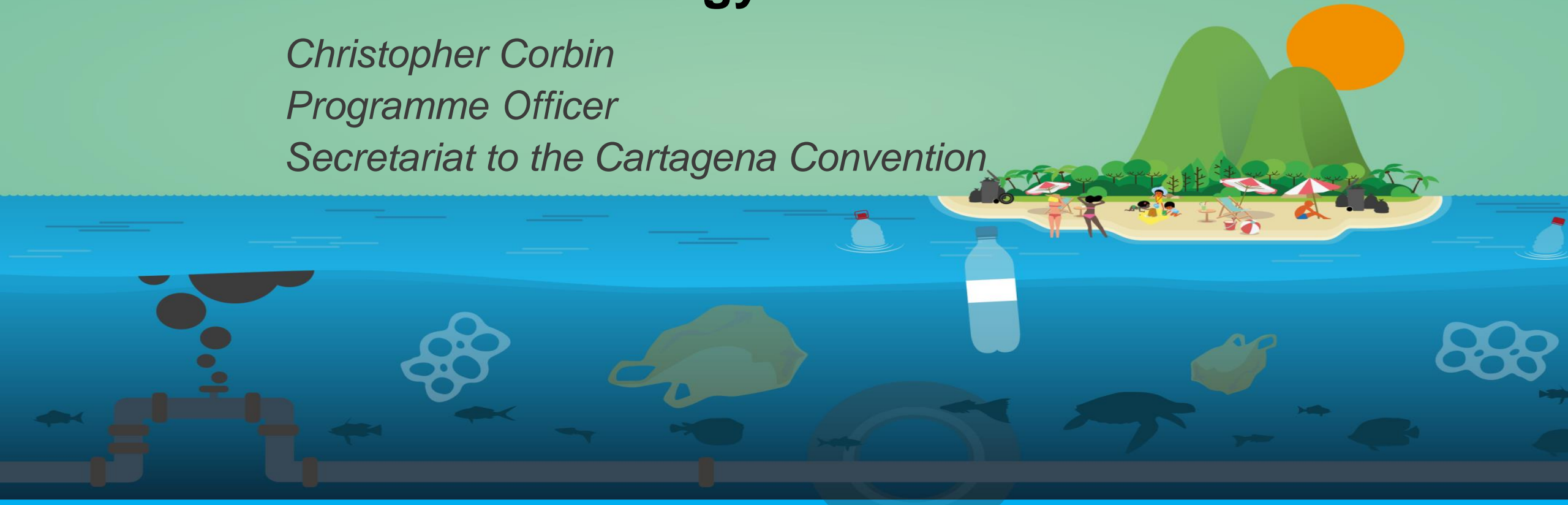
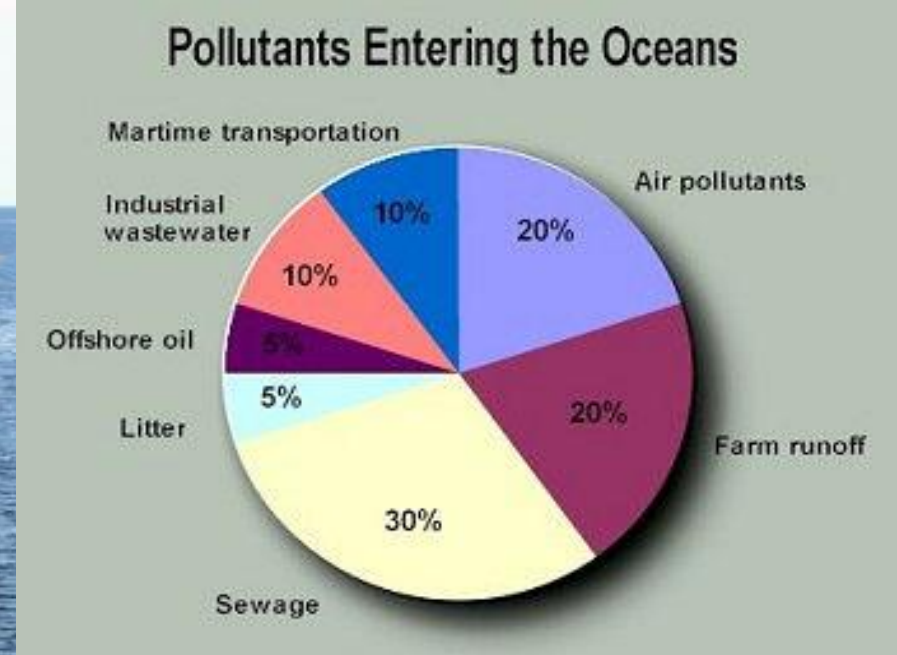




