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## [Indonesia: The destruction of mangrove ecosystems](#)

Mangroves are a primary coastal biologically diverse ecosystem in tropical and subtropical regions which has traditionally supported local livelihood providing food --since the mangrove area is spawning and nursery area for many marine species-- firewood, charcoal, and timber, among other products.

Mangroves also perform a flood reduction function, help to prevent erosion of the riverbanks, and serve to dampen storm surges and to a minor extent high winds, both of which are associated with many tropical and subtropical storms. While the mangrove coastal barrier may be battered and damaged in severe storms, unlike any human-made coastal protection barrier, it will grow back naturally, without cost. However, mangrove ecosystems are being purposely destroyed for unsustainable industrial activities.

Indonesian wetlands, including mangrove forests, swamps, and peatlands, have significantly declined in total area from 42.5 million hectares in 1987 to 33.8 million hectares this year. The destruction of wetlands has caused a number of disasters in the country including annual flooding, drought, and loss of biodiversity.

Significant areas of mangrove swamps in Indonesia and other regions of Southeast Asia have been "developed" to create ponds for the commercial production of fish and shrimps. It is estimated that mangrove forest area has declined from 3.2 million hectares in 1986 to 2.4 million in 1996, due to their conversion into fish and shrimp ponds.

Results of a research reported by the International Institute for Aerospace Survey and Earth Science in the delta of the Mahakam River, East Kalimantan, show that during the period of 1982 to 1996 about 17,429 hectares of mangrove forest in the region disappeared and changed to other land uses, mainly shrimp ponds for industrial production.

Hajrul Junaid of the Indonesian NGO Network for Forest Conservation (SKEPHI) agreed that the country's wetlands were severely damaged, and that it needed an integrated policy from the central government. "The government must move quickly, however, because there are obvious threats to the wetlands," he said.

Article based on information from: "The Late Friday News, 107th Edition", Mangrove Action Project, e-mail: mangroveap@olympus.net , <http://www.earthisland.org/map/index.htm> ; "The world of mangroves", <http://www.mangroveweb.net/html/mangrov.htm> ; "Monitoring Mangrove Forests using Remote Sensing and GIS, Yousif Ali Hussin Mahfud M. Zuhair Michael Weir, <http://www.gisdevelopment.net/aars/acrs/1999/ps5/ps5126pf.htm>

