

10th Global Meeting of the Regional Seas Conventions and Action Plans



Guayaquil Ecuador

25th - 27th November, 2008

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Caribbean Environment Programme

UNEP CAR/RCU

Secretariat to Cartagena Convention





In to the Blue:

Our Caribbean Sea



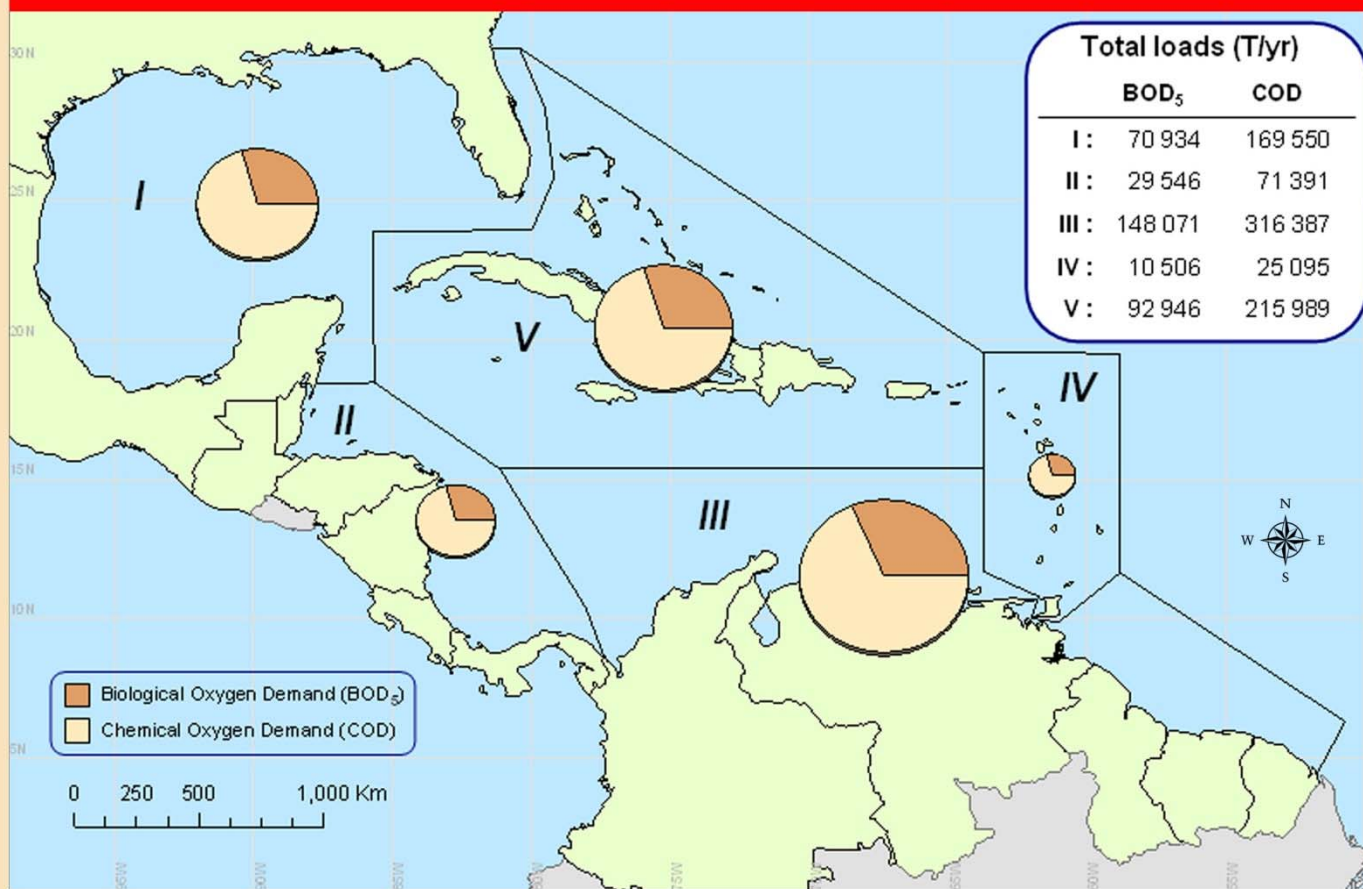
80–90% Untreated



The # 1 Source of Direct Pollution of the Marine Environment is Untreated Domestic Wastewater

(Steve Spring)

