

  
**KGID  
2025****Green Growth:  
The Path to  
Sustainable Jobs**

# Enhancing India's Capacity for Green and Resilient Coastal and Marine Ecosystems Management: *Pathway for a Sustainable Blue Economy*

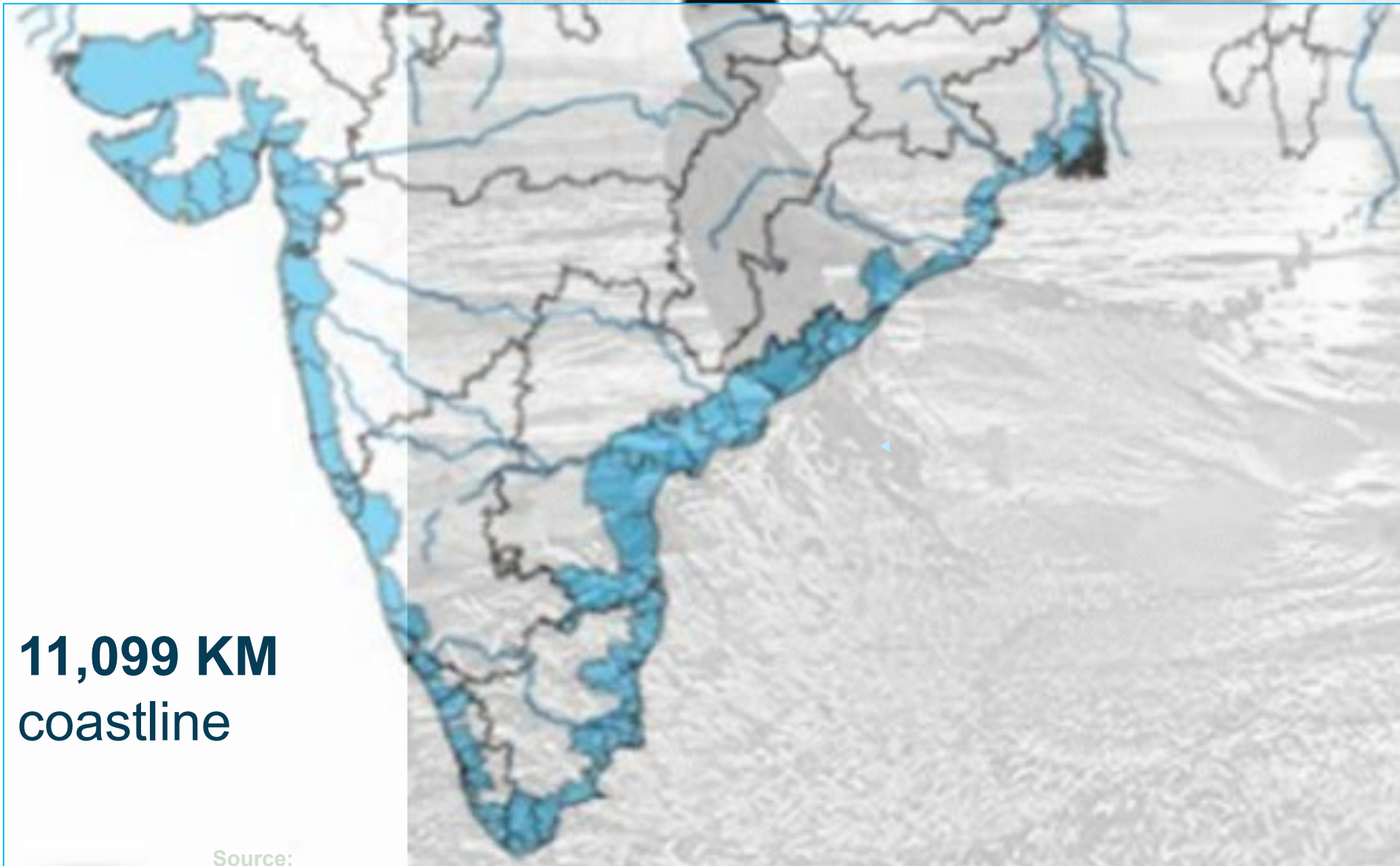


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Environment, Climate Change & Forests  
Government of Tamil Nadu, INDIA

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Senior Environmental Specialist  
The World Bank



