

IMPLICATIONS AND EXPLORATIONS OF DEFORESTATION

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Abstract:

The socio-economic development of human society not only depends on the environment but also influences the environment. Humans have transformed into destroyers of the environment in pursuit of development. This continuous developmental process has led to large-scale exploitation of natural resources. The growing population and rapid industrialization and many related activities are related to forest area exploitation. Encroachment of forest land for agricultural use: On account of the increasing population, large areas of forests have been turned into agricultural land to meet the growing demands. However, poor agricultural practices cause the soil to become infertile in the long run, leaving the land barren and useless. Submergence of forests in river valley projects: Various river valley projects have caused large-scale submergence of forests. Such large-scale logging has led to forest degradation and the resultant soil erosion has led to a heavy flow of sediments into the coastal waters that has smothered and killed a substantial amount of corals. The extraction has also adversely affected mangroves and corals. Species such as the saltwater crocodile and the Andaman wild pig have become endangered.

Keywords: population, poor agricultural practices, coastal waters, .etc

Introduction:

The socio-economic development of human society not only depends on the environment but also influences the environment. Humans have transformed into destroyers of the environment in pursuit of development. This continuous developmental process has led to large-scale exploitation of natural resources. The growing population and rapid industrialization and many related activities are related to forest area exploitation.

Causes of Deforestation:

The term deforestation refers to the removal or reduction of forest cover. Trees are cut down for many purposes; the important reasons responsible for the destruction of forests are the following:

1. Encroachment of forest land for agricultural use: On account of the increasing population, large areas of forests have been turned into agricultural land to meet the growing demands. However, poor agricultural practices cause the soil to become infertile in the long run, leaving the land barren and useless.
2. Expansion of cities: Owing to the growing population, there is an ever-increasing demand for providing housing facilities.
3. Construction of dams, canals, and highways: Developmental activities such as the construction of dams, bridges, and highways have caused large-scale cutting of trees.
4. Establishment of industrial areas: Forests provide raw materials for several small and large-scale industries. Industrial operations cut countless trees each year for the raw materials that are provided by the forests.
5. Demand for firewood: Tribal people, who depend on the forest for fuelwood, are responsible for the large-scale cutting of trees. The United Nations Food and Agriculture Organization estimates that 1.5 billion of 2 billion people worldwide who rely on fuelwood for cooking and heating are overcutting forests. This problem is worst in the drier region of the tropics, especially in drier areas of Africa, the Himalaya, and the Andes.
6. Mining: Mining activities promote the deforestation process. The adverse effect of these activities leads to large-scale deforestation. Mining on a large extent leaves the area unfit for and future use and destroys the scenic value of the landscape.
7. Shifting cultivation: Many parts of North America and Western Europe have become deforested due to unsustainable agriculture, leading to severe soil degradation; in many cases, it has led farmers to leave the area and search for other options.

8. Forest fires: Rainforests are increasingly susceptible to forest fires. Millions of Acres of forests were burnt as fires swept through Indonesia, Brazil, Columbia, Central America, Florida, and other places. In 1998, the woods Hole research Center warned that more than 400,000sq km of Brazilian Amazonia was highly venerable to fire.
9. Submergence of forests in river valley projects: Various river valley projects have caused large-scale submergence of forests.