ORGANIC POLLUTANT LOADS FROM DOMESTIC SOURCES BY SUB-REGION



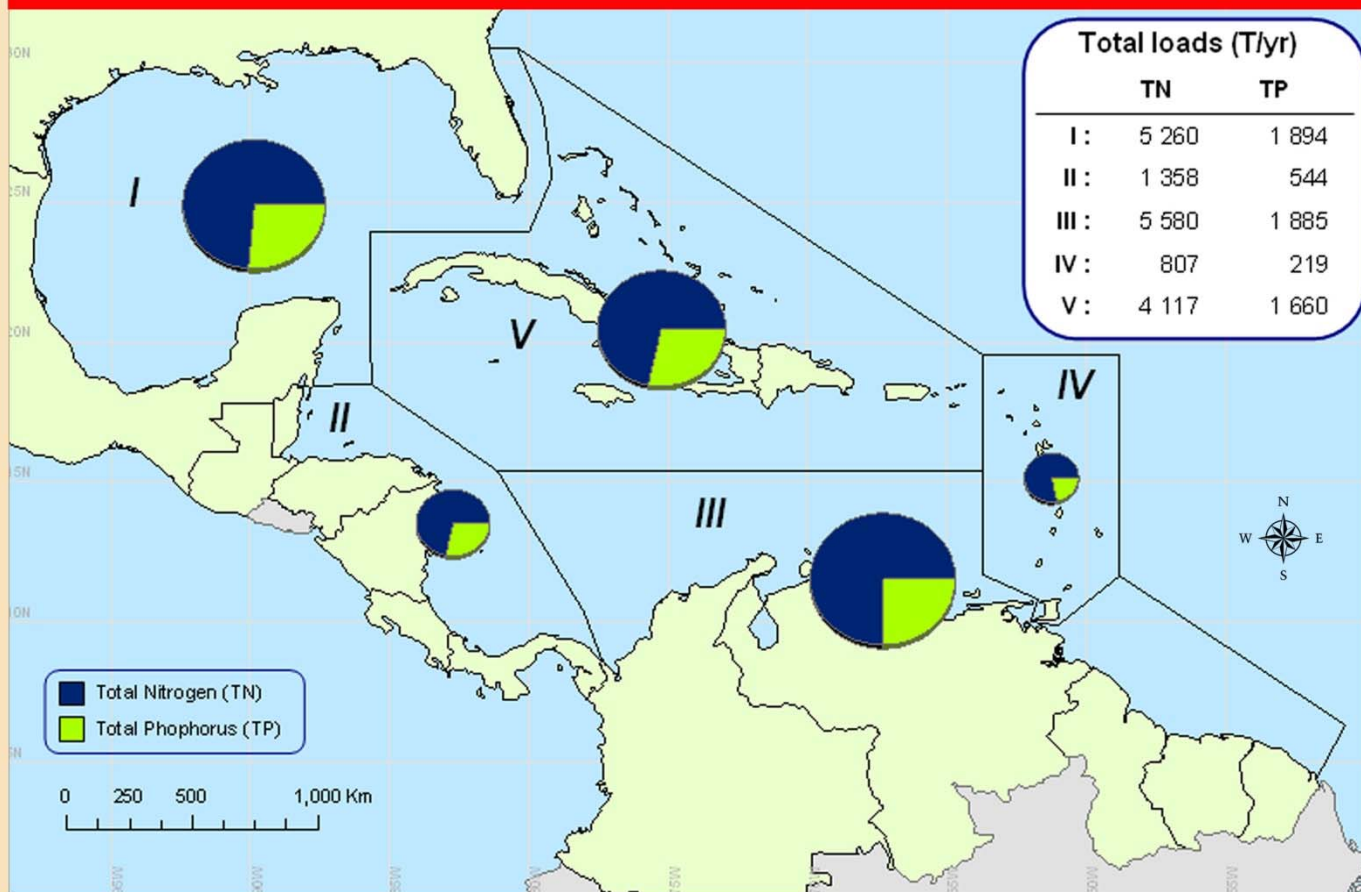
Source: Final Report: Overview of Land-Based Source of Pollution in the Wider Caribbean Region, LBS/RAC-Cimab – UNEP-CAR/RCU, 2008.

Approximately half of the total load of organic matter to the Caribbean Sea is from sub-region I (USA and Mexico), despite the high levels and coverage of wastewater treatment plants present. Loads of domestic organic matter that surpass the auto purification capacity of the receptor body may cause eutrophication or anoxia of the ecosystem.

