 25 to 30	3 L	18.05	72.9	24.15	1.55	41.25	157.90
				KM 30 to 34	4 L	28.5	44.45	0	1.8	84.55	159.30
				KM 15 to 20	1 R	14.05	29.35	321.6	0.85	98.1	463.95
				KM 20 to 25	2 R	41.8	59.1	0.75	0	152.8	254.45
				KM 25 to 30	3 R	66	46.6	17.65	0	49.9	180.15
				KM 30 to 34	4 R	28.8	68	0	0	145.7	242.50
16	Budhlada	Budhlada Sunam Road	KM 0 to 10	KM 0 to 6	1 L	44.65	81	5.05	0.55	138.1	269.35
				KM 6 to 10	2 L	6.75	25.35	0	0	106	138.10
				KM 10 to 17	3 L	46.95	38.8	0	1.1	79.3	166.15
				KM 0 to 6	1 R	20.25	132.15	0	0.2	209.9	362.50
				KM 6 to 10	2 R	9.35	22.05	0	0	159.3	190.70
				KM 10 to 17	3 R	36.6	31.25	0	1.95	48.65	118.45
17	Mansa	Dhapai Hodla Link Road	KM 0 to 5	KM 0 to 5	1 B/s	14.9	17.9	0	0	145.15	177.95
18	Budhlada	Fulluwala Budhlada Road	KM 0 to 12	KM 0-5	1 L	2	98.45	0	0.15	2.55	103.15
				KM 5-12	2 L	2.75	49	0	0	22.1	73.85
				KM 0-5	1 R	0	82	0	0	2.2	84.20
				KM 5-12	2 R	3.1	36.35	0	0	12.15	51.60
19	Budhlada	Jatana Link Road	KM 19	KM 19-16	1 L	3.1	100.3	0	0	70	173.40

			to 16	KM 19- 16	1 R	12.15	70.8	0	0.7	53.3	136.9 5
20	Budhlada	Jatana Mian Road	KM 0-6	KM 0-6	1 L	23.55	105.6	0	3.25	39.15	171.5 5
				KM 0-6	1 R	9.25	22.35	0	4.75	16.2	52.55
21	Budhlada	Jhanda Kalan Link Road	KM 0-3	KM 0-3	1 L	1.8	3.2	0	0.15	27.75	32.90
				KM 0-3	1 R	7.3	4.8	0.55	0	26.2	38.85
22	Budhlada	Jhunir Jorkian Road	KM 0-15	KM 0-5	1 L	3.6	3.6	0	0	49.45	56.65
				KM 5- 10	2 L	12	10.75	0	0	47.45	70.20
				KM 10- 15	3 L	15.4	87.05	0	0	79.75	182.2 0
				KM 0-5	1 R	21.05	27.8	0	2	6.85	57.70
				KM 5- 10	2 R	28.7	35.4	0	0	23.85	87.95
				KM 10- 15	3 R	7.75	48.7	0	0	54.45	110.9 0
23	Mansa	Joga Anupgarh Link Road	KM 0-5	KM 0-5	1 L	0	1.25	0	0	1.8	3.05
				KM 0-5	1 R	0	0.3	0	0	1.65	1.95
24	Budhlada	Kahane Wala Link Road	KM 0-2	KM 0-2	1 L	5.45	7.3	6.4	0	30.25	49.40
				KM 0-2	1 R	7.9	8.4	11	0	15.05	42.35
25	Mansa	Khaila to Mansa Link Road	KM 0-5	KM 0-5	1 B/s	0	17.3	0	0	23	40.30
26	Mansa	Mansa Talwandi Road	KM 0 to 20	KM 0 to 5	1 L	0.45	53.6	0	1.35	89.1	144.5 0
				KM 5 to 10	2 L	18.35	48.75	0	1.4	223.7	292.2 0
				KM 10 to 15	3 L	5.5	34.75	0	1.1	193.75	235.1 0
				KM 15 to 20	4 L	17.75	51.95	0	1.25	256.95	327.9 0
				KM 0 to 5	1 R	0	13.6	0	1.85	156.2	171.6 5
				KM 5 to 10	2 R	10.85	32.35	0	4.4	154.75	202.3 5
				KM 10 to 15	3 R	7.1	8.85	0	0	161.1	177.0 5
				KM 15 to 20	4 R	12.15	61.85	0	1.75	266.45	342.2 0
27	Mansa	Mansa Chakerian Khillan Phaphre Link Road	KM 0 to 8	KM 0 to 8	1 B/s	5.25	4.75	2.9	2.4	45.65	60.95

