

# Pioneering Mangrove Valuation Research



Sundarbans resources used for livelihoods: shrimp fry; nypa palm; crab.

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More than 3.5 million people in Bangladesh depend on the Sundarbans mangrove forest for their livelihoods. Located in southwest Bangladesh on the border with India, the 140,000 hectare UNESCO World Heritage site is the largest mangrove forest in the world.

Winrock's USAID-funded Climate-Resilient Ecosystems and Livelihoods (CREL) project has supported a first-of-its kind, on-the-ground assessment to determine the economic value of the services provided by the Sundarbans.

Services provided by the Sundarbans mangrove forest include forest products such as roof thatching; livelihoods for fishermen; protection from cyclones; flood regulation; and tourism.

CREL partnered with Winrock's John D. Rockefeller 3<sup>RD</sup> Scholars Program to commission a multidisciplinary team with expertise in environmental economics, conservation biology, geographic information services (GIS), and land use planning.

Several studies have attempted to place a dollar value on Sundarbans services, but have relied on proxy indicators from mangroves in other countries. The CREL/JDR 3<sup>RD</sup> team interviewed 400 Sundarbans tourists and 1,525 households in villages adjacent to the Sundarbans to collect original data.

## Findings

Findings include:

- The value of tourism and cultural services is US \$53 million/year;
- The value of avoided storm damages is between US \$98 million and US \$132 million/year; and
- The value of livelihood activities for the 2 million inhabitants of the Sundarbans is \$296 million/year.



In May 2015 the CREL/JDR 3<sup>RD</sup> Mangrove team met with the Deputy Chief and Chief Conservator of Forests, Mr. Md. Yunus Ali and Mr. Akbar Hossain (4th and 5th from right), of the Bangladesh Forest Department. JDR 3<sup>RD</sup> team members included (starting 3rd from right) Dr. Raihan Sarker; Nur Nobil; Mr. Modasser Hossain; and (far left) Mr. Jahidul Kabir.





November 2014: The CREL JDR 3<sup>RD</sup> Mangrove team interviewed residents of Sharankhola county, Khulna District, to understand how they use Sundarbans mangrove resources as part of their livelihoods.

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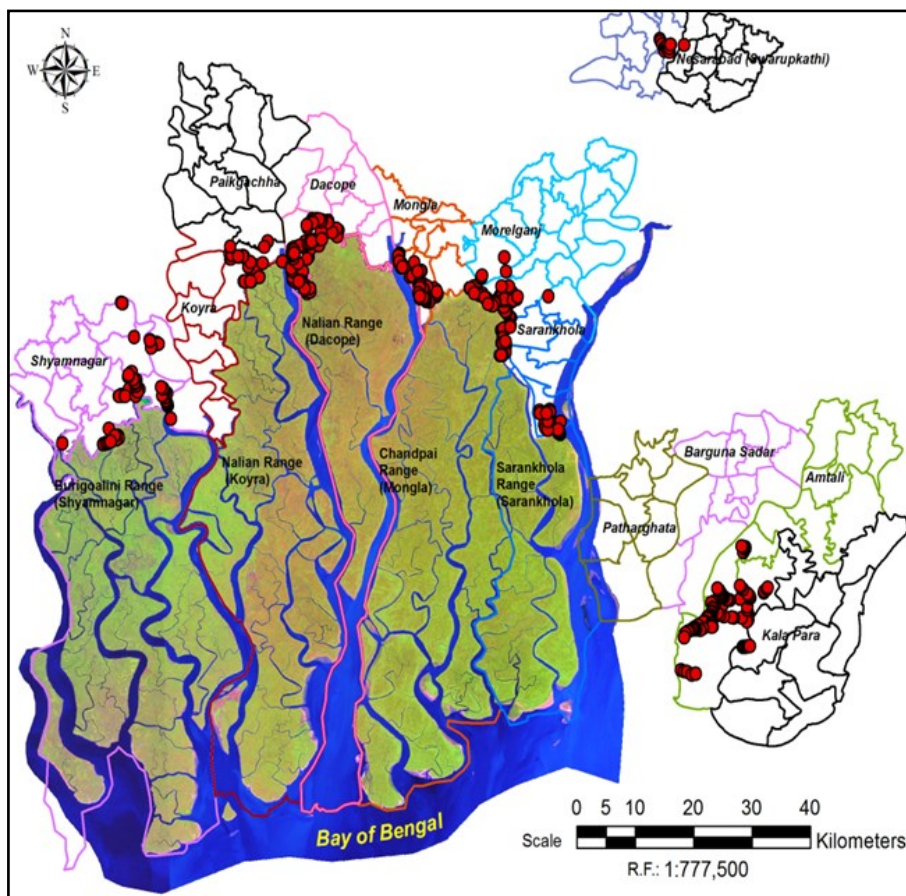
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## Informing Policy

As a result of meetings between the CREL/JDR 3<sup>RD</sup> mangrove team and Bangladesh Forest Department staff, the updated 2015 draft of the country's Protected Area Rules permits "development of eco-friendly tourism services in forest Protected Areas." Previously, no outside entities could operate eco-tourism inside the Sundarbans reserve.

Also influenced by the JDR 3RD team's study, the Protected Area rules include a provision to seek funding for Sundarbans conservation from payments for ecosystem services.

The Bangladesh Department of Environment (DOE) mentioned the JDR 3<sup>RD</sup> team's economic valuation research in its fifth National Report to the Convention on Biological Diversity, and has requested recommendations from the team to inform their rules for Ecologically Critical Areas.



The team surveyed 1,525 households (red dots) to determine the value of storm protection and livelihoods provided by the Sundarbans mangrove forest.