

CHAPTER-3

3. IMPROVEMENT WORKING CIRCLE

3.1 Introduction

3.1.1 The term “**Improvement**” as contemplated in this plan is to be understood in the sense as to implement measures so that the existing root stock and the regeneration improves during this plan period. The treatment package revolves mainly around **Assisted natural regeneration and Eco-restoration models**.

3.2 General constitution of the working circle

3.2.1 The working circle extends over 10000.00 hectares that would be taken up for improvement and accounts for about 8.8% of the forest area of the division. Some of the forest blocks that have a canopy density between 10-25% are assigned to this working circle. Though the extent coming under this density class is much more only about 10000 hectares will be taken up for treatment considering the men and material resource on hand, and financial resources that could be made available during this plan period. Care is taken not to aim high and achieve less. Only realistic and achievable targets are set forth.

3.2.2 Range-wise areas that are included in the working circle are given in Table-30.

Table 30: Constitution of Improvement working circle

Sl.No	Range	Total Extent (ha)	Extent included in Improvement working circle (ha)					Total
			Reserve forests	Protected forests	Village forests	Areas notified u/s-4 of KFA,1963	Deemed forests	
1	Bukkapatna	17337.96	1000.00	0	0	0	0	1000.00
2	C.N.Halli	9588.90	975.00	0	0	25.00	0	1000.00
3	Gubbi	19024.20	1000.00	0	0	0	0	1000.00
4	Koratagere	9511.59	955.00	0	0	0	0	955.0
5	Kunigal	10080.97	1000.00	0	0	0	0	1000.00
6	Madhugiri	17160.50	1000.00	0	0	0	0	1000.00
7	Pavagada	10711.41	950.00	0	0	0	50.00	1000.00
8	Sira	5649.04	930.00	0	0	50.00	20.00	1000.00
9	Tiptur	3350.39	795.00	0	0	100.00	0	895.00
10	Tumkur	10140.04	1050.00	0	0	0	100.00	1150.00
Total		112555.00	9655.00	0	0	175.00	170.00	10000.00

3.2.3 The Working Circle includes the following forests.

Table 31: Forest blocks identified for treatment

Sl.No	Range	Forest blocks identified for treatment	Total extent (ha)	Extent proposed for treatment (ha)
1	Bukkapattana	Bukkapatna RF	13154.02	950.00
		Chiksandra RF	1375.96	50.00
2	C.N.Halli	Thirtharampura RF	483.37	75.00
		Kempalapura B Block RF	1799.20	25.00
		Thirtharampura NW RF	1674.94	875.00
		HM Kaval	1009.51	25.00
3	Gubbi	Manchaldore RF	2873.33	25.00
		Ankasandra RF	3617.64	875.00
		Marshettihalli RF	775.71	50.00
		Mattikere RF	236.21	50.00
4	Koratagere	Kolikal Ext RF	666.30	780.00
		Kavargal RF	368.90	50.00
		Minchgal RF	975.40	75.00
		Madhugiri RF	566.68	50.00
5	Kunigal	Andalkuppe RF	1517.85	785.00
		Ujjani RF	2385.02	175.00
		Huliyurdurga RF	711.86	40.00
6	Madhugiri	Madhugiri RF	2743.05	900.00
		Badavanahalli RF	1167.23	50.00
		RD Betta RF	460.92	50.00
7	Pavagada	Nidagal RF	1220.26	900.00
		Mugdalbetta - II RF	265.15	50.00
		Arasikere	95.01	50.00
8	Sira	Ranaganathpura RF	2157.77	860.00
		Mudigere RF	1224.20	70.00
		Seebi	399.44	50.00
		T.Ranganahalli	18.93	20.00
9	Tiptur	Chowdlapura RF	995.00	795.00
		Halkurke	1500.43	100.00

10	Tumkur	Devarayanadurga RF	4159.45	1050.00
		Bannikuppe	77.15	25.00
		Bidanagere	30.80	25.00
		Honnenahalli	29.64	50.00
Total			50736.53	10000.00

3.3 General character of vegetation

3.3.1 Barring a few isolated pockets of Devarayanadurga RF (around Namadachilume), Kolikal RF (around Siddarabetta), Madhugiri RF (around the Forest Rest House) and Nidagal RF the remaining forest blocks are open forests with a canopy density of less than 25%.

3.4 Special objectives of management

3.4.1 This working circle is constituted with the following specific objectives which are consistent with the general objectives mentioned in Part-II, Chapter-1, para 1.1.

- To improve the stock and condition of natural forests (rehabilitation of degraded forests) by aided natural regeneration, enrichment planting and if necessary tending the existing root stock in order to improve the economic value and utility.
- To prevent soil erosion and to improve the moisture regime of the soil.

