

Conservation of Forests

Essay No. 01

Floods, population problems and other environmental hazards have been increasing. The environmental hazards in this country have not reached the stage prevailing in several highly industrialized countries. We are, however heading to it. Lack of adequate vegetate cover in the catchments or watersheds of our rivers and streams, exploitation of our hill forests indiscriminately to meet the ever-increasing needs of population, the indiscriminate lopping, grazing and fires have resulted in a great loss to the country in the form of soil erosion, floods, and damage to the regeneration.

Since independence the country has lost over four lakh hectares of forests – a precious and renewable source of energy – due to indiscriminate release of land for agriculture (when one knows that what is needed is a more intensive cultivation and not extensive one), submersion due to irrigation and power projects, clearance for high tension lines, for rehabilitation of expropriated and other categories of people, development of colonies, command areas, etc. with adequate safeguards against environmental hazards.

Only recently the National Committee on Environmental Planning and Co-ordination was constituted to have a look into the several projects from an ecological angle sent by States to the Planning Commission for clearance.

It is needless to indicate here the manifold advantages of vegetation in ameliorating the climatic conditions, maintenance of stream flow, conserving the soil and general maintenance of the eco-system including flora and fauna. Forest soils well stocked with deep-rooted trees have a storage capacity varying from 50,000 to 2,00,000 cusecs of water per square kilometer.

The structure of a forest has a bearing on its influence on noise effect. The denser the under storey and the ground vegetation and the more pronounced the vertical closure of the forest stand, the higher is its sound-absorbing capacity. A park 50 m wide can reduce the traffic noise by 20 to 30 decibels. Forests thus provide indirect protection against noise. A hectare of a forest of broad-leafed trees would collect at least 30 to 50 tons of dust, besides the usefulness of forests from the recreational aspect and in conserving wild life.

The people living in the villages need for their daily sustenance fuel for their cooking and other needs, fodder for their cattle, fertilizer for their fields, and small

timber for their rural houses and agricultural implements, bamboos for a variety of uses.

The plight in urban areas of middle and low-income groups is worse. In other words the trees become the basis of all sustenance and preservation of environment.

Forestry's role in preventing soil erosion, stabilizing sand dunes, protecting water catchment areas, and providing fodder and shade for livestock and humans may be less obvious, but is frequently more important than the production of timber. Ecological considerations have not been of high priority in many developing countries.

Fortunately awareness of ecological consequences has been growing rapidly, and environmental considerations would increasingly affect the forest development policies and strategy all over the world.

Large areas of the hills of North-East India, Orissa, M.P., etc., are subjected to shifting cultivation. This is a serious threat to the ecological balance of these areas resulting in the rapid destruction of flora and fauna in the hill regions and accentuating soil erosion and floods. It is both a way of life and an aspect of culture of these people.

The only way in which shifting cultivation could be controlled is by agro-forestry practices. Taungya cultivation, Agrisilvi culture is practiced in India to grow forest crops in conjunction with agricultural crops where there is great pressure on land in North U.P. and Kerala.

A notable example of agro-forestry practice is the Paper Industries Corporation of the Philippines which has initiated the shifting cultivators to grow *Albizia falcataria* for pulp aided by the World Bank through the Development Bank of the Philippines. A similar measure, modified to our local conditions, would help in the ecological balance in the hills.

Government of India through the I.C.A.R. have rightly constituted a Task Force on agro-forestry for the Ganga, Brahmaputra, Barak region. To do this, dedicated experienced people are needed to handle these cases and to make the cultivators accept the concept of a settled way of life.

India's forest area is hardly 23 per cent and is short by nearly 10 percent of the world average. Since independence we have lost 410 million hectares of forest land. The installation of more thermal plants and planning of nuclear power plants as well as utilization of solar energy should be encouraged and natural forests saved. Forests form the backbone for many wood and pulp industries

which consume power and if forests are lost the power cannot be commissioned. India's non-commercial energy resources include fuel wood, agricultural residues, and animal dung. Nearly, 175 million tons of fuel wood is consumed per year out of which only 20 million tones come from recorded sources.

This indicates the alarming rate at which the tree growth is depleted on the countryside. Nearly four million tons of fuel is reported to be needed for cremation in the country. Nearly 80 million tones of valuable crowding is burnt as fuel for want of alternative fuel. Bio gases and other agricultural residues valuable as raw material for pulp industries are burnt.

In order to rationalize the usage of these materials energy plantations are badly needed. Such energy plantation as Casuarinas and Eucalyptus could be seen raised by people around Bangalore and Keral in Karnataka. The extensive plantations raised by Government have been earmarked to industries and the common man continues to feel the pinch of shortage of fuel wood.

Large area in India are subjected to mining. In 1977, 5097 mines were working in India of which 4564 were non-coal mineral mines and 533 were coal mines, all employing nearly 7,45,000 persons.

