

# Restoration of mangroves in the Sian Ka'an biosphere reserve



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## Summary

The Sian Ka'an biosphere reserve features mangroves and marshland. The once extensive stands in the reserve have, however, been severely depleted. A road constructed across the reserve improved access to the reserve but hindered water flow within the mangrove stands, leading to a large scale degradation of mangroves. The restoration programme uses the framework of an ecosystem-based approach to climate change adaptation to restore the original state of ecological conditions.

## Classifications

### Region

[Caribbean](#)

### Scale of implementation

[Local](#), [National](#), [Subnational](#)

### Ecosystem

[Coral reef](#), [Freshwater ecosystems](#), [Lagoon](#), [Mangrove](#), [Marine and coastal ecosystems](#), [Seagrass](#),  
[Wetland \(swamp, marsh, peatland\)](#)

### Theme

[Adaptation](#), [Coastal and marine spatial management](#), [Ecosystem services](#), [Mitigation](#), [Sustainable fisheries and aquaculture](#),  
[Sustainable tourism](#), [World Heritage](#)

## Location

Sian Ka'an biosphere reserve, Yucatán peninsula, México

## Challenges

- Declining fish stocks
- Degradation of mangrove stands
- Loss of carbon storage
- Economic impacts due to climate change

## Beneficiaries

Local fisherfolk and tourism operators as well as tourists.

## Building blocks

### Study on healthy ecological conditions

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### Monitoring and evaluation

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### Mangrove restoration

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### Involvement of stakeholders

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### Communication and dissemination

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## How do the building blocks interact?

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## Impacts

Moreover, to set up efficient programmes of mangrove restoration and conservation knowledge is needed on their ecological characteristics and dynamics, actual conditions and sources of impacts to which they have been subdued. Restoration of degraded mangrove areas is of current interest, particularly with regard to the overall goals of habitat restoration, ecosystem service preservation and climate change mitigation. The project strives to restore the ecosystem services that are provided by the mangrove ecosystem and to contribute to the reduction of greenhouse gases through carbon dioxide capture.

## Contributed by

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## Contributors

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## Organisations involved





THE WORLD BANK

## Portals

This solution is published in the **Marine and coastal** and **Protected areas** portal.