# Development of Regional Nutrients Reduction Strategy & Action Plan

*Christopher Corbin  
Programme Officer  
Secretariat to the Cartagena Convention*





# Part 1 Outline

# Outline

Global & Regional Frameworks for Nutrient Pollution

Nutrient Pollution: *Sources, Trends, Gaps, Levels & Impacts*

*UNDP GEF CLME+*

Objective of Regional Nutrients Reduction Strategy

Strategic Linkages

Table of Contents

Timeline & Next Steps

Technical Guidance: *Scope, Content, Approach, Partners, Projects & Activities*



Part **2** Global Frameworks

80% of marine pollution originates from land-based sources -  
wastewater, nutrients & sediment loadings

Excess Nutrients – Dead Zones

Global Partnership on Nutrients Management (GPNM)

Support to Aichi Targets of the Biological Diversity Convention

Support to SDGs 6 & 14

UN Environment Assembly Resolutions on Nutrients Reduction

Not just a pollution issue but a nutrients efficiency issue – food  
security, climate change



Part **3** Regional Frameworks

Cartagena Convention, LBS Protocol - Annexes III & IV  
Caribbean Platform for Nutrients Management (CPNM)  
Caribbean Node for Wastewater Management  
Cooperation with Brazil/Amazon Sub-Region  
GEF IW Projects: REPCar, IWCAM, IWEco, CLME, CLME+, CReW,  
CReW+

# Top Sources of Nutrient Pollution

## Municipal Sewage

Human sewage is the most common source of nutrient pollution, particularly in South America, Asia, and Africa.



## Agricultural Fertilizers

Often applied to crops in excess, chemical fertilizers containing nitrogen and phosphorus seep into groundwater or are washed away as runoff.



## Livestock Waste

Manure from animal production, which is often used as fertilizer, contributes additional nitrogen and phosphorus.



## Stormwater Drainage

Stormwater runoff washes nutrients from residential lawns and impervious surfaces into nearby rivers and streams.



## Aquaculture

Direct discharge of excrement, uneaten food, and other organic waste generates concentrated amounts of nitrogen and phosphorus in the waters surrounding fish farms.



# Part 4 Nutrient Pollution: Sources



## **Sewage:**

*85% Untreated or Partially Treated*

## **Agrochemical Run-off:**

*Sediment loads from the Meso-American region (Belize, Guatemala, Honduras, & part of Mexico's Yucatan Peninsula) contribute significant amounts of sediment to the WCR—374 million tons per year*

A tropical beach scene with several palm trees in the foreground, a sandy beach, and the ocean under a blue sky with scattered white clouds. The text 'Part 5 Nutrient Pollution: Impacts' is overlaid on the image.