28		Mansa Jawaharke Kalheri Budhalda Road	KM 0 to 12	KM 0 to 12	1 B/s	10.25	35.6	5.3	1.25	10.6	63.00
29	Mansa	Mansa Khokhar Sadd Singhwala Link Road	KM 0 to 13	KM 0 to 13	1 L	107.6	19.75	0	0.55	11.45	139.35
				KM 0 to 13	1 R	3.3	0.55	0	0	1.65	5.50
30	Mansa	Mansa Kot Lallu Phaphre Link Road	KM 0 to 12	KM 0 to 12	1 B/s	35.75	57.15	0.15	5.3	46.2	144.55
31	Mansa	Mansa Nangal Kot Dharmu	KM 0 to 8	KM 0 to 8	1 B/s	20.35	37.8	0.15	0	14.85	73.15
32	Mansa	Mansa to tinkoni Link Road	KM 0 to 1	KM 0 to 1	1 B/s	0	11.2	0	0	1.2	12.40
33	Budhlada	Sardulewala Rori Road	KM 64 to 68.3	KM 64 to 68.3	1 L	4.6	91.05	0.55	1.4	304.35	401.95
				KM 64 to 68.3	1 R	9	102.45	0	0.85	266.5	378.80
34	Budhlada	Sardulgarh Ratia Road	KM 1 to 5	KM 1 to 5	1 L	17.65	67.75	0	4.3	207	296.70
				KM 5 to 10.50	2 L	109.35	84.6	0	1.8	140.4	336.15
				KM 1 to 5	1 R	14.6	92.25	0	1.1	162.8	270.75
				KM 5 to 10.50	2 R	56.9	74.8	0	1.3	128.8	261.80
35	Budhlada	Samoun Atla Rall Link Road	KM 0 to 10	KM 0 to 10	1 B/s	15.25	26.2	409.4	0	40.9	491.75
36	Budhlada	Sardulgarh Sangha Road	KM 4 to 17	KM 4 to 17	1 L	1.25	23.55	0	0	53.2	78.00
				KM 4 to 17	1 R	1.25	21.7	0	0	73.15	96.10
37	Mansa	Thuthain wali to Tinkoni Mansa Link Road	KM 0 to 3	KM 0 to 3	1 B/s	0.7	10	0	0	9.15	19.85
38	Budhlada	Tibbi Bhagwanpur a Link Road	Km 0-9	KM 0-9	1 L	5.1	4.75	0	0	22.5	32.35
				KM 0-9	1 R	0.15	3.5	0	0	1.1	4.75

39	Budhlada	Tibbi Jatana Road	Km 0-4	KM 0-4	1 L	8.5	13.4	0.15	1.45	76.3	99.80
				KM 0-4	1 R	6.5	15.8	1.8	2.55	19.85	46.50
Total						3564.9	6728.85	9440.7	388.95	23029.1	43152

Felling Programme of Road working Circle

Table 4.6 Felling Programme of Road working Circle								
Year	Name of Strip	Comp	Side	Shisha m	Kikar	Euc	Mul bery	Misc
2019-20	Budhlada Jakhal Road	6 L, 5R	B/s	Dead, Dry, Disease d, Fallen	Dead, Dry, Diseased , Fallen	0	29	0
	Barnala Sirsa Road	2 L	L/s			0	0	151
	Bhawanigarh Kotshamir Road	1 L,7L	L/s			449	0	280
Total						449	29	431
2020-21	Barnala Sirsa Road	5 L, 3L	L/s			0	13	157
	Bhawanigarh Kotshamir Road	2 R, 6L, 5L	B/s			91	16	274
	Budhlada Jakhal Road	1 BS	B/s			358	0	0
Total						449	29	431
2021-22	Bhawanigarh Kotshamir Road	1 R, 5R. 7R	R/s			449	0	431
	Barnala Sirsa Road	2R, 3BS	B/s			0	29	0
Total						449	29	431
2022-23	Bhawanigarh Kotshamir Road	2 L, 3R	B/s			400	0	215
	Barnala Sirsa Road	1L, 2L, 4BS, 10R, 12R, 5R	B/s			0	23	216
	Bhikhi Budhlada Road	1 L	L/s			0	6	0
	Samoun Atla Rall Link Road	1 B/s	B/s			49	0	0
Total						449	29	431
2023-24	Budhlada Chakk Bhai Ke Link Road	1 L	L/s			171	0	0
	Budhlada Ratia Road	1 L	L/s			157	0	0