# INDIA- The Blue Resource Base



**11,099 KM**  
coastline

Source:  
CCZMCSB,  
MoEFCC

**Coastal population -  
~ 250 million**

**24,136 km<sup>2</sup>**

Inter-tidal mud flats

**1,611 km<sup>2</sup>**

Salt marshes

**1,420 km<sup>2</sup>**

Coral Reefs

**4,992 km<sup>2</sup>; 517 km<sup>2</sup>**

Mangroves and seagrass

**2,331 km<sup>2</sup>**

Mainland Coastal Beaches

**30 million people**

Livelihood

**2<sup>nd</sup> largest ~ 8% of global**

Fish production



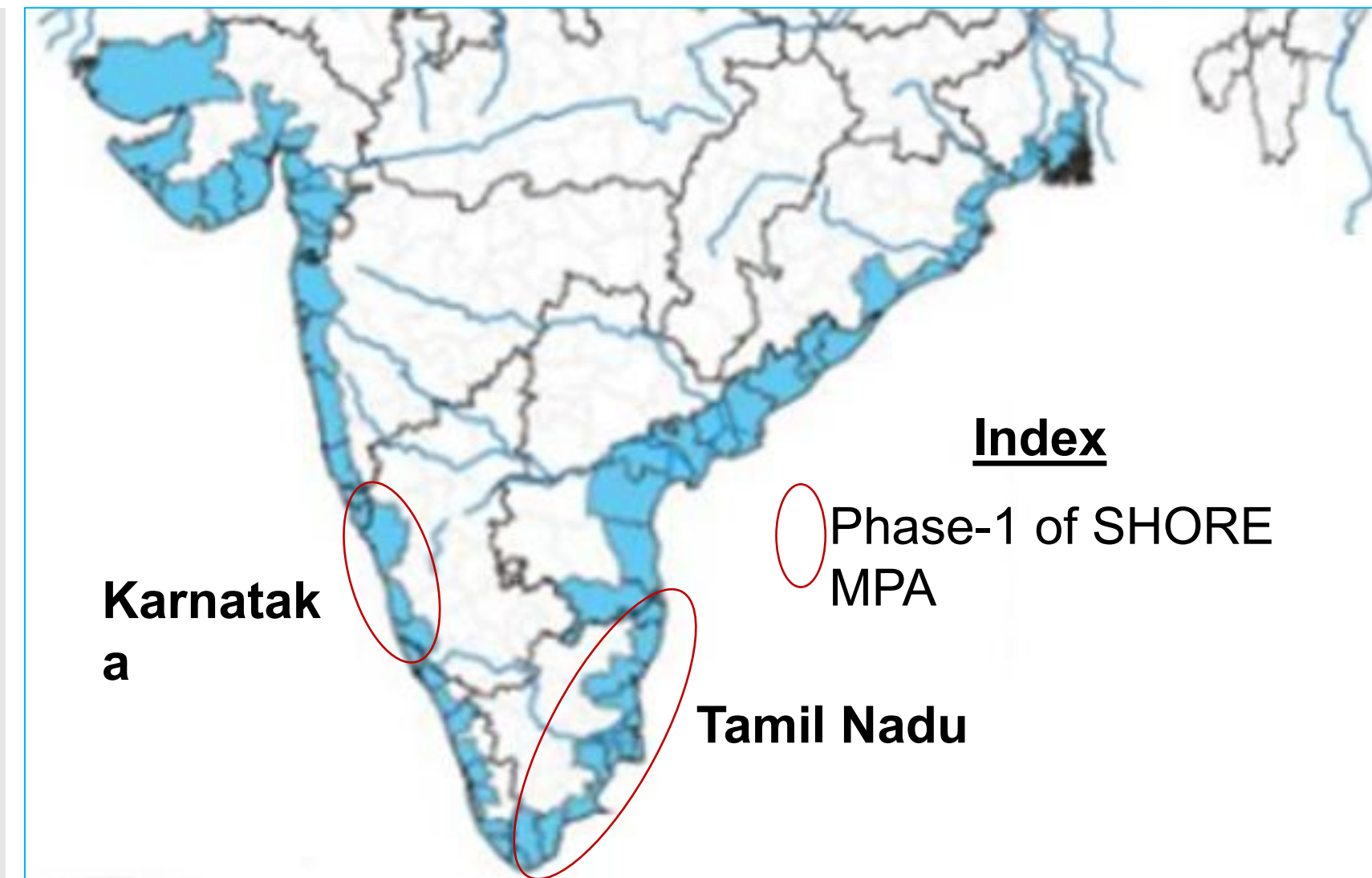
# Vision: “to create a world free of poverty on a livable planet”

