



Global Challenges, Policy Framework & Sustainable Development for Mining of Mineral and Fossil Energy Resources (GCPF2015)

Forest Conservation & Environmental Awareness

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Abstract

Forest conservation is the practice of planting and maintaining forested areas for the benefit and sustainability of future generations. The conservation of forest also stands & aims at a quick shift in the composition of trees species and age distribution. Forest conservation involves the upkeep of the natural resources within a forest that are beneficial to both humans and the environment. Forests are vital for human life because they provide a diverse range of resources: they store carbon & act as carbon sink, produce oxygen which is vital for existence of life on the earth, so they are rightly called as earth lung, help in regulating hydrological cycle, planetary climate, purify water, provide wild life habitat (50% of the earth's biodiversity occurs in forests), reduce global warming, absorb toxic gases & noise, reduce pollution, conserve soil, mitigate natural hazards such as floods & landslides & so on. But now-a-days, forest cover is depleting rapidly due to many reasons such as an expansion of agriculture, timber plantation, other land uses like pulp and paper plantations, urbanization, construction of roads, industries, constitutes the biggest and severe threat to the forest causing serious environmental damage. Thus, there is need of public awareness. This paper offers various strategies for the conservation of forest & awareness to people, which plays a vital role for maintaining a proper balance of environment. So, we must get involved in this national task.

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1. Introduction

A forest referred to as a wood or the woods, is an area with a high density of trees. Forest may vary significantly in size & have different classifications according to how & of what the forest is composed. Tree forests cover approximately 9.4 percent of the Earth's surface (or 30 percent of total land area), though they once covered much more (about 50 percent of total land area). They function as habitats for organisms, hydrologic flow modulators, & soil conservers, constituting one of the most important aspects of the biosphere. Thus, there is need of conservation of forest. Forest conservation is the practice of planting and maintaining forested areas for the benefit and sustainability of future generations [1]. The conservation of forest also stands & aims at a quick shift in the composition of trees species and age distribution. In the United States, forest conservation became popular in the late 19th and early 20th centuries [2]. Forests are central to all human life because they provide a diverse range of resources & multiple benefits too.

1.1. Importance of forests

Forests provide multiple benefits. These are:

- a. Forests lower the air temperature by releasing water vapor into the air.
- b. At day time trees generate oxygen and store carbon dioxide, which helps to clean air.
- c. Forest attracts wild life and offer food and protection to them.
- d. Forests offer privacy, reduce light reflection, offer a sound barrier and help to guide wind direction and speed.
- e. Trees offer artistic functions such as creating a background, framing a view, complementing architecture, and so on.
- f. Well managed forests supply higher quality water with less impurity than water from other resources.
- g. Some forests raise total water stream, but this is not true for all forests, Forests help in controlling the level floods.
- h. Forest provides different kind of wood which are used for different purposes like making of furniture, paper/ pencils and so on.
- i. Forest helps in keeping environment healthy and beautiful. Forests also minimize noise pollution.
- j. They store carbon, aid in regulating the planetary climate, purify water & mitigate natural hazards such as floods & landslides. Forests also contain roughly 90 percent of the world's terrestrial biodiversity.

But now-a-days, forests are being destroyed; therefore efforts to stop or slow deforestation are important as deforestation causes serious environmental damage. It is extremely important that we have enough knowledge in the area of forests & deforestation to ensure that our world is a better one to live in & that biodiversity can be preserved. This paper highlights the various methods of forest conservation to reduce environmental damage.

2. Destruction of forests

Deforestation is the removal or destruction of large areas of forest. Deforestation happens for many reasons, such as logging, agriculture, natural disasters, urbanization and mining. Although deforestation occurs worldwide, it's a particularly critical issue in the Amazon rainforests of Brazil. The tropical forests and the species of plants and animals within them are disappearing at an alarming rate. For example, In December 2007 experts measured Amazon destruction at more than 360 square miles (932 square kilometres) in just one month.

The effects of deforestation are long lasting and devastating. Entire species of insects and animals have disappeared because of the destruction of their habitats. Deforestation can cause catastrophic flooding as well. Scientists see that deforestation has a significant effect on climate change or global warming [3]. It is also observed that 3400 plant species found in tropical forests are threatened with extinction; the volume of tropical hardwood exports has fallen since 1980. Malaysia has seen a 60 percent decline in log exports, while the Philippines (a major exporter of logs during the early 1980s) have seen a virtual cessation in log exports. In both cases, the declines are due to dwindling harvestable forest resources.

2.1. Solutions for deforestation

Solutions to the loss of our forests include management of woodland resources by local communities and forest dwelling populations, efforts by various forest conservation organizations dedicated to their preservation and the restoration of forest goods and services for the benefit of people and planet. The regulation of carbon dioxide emissions to reduce global warming, in addition to government support and protective environmental policies are also crucial to reverse the decline of our forests and woodlands.

3. Steps that should be taken for conservation of forests

Conservation of forest is a national problem so it must be tackled with perfect coordination between forest department and other departments. People's participation in the conservation of forests is of vital

importance. So, we must get them involved in this national task. The cutting of trees in the forests must be stopped at all costs. Afforestation or special programmes like Van-Mahotsava should be launched on grand scale. Celebrations of all functions, festivals should precede with tree-plantation. Cutting of timber and other forest produce should be restricted. Grasslands should be regenerated. Forest conservation Act 1980 should be strictly implemented to check deforestation. Several centres of excellence have been setup and awards should be instituted.

