

# SUSTAINABLE FOREST MANAGEMENT HARYANA: A STUDY

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## ABSTRACT

*The degradation of world-wide estuarine ecosystems as a result of accelerated human population growth accompanied by agricultural, industrial and urban development justifies a strong need to find efficient ways to manage and protect these sensitive environments. Haryana is predominantly an agricultural state. About 80% of its land is under cultivation while 16% of land supports other uses like habitations, roads, railways, institutions, canals etc. As most of the area is under agriculture and other infrastructure, the notified forest area is only about 3.90% of its geographical area and there is limited scope to increase the notified forest area through land acquisition and other means. In order to increase the Forest and Tree Cover, forest department has undertaken massive plantation programme on other government lands, institutional lands, panchayat lands, common lands and other waste lands to bring more and more area under tree cover. Forest Department undertakes plantations on an average 20,000 ha area annual basis. Approximately 60% of the plantation is done outside the notified forests. Till 2012-2013, seedlings were also distributed to farmers, other government departments, institutions, schools, village panchayats etc. free of cost for planting on their lands. Due to large scale plantation initiated by forest department on non-forest lands as well as adoption of tree farming by farmers, the forest & tree cover of the state has increased to 6.80% as per the State of Forests Report published by Forest Survey of India Dehradun in 2011. Forest Department has set a goal to achieve 20% of forest and tree cover in a phased manner in the state. This goal can be achieved only when major thrust is given to agroforestry and plantations on lands outside the notified forest areas.*

*Keywords:- Haryana , Wildlife, Forest, Reserve Forests, Protected Forests*

## INTRODUCTION

The land use of an area is the cumulative product of the interaction between natural environment and socio-economic condition in that area. Land use is a primary indicator of the extent and degree to which man has modified the land resources. Haryana is primarily an agricultural state with almost 80% of its land under cultivation. The geographical area of the state is 44212 sq. km which is 1.3% of India's geographical area. It is not bestowed with bounty of natural forests and only 3.9% of its geographical area is under notified forests. As per India State of Forest Report, FSI, 2013, the Forest Cover in the state is 1586 sq.km which is 3.59% of the state's geographical area and the Tree Cover in the state is

1282 sq. km which is 2.90% of the geographical area. Thus the Forest and Tree Cover of the Haryana state is 6.49% of its geographical area. Forestry activities in the state are dispersed over rugged Shiwalik Hills in north, Aravalli hills in south, sand dunes in west and wastelands, saline-alkaline lands and waterlogged sites in the central part of the state.

The forests in Haryana are classified as Reserve Forests, Protected Forests, Unclassed Forests, Areas closed U/S 38 of Indian Forest Act, 1927 and Areas closed U/S 4 & 5 of Punjab Land Preservation Act, 1900. Blocks of Reserve Forest areas are mainly confined to the Shivalik ranges in Panchkula and Yamunanagar districts. Small blocks of Reserved Forests are found at a number of places in the districts of Yamunanagar, Kaithal, Ambala, Jind and Hisar. Majority of forests in the state belong to Subtropical dry deciduous category whereas subtropical thorny forests are found only in the Aravalli hills in the southern parts of the state. Pine forests are located at higher reaches in the Protected Forests of Morni Hills in Panchkula district, whereas Sal Forests dominate the Reserve Forests in the Shiwaliks of Yamunanagar district.

To promote sustainable development of forest resources in the State, Haryana Government framed its own Forest Policy in 2006. The policy has fixed the goal of achieving 20% Forest and Tree Cover in the state in a phased manner. This goal can be achieved by adopting Agroforestry practices. We are using genetically superior seedlings under Agro-forestry on farm lands to increase productivity. In fact Agroforestry should become a national mandate and a people's movement, as it is most economical, sustainable and stable alternative for ensuring ecological security of the country. Till the year 2012-2013, the Forest Department has been distributing about 2.5 crore seedlings to the farmers free of cost. Agroforestry plantations raised by the Forest Department are rated as one of the best in the country. It has been adopted by farmers as an Income Generation Activity and used as a model of rural development, worthy of emulation in rest of the country. The policy of not putting unnecessary restrictions on felling of trees from private land and their subsequent transit has enabled an environment which has led a large number of farmers to grow trees. The endeavour has been to create an environment that Agroforestry and Wood-Based Industries flourish and grow simultaneously.

