

Economic Studies for management decision making: case study from Bangladesh



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Session objectives

- We all know that
 - Nature provides services to human being
 - The services are
 - § Provisional Services: supplies of goods and services for human use
 - § Regulatory services: regulation of nature to ensure provisions of goods and services for future
 - § Cultural services: source of aesthetic, knowledge and religious services for human society
 - § Habitat services: Services to sustain natural reproduction of plants and animals
- Do we need to value them? If yes, why?
 - PS –evident but it fails to protect nature - why
 - § Tragedy of commons: ownership right and control becomes open access
 - § Over time, due to over-exploitation, as PS reduces and alternative use of land becomes powerful.
 - Beneficiaries of nature goes beyond its immediate beneficiaries
 - § Spatial and temporal dimension of benefits

Context

- Political, economic and societal support for conserving ecosystems and promoting sustainable agro-ecosystems can be considerably increased if the value of ecosystem services to society can be highlighted and incorporated into land-use management and policies using economic and legal instruments.
- Ecosystem services have trade-offs and synergies which differ with spatial and temporal scale and that makes sustainable management of diverse ecosystem services for different stakeholders complex.
- The role of biodiversity in stabilizing ecosystem functions and services at various spatial and temporal scales is less clear
- The role of climate and other global change on the future dynamics and resilience of ecosystem services and impacts on local communities and livelihoods is largely unknown and is required for climate change adaptation and mitigation.

Bangladesh context

- Coastal ecosystem supports livelihood of 50-60 million population in Bangladesh
- Protection of nature is understood but in practice it has been failing
 - Due to
 - Over-exploitation of resources
- Results?
- Chakaria Sundarban –denuded due to
 - to expanding shrimp and salt farming
 - Human settlements
- Livelihood of people living on fisheries are threatened
- Future productivity of land is going down
- Efforts to protect coastal ecosystem are being threatened due to
 - Poverty and Unemployment

Bangladesh context ...

- Satkhira coastal agriculture is threatened due to
 - Expanding shrimp farming
 - Coastal protection is weakened
 - Social conflicts on the rise due to
 - § Changing employment pattern
 - § Grazing land is in shortages –threatening livelihood of millions
 - § Increasing pressure on Sundarban forests for illegal harvests
 - § Measures like total ban on harvests from nature are on high demand by ecologists
 - § Conflict between local poors and land-owners are on rise fuelling political movements that might destabilise the society
 - New threats due to
 - § Expanding mud-crab harvests from nature

Content

- Supporting coastal communities to prevent further damages
 - Continues by government and NGO/INGOs
 - Government under pressure to take measures against depletion and degradation of coastal ecosystems
 - Activities like developing alternative livelihood strategies are promoted
 - Awareness building at hh and at community levels are ON
 - Improving local governance structure through practices of local participation
 - Demand for more actions on
 - § Poverty alleviations
 - § Climate adaptations

Economic Studies planned

- Economics of Crab Production
- Mud crab harvesting has been gaining popularity in coastal areas near Sundarban and it has become an important export item from Bangladesh. The process of mud-crab harvest involves several layers of agents starting from catchers to the exporters.
- The objective of the research is to understand
 - i) the value chain of mud-crab exports and identify the major players in the industry, and
 - ii) analyze the impact of mud-crab harvest on the ecosystem using Maximum Sustainable Yield estimates.

