FACTSHEETS TII

THE ECONOMICS OF ECOSYSTEMS AND BIODIVERSITY-INDIA INITIATIVE

Ministry of Environment, Forest and Climate Change
Government of India

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सत्यमेव जयते

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FOREWORD

With just 2.4% of the world's land area, 17% of the global human population as well as a large livestock population, India yet accounts for nearly 7-8% of all globally recorded species. We are a mega-diverse country seeking economic development while maintaining the integrity of our biodiversity and ecosystem services. We need to ensure that our natural capital is maintained so that ecosystem services continue to support both human well-being and socio-economic prosperity.

In 2011, the Ministry of Environment, Forest and Climate Change launched 'The Economics of Ecosystem and Biodiversity – India Initiative (TII)' with the goal of making the value of India's natural heritage explicit and for factoring such values into economic development planning. Fourteen projects were commissioned under TII, with multi-disciplinary teams mentored by eminent ecologists and economists, to ensure balanced application of methodological approaches within the relevant ecological and development context of each case study site.

I am now pleased to present here the fourteen factsheets that offer insights that are authentic based on a robust methodology yet startling in their revelation of the true worth of our natural capital. For instance, some of the TII case studies have shown that:

- During its life time, a single vulture provides scavenging benefits worth around ₹695,000. In absence of these natural scavengers, India will have to build carcass disposal plants in virtually each of our villages and cities. It makes better economic sense to invest in vulture conservation instead of investing in carcass disposal plants!
- Ecosystem services (timber, fuel-wood, NTFP, carbon, recreation) from just 10 sq. km. of the Western Ghats forests are worth over ₹23 million. Failure to recognize these values would lead to distorted policies with detrimental environmental and human consequences.
- Loktak Lake in Manipur provides US$3 million worth of water for hydropower generation. However, this value is not accounted for in hydropower pricing. Factoring biodiversity and ecosystem services values in Loktak Lake will make water management more efficient
- Every ₹invested in Chilika restoration has sustained ₹5 worth ecosystem services benefit.

I compliment all the TII case studies investigators for presenting the economic benefits of biodiversity, growing costs of biodiversity loss and ecosystem degradation, and drawing together expertise from the fields of science, ecology, economics and policy to find practical solutions.

Contribution of the following persons is also appreciated: Dr. Kirit Parikh (Chairman, Scientific and Technical Advisory Group of TII and former Member, Planning Commission), Mr. Hem Pande (Special Secretary, MoEFCC), Dr. J. R. Bhatt (Scientist 'G', MoEFCC) and Mr. Edgar Endrukaitis (Programme Director, GIZ) for their guidance and support to the TII case studies. I would like to thank the Federal Ministry for Economic Cooperation and Development (BMZ), Government of the Federal Republic of Germany and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH for their support to the TII process.

I am sure the fact sheets would not only provide interesting facts and figures, they will also motivate us all to conserve our biodiversity for the significant services and benefits they provide.

(Ashok Lavasa)

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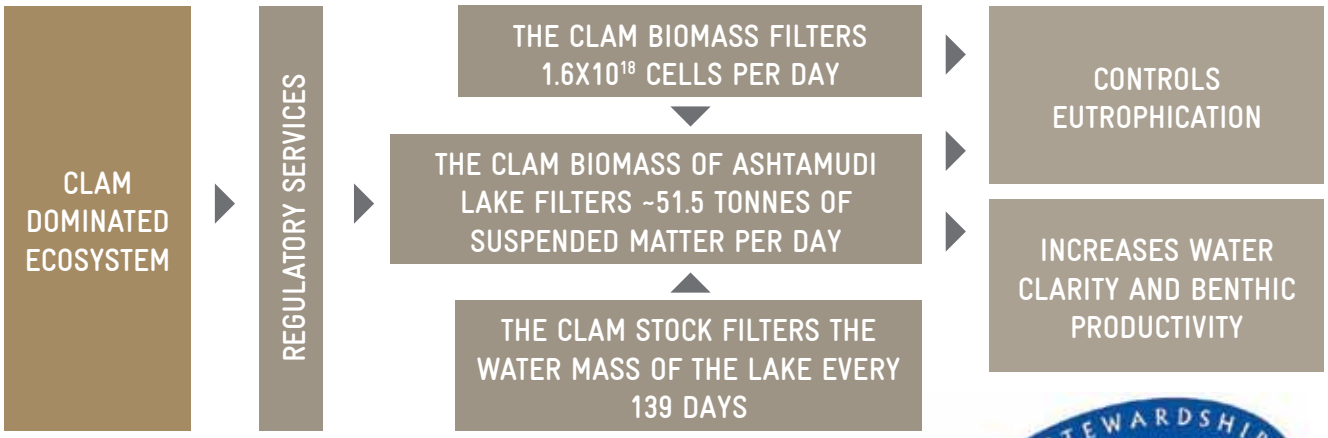
ASHTAMUDI CLAMS FETCH MORE

