

# THE BERAU MARINE ECOSYSTEMS

## *Protecting an Underwater Paradise for Sustainable Benefits*

Stretching over 100 miles along the coast of East Kalimantan, the Berau marine waters – which includes the Derawan Island chain – is one of the most biologically rich areas in all of Indonesia. Here, water from the Berau river mixing with the Sulawesi Sea created a unique seascape characterized by a broad river delta leading to a scattered groupings of patch reefs, fringing reefs, and atolls.

Marine surveys by The Nature Conservancy (TNC) and a team of international experts showed that this area contains more than 460 different species of coral, giving it the world's second highest level of hard coral diversity after the Raja Ampat Islands in eastern Indonesia. The study also documented more than 870 species of fish, ranging from tiny pygmy seahorses to giant manta rays and false killer whales. On some days, groups of up to 50 manta rays have been seen feeding together in Berau's seas. In addition to its coral and fish diversity, the Berau marine waters contains Indonesia's largest nesting site for endangered green sea turtles, which emerge from the sea every night to lay their eggs on the white sand beaches of Sangalaki, Derawan and Bilang-Bilangan Islands. The Semama Island, is an important bird sanctuary for Frigatebirds, and Kakaban Island contains the world's largest and most diverse jellyfish lake, with four unique species of stingless jellyfish. The Berau river is also home to some of the remaining Irrawady dolphins in Indonesia.

Overharvesting of fish and marine invertebrates such as sea cucumber, turtle



Some of Berau's islands are the most important turtle nesting beaches in the region ©Rudyanto/TNC

poaching, and destructive fishing practices threaten species, habitats and livelihoods of future generations of coastal people. The marine environment of the Berau Regency is also threatened by unsustainable land-use patterns in the watershed of the Berau river, resulting in siltation and pollution of reefs.

In supporting the Berau Regency's initiatives to establish a co-managed marine protected area that includes use zones and no-take zones, TNC is working in collaboration with WWF-Indonesia, and community-based tourism and conservation organizations to:

- 1) Provide technical assistance to the government and local communities in delineating the Berau Marine Protected Area

(MPA) boundaries and zones and to integrate the MPA into the Berau Regency marine spatial plan.

- 2) Support the regency government, law enforcement authorities, and local communities in conducting a joint patrol program to deter destructive fishing practices in the Berau waters.

- 3) Conduct outreach and education to local communities to enhance their involvement and level of ownership in the sustainable management and use of their marine and coastal resources.

This strategy will help conserve Berau's biodiversity while benefiting local communities who rely on marine resources for their livelihoods.