La Subregión I (Estados Unidos de América y México) presenta una contribución media de materia orgánica al Gran Caribe, a pesar del gran tamaño de su población costera tributaria, debido a los altos niveles de tratamiento y de cobertura de saneamiento que presenta. Si los aportes de materia orgánica de origen domésticas superan la capacidad autodepuradora del cuerpo receptor contribuyen a la eutrofización y anoxia del ecosistema

La sous-région I (Etats-Unis et Mexique) contribue environ la moitié de l'apport en matière organique dans la région des Caraïbes, malgré les niveaux et la couverture élevée de traitement des eaux usées de cette sous-région. Si les apports en matière organique d'origine domestique dépassent la capacité d'autoépuration du corps réceptif, ceci peut contribuer à l'eutrophisation et l'anoxie de l'écosystème.

NITROGEN AND PHOSPHORUS LOADS FROM DOMESTIC SOURCES BY SUB-REGION

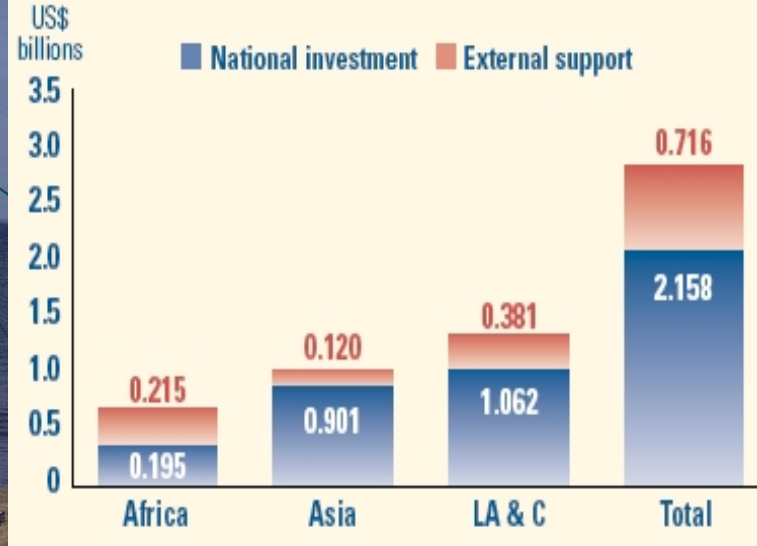
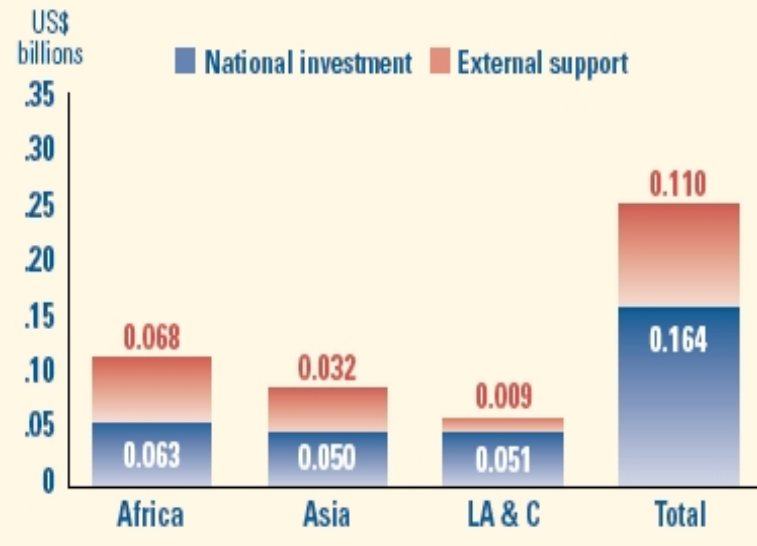


Source: Final Report: Overview of Land-Based Source of Pollution in the Wider Caribbean Region, LBS/RAC-Cimab – UNEP-CAR/RCU, 2008.

The small nutrient loads in sub-region IV (Lesser Antilles) are primarily due to the small contributing populations. Excessive nutrient loads in the Wider Caribbean Region is the principal cause of eutrophication along coastal waters, particularly in areas where water circulation is limited.

Los aportes menos significativos de nutrientes a la Región del Gran Caribe (RGC) proceden de la Subregión IV (Antillas Menores) debido al bajo número de pobladores tributarios. El aporte de nutrientes a la RGC es la causa principal de eutrofización en las aguas costeras, particularmente en zonas donde es limitada la circulación de las aguas.

Les bas apports en nutriments de la sous-région IV (Petite Antilles) sont essentiellement dus aux petites populations correspondantes. Un excès en nutriments dans la région des Caraïbes est la principale cause d'eutrophication des eaux côtières, surtout dans des zones où la circulation est limitée.