3.5 Analyses of the crop

3.5.1 The growing stock in the forest blocks assigned to this working circle is very similar to that of forests assigned to Protection and Biodiversity Working Circle. Assessment of growing stock was made by inventory. The issues pertaining to the methodology of enumeration, assessment of growing stock, status of regeneration etc. is already discussed in Part-I, Chapter-3, para 3.2 and subsequent sub paras. It is inferred that the distribution of trees among diameter classes is unequal showing a negative exponential trend as indicated by the "Reverse-J curve" (Part-I, Chapter-3, para 3.2.11). There is no perceptible change in the status from the previous plan period. Natural regeneration and coppicing of root stock is moderately good in some of the forests mentioned at Table-30. The forest blocks are seen with scattered growth of *Eucalyptus* obviously planted under various schemes in the past. This has also contributed to the altered composition. *Tamarindus indica*, *Buchanania lanzan*, *Annona squamosa*, *Terminalia chebula*, *Diospyrous* spare some of the important NTFP bearing species. Detailed qualitative and quantitative parameters like composition of the crop,

distribution of trees in dia-class, relative values for density, dominance and volume for each of the forest block are available in **Appendix-14 and 15.**

3.6 Regulation of harvest

3.6.1 In view of poor growing stock, harvest is silviculturally not desirable. **As such no harvesting will be done in natural forests that are included in this working circle.** As such regulations pertaining to silvicultural system, rotation and conversion period, harvestable diameters, reducing factors and reduced areas, felling cycle, table of felling, method of executing felling etc have no relevance during the plan period and as such not prescribed.

3.7 Regulation of regeneration and improvement

3.7.1 It is intended to treat 10,000 hectares of natural forests assigned to this working circle by Assisted Natural Regeneration (ANR) and enrichment planting during the plan period, the annual target being about 100 hectares per range.

3.7.2 Silvicultural system: Consistent with the circular no: B1/species/CR-8/2012-13, dated 28-01-2013, of the Principal Chief Conservator of Forests (Head of Forest Force) issued in connection with the general guidelines of “ **Species and planting technique models for Karnataka**” with specific reference to management interventions for dry zones (Tumkur district is classified under dry zones as per the Karnataka State Land Plan Use) the silvicultural system would be “**Assisted Natural Regeneration (ANR)**” and its associated Eco-restoration and supplemental planting models.

3.7.3 For efficient management the regeneration areas should be delineated on watershed basis. A landscape of about 1000.00 hectares in each range shall be taken as the unit of treatment. All resources available for regeneration should be allotted to such delineated landscapes so that the limited financial resources at the disposal of the department are spent on such identified landscapes.

3.7.4 The landscapes identified for treatment have been treated in “**Bits and pieces approach**” under various models in the past. Overlapping of such previously treated areas should not be the consideration for taking up remedial and restoration measures. **On the other hand the present status of the land is considered for taking up treatment.**

APPENDIX-25 (Part II, Chapter - 2, Para 2.2.3)

Forest blocks allotted to Protection and Biodiversity conservation Working Circle

Sl. No.	Forest block	Total extent (Ha)	Extent included in Protection and Biodiversity conservation Working Circle (Ha)
A) RESERVED FORESTS			
BUKKAPATTA RANGE			
1	Bukkapatana RF		
2	Chikksandra Kaval RF	13154.02	11329.02
3	Dasodi RF	1375.96	1150.96
4	Kudure Kanive Extension RF	1284.86	1184.86
5	Mutthagadahalli 'A' Block RF	562.21	562.21
	Total	154.38	154.38
		16531.43	14381.43
		[5 Blocks]	
CHIKKANAYAKANAHLLI RANGE			
1	Kaadladagida R.F.	254.96	129.96
2	Kamalapura 'B' Block RF	483.37	373.37
3	Kamalapura 'C' Block RF	134.9	114.9
4	Nagegowdanabyala RF	409.55	409.55
5	Ramasagara RF	934.8	934.8
6	Thirthampura N-W Extension RF	1799.2	1574.2
7	Thirthampura RF		
	Total	1674.94	799.94
		5691.72	4336.72
		[7 Blocks]	
GUBBI RANGE			
1	Ankapura RF		
2	Adgur RF	99.95	99.95
3	Ankasandra RF	121.4	121.4
4	Ammanagatta RF	2873.33	2343.33
5	Bennehallada Kaval RF	162.32	162.32
6	Gowripura RF	320.92	205.92
7	Gubbi Plantation (Honnnavalli Channasettih	106.39	106.39
8	Haragaladevigudda RF	283.29	193.29
9	Harehalli RF	515.25	440.25
10	Haralakatte A & B Blocks RF	192.63	192.63
11	Manchaladore RF	288	288
12	Manchaladore (Additional) or Nayakanaker	3617.64	2402.64
13	Manchaladore Extension RF	384	384
14	Marashettihally RF	571.54	571.54
15	Marashettihalli RF	132.34	132.34
16	Maradigudda RF	775.71	443.71
		756.27	756.27