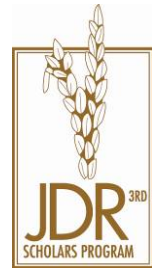




Request for Research Concepts Deadline: December 22, 2013



Valuing the Ecosystem Services Provided by Mangroves in Bangladesh

The John D. Rockefeller 3RD Scholars Program, in collaboration with Winrock International's Climate Resilient Ecosystems and Livelihoods (CREL) project, funded by the US Agency for International Development, seeks concepts for applied research on the value of ecosystem services provided by mangroves in Bangladesh. The goal of the research is to assist government officials and funders in making informed decisions on policies and programs to protect mangroves.

Individuals or teams are welcome to submit concepts (see *How to Apply* below). The Program will award planning grants of up to \$1,000 each to the top three concepts. The three planning grant winners will have one month to recruit a multi-disciplinary team and jointly develop a full research proposal. One full proposal will be selected and awarded up to \$50,000, and supported over a period of one year.

Problem Statement

Bangladesh is one of the most vulnerable countries in the world to climate change. Rising sea level, increased storms, flooding and erosion by rivers will adversely affect millions of people. Mangroves are a first line of defense against the effects of climate change. The Sundarbans mangrove area in Bangladesh is the natural habitat of the world famous Royal Bengal Tiger, and a World Heritage Site. Sundarbans mangroves are playing a vital role protecting coastal people from natural disasters, regulating the local micro climate, promoting eco-tourism, providing habitat for wildlife, and giving livelihoods to millions of people.

But a lack of awareness and information on ecosystem value leads to poor management of the mangroves and triggers the causes of ecosystem depletion. Like other mangroves of the world, Sundarbans is under threat due to over-exploitation of wood and Non Timber Forest Products (NTFPs), pollution from agricultural and industrial activities, oil spills from boats and ships, polder construction, sea level rise, and damage due to cyclones and storm surges. Already scientists have noticed a considerable disappearance of native tree species *Golpata*, and *Sundri* from Sundarbans mangroves, while other species *Goran*, *Baen*, *Hantal palm*, *Gewa* are becoming dominant. In addition, mangrove products like wood, thatching materials and fisheries are decreasing which ultimately will affect local livelihoods as well as the local and national economy. Hence economic valuation of Sundarbans ecosystem services is critically important to be studied for policy makers to more effectively protect the Sundarbans mangrove.

JDR 3rd Scholars Applied Research Team

The JDR 3RD Scholars Program seeks to commission a multidisciplinary, applied research on valuation of mangrove benefits in the Sundarbans (greater Khulna region) of Bangladesh, where the CREL project aims to improve governance of natural resources and strengthen legal and policy frameworks for collaborative management with communities. A multi-disciplinary, applied research team is ideally suited to work with communities in assessing the economic benefits of mangroves, in order to provide high quality recommendations to policymakers for immediate actions aimed at mangrove protection through co-management.

The team will be composed of up to four principal researchers, and will be chosen through a competitive process as explained below (see *How to Apply*). The team will be advised by an expert review committee made up of decision makers who can act on the team's recommendations. The review committee will be facilitated by Winrock.

In addition, teams will have access to a distinguished network of policymakers and scientific leaders including former Agricultural Development Council (A/D/C) fellows and current Winrock and USAID experts.

Goals of Research

This research project has three goals:

1. Assess the current value of mangrove ecosystem services (protection, cultural, provisioning, supporting services) in the Sundarbans.
2. Assess the potential changes in value of ecosystem services that could occur in the next 20-30 years due to climate change and other exogenous factors, by determining the present value of ecosystem services and comparing it to future scenarios, including "business as usual" and various levels of mangrove protection.
3. Analyse and recommend policy instruments and tools to support adaptive protection through co-management of the Sundarbans, and present these recommendations directly to key policy makers and development partners.

Using the attached concept format, applicants should propose a methodology using rapid assessment techniques to answer the following research questions:

Current value of mangrove ecosystem services

1. What studies have already been done on the value of mangrove ecosystem services?
2. What are the best methods to assess the current value of ecosystem services provided by mangroves in Bangladesh?
3. What is the current value of ecosystem services provided by Sundarbans mangroves, and can this be represented on GIS maps? For example:
 - Marine fisheries (nursery habitat for commercial fish species)
 - Wildlife habitat
 - Protection of coastline and coastal settlements *and their economic activities* from cyclone, storm surges, and floods
 - Ecosystem goods, such as timber, fuel wood, food, medicine, construction materials
 - Eco tourism and other environmental services

Potential changes to the future value of mangrove ecosystem services

4. What are the predicted impacts of climate change and other exogenous changes in the Sundarbans mangroves in the next 20-30 years under a *business as usual* scenario?

Recommendations for policy to protect mangroves through co-management

5. How can co-management Organizations (CMO) contribute in protecting Sundarbans mangroves?
6. What economic incentives can be provided to CMOs for improved conservation of Sundarbans mangroves?
7. What is the willingness-to-pay of landscape people for sustainable harvesting ecosystem services from the Sundarbans for their livelihoods?

