

8.9 HARYANA

8.9.1 Introduction

Haryana, situated in the northern part of India has a geographic area of 4.42 million ha. It lies between lat 27°39' and 30°55' N and long 74°27' and 77°36'E. The State is divided into two natural zones, the Shiwaliks and the Aravalli hills and the Indo-Gangetic plains. The Yamuna and the Ghaggar rivers are the lifelines of the State. It is an intensively cultivated State having more than 80% area under agriculture.

The annual rainfall varies from 213 mm in south-west to 1,400 mm in the north-east and the temperature ranges between 1°C to 45°C. The land use pattern of the State is given in Table 8.9a.

The total population of the State is 21.14 million (*Census 2001*) which constitutes 2.1% of the country's population. Of this, rural population is 70.08%, and urban 29.92%. The population density is 478 persons per km². The livestock population is 8.89 million (*Livestock Census 2003*) which has marginally decreased since the census of 1992.

8.9.2 Forest Resources

Though Haryana is deficient in natural forests, it produces significant quantity of timber from outside forest areas. The recorded forest area is 1,559 km², which is 3.53% of the geographic area of the State. As per legal classification, Reserved Forests constitute 15.97%, Protected Forests, 74.28%, and Unclassed Forests 9.75%.

Forests are mainly distributed in the north-eastern

and south-eastern districts of the State. The three major forest types occurring in the state are Tropical Dry Deciduous in the eastern part, Tropical Moist Deciduous in the Shiwalik region, and Tropical Thorn Forests in the western part.

8.9.3 Protected Areas

The 2 National Parks and 10 Wildlife Sanctuaries in Haryana cover an area of 27,362 ha, which constitutes 0.62% of the geographic area of the State.

8.9.4 Joint Forest Management

In Haryana, Joint Forest Management (JFM) has been in practice since early 1972, though the Government notification in this regard was issued in 1990. There are 875 Joint Forest Management Committees (JFMCs) as on March 2005 managing 56,000 ha of forest land which is about 36 % of the forest area of the state. About 165,500 families are involved in JFM.

Source: Proceedings of the National Workshop on JFM, MoEF, 2005.

8.9.5 Forest Cover

The forest cover of the State, based on satellite data of October-November, 2004 and January 2005, is 1,587 km², which constitutes 3.59% of the geographic area. Very dense forest accounts for 3 km², moderately dense forest, 523 km², and open forest, 1,061 km². The forest cover of the State is shown in Fig.8.9.

Table 8.9a: Land use pattern

Land Use	Area in '000 ha	Percentage
Total geographical area	4,421	
Reporting area for land utilization	4,402	100.00
Forests	115	2.61
Not available for cultivation	469	10.65
Permanent pastures and other grazing lands	34	0.77
Land under misc. tree crops & groves	7	0.16
Culturable wasteland	19	0.43
Fallow lands other than current fallows	0	0.00
Current Fallows	232	5.27
Net area sown	3526	80.10

a: Below 500 hectares.

Source: Land Use Statistics, Ministry of Agriculture, GOI, 2005.

