
STATE OF BIO-DIVERSITY AND CONSERVATION COMPLIANCE IN BANGLADESH

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SUMMARY

Indiscriminate and imprudent uses of lands and water in Bangladesh have had significant impacts on natural ecosystems, changing the land's character and ability to sustain biological resources. Both flora and fauna are threatened by the loss of habitat resulting from increasing human populations and unwise utilization of natural resources. A focus on biodiversity has been emphasized in the Forest Policy and Environment Policy; however, a separate policy on biodiversity has not been formulated. As a result, various departments of the government are responsible for conservation of biodiversity. The Bangladesh National Biodiversity Strategy and Action Plan is under preparation as a national obligation to the Convention on Biological Diversity. Currently, the Forest and National Environment Policy sets the policy framework for biodiversity and environmental protection. Serious efforts must be taken to prevent further exploitation of Bangladesh's natural resources; additionally, sustainable management plans need to be formulated and implemented.

1 INTRODUCTION

Bangladesh is a transitional zone of flora and fauna because of its geographical settings and climatic characteristics. Unfortunately, the degradation and loss of natural resources in Bangladesh started a long time ago. A country traditionally rich in biodiversity, the natural resources of Bangladesh have become greatly depleted. Biological resources are consumed at an alarming rate, and indiscriminate and imprudent uses of lands and water have had significant impacts on natural ecosystems. The Ministry on Environment in Bangladesh has promulgated and enforced a few environmental regulations, but it is clear that a strategy and action plan to specifically protect biodiversity is needed.

2 BIODIVERSITY OF BANGLADESH

Bangladesh supports approximately 5000 floral species, of which about 300 species are being actively cultivated. There are many rivers and streams existing

in the country covering a length of 22,155 kilometers. Both flora and fauna are threatened by the loss of habitat resulting from increasing human populations and unwise utilization of natural resources. Increasing demand for timber and fuel-wood, general human encroachment, and *Jhum* (shifting) cultivation in the hilly districts, are aggravating factors contributing to deforestation and environmental degradation. The unplanned rapid urbanization and industrialization are leading to waste and pollution problems that negatively stress natural ecosystems.

2.1 Impact of Habitat Depletion on Bangladesh's Flora

According to a recent estimate, total forest lands including plantations, gardens, and homesteads cover about 2,600,000 hectares in Bangladesh, which is 17.87 percent of the land surface of the country. Most of the forests of Bangladesh are located in the Greater Districts of Chittagong, Chittagong Hill Tracts, Sylhet, Khulna, Dhaka, Mymensingh, and Tangail. The lack of environmental stewardship in Bangladesh has resulted in over 100 threatened plants in this country. Further, many plants with medicinal value may yet to be discovered.

For example, there are more than 100 species of orchids found in Bangladesh. These plants have become immensely popular among urban dwellers, resulting in their secret collection by businessmen. Also, Bangladesh has one of the most biologically resourceful and unique forests known as the Sundarbans. The Sundarbans, the world's largest mangrove forest, is very rich in biodiversity and supports 334 species of plants. Additionally, the Sunderbans is the only remaining habitat of the famous Royal Bengal Tiger (*Panthera tigris*) and harbors a large number of threatened wildlife. Out of 26 species of mangroves, some are used in newsprint mills for paper production, for fuel-wood, timber, and the leaves of some mangrove species are used for thatching. Uncontrolled logging and agricultural expansion threatens as the Sundarbans, along with other mangrove forests in Bangladesh.

2.2 Impact of Habitat Depletion on Bangladesh's Fauna

Fish is the main dietary source of protein in Bangladesh; the country is rich in fish and other aquatic resources. For example, Bangladesh's inland water bodies are known to be the habitat of 266 species of indigenous fish, thirteen exotic fish, 56 prawns, about 26 freshwater mollusks, and 150 birds. The marine water bodies (200 nautical miles along the coast) are home to 442 species of fish.

Fisheries supply over 85 percent of the total animal protein intake by the population. The fisheries resources of Bangladesh are among the richest in the world and the inland fisheries production ranks third globally, behind China and India. Fish stocks in Bangladesh are in grave danger due to over consumption in this densely populated country, including large scale water abstraction for irrigation, construction of embankments for flood control, degradation caused by siltation, soil erosion due to deforestation in the catchment water, and pollution

from industrial, agriculture and municipal waste have placed great stress on fisheries and decreased water quality. IUCN Red List (2000) revealed 54 threatened species of fishes in Bangladesh.

Additionally, Bangladesh's mammal populations face an uncertain future as critical habitat is destroyed. Furthermore, the conversion of wetlands into agricultural lands, large-scale deforestation, and human overpopulation are considered to be the major factors causing many species of birds in Bangladesh to be threatened.

3 ENVIRONMENTAL COMPLIANCE & ENFORCEMENT IN BANGLADESH

Bangladesh is a signatory to about 28 environmental treaties, conventions, and protocols. Bangladesh signed the Biodiversity Convention at Rio in 1992, and ratified it in 1994. Currently, there is an overall focus on biodiversity emphasized in Bangladesh's Forest Policy and Environment Policy. However, a separate policy on biodiversity has not yet been formulated. As a result, various departments of the government are responsible for conservation of biodiversity. The Bangladesh National Biodiversity Strategy and Action Plan is under preparation as a national obligation to the Convention on Biological Diversity.

Forest and National Environment Policy in Bangladesh sets the policy framework for biodiversity and environmental action, in combination with a set of broad sectoral guidelines. It emphasizes the need to focus on maintaining ecological balance in Bangladesh, along with the need to focus on the overall development of environmental protection and policy. The Forest and National Environment Policy also highlights the need for identification and control of all types of activities related to pollution and degradation of environment, including environmentally sound development in all sectors and active association with international environmental initiatives.

4 CONCLUSION

Biological diversity is crucial for the survival and progress of nature and humanity in Bangladesh. The numerous direct and indirect human causes of environmental devastation must be curtailed with the implementation of sound environmental policy. Biological resources and biological diversity form the backbone of the economy in Bangladesh. There is a great potential in Bangladesh for biodiversity-based sustainable development. In spite of threatened flora and fauna, nearly 10,000 species of plants, animals, and microbial organisms still flourish in this country. Serious efforts must be taken to promote environmental stewardship in Bangladesh and prevent further exploitation of its valuable biological resources, including the implementation of environmental policies and sustainable management plans.

Excerpt from the Proceedings of the International Network for Environmental Compliance and Enforcement's (INECE) Eighth International Conference, Linking Concepts to Actions: Successful Strategies for Environmental Compliance and Enforcement, held 5-11 April 2008, in Cape Town, South Africa.

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