

DATA & APPLICATIONS ONLINE

Global Mangrove Forests Distribution, v1 (2000)

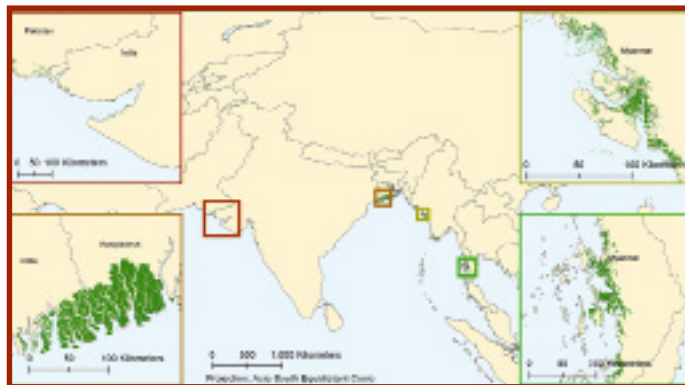
Overview

Mangrove ecosystems have a complex ecological value. They act as vital breeding grounds for fish and invertebrates such as oysters, shrimp, and crabs, because a great deal amount of organic matter is concentrated in a relatively small area. Their deep and extensive roots typically host small marine organisms that need a hard surface, and their sturdy root systems growing in a dense tangle provide stable shelter for diverse species as the tides come and go. This characteristic of mangroves also means they can act as a deterrent to coastal erosion and may provide a buffer to extreme weather events such as tsunamis and tropical storm surge. Mangroves are also highly adaptive, so mapping their growth can help us understand the physiological traits that support their ability to cope with changing conditions.

Mangrove forests have been destroyed throughout the world due to short-term development decisions. Mapping mangroves can support conservation efforts, provide critical insights into their role in the very particular ecosystem of the mangrove forest, and may suggest a role for mangroves in mediating extreme weather events. Maps of mangrove areas at different points in time can serve as a tool for monitoring development and may also help reveal land-use and land-cover trends with implications for biodiversity, urbanization, ecosystem modelling, flood impacts, sea level rise, population issues, and more.

About the Data

The Global Mangrove Forests Distribution, 2000 data set is a compilation of the extent of mangrove forests from the Global Land Survey and the Landsat archive, with hybrid supervised and unsupervised



digital image classification techniques. The data are available at 30-m spatial resolution. The total area of mangroves in the year 2000 was estimated at 137,760 km² in 118 countries and territories in the tropical and subtropical regions of the world.

Data Access

Go to bit.ly/1Su6YI7 to download data, maps, and information.

References

Giri, C., Ochieng, E., Tieszen, L. L., Zhu, Z., Singh, A., Loveland, T., Masek, J., and Duke, N. 2011. Status and distribution of mangrove forests of the world using earth observation satellite data. *Global Ecology and Biogeography* 20(1): 154–159. <http://dx.doi.org/10.1111/j.1466-8238.2010.00584.x>.

Kauffman, J. B., Hernandez Trejo, H., del Carmen Jesus Garcia, M., Heider, C., and Contreras, W. 2015. Carbon stocks of mangroves and losses arising from their conversion to cattle pastures in the Pantanos de Centla, Mexico. *Wetlands Ecology and Management*. <http://dx.doi.org/10.1007/s11273-015-9453-z>.



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