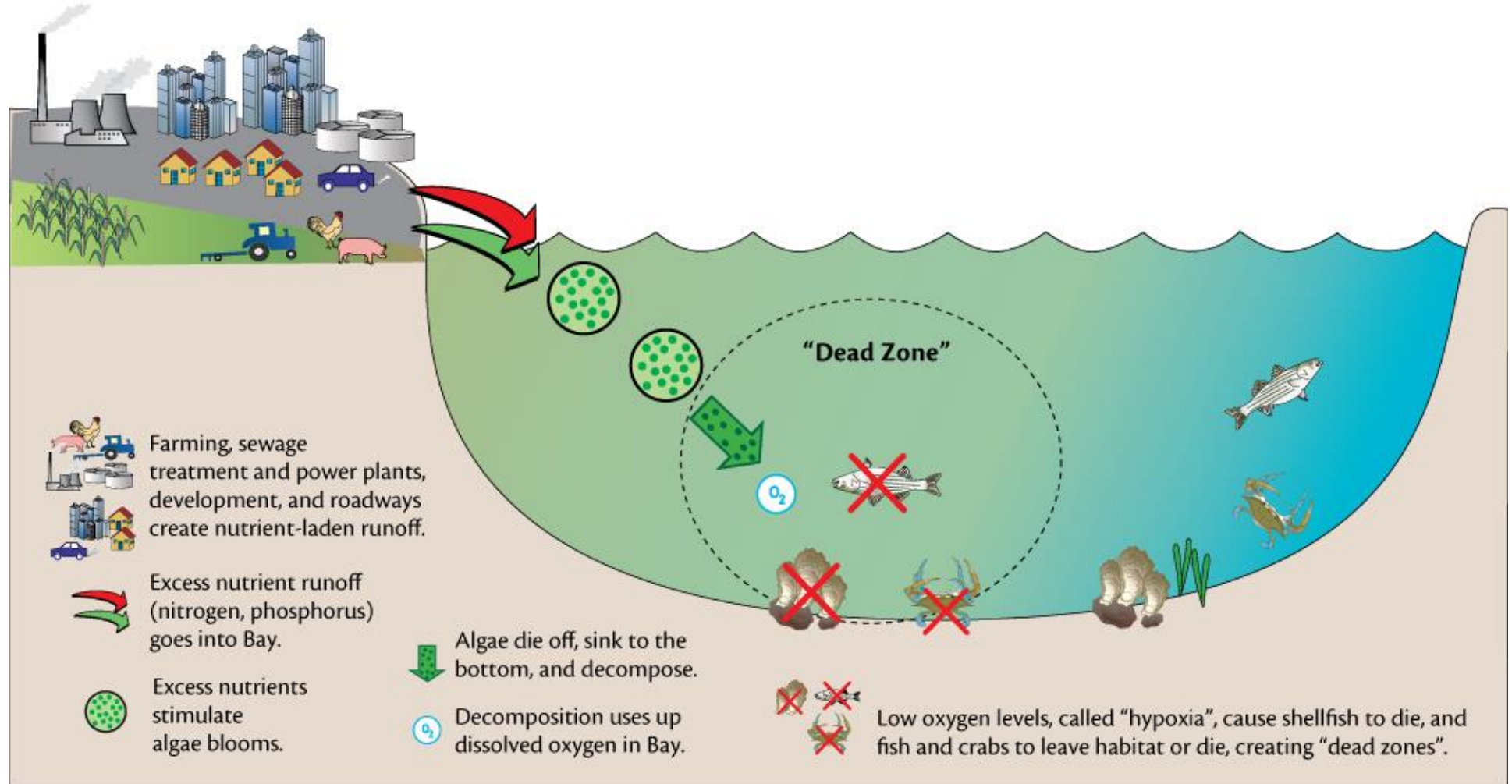
# Part 5

## Nutrient Pollution: Impacts

Coral Reefs; Sea  
Grass Beds;  
Sargassum

Tourism

Fisheries





Part **6** UNDP GEF CLME+ Support

# Regional Strategies & Action Plans

*For the valuation, protection and/or restoration of key marine habitats in the CLME+ (SPAW)*

**For the reduction of impacts from excess nutrient loads on marine ecosystems (LBS)**

Established Caribbean Platform for Nutrients Management  
Convened 2<sup>nd</sup> Regional Workshop of Platform in Trinidad & Tobago