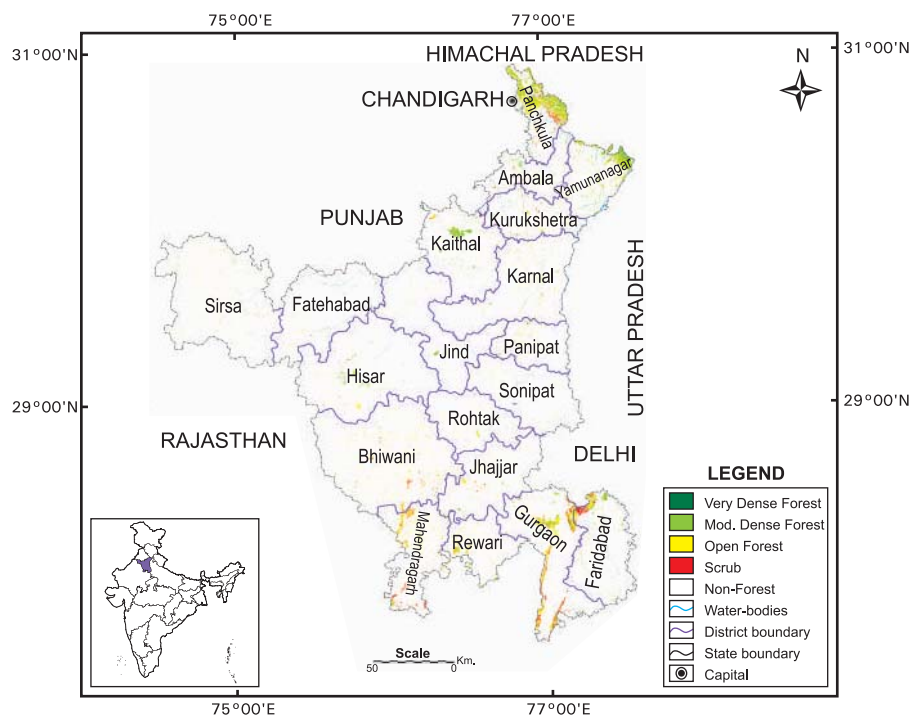


Fig 8.9 : Forest Cover Map of Haryana

An increase of 11 km² in forest cover has been assessed in the present assessment as compared to the previous assessment (based on satellite data of October-November 2002.)

The change matrix, given in Table 8.9b reveals that there has been an increase of 12 km² in open forest, and a decrease of 1 km² in moderately dense forest.

Increase in Faridabad and Gurgaon districts (Aravali Hills) is mainly due to coppice growth of miscellaneous spp. (mainly *Prosopis juliflora*) and plantations as observed by FSI officials during field verification. There is loss in forest cover in Rohtak district due to felling of mature trees in panchayat lands.



Table 8.9b: Forest cover change matrix

(area in km²)

2003 Assessment (Data of Oct.-Nov. 2002)	2005 Assessment (Data of Oct.-Nov.2004&Jan.2005)					Total 2003
	VDF	MDF	OF	Scrub	NF	
Very Dense Forest	3	0	0	0	0	3
Moderately Dense Forest	0	523	0	0	1	524
Open Forest	0	0	1,049	0	0	1,049
Scrub	0	0	0	165	0	165
Non Forest	0	0	12	0	42,459	42,471
Total 2005	3	523	1,061	165	42,460	44,212
Net Change	0	-1	12	0	-11	

The extent of very dense forest, moderately dense forest, open forest, and scrub, along with the changes

compared with 2003 assessment, has been provided in Table 8.9c.

Table 8.9c: District-wise forest cover

Number of Districts: 19

(area in km²)

District	Geographic area	2005 Assessment				Percent of G.A.	Change	Scrub
		Very dense forest	Mod. dense forest	Open forest	Total			
Ambala	1,574	0	17	21	38	2.41	0	2
Bhiwani	4,778	0	11	131	142	2.97	0	19
Faridabad	2,151	0	30	62	92	4.28	0	27
Fatehabad	2,538	0	9	13	22	0.87	0	0
Gurgaon	2,766	0	48	170	218	7.88	13	59
Hisar	3,983	0	20	24	44	1.10	0	2
Jhajjar	2,702	0	5	32	37	1.37	0	1
Jind	1,834	0	8	15	23	1.25	0	0
Kaithal	2,520	0	50	27	77	3.06	0	2
Karnal	2,317	0	10	36	46	1.99	0	0
Kurukshetra	1,530	0	15	24	39	2.55	0	2
Mahendragarh	1,859	0	7	63	70	3.77	0	20
Panchkula	1,268	1	159	209	369	29.10	0	27
Panipat	898	0	6	17	23	2.56	0	0
Rewari	1,745	0	6	40	46	2.64	0	3
Rohtak	1,582	0	3	18	21	1.33	-2	0
Sirsa	4,277	0	15	46	61	1.43	0	1
Sonipat	2,122	0	5	12	17	0.80	0	0
Yamunanagar	1,768	2	99	101	202	11.43	0	0
Total	44,212	3	523	1,061	1,587	3.59	11	165

8.9.6 Tree Cover

Tree cover of Haryana has been estimated following a sampling based approach. A separate exercise was carried out where high resolution satellite data (5.8m) has been used for identification of tree patches for field

inventory. Field inventory has been carried out on 153 sample plots in one district of the State between 2002-06 and the estimated tree cover in the State is 1,565 km².

The forest and tree cover of the State is presented in the Table 8.9d.

Table 8.9d: Forest & tree cover

(area in km²)

Category	Area	% of Geographical Area
Tree Cover	1,565	3.54
Forest Cover	1,587	3.59
Forest & Tree Cover	3,152	7.13