## **SHORE MPA - Priorities aligned with WB Pillars**

- **People:** Economic resilience of coastal communities
- **Prosperity:** create opportunity for sustainable “Blue” Jobs
- **Planet:** Environment; Agriculture; Water GPs collaboration
- **Infrastructure:** Safe and resilient coastal assets
- **Digital:** Digital access and robust M&E
- **Cross Cutting Areas:** integrated management

### **Program Objective**

**“To increase coastal protection and conservation, enhance livelihood benefits, and reduce marine plastic pollution in targeted coastal communities.”**



## **Phase 1 – Tamil Nadu and Karnataka**





# Coastal resilience - Key Activities supported under SHORE

## Resilient People and Livelihoods

- **Alternate livelihoods;** Community driven activities
- **ICZMP, SMP, CVCA,** coastal database; MIS/GIS
- **Learning agenda:** training & capacity building;

## Resilient Infrastructure

- **Nature Based Solutions (NbS)** to reduce coastal erosion
- Greener/bluer harbors

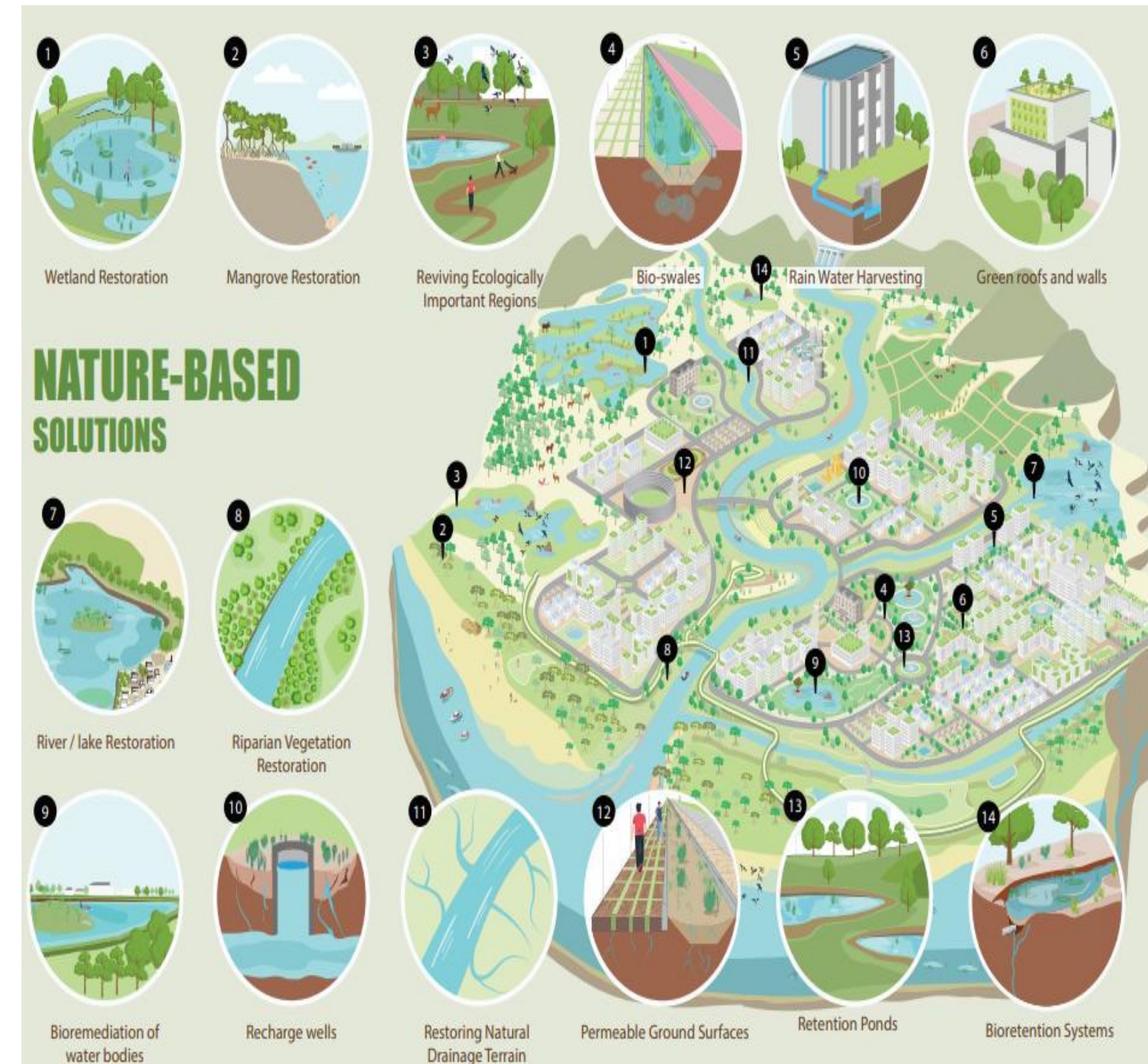
## Resilient Eco-systems

- **Restoring** wetlands, mangroves, sea grass,
- **Enhancing waste circularity** and private sector mobilization
- **Biodiversity conservation**

## Mobilizing finance



Private sector participation - plastic circularity; climate finance  
Sustainable livelihoods - Eco-tourism; aquaculture and sustainable fisheries;



