

State of Forest Report: Analysis of Forest Cover in Haryana

Sunny Hooda*

Research Scholar, Department of Public Administration, M.D. University, Rohtak

Abstract – Forest and green cover are important for environmental sustainability. The most important activity that forests carry out is absorbing carbon thus reducing harmful effects of climate change. They capture and store carbon dioxide through photosynthesis. Preservation of forest is vital for existence of human life. Afforestation not only helps in conservation of tree cover but helps in availability of timber, food, fodder and fuel to the local people & livestock. Destruction of forest contributes to degradation of environment and heating of our planet. Indian forest policy strives for bringing 33 percent of geographical area of the country under forest cover, but State of Forest Report for Haryana shows otherwise where forest cover is less than 4 percent of total land area. This research paper is based on secondary data. The paper covers a basic overview of forest cover in the state of Haryana, schemes of Forest Department of Haryana, challenges and suggestions for afforestation in the state.

Keywords: Indian State of Forest Report, Joint Forest Mechanism, Social Forestry, National Forest Policy, Punjab Land Preservation Act (PLPA), Aravallis, Shivaliks, Environment.

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INTRODUCTION

Forest is a large area extensively covered by trees. There are different types of forest based on tree density, height, land use and legal status. Forest cover and trees play important role in water conservation. That is why International Forest Day is celebrated on 21st March and World Water Day is celebrated on 22nd March. Trees absorb and release water during photosynthesis and helps in maintaining water cycle. They also act as barrier for floods.¹

Planet Earth which harbor life consist of 29 percent of land area and 71 percent of land area under water. Among the total land surface area approx. 31 percent of land area is under forest cover which is less than one third of total area. But there is huge variation with countries such as Brazil and Japan consist more than 66 percent of area under forest whereas countries such as UK, China and Australia covers not even 15 percent of their land area under forest. While most of the tree cover depends on soil, climate, minerals and availability of water, but recent human activities such as construction, land degradation, soil erosion, desertification and overgrazing has tremendously increased the pressure over our natural vegetation and forest cover.²

INDIA

According to India State of Forest report (ISFR - 2017), India accounts for 24.4 percent of land area

under forest cover and 21.54 percent of actual forest cover. But it is important to understand that forest area and actual forest cover are different. Forest area is notified under the state forest department whether they have tree cover or not and actual forest cover is trees with canopy. So the actual forest area is only 21.54 percent.³

India is placed 10th rank in the world in area under forest. The other nine countries are Russia, Brazil, Canada, United States, China, Australia, Congo, Argentine and Indonesia respectively. India accounts for only 2.4 percent of land area of the World but it includes 17 percent of world population & 18 percent of total livestock population. India has a population density of 382 people per sq. km. which places a high burden on its land and agriculture.⁴

India has increased about 8,021sq km or 1 percent in forest covers as compared to India State of Forest Report in 2015. There has been much increase in 'very dense forest area' which acts as most absorber of CO₂ (carbon dioxide) which is a greenhouse gas.⁵

Among states Andhra Pradesh, Kerala and Karnataka has shown maximum increase in forest area. The states with maximum forest cover are Madhya Pradesh, Arunachal Pradesh & Chhattisgarh. 15 states in India have more than 33 percent area under forest. Punjab & Haryana state remain lowest among the states in land under forest cover. The above figures indicate for a much

stronger forest policy, which not only preserves forest but also fulfills contribution of locals & tribals. The National Forest Policy 1988 aims for 33 percent of geographical area under forest cover.⁶

HARYANA

Haryana is a leading agricultural state of India having area of 44212 sq. km. It constitutes 1.34 percent of land area of India. The population of the state is 25.35 million and population density is 573 people per sq. km. (national average 382 people per sq km.). The main rivers in state are Yamuna and Ghaghar. The annual range of temperature of Haryana is 1°C to 45°C. The climate of northern Haryana is moist subtropical while the western and southern Haryana constitutes tropical thorn forest, which includes the maximum area. They have scrub vegetation like babool, ber, khair, neem and khejri trees.⁷

FOREST COVER IN HARYANA

Haryana is agriculture dominated state with 80% of land under cultivation. 16 % of land is used for other purpose (infra, housing, roads, canals) and mere 3.90 % of geographical area is notified under forest area. But the actual forest cover is only 3.59 % of state geographical area.