8. What policies, actions or incentives are recommended to prevent adverse impacts on the value of mangrove ecosystem services in the Sundarbans in the face of predicted climate change and exogenous impacts? With key policies, actions or incentives in place, how will the future value of ecosystem services compare to the “business as usual” scenario?

In addition to extensive review of existing literatures and data from concerned agencies, the research project should include fieldwork to gather primary as required. Fieldwork should include interviews with and/or surveys of local stakeholders including community and NGO representatives, private sector leaders, and policymakers.

Involvement of Key Decision-Makers

Teams should involve key decision makers¹ in their research. Following are examples of how key decision makers might participate:

- Involve key decision makers in the development of the research proposal (e. g setting research questions, objectives and methodology, etc.)
- Through stakeholder workshops during and after the research, inform and update wider audience and key decision makers who will ultimately make use of the findings.
- Frequent consultations and sharing with concerned GOB Departments at local level.

Outputs

The expected outputs of this research project are:

1. A bibliography of existing research on economic valuation of mangroves, emphasizing Sundarbans mangroves;
2. A report and maps describing: 1) the total current value of different ecosystem services in Sundarbans mangroves; 2) estimates and maps of the “business as usual” scenario showing changes in ecosystem service value that would likely occur due to climate change and other exogenous impacts over the next 20-30 years; and 3) estimates and maps of the changes in ecosystem service value that would likely occur with key mangrove protection policies, actions or incentives in place.
3. At least two multi-stakeholder workshops to involve and inform key decision makers about the economic value of ecosystem services provided by mangroves and policy options for mangrove co-management and protection; and
4. A set of recommendations for policies and programs to protect Sundarbans mangroves through co-management.

Outcomes

The expected outcomes of this project are:

1. Key decision makers in Government and donor agencies will have adequate guidance on the value of mangroves on the verge of likely impacts of climate change over the next 20-30 years; and
2. Influence concerned policy makers and GoB Departments in interpretation, negotiation and formulating evidence-based and socially sensitive policies to promote co-management and conservation of mangroves.

How to Apply

¹ **Key decision makers** are people who are in a position to co-analyze results and adjust policies and/or legal frameworks according to the findings of this study. They may be affiliated with a community, Government, NGO, or business concerned with natural resource management in Bangladesh, particularly in the Sundarbans/Khulna regions.

Selection of one winning team will take place in two steps:

1. The Program is currently accepting 5-page concepts for this research (see the *Application Instructions*). Three winning concepts will be selected, by a panel of experts, and each receives a planning grant of up to US \$1,000. Planning grant winners will receive a three-days training on research design (during mid-January 2014). The winners will have one month to undertake travel, communications and/or convenings to reach out to colleagues in order to form a multi-disciplinary team and jointly submit a full research proposal by mid-February 2014.
2. From these three full proposals, one will be selected to carry out the proposed research over a one-year period. Support will include funds for researcher salaries, travel, communications, research assistants and other direct research costs.

Planning Grant Competition

In anticipation that many qualified scholars may not be able to immediately convene a high-quality multi-disciplinary team, the Program will award up to three planning grants, each up to US \$1,000, to allow recipients to form high-quality teams and prepare a full research proposal. Individuals or teams of up to four principal researchers may apply for a planning grant. For example:

- An individual researcher may apply and use the planning grant funds to reach out to researchers in one or more additional disciplines to form a team.
- Two individual researchers from different disciplines may apply jointly for the planning grant.
- Multidisciplinary teams may include professionals (divisional/district or national level officials) from concerned GoB agencies as team member.

Eligibility Requirements

Concepts are accepted from Bangladeshi mid-career scholars/academics who reside in Bangladesh, and/or are associated with an institution or university. Applicants must have at least a Master degree in a relevant field and extensive experience in related areas. Individuals or teams of up to four researchers representing disciplines from both the social sciences (e.g. environmental economics, development studies, rural sociology, agricultural economics) and natural sciences (e.g. forestry, wetland management, natural resource management, ecology, marine biology) may apply.

Applicants must be proficient in English. Women researchers and young professionals (under age 45) are especially encouraged to apply.

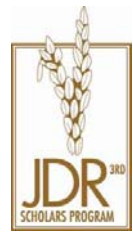
Planning Grant Concept Evaluation Criteria

Planning grant concepts that meet the eligibility requirements will be reviewed for funding by an independent evaluation committee made up of local experts. Concepts will be evaluated using the following criteria:

- **Demonstrated understanding of appropriate research methods:** Concept demonstrates experience with and/or understanding of ecosystem valuation techniques, as well as creation and analysis of likely future scenarios.
- **Inclusion of participatory research techniques:** Concept includes at least one participatory research technique involving Sundarbans stakeholders.



Request for Research Concepts



- **Involvement of key decision makers:** Concept answers a clear need for information to inform policy and practice and lends itself to involvement of key decision makers affiliated with governments, NGOs, businesses, and/or communities.
- **Qualifications of principal researchers:** Research team demonstrates technical skills and experience required to successfully implement the research project. Team members have experience building and/or working with interdisciplinary teams and dealing with multiple stakeholders.
- **Proposed team includes women and young professionals:** Women and young professionals (under age 45) have formed the team of Principal researchers.