Fig. Deforestation and forest degradation

Causes of tropical deforestation 2000-2005

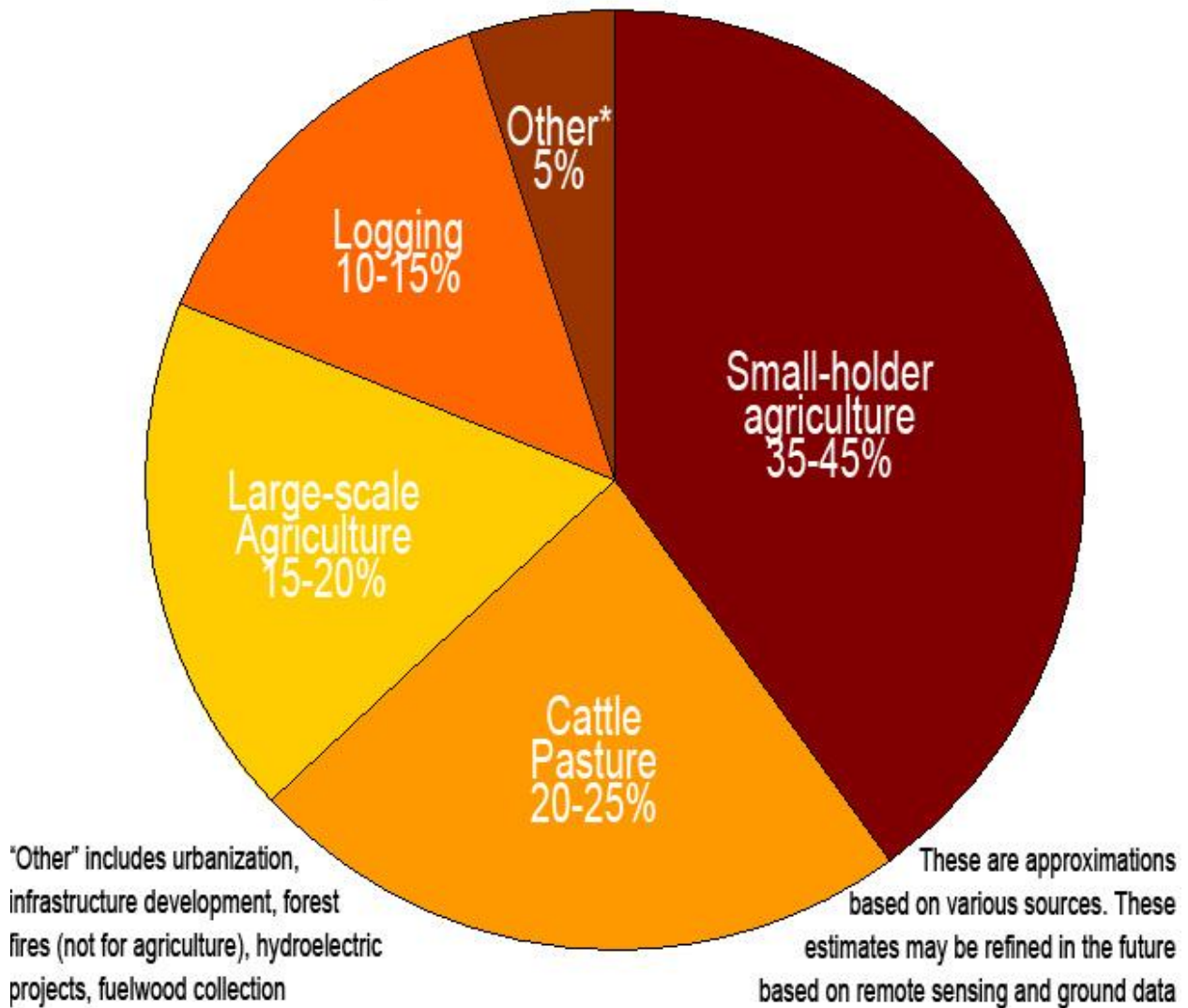


Fig. Causes of Deforestation

Deforestation in Andaman and Nicobar Islands

Some of the finest tropical evergreen forests in the world are found in the Andaman and Nicobar Islands, which are also rich biodiversity and contain a variety of known and unknown species of flora and fauna.

The British established a Forest department on the islands in 1883 and began the extraction of timber using convict labor. (The Andaman jail was famous for housing political prisoners, who had opposed the British government). The logging has continued without a break-even after Independence.

Such large-scale logging has led to forest degradation and the resultant soil erosion has led to a heavy flow of sediments into the coastal waters that has smothered and killed a substantial amount of corals. The extraction has also adversely affected mangroves and corals. Specials such as the saltwater crocodile and the Andaman wild pig have become endangered.

Effects of Deforestation:

Large-scale destruction of forests leads to several adverse environmental effects, the important effects of deforestation include.

- Increased intensity and frequency of floods:

The environment is endangered by floods due to the clearing of forests. In Nepal and India, for example, deforestation in the foothills of the Himalayas has led to catastrophic flooding of the river Ganges.