RURAL

URBAN



Facilities

Laws & Policies

Trained Persons

Data & Information

Affordable FINANCING



BUT

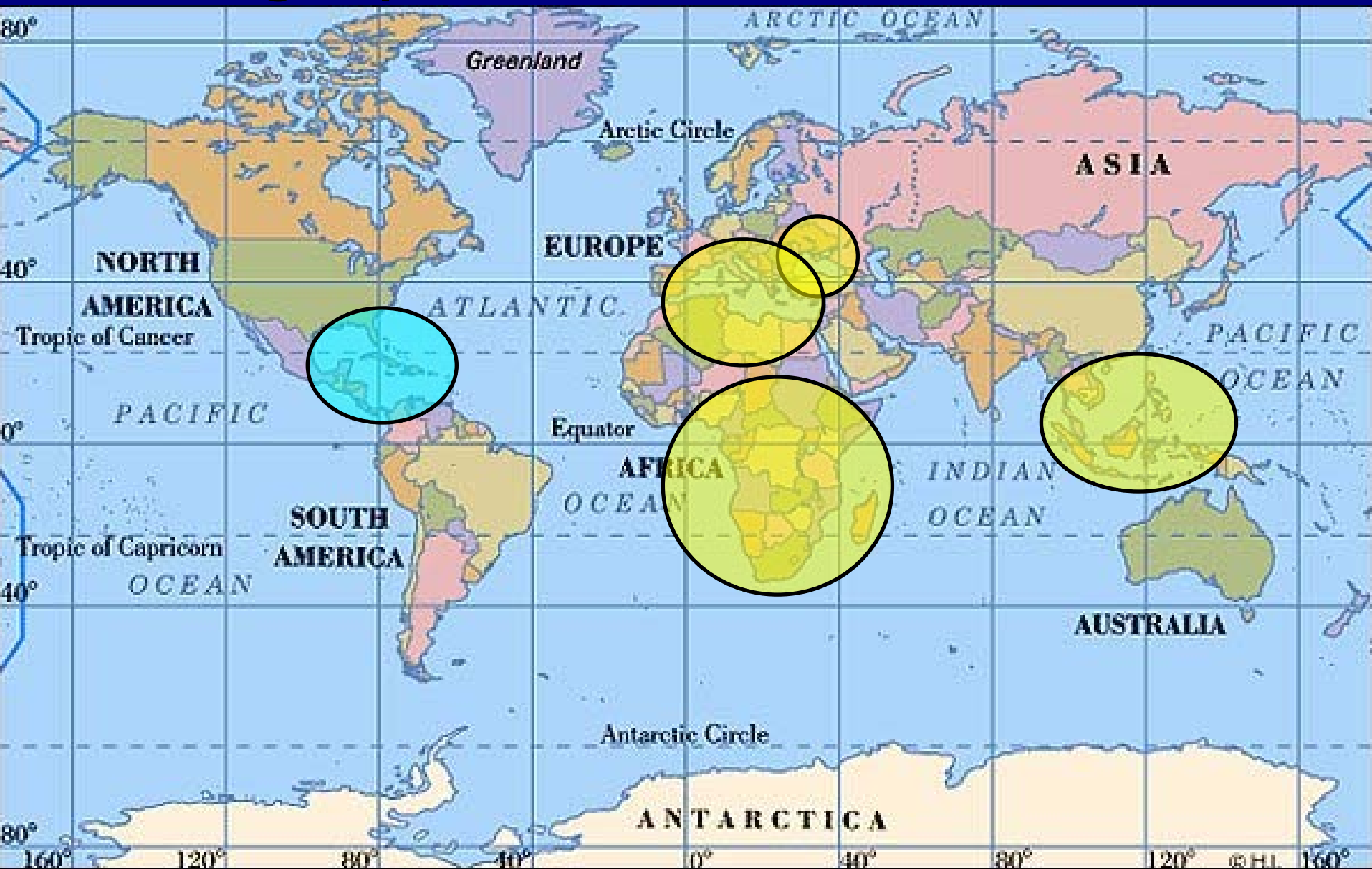
**Several Funds
Needed &
Unwillingness to
Contribute by
Governments**

GEF Strategic Program 2

Reducing nutrient over-enrichment and oxygen depletion from land-based pollution of coastal waters in LMEs consistent with the GPA



Geographical distribution of IFs





The CReW

- Funds for Wastewater Management
- Innovative Funding Mechanisms
- 14th IGM in Jamaica 2006
- Consultations at Regional Level in 2007
- Supporting Feasibility Studies in 2007
- 15th IGM in Antigua 2008