Great emphasis has been given to Agro-forestry and Farm-forestry. As a result, Tree Cover of the State has increased considerably over the years. Infact, Tree Cover outside recorded forest area is almost equivalent to Forest area of the State. While recorded forest area of the state is just 3.90% of its geographical area, total Forest and Tree cover of the State as per State of Forests Report, 2011, published by Forest Survey of India has become 6.80%. Poplar tree plantations dominate the Tree Cover in agricultural fields of Panchkula, Ambala and Yamunanagar districts. Eucalyptus, Shisham, Kikar, Jal and Jand tree plantations in Agricultural fields of central and south Haryana also account for a major

portion of Forest & Tree Cover in the State. The total Forest area in the state as per the records of Forest Department is given in the table below:-

### Forest Area of Haryana

S.No.	Type of Forest	Area (in Ha.) .
1	Reserve Forest	24913.70
2	Protected Forest	
	(a) Compact	34931.08
	(b) Strip	81209.44
	Total Protected Forest	116140.52
3	Unclassed Forests	979.94
4	Areas closed U/S 38 of IFA, 1927	1160.68
5	Areas closed U/S 4 & 5 of PLPA, 1900	29682.23
6	Others	3001.06
	Total Forest Area	175879.00

State of Haryana has very little scope for extending area under the regular Forests. The department is laying great emphasis on promoting Farm-forestry, Agro-forestry and afforestation of wasteland for increasing the Tree Cover. Wildlife management in Haryana has special significance because of large variety of avi-fauna. The state has about 33000 Ha. area. under Protected Area Network, which consists of 2 National Parks, 8 Wildlife Sanctuaries and 2 Conservation Reserves. Over 500 bird species have been recorded in the state, which is almost 40 percent of total bird species in the country. The state has the potential to become a paradise for bird watchers, especially during winter. Sultanpur National Park situated about 55 km away from Delhi, is already a birdwatcher's paradise.

### PROTECTED AREAS IN HARYANA

#### Deer Parks

##### S.No. Name of the Deer Park

1 Deer Park, Hisar

#### Zoos

##### S.No. Name of the Zoo

1 Mini Zoo Bhiwani

2 Rohtak Zoo

3 Mini Zoo Pipli

#### Breeding Centres

S.No.	Name of Breeding Centre
1	Chinkara Breeding Centre, Kairu
2	Crocodile Breeding Centre, Baur Saidan (Kurukshetra)
3	Vulture Conservation and Breeding Centre, Pinjore
4	Pheasant Breeding Centre, Morni
5	Peacock & Chinkara Breeding Centre, Zhabua

## AGRO FORESTRY

Agro forestry is an area wherein Haryana State has taken long strides. This is the only way in which the State can increase its area under green cover. The Forest Department has been distributing 2.5 crore seedlings every year to the farmers and other tree growers free of cost to promote agro-forestry. Recently, the department has decided to sell the seedlings on subsidised cost. Agro-forestry has enabled the forest deficient state of Haryana to support a large number of wood-based industries based on farm-grown wood. The town of Yamuna Nagar has virtually become the national centre of plywood and veneer industry. Our policy of not having any restrictions on felling of trees from private areas and on transit of wood, has also helped in expanding the timber trade and wood-based industries. Our endeavour is to create favourable conditions so that wood-based industries and agroforestry activity can further grow simultaneously.

Although, the national goal is to bring at least one-third of country's geographical area under forest and tree cover by year 2012, our vision is to bring forest and tree cover over at least 20 percent of the State's geographical area in a phased manner. Our endeavour is to involve rural people, especially women, in raising forest nurseries so that agro-forestry can become people's movement. The state is also establishing organised timber market (Mandis) at Yamunanagar district of the state to facilitate transparent trade of farm-grown wood.

Agroforestry is the most economical, sustainable and stable alternative for ecological security of land production system. Whereas the average productivity of plantations in forest and wastelands is approximately 4 to 5 cubic meters per hectare per year, seed-route agroforestry plantations in irrigated land ensure average productivity of 10 to 15 cubic meters per hectare. The average productivity has been enhanced to 25 to 30 cubic meters per hectare per year from poplar and clonal eucalyptus plantations. Thus, by all aspects, agroforestry is a cheap, profitable and sustainable alternative. However, there are still problems associated with species suitability, marketing, policy and industrialisation for which there is a great necessity for discussion and deliberation.



There is a vast scope of Research and Development (R&D) in the field of agro-forestry. Many high yielding clones of agro-forestry species have been evolved which need to be demonstrated in the field, so that tree growers can increase productivity of their plantations. High yielding and disease resistant clones of eucalyptus, poplar, teak, ailanthus, khejri, etc. need to be evolved through continuous research. The assistance is required from the Central Government in R&D and extension activities. Plantations of poplar were instrumental in the expansion of plywood and veneer industry in Haryana State. Further research need to be conducted for developing alternative uses of poplar wood to expand its marketability. There have been many fluctuations in the prices of eucalyptus and poplar wood due to variations in demand and supply which always poses a threat that farmers may become indifferent to agro-forestry. This issue should be taken up with more seriousness and priority and there is an urgent need to work on issues related to marketing and government policies of import and export of wood.

