

Towards adaptive co-management of the Mimika-Asmat coastal wetlands

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Abstract

Coastal wetlands include saltwater and freshwater wetlands located within coastal watersheds — specifically USGS 8-digit hydrologic unit watersheds which drain into the Atlantic Ocean, Pacific Ocean, or Gulf of Mexico.

Wetland types found in coastal watersheds include salt marshes, bottomland hardwood swamps, fresh marshes, mangrove swamps, and shrubby depressions known in the southeast United States as “pocosins.” Coastal wetlands cover about 40 million acres and make up 38 percent of the total wetland acreage in the conterminous United States. 81 percent of coastal wetlands in the conterminous United States are located in the southeast. The diagram to the right illustrates the range of wetlands which can be found in a coastal watershed. These wetlands can be tidal or non-tidal, and freshwater or saltwater. The Mimika-Asmat coastal wetlands of south-west New Guinea include approximately 575,000 ha of mangroves and 2,000,000 ha of swamp forest and are amongst the world’s most extensive, bio-diverse and carbon rich coastal wetlands. They are home to the indigenous Kamoro, Semapan and Asmat people, who depend heavily on mangrove and swamp forest resources. Contrary to the trend of rapid deforestation and degradation of mangrove and swamp forests in Western Indonesia, up until around 2001 these and most of Papua’s other coastal wetlands remained largely intact, but since then threats from logging, mining, plantations, infrastructure development and urban encroachment have resulted in the rate of degradation and deforestation rising to approach the national average

The Mimika-Asmat coastal wetlands program was initiated by the USAID Indonesia Forest and Climate Support Program in 2013 with the aim of building multi-stakeholder commitment and capacity for sustainable utilization and management of these forests. Activities undertaken to date include

Vegetation and carbon stock mapping; formation and capacity building of a mangrove and swamp forest working group; participatory mapping, land-use planning and development of community conservation and livelihoods agreements; identification of threats and modeling of the impacts of climate, land-use and coastal change; social-ecological resilience assessment, economic valuation and preliminary assessment of the sustainability of existing and potential resource exploitation; coastal field schools pilot program and development of regional mangrove management strategy, an adaptive-collaborative management plan and local regulations.

Whilst this initiative is still in its infancy, significant progress has been made towards highlighting the local, regional and global significance and building local capacity towards sustainable management. Semapan and Asmat people, who depend heavily on mangrove and swamp forest resources. Contrary to the trend of rapid deforestation and degradation of mangrove and swamp forests in Western Indonesia. Vegetation and carbon stock mapping; formation and capacity building of a mangrove and swamp forest working group; participatory mapping, land-use planning and development of community conservation and livelihoods agreements; identification of threats and modeling of the impacts of climate, land-use and coastal change; social-ecological resilience assessment, economic valuation and preliminary assessment of the sustainability of existing and potential resource exploitation.