



CLIMATE CO-BENEFITS OF WETLAND MANAGEMENT -AN ASSESSMENT TOOL

Wetland management provides numerous climate co-benefits. Healthy wetlands serve as natural buffers against extreme events like storm surges and flooding, while also enhancing water and food security and fostering resilience to climate change. Although our understanding of the significant climate co-benefits of wetlands has advanced, their potential for climate action remains unrecognised.

To address this, a tiered approach has been developed to evaluate the roles of wetland protection, management, and restoration in climate change adaptation and disaster risk reduction (DRR). Deepening the understanding of these co-benefits can:

- Improve the design and implementation of programmes and policies.
- Facilitate access to funding at both national and international levels.
- Report progress toward national climate targets.

Tiered approach for assessment of climate change adaptation co-benefits of wetland management






TIER 1 IDENTIFICATION of adaptation co-benefits for incorporation into management planning

1. Assess climate hazards for the wetland
2. Shortlist relevant management interventions
3. Identify the adaptation co-benefits corresponding to the selected management interventions

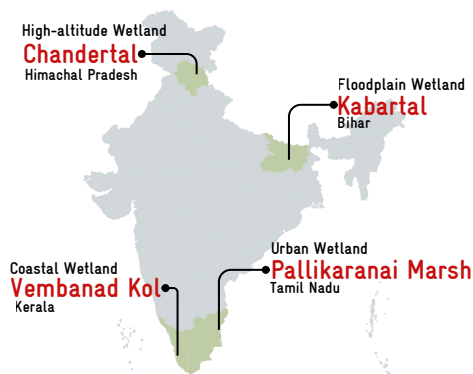
TIER 2 QUANTIFICATION of adaptation co-benefits for leveraging climate finance

1. Outcome assessment to demonstrate that management plan contributes to tangible outcomes
2. Hazard assessment to understand hazards' characteristics
3. Estimation of adaptation co-benefits through comparison of baseline and intervention cases

Key Features

-  Enable practitioners to assess adaptation co-benefits and incorporate in planning
-  Mainstream wetland conservation into climate and disaster management plans
-  Build a financial case for leveraging climate finance for wetland management
-  Identify potential of wetland restoration based on adaptation benefits
-  Enable effective communication of adaptation benefits of wetlands

Pilot Sites

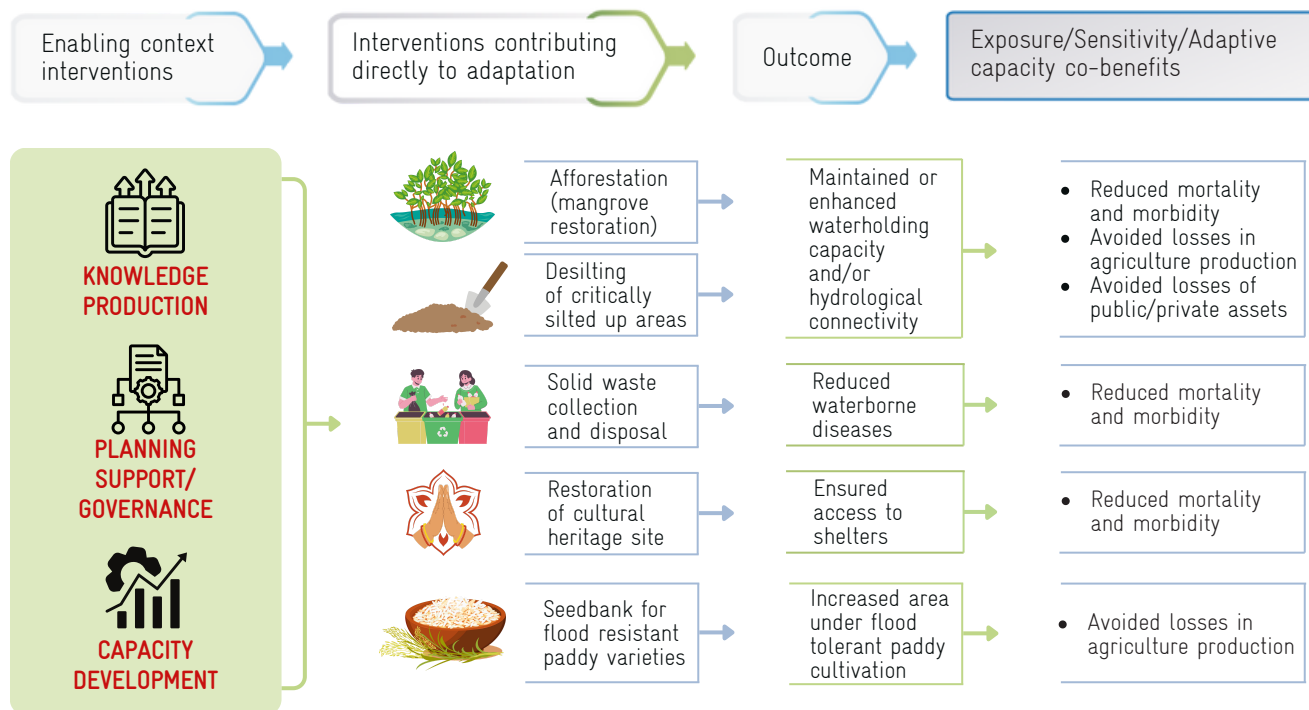


CASE STUDY OF VEMBANAD-KOL, KERALA

Vembanad-Kol one of India's largest **coastal wetland** complexes, spans 1,323 km² and supports over 200,000 people through flood buffering, fisheries, tourism, and unique agricultural practices like Pokalli farming.



Tier 1 Results: Illustration of adaptation and DRR co-benefits



Tier 2 Results: Illustration of quantified DRR co-benefits for a flood event-100 year return period

*Co-benefits are referred to as DRR co-benefits in this case, given that the attribution of the 2018 flood event to climate change is not demonstrated

	Baseline case (2018 flood event)	Intervention case	DRR co- benefits
Mortality and disabled adjusted life years (DALYs)	13 DALYs per year	Desired target value: 0 DALYs per year	Maximum avoided health losses: 13 DALYs per year i.e. 13 years of healthy life by preventing death & disability
Losses in agriculture production (paddy and pokkali)	₹ 29.34 million losses per year	₹ 17.65 million losses incurred per year	₹ 11.74 million losses avoided per year
Avoided losses of private assets	₹ 2.38 million losses per year	₹ 1.19 million losses per year	₹ 1.19 million losses per year

The case study results are based on i) available data on damages associated to the 2018 flooding event in Kerala (100 years return flood) and ii) best available estimates related to the management plan implementation. The results may not be used in different contexts.

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For more information: The full report can be accessed at <https://www.indo-germanbiodiversity.com/>

Digital tool for assessing the climate co-benefits of wetland management



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