PHOTO: K SUNIL

Eco-labelling through sustainable fishing practices results in premium prices and ecological gains. Short-neck clam fisheries of Ashtamudi garnered an eco-label from the Marine Stewardship Council (MSC), a first in India. Clams function as bio-filters for Ashtamudi. Understanding the value chain and a comparison between pre and post management of the fishery points to the advantages of certification. Can this be replicated in other small-scale fisheries?

A HEALTHY CLAM POPULATION IN ASHTHAMUDI TAKES 139 DAYS TO FILTER THE WLAKE WATER COMPLETELY

The Economics of Ecosystems and Biodiversity – India Initiative (TII) aims at making the values of biodiversity and linked ecosystem services explicit for consideration and mainstreaming into developmental planning.



Findings

- The Ashtamudi estuary, a **61 sq km** Ramsar Site, provides livelihood for about **3,000** locals.
- The estimated value of fishery resources of the lake is **₹985 million** (**US$ 16.4m**), of which **51%** comes from clams.
- The amount of nutrients released in the water where clam beds exist was thrice as much as non-clam zones. With more clams, it takes **139 days** to filter the lake water completely, as opposed to **277 days** when clam abundance is poor.
- The estimated cost of certification is **₹3 million** (**US$ 50,000**) and fishery management is **₹161.7 million** (**US$ 2.7m**).
- A change in processing and marketing of clams can improve livelihood security for fishers and boost the export value from the present **US$ 1 million**.
- With MSC certification, it is feasible to shift to new export markets such as Europe and Japan. A change in product from clam meat to whole clams can lead to **75% increase** in revenue.

Recommendations

- More fishers should be made aware of eco-labelling as a tool for resource management in small-scale fisheries.
- The Central Marine Fisheries Research Institute, in tandem with WWF, should identify similar small-scale fisheries to move them towards eco-labelling.
- Seafood trade promotion agencies such as the Marine Products Exports Development Authority could take the results of this study to processors and exporters to reap the benefits of consumer preferences and target new markets.

Implementing Partner

Central Marine Fisheries Research Institute
www.cmfri.org.in

Based on Assessment of Eco-labelling as Tool for Conservation and Sustainable Use of Biodiversity in Ashtamudi Lake, Kerala (Southwest coast of India)
Researchers: Dr K Sunil Mohamed, Dr V Kripa, Dr R Narayanakumar, Dr D Prema, Dr V Venkatesan, Shri. Vinod Malayilethu, Ms. Jenni Sharma and Shri. KK Sajikumar (CMFRI, Kochi).

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Indo-German Biodiversity Programme, GIZ India
www.indo-germanbiodiversity.com

India, a Biodiversity Hotspot

India is one of the 17 mega-diverse countries in the world. It faces unique circumstances as well as challenges in the conservation of its rich biological heritage. With only 2.4% of the world's geographical area, her 1.2 billion people co-exist with over 47,000 species of plants and 91,000 species of animals. Several among them are keystone and charismatic species. In addition, the country supports up to one sixth of the world's livestock population. The rapid growth of her vibrant economy as well as maintaining its natural capital are both essential to maintaining ecosystem services that support human well-being and prosperity.

Indo-German Biodiversity Programme

The Ministry of Environment, Forest and Climate Change, Government of India is collaborating with the Federal Ministry for Economic Cooperation and Development (BMZ), Government of Germany and the Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety (BMUB), Government of Germany. The Indo-German Biodiversity Programme comprises the following:

- The Economics of Ecosystems and Biodiversity - India Initiative (TII)
- India Business and Biodiversity Initiative (IBBI)
- Conservation and Sustainable Management of Existing and Potential Coastal and Marine Protected Areas
- Himachal Pradesh Forest Ecosystem Services Project
- Access and Benefit Sharing Partnership Project

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