The pollution and health hazards consequent on the open mining methods, as well as the slime disposal of underground mines pose a big problem. Ecological measures are badly needed to prevent soil wash, prevention of noise and dust and other forms of pollution.

A far reaching development was that of Kudremukh Iron Ore Co., having initiated measures to sustain ecological stability in the area along with turning out of the first sod of the subject. This has been followed by the Visvesvarayya Iron & Steel, and Chitradurga Copper. The Bababudangiri Iron Ore Project has tried to inbuilt the environmental measures within the project cost.

Extensive implementation of social forestry would mean the improvement in climatic conditions, betterment of the environment, and building up of enormous potential for energy resources without detriment to the present resources and providing employment to thousands.

The large scale cultivation of bamboo, a much sought after material both by the rich and the poor, would add to increased resources. Treated bamboos offer excellent raw material for housing of low-income groups.

In the matter of conservation of wild life our country has done a commendable work in total banning of shooting and initiating establishment of sanctuaries and

National Parks including the prestigious Project Tiger which has also produced encouraging results.

The conservation of other species like crocodiles and reptiles and fish which are threatened of extinction need to be stepped up. Crocodile farming has been an outstanding success in places like Bangkok, and India should step up such projects. A more intensive vigilance is needed to protection of wild life especially around project areas.

Our elephant population has been dwindling, though reports of rampage by elephants are made out in such a way as to make people believe that their number has increased. In reality it is the other way and man has encroached on their habitat and they are perforce to head into the agricultural fields for food.

In recent years a pernicious practice has developed where the herd are followed with or without the help of the local tribals and males are killed for ivory. It is found that there has been a gradual reduction in the number of male animals in elephant herds. The Karnataka-Kerala-Tamil Nady complex has been the home of these pachyderms. The submergence of large chunks of forests has deprived these animals and other wild life undisturbed habitat.

Against this background, it was proposed nearly ten years ago to develop an integrated National Park called Jawahar National Park including Bandipur, Mudumalai sanctuaries of Karnataka and Tamil Nadu of the area abutting these in Kerala. But it is unfortunate that some considerations have come in the way of integrating these three areas. When this is done there can be no better effort in conservation of wild life and with the interest the Prime Minister has in this it is hoped it will materialize. Even the Rhinos have to get a better deal than what they are getting now.

The denudation in the Himalayan Region and consequential floods calls for an international programme of watershed management aided by all the adjacent countries – Pakistan, Nepal, India, Bangla Desh and Bhutan. Controlled forestry policy backed by political will, with a long-range view and not a primitive outlook towards forest, is needed today. Our forest policy should, therefore, result in a large share of resources being allocated to rural a forestation programme directly benefiting the large percentage of the people.

Greater investment in forestry section, formation of a separate department of social forestry and environment in each state, total banning of export of wood in the form of logs, control of pests like parthenium, eupatorium and other species and a judicious working of existing forest followed by a more intensive utilization of the biomass, proper after-care aided by adequate legislation and people's

participation would improve the country's resources. These could create enormous employment opportunities.

Technology and expertise is not lacking in our country for handling these challenges and for providing clear habitat, water and air to our people. Otherwise we could not be able to conserve our resources.

The sorry spectacle of clearance of large extents of primeval tropical forests by long leases in the countries of the Asia-Pacific Region has led to a serious setback in the ecological balance and shortage of potential resources. It is, therefore, fondly hoped that India will forge ahead as one of the leading developing countries not only in conserving but also in the all-round development of our natural resources.

Essay No. 02

Forest Conservation

THE birth and growth of human civilization and culture has been very intimately connected with the forests. Forests have had a great influence on human thought and way of living. For example, the Vedas and Upanishads, the oldest known religious, philosophical and literary monuments of mankind are the direct products of forest-life in ancient India. The Aranyakas or the Forest Texts form an integral part of these oldest testaments of human wisdom and philosophy. They are called so because they were both composed and studied in the forest-dwellings. They contain the contemplation and meditation of the forest seers, hermits and rishis on God and Soul.

Many of the Vedic gods are deified forces of nature They have been very beautifully and poetically personified in hymns and prayers. The Vedic mind looked upon forests as the 'ecological redresser of man's excessive activism' and as 'an intimate part of his life and experience'. In a very fascinating hymn, which is addressed to the Spirit of the forest, the Vedic poet says:

"The Spirit of the forest never slays unless one approaches in fury, one may eat at will of her luscious fruits and rest in her shade at one's pleasure.

Adorned with fragrant perfumes and she needs not toil for her food. Mother of untamed forest beasts, Spirit of the wood, I salute you!"