	Budhlada Jakhal Road	6 R	R/s		0	4	0
	Mansa Kot Lallu Phaphre Link Road	1 B/s	B/s		0	3	0
	Jatana Mian Road	1 R	R/s		0	3	0
	Barnala Sirsa Road	12 R, 10L, 12L, 2R	B/s		0	11	176
	Bhawanigarh Kotshamir Road	3 BS, 4L, 2R	B/s		121	8	255
Total					449	29	431
2024-25	Budhlada Ratia Road	1 R	R/s		110	0	0
	Budhlada Chakk Bhai Ke Link Road	1 R	R/s		107	0	0
	Bhawanigarh Kotshamir Road	6BS, 1R	B/s		232	3	0
	Mansa Talwandi Road	2 R	R/s		0	3.5	0
	Sardulgarh Ratia Road	1 L	L/s		0	3	0
	Tibbi Jatana Road	1 R	R/s		0	2.5	0
	Barnala Sirsa Road	5R, 11R, 3R, 12L	B/s		0	6	431
	Jatana Mian Road	1 L	L/s		0	3	0
	Budhlada Jakhal Road	5 L	L/s		0	3	0
	Bhikhi Budhlada Road	2 BS	B/s		0	5	0
Total					449	29	431
2025-26	Barnala Sirsa Road	9 R, 2 L, 8L, 11R, 12R, 4L, 10R	B/s		216	0	281
	Budhlada Jakhal Road	1R-6R	R/s		0	29	0
	Bhikhi Dhanula Road	1 L, 2 BS	B/s		98	0	0
	Bhawanigarh Kotshamir Road	7 BS, 4R, 3L	B/s		135	0	150
Total					449	29	431
2026-27	Samoun Atla Rall Link Road	1 B/s	B/s		7	0	0

	Bhawanigarh Kotshamir Road	2 R, 3L, 4L, 6L, 3R, 4R	B/s		160. 7	0	251
	Budhlada Ratia Road	1 R, 3L, 3R, 2L	B/s		52	0	0
	Budhlada Chakk Bhai Ke Link Road	1 R	R/s		28	0	0
	Barnala Sirsa Road	11 L, 4BS, 1R, 8BS, 2R, 12L, 10BS, 7R	B/s		167	0	180
	Kahane Wala Link Road	1 BS	B/s		8	0	0
	Budhlada Sunam Road	1 L	L/s		3.3	0	0
	Bhikhi Dhanula Road	1 R	R/s		9	0	0
	Budhlada Jakhal Road	1 L- 6L, 2R	B/s		14	29	0
Total					449	29	431
2027-28	Bhawanigarh Kotshamir Road	1BS, 4L	B/s		321	0	70
	Samoun Atla Rall Link Road	1 B/s	B/s		128	0	0
	Barnala Sirsa Road	1L-13L, 9R	B/s		0	29	221
	Bhikhi Dhanula Road	1 L	L/s		0	0	70
	Sardulewala Rori Road	1 L	L/s		0	0	70
Total					449	29	431
2028-29	Bhawanigarh Kotshamir Road	3 BS, 2L	B/s		109	0	0
	Budhlada Jakhal Road	1 BS	B/s		100	0	0
	Budhlada Chakk Bhai Ke Link Road	1 L	L/s		25	0	0
	Barnala Sirsa Road	1R-13R	R/s		0	29	140
	Budhlada Ratia Road	1 L	L/s		25	0	0
	Mansa Talwandi Road	4BS, 2L	B/s		0	0	210
	Sardulgarh Ratia Road	1L	L/s		0	0	11
	Bhikhi Budhlada Road	1 BS, 2R	B/s		190	0	70
Total					449	29	431

Planting Program for the Road Working Circles

Table No 4.7- Planting Program for the Road Working circle				
Year	Total Target (ha)	Area (ha)		Total Area (ha)
		Felling	Blanks	
2018-19	50	5	45	50
2019-20	45	3	42	45
2020-21	55	5	50	55
2021-22	50	5	45	50
2022-23	45	3	42	45
2023-24	55	5	50	55
2024-25	50	5	45	50
2025-26	45	3	42	45
2026-27	55	5	50	55
2027-28	50	5	45	50

Regeneration

Methods of assisted natural regeneration based on status of natural regeneration may be prescribed. Keeping in view the objective of multiproduct forestry a multi-tier canopy shall be ensured while prescribing silvicultural and follow up cultural activities.

4.15 Associated regulations and measures

May cover controlled grazing, lopping schemes and regulated firewood removals; soil and moisture conservation measures fire protection; forest protection from illicit felling, unregulated removal of NTFP and MAPs, encroachments, illegal mining, jhumming etc.; restriction on fellings along rivers, highways, hill slopes, etc., which are relevant to the working circle.