# Governance, Policy and Frameworks

## International conventions



**UNCLOS, 1982**



**Convention on Biological Diversity (CBD), 1993**



**Global Oceans Action Summit for Food Security and Blue Growth, 2014**



**International Maritime Organization, 1958**

## Indian legislations



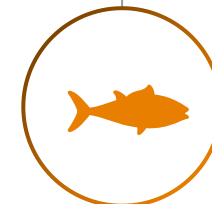
**Wildlife Protection Act, 1972**



**Environment Protection Act, 1986**

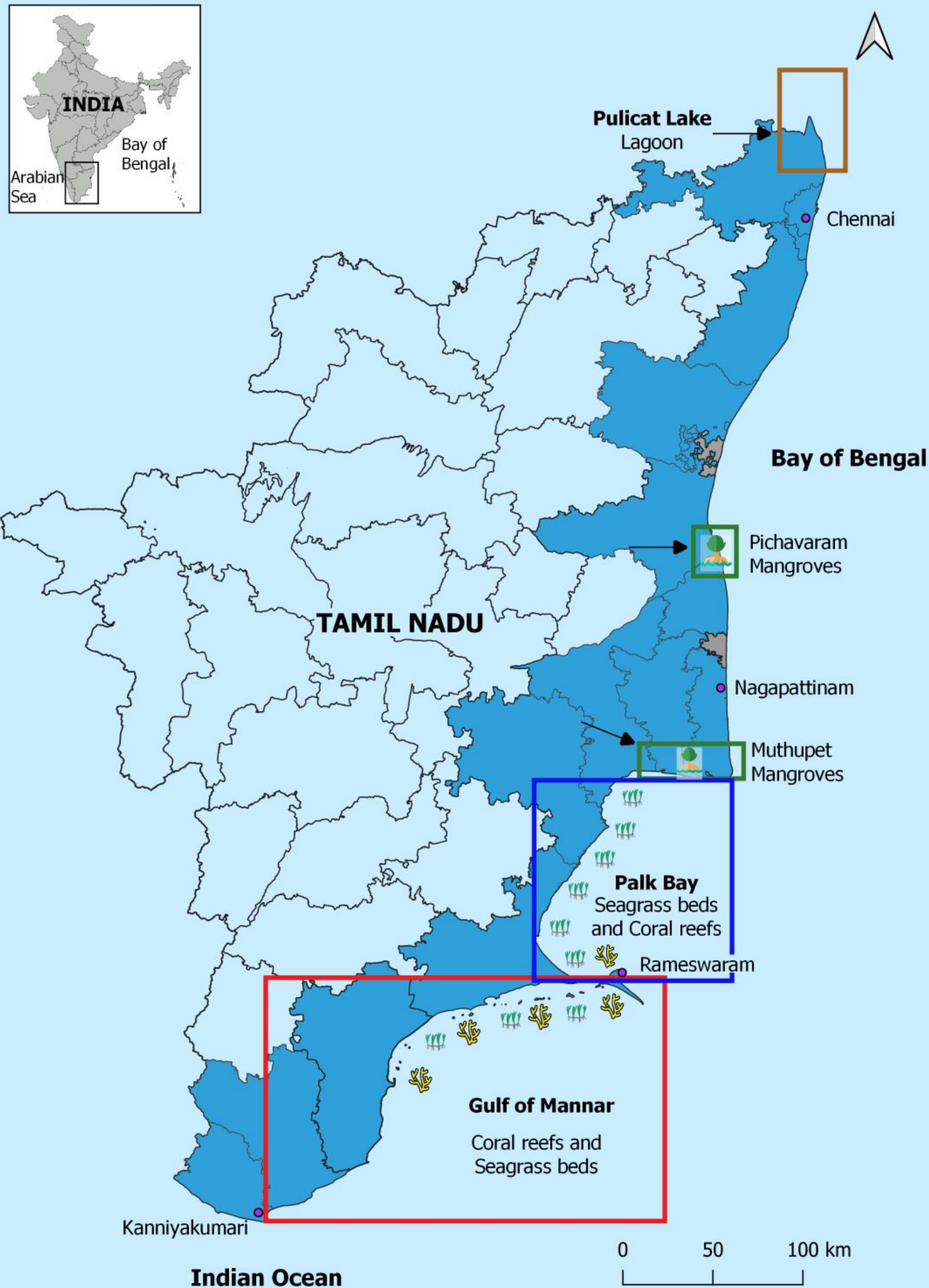


**Coastal Regulation Zone Notification, 2019**



**National Policy for Marine Fisheries, 2017**





# Tamil Nadu's Strategic Ocean Position

**Coastline:** 1069 km (2nd longest in India, ~18% of mainland)

**EEZ:** 0.19 million sq. km (9.4% of India's EEZ)

**Ecosystems:** Mangroves, seagrass, coral reefs, wetlands, lagoons, estuaries, 20 Ramsar sites

**4 Coastal Zones:** Coromandel • Palk Bay • Gulf of Mannar • West Coast

**21 Islands**

**Major rivers:** Cauvery, Pennaiyar, Vaigai, Palar, Thamirabarani

[illegible]