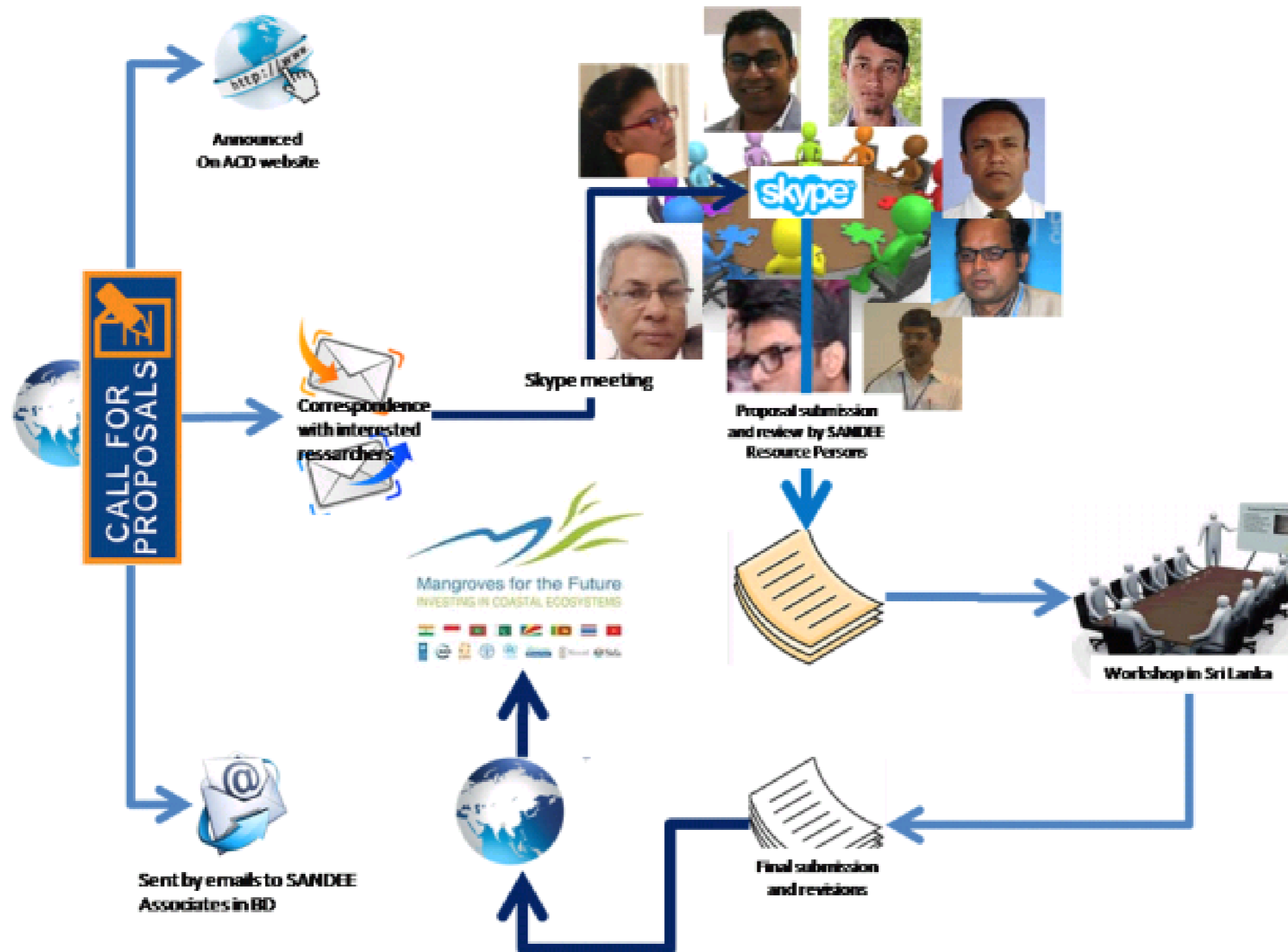
Economic Studies planned

- Impact of Small Grants Facilities of MFF:
- MFF provided Small Grant Facility (SGF) supports to local community-based actions for the conservation and management of coastal ecosystems with the objective to realize the potential of mangroves and other coastal vegetation for climate change adaptation and mitigation.
- The main aim of the SGF is to finance small projects to support strategic local community action for management of coastal ecosystems and their use on a sustainable basis.
- The objective of the research is to create evidences in terms the impacts of SGFs
- to promote conservation of mangroves and
- to reduce vulnerability of coastal communities against potential threats of climate change.

Economic Studies planned

- Cost Benefit Analysis of Sylvo-fisheries:
- Mangroves in Chittagong regions of Bangladesh were completely depleted due to systematic rise of shrimp farming in coastal areas in Chakaria. The Chakaria mangroves were naturally grown mangroves and due to expansion of shrimp farming through both resettlement of population and leasing of land for shrimp farming, the mangroves forest lands were completely denuded by the end of the 90s. However, over time, shrimp farming also became less productive and soil salinity increased. Many areas were replaced by salt farming. However, MFF activities in Vietnam provided an incentive to MFF Secretariat to study the economics of sylvo-fisheries.
- Objectives
 - To find what support is needed to promote sylvo-fisheries
 - To find whether it is economic to do this while it is not financially feasible

Methods used to finalize themes



Activity 1

- Value Chain and Sustainability of Wild Mud Crab Collection: a provisional ecosystem service from mangroves in the South-west Coastal Region of Bangladesh –by Dr. Muhammad Ziaul Haider, Department of Economics, Khulna University (with Fariha Farjana).
- This study is mentored by Dr. A.K. Enamul Haque (ACD) and Dr. Santadas Ghosh (Vishwavarti, West Bengal).

Activity 2

- Analyzing the Effectiveness of MFF-SGF Program on Household and Community Resilience to Climate Change in Bangladesh by Ms Suzana Karim, Institute of Health Economics, Dhaka University (with Moinuddin Ahmed and K M Nafiz Iftekhar)
- This study is mentored by Dr. A.K. Enamul Haque (ACD) and Dr. Saudamini Das (Institute of Economic Growth, New Delhi)

Activity 3

- Economic Feasibility of Sylvofishery in Charakria Sundarban, Bangladesh by Dr. Mahfuzur Rahman, Institute of Forestry, Chittagong University (with Dr. Muhammed Kamal Hossain, and Dr Mohammad Mosharraf Hossain).
- This study is mentored by Dr. A.K. Enamul Haque (ACD) and Dr Heman D Lohano (SANDEE).

Key messages

- Ecosystem valuation studies need to be initiated with care – Freelance researchers often miss out on the policy relevance of studies. It is, therefore, important to use a dual approach to ensure that studies are scientific, evidences are robust and policy interventions are relevant.
- The approaches are:
- a) engage a strong group of mentors for ensure quality of the study, b) engage program personnel to keep the studies focused in terms of government policies and other ground realities.

Key messages

- Research and Training workshop in presences of a heterogenous groups helps researchers to re-negotiate the focus of the studies.
- Presence of stronger resource persons and mentoring helps young academics to develop sound methodology for research.
- Arithmetic vs Economics of Valuation
 - Arithmetic calculations look for [changes in volume] x [prices]
 - Economic studies use
 - § Behavioral changes
 - § Consider impacts of actions and also inactions
 - § Develop true counterfactual scenarios to find changes
 - § Provide more robust policy conclusion