



PROTECT MANGROVES:

“SAFEGUARD OUR MARINE ECOSYSTEMS AND OUR LIVES”



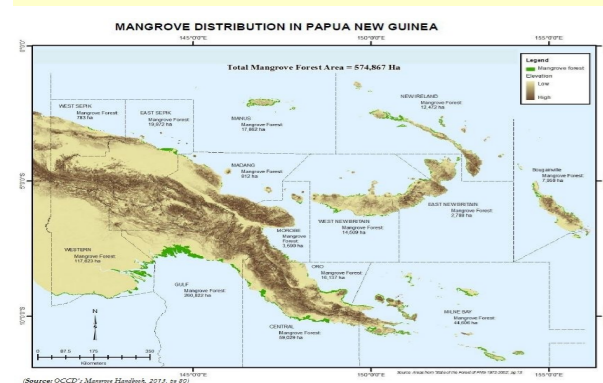
ADAPTATION FUND



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MANGROVES IN PAPUA NEW GUINEA

Mangroves are found along the coasts and are among the highly productive ecosystems. According to UN - FAO's Forestry Department; “estimated mangrove area for Papua New Guinea in 2005 to be 380 000 ha.”



There are numerous mangrove species found along the coasts of tropical and subtropical regions of the world, of which, 43 of these species are found in PNG, which makes up 75% of total mangrove area in the Pacific Region.

THE BEAUTY OF MANGROVES

A. Benefits to Biodiversity

Mangroves are rich in biodiversity providing a habitat for wide varieties of animal and plant species. Examples of few animal species are; mangrove snappers; mangrove tree crab; mangrove tree snail; crocodiles, and bees.

The live and decaying mangrove leaves and roots provide nutrients that nourish plankton, algae, fish and shellfish. In addition, mangrove habitats provide haven for threatened and endangered species. Examples are: saltwater Crocodile (*Crocodylus porosus*), diamond-back Turtle (*Cryptodira*), Mangrove Snake (*Boiga dendrophila*), and Red Tailed Eagle (*Buteo jamaicensis*).

B. Benefits to Communities

- Useful source of resources:

Coastal communities in PNG utilise mangrove trees for highly durable and water-resistant wood, where mangroves have been used in building houses, boats, pilings, and furniture.



Animals found in the mangrove forests are food to the communities, and are directly consumed while other species that are of greater economic values are sold at the local markets and industries. Examples of such are: Crocodile (*Crocodylus porosus*), and diamond-back Turtle (*Cryptodira*).

Top - left: Red Mangrove Lion Fish (*Synanceia verrucosa*)
Bottom - left: Diamond-back Turtle (*Cryptodira*)
(Source: The Encyclopedia of Earth: Mangrove Ecology)

- Protection of properties, infrastructure and services:

The mangroves acts as a *natural buffer*, protecting coastal communities' infrastructure, services and properties, for instance; food gardens, sources of fresh water and other resources from saltwater inundation and infiltration.

Also, the dense root system of mangrove forests help stabilises the coastline. It prevents erosion from waves and storm surges caused by climate change induced sea level rise and global warming.

THREATS TO MANGROVES

A. Human Impacts

These human impacts have been severe in some parts of the country, and include:

- Coastal developments resulting in total loss of mangrove habitats.
- dredging (digging out and removing materials from underwater)
- filling (materials deposited in the mangrove growth area)
- diking (sea walls built along the shores of sea to prevent coastal flooding)
- oil spills,
- runoff of human waste, and
- runoff from agricultural fields, particularly, herbicides.

B. Natural Threats.

Natural threats to mangroves include storm and hurricanes; root clogging from increased water turbidity; damage from boring organisms and parasites; excessive and sudden sedimentation can reduce growth or even kill mangroves; and sea level rise.



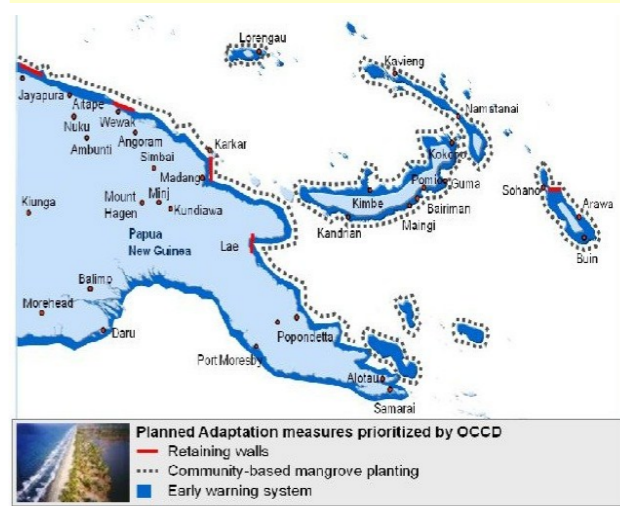
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OFFICE OF CLIMATE CHANGE & DEVELOPMENT'S INTERVENTION TO PLANT, REHABILITATE AND PROTECT MANGROVES

Office of Climate Change and Development (OCCD) has recognised the importance of mangroves, and is committed towards achieving its goal to Plant, Rehabilitate and Protect the mangroves in identified priority affected areas along the coastlines.

Mangrove planting, rehabilitation and protection is a project under the Adaptation and Projects Division's one of nine (9) priority focus areas, particularly adaptation to Coastal Flooding, where mangroves are planted, rehabilitated and protected as a soft intervention approach to protect communities from the adverse effects of coastal flooding.

The pilot projects as well as the identified priority areas are along the coastlines, as demarcated on the map shown hereunder:



The division is also working in partnership with other program partners like; Donor agencies, Institutions. Non-governmental organizations, Community Based Organizations, Civil Society Organizations and Faith Based Organizations, who deals with mangrove planting, rehabilitation and protection.

One donor agency which is working closely with OCCD for the project is the Adaptation Fund Program managed by United Nations Development Programme. It has identified four (4) priority provinces, namely; East Sepik, Madang, New Ireland and Oro, to establish mangrove nurseries and start planting mangroves.



Top - Left: Project team, led by Maureen Ewai (Manager - AF, UNDP); Luanne Losi and Manau Renagi, OCCD officers; and nursery caretakers visiting a World Wildlife Fund's (WWF) Mangrove nursery in Madang.

Top - right: Minister for Environment & Climate Change Hon. John Pundari with OCCD Staff, local community representatives and some primary school students planting mangrove at Idubada Village, NCD, on 2014 World Environment Day. (OCCD & AF File Photos)