**CRZ II:** Developed areas up to or close to the shoreline

**CRZ IV:** Area between the LTL and 12 nm into the sea/tidal-influenced waterbodies



6 Centre of Excellence



10 Blue Flag Beaches

15 acres of Seagrass under Restoration



20 Coastal Wetlands targeted for Restoration

1000 ha of Mangrove Restoration underway

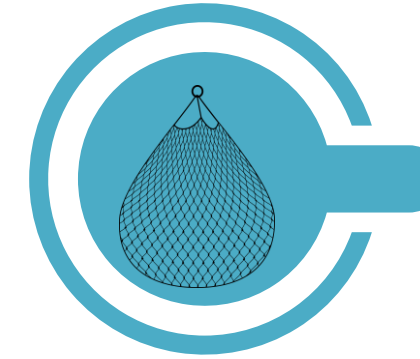
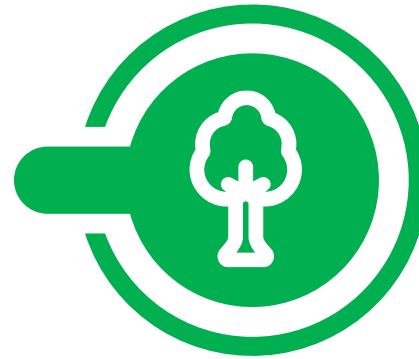


## Tamil Nadu Sustainably Harnessing Ocean Resources & Blue Economy (TNSHORE)



MRF Centre at 3 Districts

550 ha Agroforestry initiated



Discarded Fishnet Collection Centre 14 Districts

Kariyachalli Island Restoration in Progress



6 Climate Resilient Villages



Trashboom Installation Chennai riverline



# Tamil Nadu: Six Centres of Excellence



## 1 Biodiversity Park

Kadambur (₹345 Cr / US\$41.6 M)



## 2 Bird Conservation Centre

Marakanam (₹50.3 Cr / US\$6.1 M)



## 3 Sea Turtle Centre

Guindy (₹14.5 Cr / US\$1.8 M)