Regional Dialogue with Amazon Group

Indicative Action Plan & Regional Priorities

Draft Outline & Approach Action Plan for Nutrients

# Baseline and (pre-)feasibility assessment reports (2019)

... to assess the needs and opportunities for investments

- *for the enhanced protection and restoration of key habitats (SPAW)*

- **to reduce the impacts of pollution on human well-being (LBS)**

**→to safeguard the goods & services delivered by marine ecosystems and associated living resources to human society**

**...followed by Investment Plans  
(2019)**

*For large-scale action on habitat protection and restoration (SPA W)*

**Outlining costs for high-priority actions to reduce LBS pollution (LBS)**

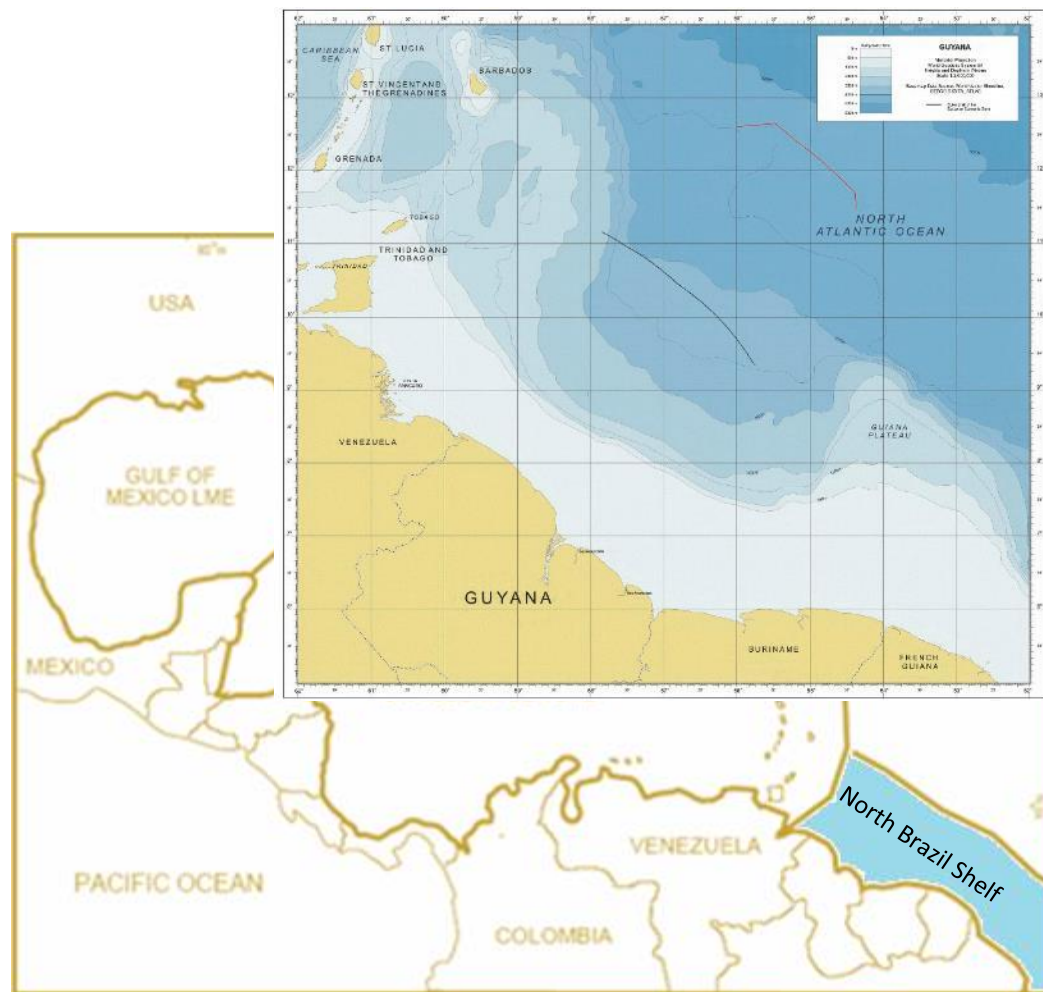
# EBM Sub Project: Pilot sites

Located within Guianas & North Brazil Shelf

Link to ongoing EBM projects in Eastern Caribbean

## Aim:

- **Coordinated implementation** of joint SPAW and LBS Protocol **actions and measures** at selected sites
- **Outcomes** and **'lessons learned'** from the project will improve coordinated implementation of SPAW and LBS in the future







Part

7

Proposed Scope & Approach

# Objectives

Identify most important “regionally relevant” pollution sources;  
Identify high priority areas for further action based on most affected ecosystem types & socio-economic impacts;  
Leverage financing for on-ground investments;  
Contribute to regional & global commitments;  
Address data gaps identified in SOCAR – improved baseline;  
Build capacity of the LBS RACs, RAN & CPNM;  
Facilitate knowledge exchange, policy reform, technological transfer & capacity building;

# Scope & Approach

Wider Caribbean Region: 3 LMEs

Lead Role for LBS RACs & RAN

Sub-regional approach – previous reports including SOCAR

Build on gaps identified in SOCAR

Link to State of Habitat & Habitat Restoration Strategy under SPAW

Link to Pre-Feasibility Assessments & Investment Plans

20 <b>Output</b>	<b>TimeLine (to be completed during meeting)</b>
Task team established & formalized	
Baseline of regional sources & impacts	
Mapping of projects & organizations	
Mapping of transboundary characteristics of most affected ecosystems	
Nutrient monitoring protocol/guidelines incl GEAF indicators	
Types, concentration & temporal variations of nutrients (key data gaps)	
An integrated nutrients Databank/information platform	
Integrative strategy for policy & action plans	
Investment Plan identifying the costs of high-priority actions to reduce nutrient pollution sources which cause substantial impacts on ecosystem goods and services available.	



