



JDR 3RD Scholars Team principal researchers Dr. Raihan Sarker (third from right), Modasser Hossain (far right), and Dr. Hasneen Jahan (second from left), with expert advisors Dr. Haque and Dr. Niaz A. Khan (center) and Winrock CREL staff, October 2014.

## Environment: Forestry, Energy & Ecosystem Services

## JDR 3RD Scholars Team Summary

### Valuing the Ecosystem Services Provided by Mangroves in Bangladesh

In 2014 the John D. Rockefeller 3RD Scholars Program of Winrock International held a competition for applied research concepts to assess the current value of mangrove ecosystem services in the Sundarbans, as well as changes that are likely to occur due to climate change and other impacts. This team was commissioned under the USAID Bangladesh-funded Climate-Resilient Ecosystems and Livelihoods (CREL) project.

The multi-disciplinary team is led by Dr. (Mr.) Raihan Sarker, Assistant Professor of Conservation Biology at Chittagong University, and includes Dr. (Ms.) Hasneen Jahan, Associate Professor of Agricultural Economics at Bangladesh Agricultural University; Mr. Mohammad Madasser Hossain Khan, expert in GIS mapping and data analysis at the Center for Natural Resource Studies in Dhaka; and Mr. Mohammad Jahidul Kabir, Divisional Forest Officer in Khulna District.

The team began work in late August to assess the current value of three key mangrove ecosystem services provided by the Sundarban: eco-tourism, protection from storm surges, and ecosystem-based livelihoods such as non-timber forest products and fisheries. The team will also assess expected impacts over the next 50 years of climate change and anthropogenic factors on the value of the mangrove ecosystem services. Currently only a handful of professionals in Bangladesh have experience conducting ecosystem service valuation.

Winrock CREL project staff plan to use the data and analysis produced by the JDR 3RD team to help the CREL project meet its own policy design and policy change goals for Sundarban mangrove protection. In particular, the JDR 3RD team will produce original data on how the mangrove and local livelihoods are being affected by expansion of the shipping port and other land use changes. And the study will clarify the relative value of Sundarban ecosystem services, which will help determine how to allocate protected area entry fee revenues to different types of protection measures.

This JDR 3<sup>RD</sup> Scholars team update was made possible by the support of the American people through the United States Agency for International Development (USAID). The contents are the sole responsibility of Winrock International and do not necessarily reflect the views of USAID or the United States Government.

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#### Principal Offices

2101 Riverfront Drive | Little Rock, AR 72202-1748 | T 501.280.3000 F 501.280.3090  
2121 Crystal Drive, Suite 500 | Arlington, VA 22202-3706 | T 703.302.6500 F 703.302.6512

[www.winrock.org](http://www.winrock.org) | [information@winrock.org](mailto:information@winrock.org)