

Economic Valuation of Biodiversity: A Comparative Study of Selected Wetlands of India and Bangladesh

By
A.K.M. Nazrul Islam

Under the Supervision of
Prof. M.S. Bhatt

Man-environment relationship has become fragile from the last few decades. Trade-off between the existing pattern of development and protection of environment is the main cause behind this deterioration. Dangerous consequences of this situation have been widely demonstrated (Bhatt & Islam; 2008). Losses of biodiversity, climate change, global warming, ozone layer depletion, ground water level depletion, etc. are some of the consequences. Out of all natural resources wetlands across the globe are one of the worst affected. South Asia is blessed with thousands of wetlands—rivers, streams, lakes, canals, floodplains, reservoirs, tanks, ponds, etc. which are ecologically and characteristically very diverse in nature. Like many other developing economies, this part of the world has also lost much of its wetlands. Main reasons being: pressure from overgrowing population and demands for additional cultivable land; pollution; use of pesticides and run-offs from agricultural fields; lack of institutional and legal frameworks; ignorance about economic importance of wetlands; not having of enough environmental education and awareness among masses, etc. It is widely argued that among all these reasons lack of understanding of wetland values is the major determinant of the loss of wetland biodiversity. Keeping in mind the need for understanding the economic importance of wetlands (even smaller ones) for better and informed policy as well as social awareness there is need for undertaking wetland-valuation studies which not only can help us to decide the best possible uses of wetland resources but also would serve as an effective base for their sustainable uses. It is against this backdrop that the present study has set the following objectives:

Objectives of the Study:

- (i) To study the overall situation of wetlands & wetland-based biodiversity in India and Bangladesh;
- (ii) To estimate total economic values of two selected wetlands- Tilyar lake and Nilsagar lake;
- (iii) To compare the willingness to pay (WTP) and recreational values of the wetlands and analyze their differences and similarities;
- (iv) To suggest appropriate policy measures for smaller wetlands.

The present study has demonstrated the significance of this input. It also has underlined the need for preservation of smaller wetlands as repositories of rich and valuable biodiversity. The thesis has been organized into six chapters, besides the introductory chapter. The major findings of the present study are:

- (a) The status of wetlands and wetland-based biodiversity in the Sub-Continent, particularly in India and Bangladesh, are quite disquieting and dismal despite much hue and cry about the need for their preservation and management for sustainable uses (see Chapter One for details);
- (b) Among various reasons poverty, increasing pressure from population and additional demand for land for agriculture and development activities, unsustainable consumption of wetland resources, lack of policy and regulatory measures and lack of understanding of wetlands' economic importance have made the situation very complex;
- (c) Most of the studies conducted to value wetlands in South Asia are on larger wetlands like Ramsar sites or nationally important wetlands (like Bhoj Wetland, Pong Dam, East Kolkata Wetland, etc. The present study proves that both the wetlands produce considerable amount of recreational values which are much closer in amount to each other;
- (d) People's willingness to pay (WTP) for conservation of wetland-biodiversity depends in socio-economic, demographic and behavioural characteristics of the respondents as the basis of economic valuation of wetlands is people's perception about their importance;
- (e) Developing the means of communications for accessing these sites (and especially Nilsagar lake) can considerably decrease people's travel costs and increase the number of visits to the sites. This may in turn increase governmental revenues from additional entry fees,
- (f) One of the most important factors which has heavily contributed to degradation of wetlands is the lack of understanding of their economic, ecological and socio-cultural values among all the stakeholders;

Policy Implications: As mentioned earlier one of the objectives of the present study was to identify policy issues related to the conservation of wetlands. The following policy inferences are identified from the present study for larger societal perspectives:

- (i) The findings from the present study can be used as an indicator for economic importance of smaller wetlands across the Sub-Continent for their better management and conservation and thus ensuring sustainable-utilization of their natural resources;
- (ii) The findings of the study can also be used for larger societal awareness about the wetlands and wetland-based benefits, including economic benefits;
- (iii) There is need for designing area-specific policy tools which may also help for efficient and better management of wetlands;