

A Study of Deforestation In India

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ABSTRACT

Deforestation is major threat that affects the environment in the world. The deforestation make so many bad impact on the earth, this may lead to the end of life in earth. There are some causes behind the deforestation. Here in this study it deals with impacts and causes of deforestation.

Keywords : Deforestation, Impact, causes, threats, India

I. INTRODUCTION

Forests have the role of an important part of the wealth of any country. In our nation, the forest preservation gets a major important. The preservation is taken over by the government and Government Forest Department is in charge. Forests play major influence upon the climate; for they attract rain and preserve moisture. It is an important matter forests do in a dry country like India. The surrounding atmosphere always cools by the evaporation from the eaves of a tree by giving off moisture. The moisture is in condensed form and it was dissolved in rain. Any kind of destruction to forests quickly changes the climate of the whole district as a consequence. The first Government Forest Act came into being in India in 1865. This law ceded the power to the princely states for the promulgation of laws aimed at protecting the valuable trees in the Indian forests. Indian Forest Act of 1927 which prevails in most of the state is the revised version of Indian Forest Act of 1878.

II. DEFORESTATION

Destruction of forest is called deforestation. Deforestation has serious effect on human life and environment. According to the survey of forest Department, India has about 75 million hectares of forest area. Recently collected satellite imagery data have revealed that only about 17 percent area is covered by forest. India is losing 1.3 million hectare of forest a year. In the hilly region deforestation is so acute that economy and ecology of the area is severely affected. The original vegetation of Himalaya has been greatly destroyed which has resulted in gradual loss of the

natural resources. Due to overpopulation, industrialization, urbanization, road construction, mining and other developmental activities the natural habitats of the flora and fauna are disturbed and have caused tremendous pressure on the living resources. Many plant and animal species are on the verge of extinction or endangered. Forest destruction may also be caused by several adverse factors as landslides, drought, flood, storm, earthquakes, diseases, water and air pollution and human interference. Other adverse factors such as lack of stable soil, aridity, swampiness, biotic agencies, commercial exploitation etc. may also be responsible for depletion of forest vegetation. Natural diversity of India is one of the richest in the world which is disappearing gradually due to aforesaid factors.

According to FAO report, the annual deforestation rate in India was 0.6 percent (0.34 million hectares during the period 1981 to 1990). According to Ravindra Nath and Hall (1944) 144 million hectares was afforested every year. In 1990, the total forested area in India was 70.6 million hectares of which 27 percent was under commercial plantations considering mainly of eucalyptus, teak and pine. According to Khoshod (1986) the total area under forest in the world was about 7000 million ha. in 1900. By 1975 it was reduced to 2890 million ha. By the end of 2000 AD, total area under forest in the world will be reduced to about 2370 million ha, if the present trend of deforestation continues. The destruction of forest cover in the ecologically sensitive Himalaya region has already started showing adverse impact in the form of increasing shortage of water, recurrent landslides, increasing flood, high sedimentation in the rivers, shortage of fuel and fodder

and decrease in grassing land. Due to deforestation the life supporting systems are disturbed. Underground water table is progressively going deeper and deeper. Large area of the land becomes affected by drought and well tube, wells, lakes, ponds etc. dry up sooner than expected during summer months.

In Kumaon and Garhwal Himalaya the oak forests are maintaining general environment and villagers depend to a great extent for fodder, fuel and some of other necessities on these forests. But now oak forests are being destroyed to meet the ever increasing demands of the people. This has resulted marked changes in the environmental conditions. Community associated with oak are destroyed. This may lead to the loss of medicinal herbs and shrubs associated with oak. This availability of fodder will be reduced and the age-old animal link in the hill eco-system would be broken.

At the earth Summit in Rio de Janeiro (1992) issue related to deforestation was major concern. The Agenda 21 of the UNCED (United Nation Conference on Environment and Development) stated "Deforestation is a result of many causes, some natural, but others mainly due to human development, such as inappropriate land tenure systems and incentives, expansion of agricultural areas, increasing forest product demand and lack of information about and understanding of the value of forests".

III. ECO-SOCIAL AND ENVIRONMENTAL IMPACTS OF DEFORESTATION

- **Loss of top soil:** It's virtually respectable as nature takes about 1,000 years to build an inch of soil, 12,000 Mt of India's top soil is disappearing down the rivers every year, a report in Economist, and London says (10.1. September 24, 1986).
- **Loss of food grains:** As a result of soil erosion the country loses 300-500 lakh tones of food grains every year.
- **Loss due to floods:** The flood affected area shot up from an average of 64 Mha every year in 1950's to 9 Mha in the 1980's. During the period 1981-86, the loss due to flood alone was Rs. 50,000 million.
- **Threatening of Himalayan Ecosystem:** The entire Himalayan eco system is threatened and under severe imbalance as snow-lines has thinned and perennial springs have dried up.