## 4 Mangrove Centre

Pichavaram (₹26.5 Cr / US\$3.2 M)



## 5 Dugong Centre

Manora (₹40.9 Cr / US\$4.9 M)



## 6 Wetland Centre

Pallikaranai (₹55.2 Cr / US\$6.6 M)



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## 4 Mangrove Centre

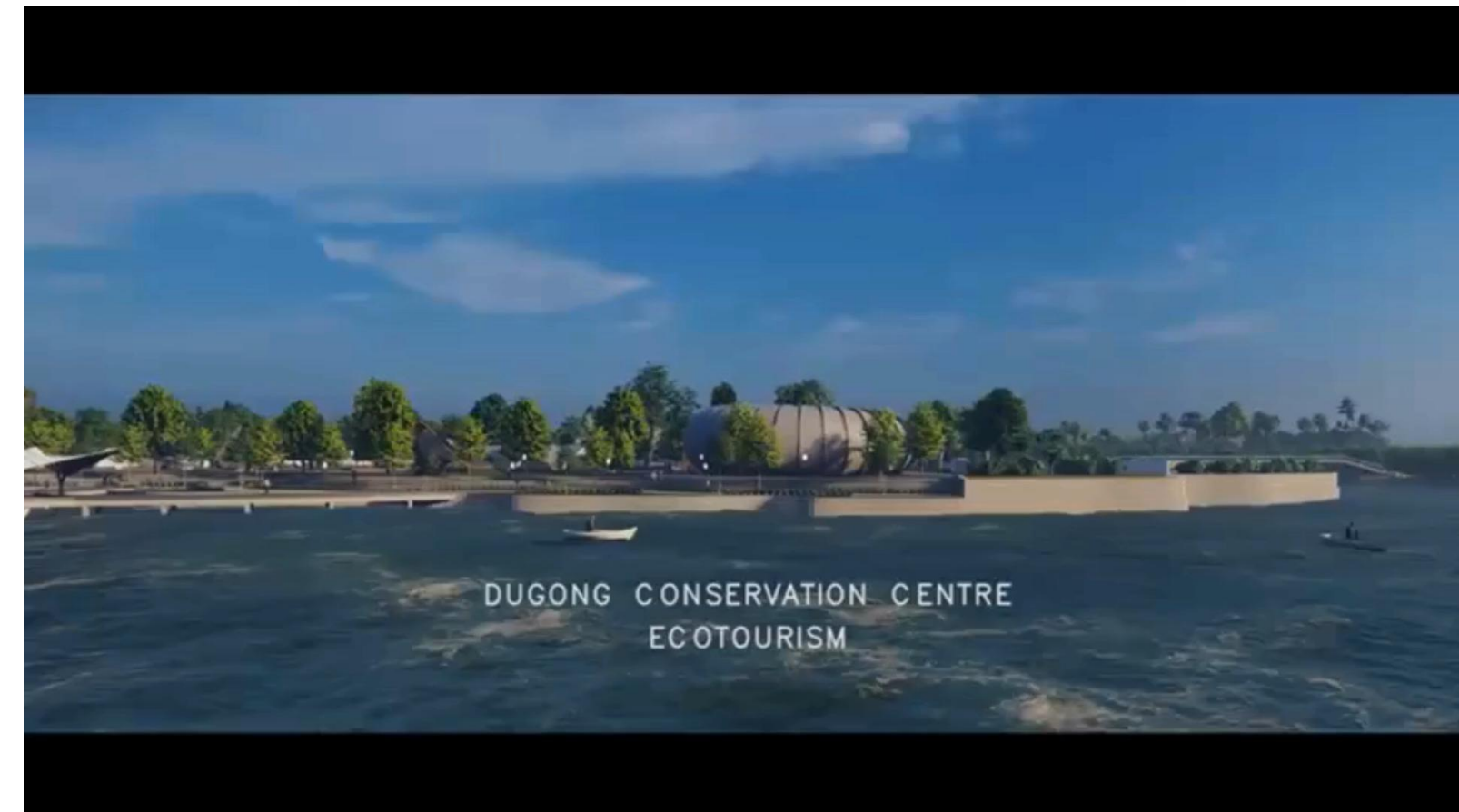
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## 5 Dugong Centre