- Land degradation:

In the absence of forest cover, a large surface of the land area is exposed to the sun; as a result of this, the moisture content in the soil decreases drastically causing it to become dry and cracked. Soil erosion is also accelerated in the absence of forests because water and wind easily wash the soil away.

- Loss of forest products:

There is a decreased availability of forest products due to the cutting of trees. For example, shrinkage of forests has resulted in such an acute scarcity of fuelwood that gathering alone takes 360 days a year per family in The Gambia.

- Change in climatic conditions:

The climate of a region depends upon the rainfall and temperature patterns. Forests are important sinks for atmospheric CO₂. The most recent survey on deforestation and greenhouse gas emissions reports that deforestation may account for as much 10% of current greenhouse gas emissions.

- The situation of rivers and lakes:

In the absence of trees, the soil particles are eroded by rains during run-offs, this eventually leads to the deposition of soil sediments in lakes and ponds.

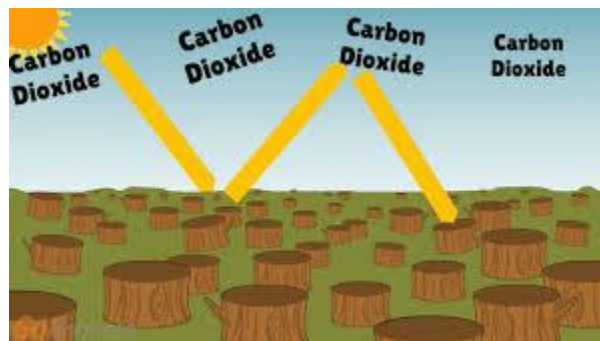
- Loss of revenue:

Deforestation leads to loss of forest products and hence causes a loss in revenue.

- Change in the water cycle and reduced rainfall:

Forests contribute to a high amount of rainfall owing to the high rate of transpiration and precipitation. In the water cycle, moisture is transpired and evaporated into the atmosphere, forming rain clouds before being transpired as rain back onto the forest. Subsequently, there is a decline in rainfall, subjecting the area to draught. Thus large-scale deforestation causes a considerable decline in rainfall. In 1998, excessive deforestation around the Malaysian capital Kuala Lumpur triggered strict water rotating owing to which the city had to import water for the first time.

- Increased socio-economic problems in the long run: Indigenous people may be forced to leave the place and, hence, are uprooted from their culture and traditions. This causes several socio-economic problems in the long run.