Part **8** Table of Contents

**Introduction:** *Governance; International & Regional; Nutrient Pollution;*

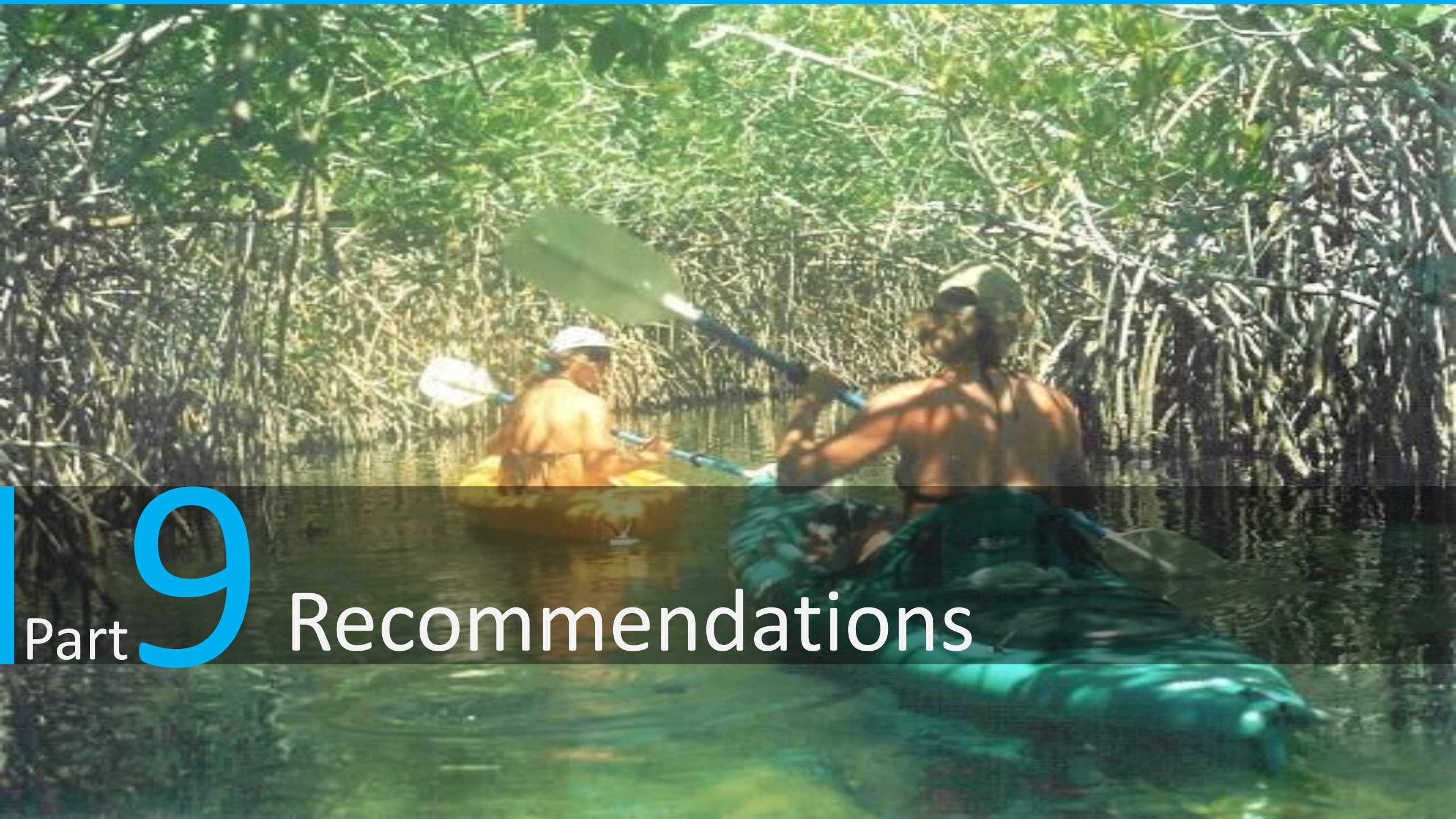
**Sources and Loads:** *Agriculture, Sewage*

**Impacts:** *Socio-Economic, Environmental*

**Strategic Objectives:** *Knowledge Generation & Transfer; Technical Services; Governance & Policy; Outreach & Advocacy;*

**Action Plan & Implementation Schedule:** *Targets & Indicators*

**Annexes:** *MEAs; Hot Spots; Habitat Maps; Reduction Targets & Indicators; Programmes, Projects, & Partners; Communications Strategy; Case Studies & Best Practices; Nutrients/Ecosystem Health Report Cards; Technologies;*



Part **9** Recommendations

What are our major gaps relating to nutrients pollution?

What regional projects & activities are you aware of?

Are there specific areas of focus we should include?

Are there additional partners we should include?

Is the proposed approach & scope feasible?

Any concerns, possible constraints?

Any other technical recommendations?



Thank you  
Merci Beaucoup  
Muchas Gracias



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