The forest area consists of different types of forest cover in Haryana. They are Reserve Forest, Protected Forest, Unclassed Forest, areas enclosed in Indian Forest Act 1927 and areas enclosed in section 4 & 5 of Punjab Land Preservation Act (PLPA) – 1900.⁸

TABLE – 01

Forest Area of Haryana

Sr. No.	Type of Forest	Area (in hectares)
1	Reserve Forest	24913.70
2	Protected forest	116140.52
3	Unclassed forest	979.94
4	Areas enclosed U/S of Indian Forest Act 1927	1160.68
5	Areas enclosed U/S 4 & 5 of PLPA 1900	29682.23
6	Others	3001.06
	Total forest area	175879.00

Source: Haryana Forest Department

Reserved forests are prominently in Panchkula & Yamunanagar. Small pockets of Reserved forest are also found in Kaithal, Ambala, Jind and Hisar. The state also boasts of pine forest in small area of Morni hills near Panchkula whereas Yamunanagar consist

mainly Sal trees. As compared to Indian State of Forest Report (ISFR) of 2017 and 2015 the state has gained only 8 sq. km. of forest cover.

Table – 02

District wise forest cover in state of Haryana 2017

Table 9.9.7 District wise Forest Cover (area in sq km)							
District	Geographical Area	2017 Assessment			% of GA	Change *	Scrub
		Very Dense Forest	Mod. Dense Forest	Open Forest	Total		
Rewari	1,594	0	10	49	59	3.70	0
Rohtak	1,745	0	3	16	19	1.09	0
Sirsa	4,277	0	3	54	57	1.33	2
Sonapat	2,122	0	3	17	20	0.94	0
Yamunanagar	1,768	22	89	83	194	10.97	1
Total	44,212	28	452	1,108	1,588	3.59	8

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District	Geographical Area	2017 Assessment			% of GA	Change *	Scrub
		Very Dense Forest	Mod. Dense Forest	Open Forest	Total		
Ambala	1,574	0	18	34	52	3.30	0
Bhiwani	4,778	0	8	104	112	2.34	0
Faridabad	741	0	26	54	80	10.80	5
Fatehabad	2,538	0	3	15	18	0.71	1
Gurgaon	1,258	0	34	83	117	9.30	1
Hisar	3,983	0	12	45	57	1.43	3
Jhajjar	1,834	0	0	24	24	1.31	0
Jind	2,702	0	5	16	21	0.78	0
Kaithal	2,317	0	24	33	57	2.46	0
Karnal	2,520	0	4	28	32	1.27	-2
Kurukshetra	1,530	0	18	21	39	2.55	-2
Mahendragarh	1,899	0	22	77	99	5.21	-1
Mewat	1,507	0	14	96	110	7.30	2
Palwal	1,359	0	2	12	14	1.03	-1
Panchkula	898	6	151	234	391	43.54	-1
Panipat	1,268	0	3	13	16	1.26	0

Source: Forest Survey of India “India State of Forest Report 2017” p. 192

SCHEMES

Haryana government has various schemes to increase the forest and tree cover in the state. The prominent among them are as follows⁹:

(A) Haryana Forest Policy 2006

Haryana Forest Policy is framework on which forest schemes are prepared. The policy visions for 20 percent land area under forest and tree cover in phased manner. The following are the objectives of Haryana Forest Policy 2006.

1. Afforestation and maintaining environment stability
2. Rehabilitation of forest and water resources.
3. Protection of biodiversity.
4. Checking desertification and sand dunes
5. Increasing forest cover and promoting social forestry
6. Conserving water resources.

(B) Green India Mission

Green India Mission is a comprehensive project for protecting and restoring forest cover and thus reducing the effect of climate change. Under Green India Mission, Haryana Government and Indian Railways will plant 1.25 lakh sapling along Sonipat-Jind and Rohtak-Rewari railway lines. The project has multiple benefits, like employment generation for youth, tree cover will reduce pollution and low import of timber from other countries.

(C) Joint Forest Management

Joint forest management was started in Haryana in 1970's. The best example is Sukho Majri village of Ambala district under foot hills of Shivaliks which has become a role model for sustainable development. Village Forest Committees (VFC's) have been formed under National Afforestation Program. They help in fulfilling needs of indigenous people like produce from forest areas such as bamboo, fodder, grass etc. In Joint Forest Management villagers assist the forest department in protection of forest through fire, grazing and illegal harvesting and in exchange Forest Department help farmers to get produce from forest such as fodder, fruit and grass. Another example of Joint Forest Mechanism is HCFP – Haryana Community Forest Project. This project gives special emphasis to women to form self-help groups to generate resources and raise their incomes.

(D) Green belt in urban areas

Green belt across roads, parks, waste lands to increase tree cover. Green belt and planting of trees along canals, railway lines and highways are best to use unutilized land. They help to check rising vehicular and industrial pollution which are prone to cities and towns. They also act as a barrier to the hot winds in summer.

(E) Rehabilitation of Aravallis Hills

Aravallis hills are among the oldest mountains in the world and at present they are in degraded state. Rehabilitation includes afforestation in degraded areas and maintaining of ponds and other tree resources. The forest department has laid stress on earth water harvesting & silt retention dams in Aravallis for conservation of soil and water ultimately helping ecology of the Aravallis.