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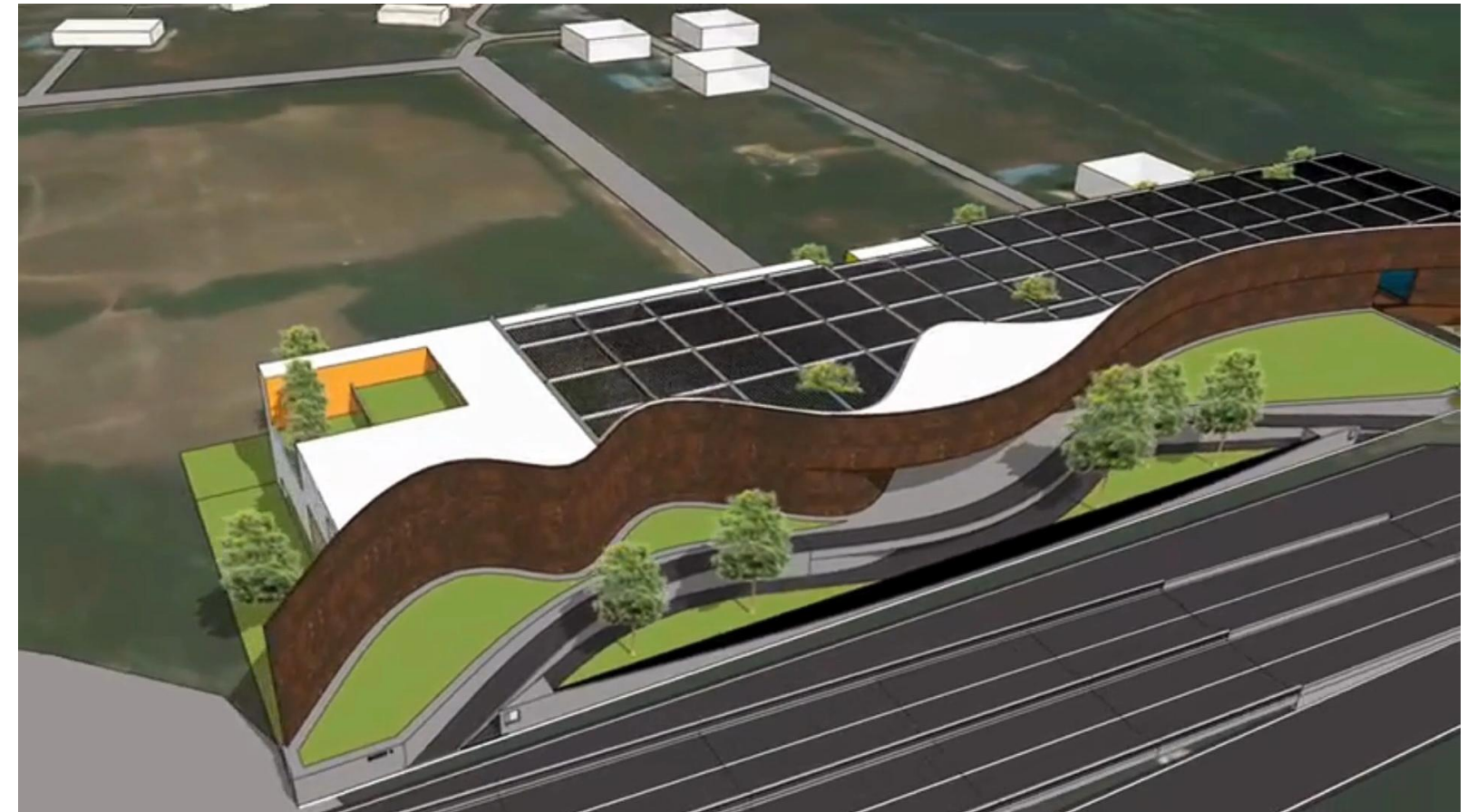




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# Coastal Protection and Resilience