There are several methods to conserve or to save forests:

- a. Chipko movement, the people's movement to save the forest of TehriGarhwal.(DTE 2003), Which became famous all over the world as the symbol of people's action in preventing the destruction of environment. Chipkomeans 'to cling to' or 'to hug tight'. The vision of women hugging the trees and daring axe-men to cut them. Chipko movement remains one of the celebrated environmental movements of the world to save forests.
- b. Conservation of forest through the Fear of God is protected by the local deity. It may even have a temple or sacred groves.(edugreen.teri.). It could be just a few trees or a whole forest. No tree or plant is cut here, no animal or bird is killed and no form of life is harmed. The sacred groves of India are a unique traditional institution devoted to the conservation of forests and biodiversity.Preserved over many generations; sacred groves contain native vegetation in a natural or near-natural state. Many groves have water sources that help local communities. The groves absorb water during the monsoon and release it slowly during the dry period. Sacred Groves are relic forest patches traditionally protected by communities in reverence of a deity. In absence of statutory protected areas and in the wake of mass deforestation in some parts of India, Sacred Groves form important repositories of forest biodiversity & provide refuge to many plant & animal species of conservation significance. India has well over 13,000 documented Sacred Groves.Almost every village in the Sahaydri - Konkan region (north Western Ghats) has at least one Sacred Grove ranging from just a few acres to hundreds of acres. Together these groves created a network of patches within the landscape often connected by seed dispersing birds such as the Great Pied & the Malabar Pied Hornbills.
- c. Acts for forest conservation - The Forest Conservation Act 1980 was enacted to help conserve the country's forests. It strictly restricts and regulates the de-reservation of forests or use of forest land for non-forest purposes without the prior approval of Central Government. To this end the Act lays down the pre-requisites for the diversion of forest land for non-forest purposes.^[4]

3.1. Importance of conserving forests

Forests play a vital role in preventing global warming and building sustainable societies. So the need to protect and develop them can never be stressed enough. Forests have a variety of functions, including land conservation, securing of water sources, control of climate change, and creation of natural environs essential to human existence. The law gives new value to these "multifunctional" forests with a view to achieving harmony between them and society.

According to the report, domestic log prices have dropped to one-third of their peak of 30 years ago. The average annual income from forestry was only 260,000 yen in fiscal 2000. Forests cover 70 percent of the land, one of the highest rates among the developed countries. But imported logs account for 80 percent of the domestic demand, making Japan the world's third-largest log importer.

Recent studies prove how important forests are scientifically and economically. The report estimates that their various functions that can be measured in monetary value are worth 70 trillion yen reducing the burden on the environment and building a recycling-oriented society which requires a well-defined policy focus on the utilization of domestic forests.

The relationship between forest conservation and global warming deserves special attention; forests play a great role as an absorber of carbon dioxide. Under the Kyoto treaty on climate change Japan is committed to cut emissions by 6 percent from the 1990 level in the five years between 2008 and 2012. More than half that deduction, 3.9 percent, is to be achieved through forest absorption. Japan's substantial forests make it a notable example. In brief, that is the message of the government report on forests and forestry released last week.

In recent years, attention has also been focused on the importance of non-wood forest products which include plants for food and medicinal purposes, fibers, dyes, animal fodder and other necessities. Indonesia, for example, earns an estimated US\$120 million a year from rattans, resins, sandalwood, honey, natural silk and pharmaceutical and cosmetic compounds [5], while the local production of bidi, cigarette from the tendu leaf (*Diospyros melanoxylon*) in India provides part-time employment for up to

half a million women. In this connection, it has been estimated that more than 200 million people in the tropics live in the forests [6] and in some parts of Africa as much as 70 per cent of animal protein comes from forest games such as birds and rodents (FAO1990).

The government should also improve the vertically divided administrative system so it can take an integrated approach to forestry development, environmental protection and tax reform. Another challenge is to set rules for the shared roles between the central and local governments, and between private companies and volunteer groups. Reviving forests and villages is a grand undertaking that requires the long-term, broad-gauged participation of communities and people across the country.

The Forestry Agency, however, believes the 3.9 percent target will be impossible to achieve even if forest development is promoted at the current pace. Actual figures, it says, will probably miss the mark by a wide margin. So the pace needs to be accelerated. In the long run, it is probably also necessary to introduce a carbon tax or a water-source tax, for example, because large-scale government spending is considered unavoidable.

Forest conservation is also essential to wildlife protection. The latest conference on the biodiversity treaty in The Hague urged governments to take protective measures by 2010. Japan needs to bolster domestic efforts under the forestry conservation program adopted by the conference^[7].

4. Conclusions

In this way, we can conclude that, individuals as well as governments can do their part in protecting the forests of the world. Knowledge about the importance of forest needs to be spread so that people become aware of the danger to everyone and everything on the earth by deforestation. People's participation in the conservation of forests is of vital importance. So we must get involved in this national task. Finally, the author finds it necessary to add that the methods, strategies and measures mentioned here for the conservation of forests are very simple so that every individual could follow them and act at their own level in order to achieve the goal of conservation of forests. If we do not start and act now, it might get too late for the cause of conservation of forests.

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