(F) 'Har Ghar Haryali' scheme

Haryana Environment and Forest minister Capt. Abhimanyu launched 'Har Ghar Haryali' green cover in every household scheme in 2015. In this scheme the state government is distributing sapling at cost of Re 1. The government also launched 'Har Goan Padon ki Chaoon' on the 67th occasion of state Van

Mahotsav in 2016. There has been awareness program through Nukar Natak, Van Chetna Yatras and Awareness camps to motivate people to adopt planting program to mitigate climate change in the state.

(G) Social Forestry

Social forestry was first started in India in 1976. It has been divided into urban, rural and farm forestry. Its aim is to increase afforestation near our environment for community benefits. Urban forestry is suitable for barren land, parks, road sides, green belts etc. whereas rural forestry includes planting trees in community land of respective villages.

(H) Farm Forestry

Agro forestry is land use system and practice of creation, conservation, and scientific management of trees agricultural crops and livestock in unit piece of land for their goods and services. In farm forestry farmers grow trees for commercial purposes in their farm land helping them to generate more income.

CHALLENGES

- ▶ Recent report on Geo Environmental hazard by Geological Survey of India pointed out that open forest in Rohtak, Bhiwani, Sirsa, Rewari have been overgrazed and are being cut for firewood.¹⁰
- ▶ Punjab Land Preservation Act (PLPA) -1900 is apex act for Haryana and Punjab for preservation of forest and green areas of the state. It curbs illegal activities in the forest. Section 4 & 5 of the act identifies areas under Forest status. Haryana Government has not re-notified large areas under Punjab Land Preservation Act (PLPA) whose notification has expired leaving these eco sensitive areas open from the protective layer of the Act. These include 36 villages in Gurgaon and 17 villages in Faridabad. Their 'forest status' notification has expired. Without re-notifying these areas the forest area will be vulnerable to real estate and private builders.¹¹
- ▶ Despite the schemes Haryana forest cover is low. It has twin fragile mountain ranges. One is Shivaliks (foot hills of Himalayas) around Ambala, Yamuna Nagar, Panchkula and other one is Aravallis near Gurgaon, Faridabad. Both the hill ranges have become vulnerable to construction and mining sites. High rise building and residential areas in and around Panchkula and Gurgaon have added to the problem. For example Sultanpur bird sanctuary near Gurgaon where many migratory birds have

flown back because of rising temperature and pollution.

- Haryana, Punjab, Delhi and Rajasthan are northwestern states of India. They are among the states with agricultural background with low natural vegetation and scanty rainfall. With daily increase of vehicular pollution, industrial waste, construction debris and stubble burnings, the air pollution is only going to rise creating more respiratory and chest diseases among citizens particularly old aged and children.

SUGGESTIONS

Following are few suggestions which will be useful for preserving forests and tree cover in the state of Haryana:

- There must be stringent laws to check private builders and stone crushers who infringe on these eco-sensitive areas for vested interest. Forest clearance for these projects should be scrutinized properly. They should spend their Corporate Social Responsibility (CSR) amount for planting and up keeping or their surroundings.
- Haryana government should re notify forest areas which have expired their notification under Punjab Land Preservation Act (PLPA) - 1900 so that they are protected under the Forest category.
- Awareness programs for the communities for urban and rural areas for promotion of community and social forestry. Schemes such as 'Har Ghar Haryali' should be encouraged among every household.
- Nature camps should be promoted such as in (Thapli, Morni, Chuaharpur). They provides natural pollution free environment. Kalesar in Yamunanagar provides scenic beauty of Yamuna river and eco adventure activities. The ecotourism and adventure activities especially for students help in creating awareness for protection of our nature.

CONCLUSION

As the agricultural land has further fragmented, there has been persistent practice of intensive agriculture with heavy use of fertilizers and pesticides. Community land resources are reducing, forest land have become waste land. Large cattle graze the open forest and destroy young seedlings and baby plants which lead to soil erosion. It is high time for government and citizens to promote Social Forestry and Joint Forest Management. Agro forestry is best alternative for increasing the tree and forest cover to 33 percent from present 24 percent as in India

resources are skewed and 60 percent agriculture is rainfed. Horticulture should be increased in rural areas. Effective government policies and community participation can halt deforestation and increase tree cover.

The India State of Forest Report (ISFR) is a biennial report on forest and tree resources of country published by Forest Survey of India since 1987. The ISFR 2017 was fifteenth such report. The data has been collected using earth observation satellites such as Resourcesat-I and Resourcesat-II. Not only the forests the report also highlight bamboo, mangrove and water resources which are important for forest sustainability.

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Corresponding Author

Sunny Hooda*

Research Scholar, Department of Public
Administration, M.D. University, Rohtak