

# PROTECTING MANGROVES PROTECTS COMMUNITIES

Along thousands of kilometers of Philippine coastline, mangrove forests are a vital—yet threatened—resource.

Actions that local leaders can take to preserve and restore mangrove forests are critical to protecting their communities from the impacts of climate change.

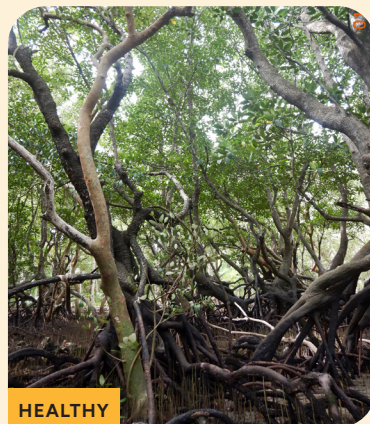
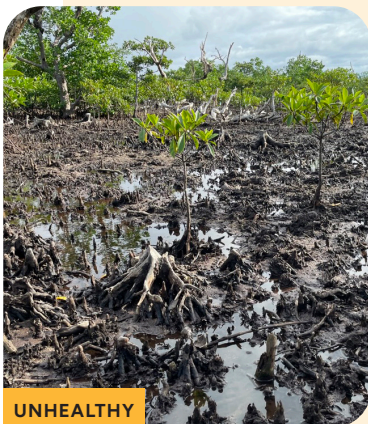
## Philippine Mangrove Forests Are a Vital Resource

**THE MANGROVE FORESTS THAT GROW** in the salty and brackish waters of the Philippine coastline play a critical role in supporting healthy ecosystems and prosperous livelihoods. They also create opportunities for recreation and ecotourism. Filipino communities have long lived harmoniously with mangrove forests, which have become intertwined with coastal cultural identities.

These unique forests found in tidal zones protect local communities during typhoons. Mangrove roots, trunks, and branches create a break that reduces the speed and force of the winds and waves that pass through them. This break limits how far inland floods and strong winds can penetrate, reducing the damage they can cause.

Mangrove root systems also trap sediment and protect against shoreline erosion from wave action, helping to stabilize elevation as sea levels rise. As the frequency and intensity of typhoons increase due to climate change, these protections become even more vital.<sup>1</sup>

The benefits provided by mangrove forests—known as ecosystem services—are most effective when mangroves are widespread and healthy. Yet over the last century, the Philippines has lost half of its mangrove cover, and many of the mangrove forests that remain are fragile and fragmented. Local leaders must act to preserve mangrove forests and the ecosystem services that benefit all Filipinos.



## Mangrove Forests Are Threatened by Human and Natural Forces

In the Philippines and around the world, mangrove forests are under threat from both human and natural forces. Construction projects and industrial uses such as airports, tourism, aquaculture, and housing have destroyed massive areas of mangrove forests. Sea level rise and severe typhoons can damage and destroy the mangrove areas that stand today.

## Ecologists and Economists Agree That Mangroves Provide Valuable Services

Mangroves provide services that extend beyond coastal communities. Like other plants, mangroves extract carbon from the atmosphere and store it in their roots, trunks, and leaves. This process is called biological carbon sequestration, and mangroves can store four to five times as much carbon as upland forests.<sup>2</sup> Thus, increasing the land area of healthy mangrove forests through restoration can help reduce carbon dioxide in the atmosphere. This also means that destroying mangroves not only releases carbon but also removes a location for future carbon storage.

As communities adapt to more severe typhoons and rising sea levels caused by climate change, mangroves can reduce the impacts of damage and flooding. Economists have recently estimated the value of these protective services, finding that mangroves provide approximately US\$1 billion in annual savings by preventing storm damage.<sup>3</sup> Restoring mangrove area to historical levels would yield additional savings of more than US\$450 million every year.<sup>4</sup>

us **\$3,200**

On average, what one hectare of mangroves provides per year in direct flood reduction benefits in the Philippines.

**600,000**

Number of people in the Philippines who are protected from flooding by mangroves each year. Many of these people live in poverty.



## The Challenge of Preserving and Restoring Mangrove Forests

The [Global Mangrove Alliance](#), a conservation group, estimates that 660,000 hectares of Philippine mangroves need to be restored to healthy forests.<sup>5</sup> Although the Philippines has invested in planting mangrove forests in recent decades, many of these efforts have failed. Projects have focused on planting fast-growing, single species, without considering the specific local conditions or the monitoring and follow-up needed to help new plantings thrive.<sup>6</sup> The Global Mangrove Alliance provides tools that can help guide evidence-based restoration projects for more successful outcomes.

Nearly two-thirds of all mangroves in the Philippines grow outside of currently designated protected areas. If these mangroves are destroyed for infrastructure or construction projects, flooding and damage to people, property, and infrastructure will increase annually by approximately 25%.<sup>7</sup> Expanding protected area designations to include more mangrove forests can help protect the local communities living in these areas and reduce loss and damage.



## Preserving and Restoring Mangrove Forests Support Philippine Development Goals

The Philippines has committed to several international efforts to support the environment and reduce the impacts of climate change, including the Paris Agreement from the United Nations Framework Convention on Climate Change, the Convention on Biological Diversity, and the United Nations Sustainable Development Goals. The protection and restoration of mangrove forests are essential to achieving these shared goals.



## Local Leaders Must Act to Preserve and Restore Philippine Mangroves

As the Philippines adapts to the consequences of a changing climate, actions to preserve resources, including mangroves, are increasingly urgent. Local-level decisions are essential to protect and restore local mangrove forests and, in turn, to protect local communities from the consequences of sea level rise and increasingly severe typhoons. Local officials need to:

- **Commit to preserving mangroves by including preservation in policy statements and by designating additional protected mangrove areas.**
- **Allocate local funding for evidence-based restoration and monitoring of damaged or destroyed mangrove forests.**
- **Ensure new construction and infrastructure in coastal areas do not encroach upon or damage mangroves.**
- **Advocate to provincial and national decisionmakers for nationwide, coordinated, and evidence-based strategies to preserve and restore mangroves.**

Actions taken today to preserve and restore Philippine mangroves are investments that benefit all Filipinos in adapting to a changing climate and strengthening the country for challenges that lie ahead.

# State of the Mangrove Summit Proceedings

Using your smartphone, open your camera, center it over the QR code, then select the link that appears.



## 2014 NORTHERN LUZON PROCEEDINGS

- Bani, Pangasinan
- Bataan
- Bulacan
- Cagayan
- Ilocos Norte
- Ilocos Sur
- La Union
- Masinloc, Zambales
- Pangasinan
- Subic Bay Freeport Zone
- Zambales



## 2015 SOUTHERN LUZON PROCEEDINGS

- Batangas
- Cavite
- Marinduque
- National Capital Region
- Occidental Mindoro
- Oriental Mindoro
- Palawan
- Romblon



## 2018 CENTRAL & EASTERN VISAYAS PROCEEDINGS

- Bohol
- Cebu
- Eastern Samar
- Leyte
- Palompon, Leyte
- Northern Samar
- Ormoc City
- Samar
- Southern Leyte

## References

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- 5 Global Mangrove Alliance, "Global Mangrove Watch Database," accessed March 1, 2023, <http://www.globalmangrovetwatch.org/>.
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