- **Turning of forest into hot houses:** In Andhra Pradesh, temperate forest areas turn into hot houses and are lashed by hurricane - like forests of rain.
- **Occurrence of droughts:** Occurrence of drought is very common in state of Rajasthan. Its large portion of land is turning into wasteland. Chronic droughts have also begun in areas like Tamilnadu and Himachal Pradesh where they were unknown.

IV. CAUSES OF DEFORESTATION

There are so many reasons behind the deforestation. The different causes of deforestation are as follows:

1. **Overgrazing:** Overgrazing in forests destroys newly regenerates growth. It also makes soil more compact and impervious. Soil becomes less fertile due to destruction of organic matter. Seeds of certain species do not germinate in excessively grazed soils which results in reduction of species. Over grazing also leads to desertification. Domesticated are thus deprived of their natural grazing and forage support. Over grazing also accelerates the soil erosion. Soil erosion results in the removal of minerals and nutrients from the top soil and adversely affects the soil structure which ultimately lowers the productivity. Satellite imagery data indicate that the area under pasture land is severely degraded. The uncontrolled and indiscriminate grazing in the forests leads to degradation of forest soil and affects natural regeneration of forests.
2. **Shifting cultivation:** This is most common in North-Eastern India due to heavy water erosion; shifting cultivation is locally called shum. Many farmers destroy the forest for agricultural and commercial purposes and when fertility of soil is exhausted due to repeated cropping, a new forest area is destroyed. Therefore farmers should be advised to use the same land for cultivation and apply improved farming methods. It is estimated that every year about one million hectare land is degraded by shifting cultivation.
3. **Fuel wood:** Maximum destruction of forest vegetation is done for fuel wood. In the total fuel wood uses nearly 85 percent issued in rural areas and 15 percent in urban areas. The annual fire wood consumption was 134 million tonnes in cities in 1987. According to an estimate of Forest Survey of India (1987), the annual demand for fire wood in the

country was 235 million cubic meters. Thus fuel wood is a major factor for deforestation.

4. **Forest fires:** Frequent fires are the major cause of destruction of forests in India. Some fires are incidental while the majority of them are deliberate. According to study conducted by the forest survey of India (1996), on averages, 63.1% forest vegetation is affected by fire. Data further indicate that fire destroys about 0.5 million hectares of forests annually.
5. **Timber:** Timber and plywood industries are mainly responsible for the destruction of forest trees. According to forest survey of India 1987, against an annual demand for more than 27 million cubic metres the permissible cut of timber from forests was only 12 million cubic metres.
6. **Industry establishment:** Sometimes factories are established after destruction of forest. Thus for a small gain, there is an irreplaceable loss. In these process precious plants, wild animals and rare birds are destroyed and the quality of environment is adversely affected. A factory should be established on a waste land away from the urban population. Supply of raw materials to the forest based industries is another major cause of forest destruction in the hills. The forest based industries such as Resin and Turpentine industry are also responsible for destruction of trees in the hills.
7. **Encroachment of forest:** Another cause of deforestation in India is encroachment by tribals on forest land for agriculture and other purposes. According to forest survey of India about 7 million of forest land has been encroached upon for agriculture. Although such land makes a good contribution for agriculture production yet produces environmental hazards. So it is not desirable to convert forest land into agriculture land.
8. **Forest diseases:** Many diseases caused by parasitic fungi, rusts, viruses and nematodes cause death and decay of forest plants. Young seedlings are destroyed due to attack of nematodes. Many diseases such as heart rot, blister rust, oak wilt, phloem necrosis and Dutch elm disease etc. damage the forest trees in large numbers.
9. **Land slide:** Deforestation due to land slide in the hills is of great concern. It has been observed that, the land slide occurred mainly in the areas where developmental activities were in progress for the

past few decades. The construction of roads and railways particularly in hilly terrains, setting up of big irrigation projects have caused enough destruction to forest and accelerated the natural process of denudation.

10. **Ravine formation:** The forests and cultivated lands along the sides of ravines of big rivers (Yamuna and Chambal) are facing a serious danger of soil erosion. Once the ravines are formed, they continue to destroy the vegetation cover.
11. **Increase in population:** The population of India which was 36 crores in 1951. And it reaches up to 1.22 billion in recent year. Increased population need land for reside. So they use the habit of deforestation.

V. CONCLUSION

Deforestation is a serious threat in the environment. Unless this problem is addressed with the immediate concern it would prove detrimental to the very existence of the life on earth. Forest is the source that make earth climate in a balanced mode. Deforestation will cause the imbalanced climate behavior in our earth.

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