

# WORLD ATLAS OF MANGROVES

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## WHAT ARE MANGROVES?

Mangroves are plants of more than 110 different species, including trees, shrubs, palms and ferns. They grow in the tropics and subtropics in saline inter-tidal coastal habitats, such as estuaries and shorelines. These species are physiologically adapted to overcome the problems of anoxia, high salinity and frequent tidal inundation.

## WHY ARE THEY IMPORTANT?

Mangrove ecosystems are unique, highly productive areas, which are important from social, economic and biological points of view. Tens of millions of people in the tropics and subtropics depend on mangrove forests, which provide a variety of wood and non-wood forest products, as well as other resources such as dyes, medicines, livestock feed and honey.

Mangroves host a wide variety of organisms, including a number of endangered species. They serve as a valuable nursery to many shrimps, crustaceans and molluscs, and act as a breeding and feeding ground for many commercially important fish species.

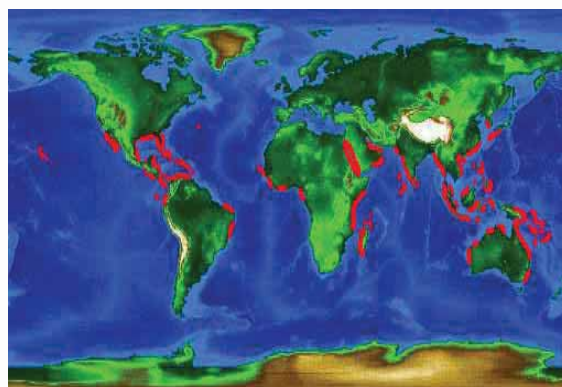
Mangroves maintain water quality and clarity, filtering pollutants (including heavy metals) and trapping sediments. Mangroves also help prevent erosion by stabilizing sediments and protecting the coast, especially during surge storms, hurricanes and tsunamis. These ecosystems are, however, fragile and it is estimated that over half the world's mangroves have been lost in recent times.

## WORLD ATLAS ON MANGROVES

The International Society for Mangrove Ecosystems (ISME) and its partners (see below) are publishing a new version of the World Atlas of Mangroves, with funding primarily from the International Tropical Timber Organization (ITTO). The new World Atlas of Mangroves will provide GIS-based distribution maps



Geographical Vector Interpretation System



Global distribution of mangroves

and describe the recent status of mangrove forests around the world, with detailed estimates of changes in mangrove forests at the regional and national levels.

Inventorying the world's mangrove stands is an important step in preserving these ecosystems. The Atlas aims to contribute towards the effective management of mangrove forests for sustainable production of timber, fisheries and other products without compromising their environmental, ecological and socio-economic value.

The Food and Agriculture Organization of the United Nations (FAO) Forestry Department has



## Mangrove ecosystems are important from a social, economic and biological point of view



undertaken a global assessment of mangroves in support of the Atlas, and the Environment, Climate Change and Bioenergy Division (NRC) is using its considerable experience in remote sensing and mapping and the support of the Global Land Cover Network (GLCN) and Global Terrestrial Observing System (GTOS) to contribute to this initiative through the preparation of digital maps for more than 40 countries.

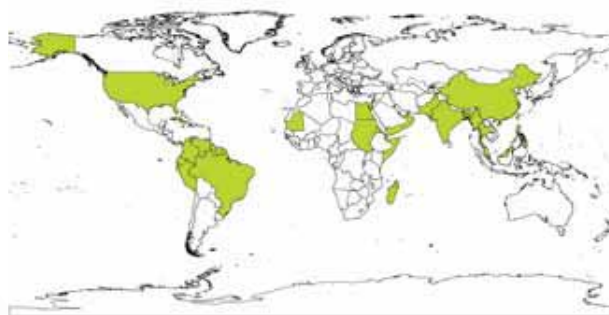
### MAPPING PROCESS

Almost 400 Landsat ETM+ scenes were photo-interpreted at a scale equivalent to 1:250 000, achieving a much greater precision than in the previous atlas, published in 1997. Band composites 432 and 543 were utilized to perform the initial visual interpretation, using the GeoVIS software, and a network of partners has been established to allow the necessary field-level validation.

Partners and field experts are being provided with the images, interpretation shape files, coastline data and other relevant information, including the interpretation doubts and uncertain boundaries. All the information is packaged using the Dynamic Atlas software in order to allow non-mapping experts the capability to view the data and provide guidance on the mapping polygons produced. Considering that a full field validation has not been undertaken, the above process will minimize mapping errors.

### ATLAS AVAILABILITY

The expected publication date of the Atlas is mid-2008. It will include country profiles, maps, colour plates, case studies and descriptive information from the lead author/editor, Dr Mark Spalding (TNC). For additional details or queries please see the link below or contact the Atlas coordinator, Dr Mami Kainuma, (Mami.Kainuma@mangrove.or.jp).



Countries mapped by FAO - GTOS

Bahamas	Madagascar	S. Lucia
Bangladesh	Malaysia	Seychelles
Brazil	Martinique	Singapore
China	Mauritania	Solomon Islands
Colombia	Mayotte	Somalia
Cuba	Micronesia	Sudan
Ecuador	Myanmar	Suriname
Egypt	Oman	Thailand
Eritrea	Pakistan	UAE
French Guiana	Palau	USA
Guadeloupe	Peru	Vanuatu
Guam	Philippines	Venezuela
Guyana	Qatar	Yemen
India	S. Kitts and Nevis	

### RELATED LINKS:

ISME: [www.mangrove.or.jp](http://www.mangrove.or.jp) | FAO NRCE: [http://dwms.fao.org/mangroves/index\\_en.asp](http://dwms.fao.org/mangroves/index_en.asp) | FAO mangroves site: [www.fao.org/forestry/site/mangrove/en](http://www.fao.org/forestry/site/mangrove/en)