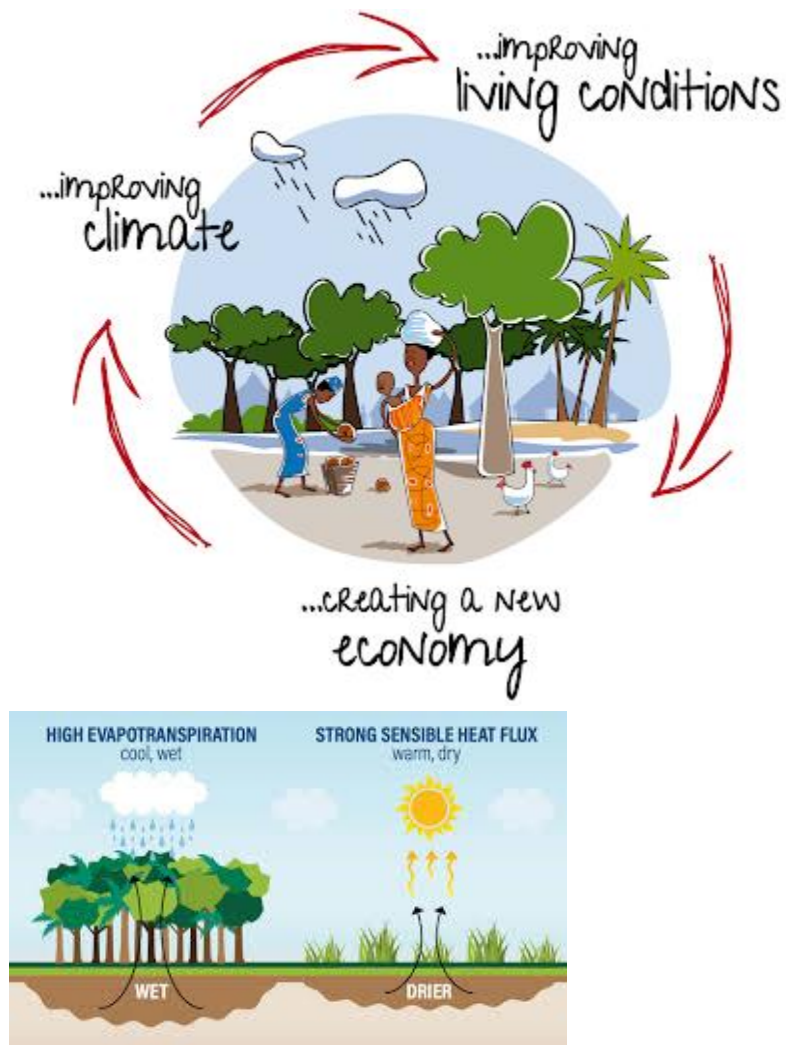


Fig. Effects of Deforestation

World's Wettest Area Dries Up:

However, Cherrapunji, which was once wettest spot in India, is drying up. Over the last decade or so, the mixed natural forests in the upper catchment areas have slowly being destroyed. There are no forests to hold water in the slopes; this causes most of the 12,000 mm of annual rainfall to quickly run off downstream, where it leads to floods. In Cherrapunji, the springs and rivers dry up soon after the monsoon, resulting in draught and even acute drinking-water shortages.

Over the years, Cherrapunji and the villages around it have received less and less rain during monsoon cause great distress to the residents. In July 1861 alone, Cherrapunji received 366 in. of rain. Between August 1860 and July 1861, Cherrapunji received 1,042 in of rain- a world record. However, the annual rainfall has now sharply fallen to less than a third of that. During winters, the rains almost stop and spring dry up. Water is supplied to Cherrapunji using trucks that are loaded with water. Some tankers, normally in the business of carrying water, load up with water as well and enjoy huge success in selling water in Cherrapunji.

Tree felling is rampant and the loss of forest covers around Cherrapunji is more serious than ever before. Also contributes to this large-scale deforestation is the rapid increase in the population of the area. While in 1960 Cherrapunji was a town of just 7,000 people, the present population is 1.5 times that number.

Control of Deforestation:

The government has launched joint forest management and social forestry schemes to conserve forests. The participation of local communities along with the government efforts is needed to ensure the success of these schemes. People live in the rural and forest areas should be sensitized to the damage done to their surroundings by the felling of trees. The important measures that help control forest destruction are as follows;

- Environmental laws and legal provisions should be strictly enforced.
- Forest extension should be administered through social forestry, agroforestry, recreation forestry, extension forestry, etc.
- Public awareness regarding medicinal and other economic and environmental significance of forests should be created. Local people should be educated about the evil effects of deforestation and that they should be taught to participate actively in forest conservation programs.



Fig. Saves Tree, save the planet

Conclusion:

Deforestation is very harmful to our community and other communities around the world. We shall reject and avoid causing deforestation by recycling our paper and not throwing it away because then in the future more trees would need to be cut down. So if we just keep reusing paper it would be more sustainable to our environment. The local effect it has on our environment is that it decreases oxygen for inhalation while trees absorb carbon dioxide and produce oxygen for living organisms like human beings and wildlife. You can save the lives of living species. Recycle your paper and Say No to Deforestation!

Reference:

- The History of Deforestation By Williams, Michael History Today, Vol. 51, No. 7, July 2001
- Who's to Blame? Although the Main Causes of Deforestation Are Conversion of Land for Agriculture, the Effect of the Forestry Industry Certainly Shouldn't Be Underestimated Geographical, Vol. 77, No. 4, April 2005
- Amazon Deforestation Destroys UK-Sized Territory Manila Bulletin, December 5, 2012
- Deforesting Malaysia: The Political Economy and Social Ecology of Agricultural Expansion and Commercial Logging By Onn, Lee Poh Journal of Southeast Asian Economies, Vol. 22, No. 3, December 2005
- The Economics of Deforestation: The Example of Ecuador By Sven Wunder Macmillan, 2000