

Forests: Ecological, economic and cultural service

Forests and human beings are closely related with each other from the very beginning of the human history. Great social value of forests and their many ecological and economic services render significant contribution towards maintaining life conditions on earth. However, forest resources are being depleted at a great pace worldwide causing increased threat for living conditions on this planet. In the face of continuing deforestation (at 5.2 million hectares worldwide per year) the theme of World Environment Day 2011 “Forests: Nature at Your Service” appeared rather challenged. At the juncture of global climate change and rapid deforestation in Bangladesh (the annual rate in Bangladesh is 3.3 percent which is 0.6 percent in South Asia), it is now high time to look back at the ecological, economic and cultural roles played by forests. So that appropriate measures are taken before it is too late.

In Bangladesh 1.46 million hectares – 17.5 percent of the country's land area – are under forest cover. However, canopy coverage would not be more than 6 percent. Forests of Bangladesh cover three major vegetation types, i.e. hill forests (evergreen to semi-evergreen); Sal forests (tropical moist deciduous) and Sundarbans (mangrove). Services provided by forests cover a wide array of ecological, economic, socio-cultural considerations and processes. However, these categories and groupings are neither exhaustive nor discrete.

Ecological services

The ecological services of forests are those environmental or ecological processes, which directly benefit humans. Some of the key ecological services are: carbon storage and sequestration, preservation and protection of hydrological function and conservation of biodiversity. Plants absorb carbon through photosynthesis from atmospheric carbon dioxide and return oxygen to the environment. Thus, simply being there forests reduce and keep carbon out of the atmosphere and maintain the earth's suitability for living. Therefore, forests can be deemed as the lungs of the earth.

Forests have major effects on hydrological processes also. Forests having large capacity for water absorption and retention, may sometimes convert irregular precipitation into a more even flow of water from catchment areas. The risk of flooding due to extreme weather and rainfall may, therefore, be reduced if forests exist there.

Moreover, forests are key components of biodiversity both in themselves and as a habitat for other species. Forests provide some of the most bio-diversity rich ecosystem on earth and are supposed to provide habitat for an estimated 90 percent of the threatened and endangered species. Regardless of poor canopy coverage, forests of Bangladesh are rich in biodiversity.

About 5,700 species of vascular plant including 300 tree species are found in Bangladeshi forests. There are approximately 840 wildlife species in the forests of Bangladesh, which includes 19 amphibian, 124 reptile, 578 bird and 119 mammal species. Biodiversity has intrinsic value as well as provides practical and economic benefits forming the foundation of forest dwelling

people.

Economic services

Forests form the basis of a variety of industries including timber, processed wood and paper, rubber, fruits, etc. In Bangladesh 40% of the commercial timber is supplied by the Chittagong hill forests. Besides, different kinds of bamboo, undergrowth of the hill forests, is the most important raw material for paper mills. It is also used for house construction and supports many cottage industries. Sal forests of the central part of the country also provide economically valuable timbers.

In Bangladesh, Sundarbans -- world's largest mangrove forest -- provides livelihood directly to approximately 600,000 people who work as fishermen, wood-cutters (bawali), loggers, honey and wax collectors (mawal), etc. Forests also contain products that are necessary for communities living surrounding and depending on the forests. These products include: fuel, fodder, game, fruits, house building materials, medicines and herbs. Approximately 3 million people live in the villages surrounding the Sundarbans and are dependent solely on the forest resources for livelihood.

Socio-cultural services

Forests are home to millions of people world-wide, and many of these people are dependent on the forests for their survival. In addition, many people have strong cultural and spiritual attachments to the forests. The Munda, first settlers around the Sundarbans consider themselves part of the forest. They believe the forest to be the most holy place.

The issue of indigenous knowledge is also important. Many local people understand how to conserve and use forest resources in a sustainable way because of their continued attachment with forests over many years. It has often been argued that forests currently are being destroyed, in part because of the non-forest dwellers' lack of knowledge about the manner to best exploit the vast diversity of medicines, foods, natural fertilizers and pesticides that forests contain. For example: the wood-cutters and honey collectors of the Sundarbans have developed traditional cultural practices for customary use of resources. The traditional cultural practices of the golpata collectors do not permit to harvest an area more than once in a year. They only cut the leaves that are approximately nine feet long and they never destroy flowers and fruits.

Honey collectors (mawal) make sure that young bees are never killed. Sheer dependence of these people on the forests has developed and fostered these norms and knowledge, which are an integral part of the forest-dependent peoples' cultures.

Non-forest dwellers are also increasingly exploiting forests now.

It is now invariably agreed that forests keep the harmony intact between ecology, economy and culture. However, forests' sustainability seems to be inversely related to the population density. The main causes of degradation of forests and deforestation are over-exploitation due to population pressure, encroachments, shifting cultivation, meager employment opportunities outside agriculture, etc. So to combat over-extraction of forest resources and deforestation and protect the remains of natural forests and bio-diversity people's participation in forest management must be increased. In this regard, expansion of agro-forestry, training of local people and flow of information about the natural services provided by forests and how to best utilize the natural services in sustainable manners may play vital roles. Now is the time to act so that continued ecological, economic and social services are received from forests.