## **RED JUNGLE FOWL**

### **CONSERVATION OF RED JUNGLE FOWL IN HARYANA**



The Red Jungle Fowl is found in India and is distributed approximately along with the Sal forests in the country. It was also found in Malaysia, Indonesia and adjoining countries of the eastern region from where it is reported to be extinct. Of late concerns had been raised regarding the genetic integrity and the purity of RJF in the wild and those under captivity. This matter regarding the purity of the wild RJF is important because wild genes often hold the key to disease resistance. The dilution with the genes of domestic fowl results in the endangerment of RJF. The red jungle fowl (RJF) is one of the four jungle fowls found in the Indian Subcontinent belonging to the genus *Gallus*, the other three being grey, Ceylon and Green. RJF is distinct in its appearance; its strikingly colourful plumes and majestic red comb makes it a beautiful bird. The presence of eclipse plumage differentiates this from other poultry birds. According to historical evidences RJF was first domesticated in Harappa and Mohenjodaro in the Indus Valley around 2500-2100 BC. From the place of domestication RJF moved to other parts of the world and has contributed to the evolution of various breeds of domestic chicken across the globe. India, despite being the origin of the red jungle fowl is importing poultry from outside. It is reported that the wild populations of RJF have been contaminated by domestic or feral chicken. However, it has been opined that the non-contaminated RJF still exists which need to be saved. With the decline in forest resources and rapid urbanization the population of many wildlife species has decreased to an alarming low level. The need for the conservation of Galliformes species was highlighted at national and international level in the early part of 1990. The Haryana Forest Department, with a view to breed available local pheasant species and release them in nature established a pheasant breeding center at Morni, about 30 km from Panchkula during 1991-92 and 1992-93. Initially it was thought that the center would breed Red Jungle Fowls, Cheere pheasants, Kalij pheasants and Chakores. However, later the emphasis continued mainly on Red Jungle Fowls and Kalij pheasants.

## CONCEPT OF JOINT FOREST MANAGEMENT

Joint Forest Management programme is an endeavor to fulfill the forestry related needs and aspirations of the local people from the adjoining government forests with their active participation in protection and maintenance of these forests. The Forest Department is undertaking the forestry interventions in these areas, which synchronize with the local felt needs. An atmosphere of goodwill and faith has been created whereby the people feel that it is their programme and the government is participating in it. The department is increasingly acting as facilitator to meet the aspirations of the local populace and in return seek their active participation in preventing the degradation of forests by eliminating illicit felling and grazing.



To arrest the degradation of forests, successive governments framed rules from time to time. These rules aimed at conserving and enriching the existing forests as well as bringing more eroded areas under tree cover. Whatever meager rights the locals had in these forests were insufficient in meeting their daily needs of forest produce. To bridge the difference between demands and supply, the people went in for illegal extraction of the same, which was opposed by the foresters. Thus, these stringent rules and regulations created a sense of alienation amongst the locals who were always at loggerheads with the foresters whom they thought were only interested in the conservation of forests as part of their official duty without caring for the genuine demands and welfare of the local inhabitants.



Since the last few decades, the concept of the forestry and its application for rural development has undergone a tremendous change. It has now been increasingly felt that it will be virtually impossible to prevent the degradation of forests without the active involvement of the locals in their protection and

maintenance. While doing so the needs and aspirations of the locals from these areas have to be clearly understood and met with to the maximum extent possible. Keeping in tune with these developments the role of the forest department has become more supportive, considerate and accommodating to satisfy the aspirations of the locals keeping in view their priorities, perceptions, preferences, motivations and constraints.

## CONCLUSION

As far as main results of the study are concern, these includes that four distinct clusters of villages emerge with one more groups of villages, which are transitional between any two types. These are (i) Steep Slopes and Dense Forested Hill Ranges, (ii a) Alluvial Plains – Mainly Agricultural, (ii b) Alluvial Plain – Agricultural Area with Wasteland due to Water Logging, (iii) Dissected Hills and Degraded Forests, (iv) Alluvial Plains with Residual Hills, and (v) Transitional Area. The Government of Haryana had initiated Joint Forest Management in the state in the late seventies, much before it became a policy of the Ministry of Environment & Forests. The model developed in Sukho Majri village of Haryana, ensuring participation of people in protecting forests who were given rights over water and forest produce in return, is now world famous. The practice of participatory approach in forestry operations and forest management has continued in the state. Village level Village Forest Committees(VFC) have been constituted in over 817 villages under National Afforestation Programme (NAP). Besides this, 1135 VFCs have also been constituted under Japan International Cooperation Agency (JICA) funded Integrated Natural Resource Management Project and Haryana Community Forestry Project (HCFP). In all these programmes/projects, there is special thrust to empower women by providing them assistance in forming Self-Help Groups and training them to start some Income Generation Activity to improve their economic well being.

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