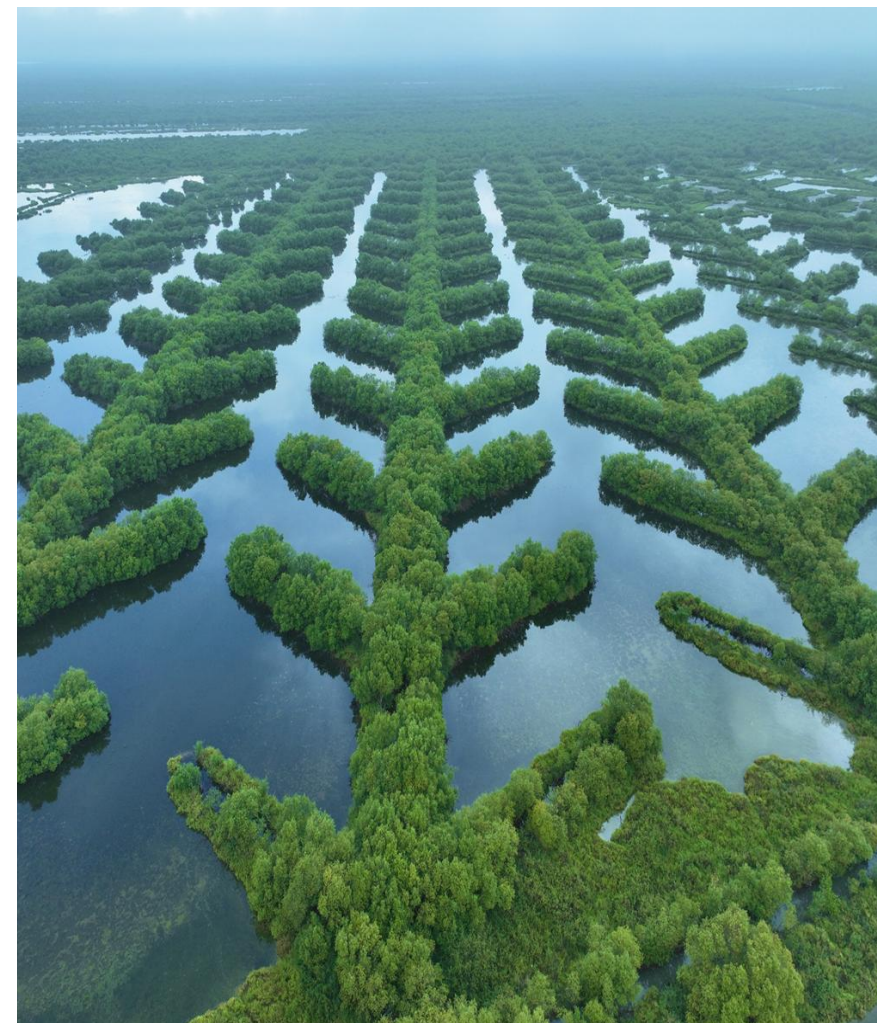
- **Mangroves & Seagrass – natural shields for coasts**

  - Mangroves in Tamil Nadu

  - Existing cover: 4,500 ha
  - Restored (last 5 years): 2,403 ha
  - New plantations: 1,207 ha
  - Total extent: 8,210 ha

- **1000 ha mangroves & 15 acres seagrass under restoration under TNSHORE**

- **Safeguarding shorelines, biodiversity & livelihoods**





# Coral Island Restoration – Gulf of Mannar

- Kariyachalli Island – part of 21-island chain
- Facing severe erosion & submergence risk
- Coral Restoration: 2 acres
- Seagrass Restoration: 3 acres
- Protecting reefs, coasts & livelihoods



# Sustainable Livelihoods & Eco-Tourism

## Building Community Resilience

- **Blue Flag Beaches** → World-class eco-tourism
- **Green Jobs & Alternative Livelihoods** → Diversified incomes
- **Women's SHGs & Fishfolk Cooperatives** → Empowered communities





# Strengthening Plastic Circularity



**Fishing Nets → Recycling Hubs**  
(14 coastal sites identified)



# Strengthening Plastic Circularity



Meendum Manjappai ->  
*A People's campaign  
against throwaway plastics*



# Strengthening Plastic Circularity



Eco Warriors ->  
*#ClimateWarriorsInitiative*

கடலோடு உழவன் புணர்ந்தொழுகின் தானே  
விடலோடு வாணிகம் சூது."

*Kadalodu uzhavan punarnthozhugin thāne,  
Vidalodu vāṇigam sūthu.*

When agriculture joins with the ocean,  
even trade across the seas flourishes without risk

**Thank You**