CHT forests: Hidden treasure

The IUCN Bangladesh Country Office initiated a programme in 2000 to link people with nature conservation in the hilly areas of southeast Bangladesh. The goal of the programme was to develop a socially acceptable, economically viable and 'biodiversity friendly' development model for a given landscape in which the ethnic people of the CHT can live "in harmony with nature".

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FORESTS occupy approximately one-third of Earth's land area and contain about 70% of carbon present in living things. Forests are a unique economic asset. They are the lungs of our planet and they provide for untapped potential of carbon capture and storage through afforestation, reforestation, and enhanced forest conservation, which is also a major component for climate change mitigation. At the same time, forest is the provider of many other ecosystem services such as freshwater enhancement, soil conservation, biodiversity conservation etc. The Convention on Biological Diversity (CBD) considered forests throughout the world as the basis for more than 5000 products, from aromatic oil distilled leaves to herbal medicines, fuel, food, furniture, and clothing. However, total forestlands of Bangladesh are decreasing day by day. As a signatory to CBD, it is mandatory to emphasize on conservation of every forest to enhance sustainable development including massive afforestation programme.

Of the total area of Bangladesh forestlands account for almost 17% which includes classified and unclassified state lands, homestead forests, and tea/rubber gardens. The natural forests are the most important wildlife habitats since most of the flagship and threatened species are found there. There are three types of forests in Bangladesh, i.e. mangrove, mixed evergreen and deciduous forest. The mixed evergreen forests are observed in the hilly areas in the districts of Chittagong, Cox's Bazar, Rangamati, Khagrachari, Bandarban and Sylhet. The total area of the Hill Forest is 670,000 hectare, which accounts for 4.54% of total area of Bangladesh. The Chittagong Hill Tracts (CHT) is a distinct region in terms of its ethnic, cultural, and environmental diversity to the rest of Bangladesh. Peoples of CHT (both tribal and non-tribal) are living there maintaining communal harmony from a long time and a vast majority of them are directly or indirectly dependent on forest for their livelihood.

All ecological functions of forests are also economic functions. Forests in the tropics are a particular concern. Most tropical forests are in developing countries that face many challenges like intense pressures on forest and other natural resources, rapidly changing consumption patterns etc. Deforestation in the tropics is continuing at a rate of about 12.5 million hectares per annum, mainly due to the expansion of agriculture. The reality is that the causal factors are complex and varied. They include population increase and the consequent demand for land for food production. Bangladesh has one of the world's lowest forest-to-population ratios (<0.02 ha per person).

The area of the Chittagong Hill Tracts (CHT) is about 13,29,500 hectare, which is approximately one-tenth of the total area of Bangladesh. Among the total area, 3,25,000 ha (about 25% of the total CHT area) is considered as forest area. The Economics of Ecosystems and Biodiversity (TEEB) study estimates that, on an average, one hectare of tropical forest provides 6,120 USD per year for different ecosystem services. The TEEB study is a major international initiative to draw attention to the global economic benefits of ecosystem and biodiversity particularly in tropical forest. Accordingly, the Total Economic Value (TEV) of the CHT hill forest stands at about 1989.04 million USD. A massive destruction of forest occurred during 1989 to 2003 and an estimated 1,70,000 ha of dense forest, (approximately 50% of total forest area) was lost in CHT that encompasses an estimated loss of 948.64 million USD per year and the destruction rate is ever increasing.

It is mention-worthy that the Kaptai Dam (constructed in 1964) devastated an area of 25,000 hectares of agricultural lands and forests belonging to the hill people, mainly the Chakma, and led to forced relocation of about 100,000 persons, who lost their homes and livelihoods and put multiplier effects on the environment, the economy, and the livelihood of the communities. In many places, the deep green forest became barren. Population growth, unemployment, lack of appropriate planning and its implementation also contributed in deforestation process.

Burning of forest for Jhum cultivation also damages the forest

Preparation for Jhum cultivation

largely. Commercial tree plantations, illegal logging, dam megaprojects, and forced displacement are responsible for the accelerated destruction of those precious ecosystems, which means the destruction of their biodiversity. Rubber, teak, and eucalyptus monocultures for export have provoked negative ecological effects by the substitution of part of the forest, as well as conflicts between local communities belonging to the 13 ethnic groups that inhabit the region and the Forest Department.

The forests in the Chittagong Hill Tracts are predominantly tropical semi-evergreen. The predominant trees are Garjan (Dipterocarpus turbinatus), Chapalish (Artocarpus chapalasha), Telsur (Hopea odorata), Boilam (Anisoptera glabra), Teak (Tectona grandis), Gamar (Gmelina arborea), Mehogani (Swietenia spp), Koroi (Albizzia spp) etc. Bamboos are common here. In some places, bamboo forms pure forest. The commonest bamboo is Muli (Melocanna bambusoides). There were about 75 species of mammals, 100 species of birds, 25 species of reptiles, and 7 species of amphibians. However, wildlife population is decreasing fast due to uncontrolled poaching and increasing deforestation leading to habitat loss.

Bangladesh government declared 19 Protected Areas (PA) and 6 Ecologically Critical Areas (ECA). Among them two areas (Kaptai National Park of 5464 ha and Pablakhali Wildlife Sanctuary of 42087 ha) of CHT was declared as the PA but no provision made for protecting the CHT forest area. Apart from this, National Forest Policy 1994 put emphasis to bring about 20% of the country's land under afforestation by year 2015; but little progress has been made. Even though in the official and the development agencies viewpoint, population pressure is the only cause for forest destruction in Bangladesh, reality shows that unsustainable "development" and infrastructure projects, coupled with poor performance of the authorities regarding forest conservation constitute the most important causes of deforestation and forest degradation in the country.

Environmental economists considered 'economic incentives' as the factor for the greater part of forest loss. Many governments provide financial incentives to convert forestland with many forms of subsidy, explicit and hidden, encourage inefficient logging and agricultural colonisation. In turn, the scale of illegal logging is unknown but is clearly very large relative to designated logging areas. The other form of incentive arises because many of the ecological functions of forests are unmarked, generating the illusion that, because their price is zero, so is their economic value. When conservation competes with conversion, conversion wins because its values have markets, whereas conservation values appear to be low or zero. However, its economic value is substantial because, released as CO2 it causes considerable economic damage via climate change impacts. In turn, economic damage is defined as any loss of human well-being now or in the future.

The International Union for Conservation of Nature (IUCN) Bangladesh Country Office initiated a programme in 2000 to link people with nature conservation in the hilly areas of southeast Bangladesh. The goal of the programme was to develop a socially acceptable, economically viable and 'biodiversity friendly' development model for a given landscape in which the ethnic people of the CHT can live "in harmony with nature". In contrast, the Government of Bangladesh does not have plan for aggressive afforestation programme. The government should take necessary steps on priority basis in order to protect the forest. Some measures can be as follow:

- Immediate actions to stop smuggling of timber from the forest;
- Inventing a new method of cultivation to minimize the destruction of forest and biodiversity and to increase the productivity;
- Capacity building of the local people to conserve biodiversity;
- Rehabilitation of Jhumia; and
- Afforestation in barren hills on participatory basis involving marginalized community.

Above all, all programmes should take in a collaborative way so that the outcome might maximize.

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Forests: Ecological, economic and cultural services

It is now invariably agreed that forests keep the harmony intact between ecology, economy and culture. However, 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.

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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.

The Sundarbans

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.

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