The intimacy with forests has always been a refreshing and invigorating influence in human life. But modern materialism, greed and over-exploitation of forests have left the bitter taste of the fruits of prosperity. It has created a disharmony and imbalance in our ecology and environment, an evil that is being intensely

realized now. The urbanization and industrialization on a vast scale, during the past few decades, have resulted in mass deforestation and depletion of the green cover. Forests are one of the priceless boons of nature, but human consumerism has created such a great pressure on forests that they have almost disappeared in many areas, resulting in soil-erosion, floods and barrenness of the earth, pollution, climatic changes, droughts and destruction of the fragile ecosystem. The neglect and destruction of forests is bound to have serious repercussions on our lives.

There is an urgent need to check deforestation and dwindling of green-cover in India. Gandhiji once said that, "Nature has enough for everybody's needs but not for everybody's greed." The over exploitation of our forests has put us in an alarming situation. Hence, the preservation and development of forests should rank high in our priorities.

The part played by forests in improving the quality of environment and that of life is beyond any shadow of doubt. They are a great source of renewable energy and contribute significantly to our economic development. India has an area of 752.3 lakh hectare notified as forests, of which 406.1 lakh hectares is classified as reserved and 215.1 lakh hectare as protected. Unclassified area is spread over 131.1 lakh hectare. About 19.47% of the total geographical area of the country is under actual forest-cover. But, unfortunately, this cover is fast shrinking because of our greed, selfishness and wrong priorities. Consequently, the wildlife has also been threatened and many species of animals and birds have become extinct and many others are in danger of extinction.

India has a forest policy since 1894. It was revised in 1952 and again in 1988. The policy aims at protection, conservation and development of forests. Its main objectives are—(i) Maintenance of environmental stability through preservation and restoration of ecological balance; (ii) Conservation of natural heritage (iii) Check on soil erosion and denudation in catchment areas of rivers, lakes and reservoirs; (iv) Check on extension of sand dunes in the desert area of Rajasthan and along coastal tracts; (v) Substantial increase in forest tree cover through massive a forestation and social forestry programmes (vi) Steps to meet requirements of fuel, wood, fodder, minor forest produce and timber for rural and tribal populations; (vii) Increase in productivity of forest to meet the national needs; (viii) Encouragement of efficient utilisation of forest produce and optimum substitution of wood, and (ix) Steps to create a massive people's movement, with involvement of women to achieve these objectives and minimize pressure on existing forests.

In the light of this policy, the forest related activities are being given a new orientation. These activities include development of waste lands, reforestation and replantation, forest settlement, restriction on grazing and supply of other kinds of fuel, elimination of forest contractors, and discouragement of monoculture practice, etc.

The objectives are really laudable but there is no proper and strict implementation of the policy decisions. Destruction of forests by timber merchants, contractors, and local people, etc., is still going on. Trees are being cut indiscriminately in the Himalayas, causing floods, soil erosion and siltation of the rivers and canals of the area. Some enlightened people of the area were very much concerned at these activities of deforestation and so started the Chipko Movement under the leadership of Sundarlal Bahuguna. The movement demands that forests be conserved and protected and degradation of the environment be stopped immediately. Among other things, the movement wants to ban felling of trees and encroachment on forest land, identification of forests to be declared as reserved and grant of rights and concessions to the tribles and forest people with proper control mechanisms. Ban on felling of trees for a number of years is a must to allow these forests in the Himalayas to recover. These hills and catchment areas prone to landslide, flood and erosion should be totally protected and quickly afforested. Gradually, the local population is becoming more and more aware of the importance of forests and the green cover and the necessity of their conservation. But in the face of manipulation and collusion between the contractors and forest officials, they find themselves helpless.

Fire is another major factor in the destruction of forests. Most of the forest-fires are man-made, deliberate and started by vested interests. It is rarely accidental. In order to stop forest-fires, there should be more watch-towers and the number of fire-watchers should be increased substantially. In 1984, two Fire Control Projects were established in Chandarpura (Maharashtra) and Haldwani, Nainital (Uttar Pradesh), but this scheme should be extended immediately to other forest areas prone to fire.

Private corporate sector should also be effectively involved in the afforestation and conservation of forests. The involvement of non-government organisations can go a long way in the conservation and improvement of our forests. They should be allotted wastelands for afforestation. The paper industry should be urged to invest in regeneration, conservation and protection of forests. Moreover, the involvement of the local people, tribals and other hill and forest communities will help a lot in the conservation of our forests. Special funds must be created for

the movement of forest conservation and national and corporate sector and voluntary agencies be invited to participate in it. The schemes for augmenting renewable energy sources in wastelands can also help a lot in the matter.

Social forestry should also be undertaken and encouraged on a vast scale, parallel to traditional forestry. It means involvement of the urban population in growing trees in and around the areas of their habitation. There are long and large stretches of land near towns, cities and all along the railway tracks. These waste and barren lands can be profitably used for afforestation. This would give a new impetus and dimension to our efforts of forest conservation and development of wasteland into forests. Participation of schools, colleges, trade unions, panchayats, local agencies and social organisations should be sought to make social forestry a success.