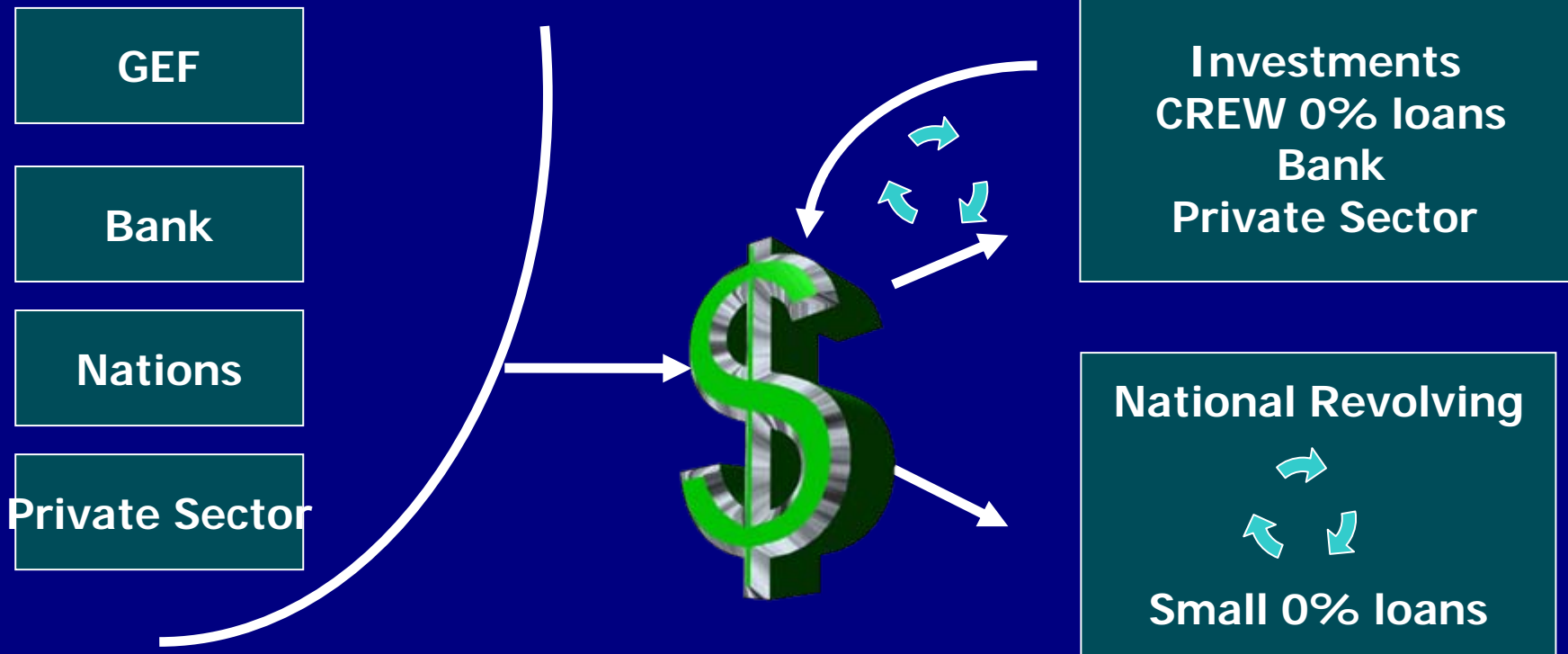
Perspective of the CReW

- Testing & Piloting Funding Mechanisms
- Low-tech Appropriate Solutions.
- GPA, Cartagena Convention & LBS Protocol

- Possibility for larger Revolving Fund (CReW II) under GEF V.



Financial Mechanism for CReW



Where is UNEP's advantage?

Innovative Wastewater Management Technologies – municipal, Industrial, agriculture

Policy reforms & Capacity building

Monitoring & Evaluation

**Regional Dialogue/
Transboundary
Legislative
agreements**

Technical solutions which could be evaluated and used:

Rehabilitation
of Wetlands

Activated
Sludge Filters

Constructed
Wetlands

Natural
Lagoons

Sand
Filters

Aerated
Lagoons



www.gpa.unep.org/training

Improving Municipal Wastewater Management in Coastal Cities

- Objective oriented planning
- Innovative technologies and financial approaches
- Stakeholder involvement
- Presentation techniques

UNESCO-IHE
UNEP
GPA

Training Manual Version 1 February 2004

H₂O H₂O



NEEDS ASSESSMENT GUIDANCE TO DEVELOP NATIONAL PLANS FOR DOMESTIC WASTEWATER POLLUTION REDUCTION

Planning Guidance to Fulfill the Requirements of Annex III to the Protocol Concerning Pollution from Land-based Sources and Activities to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region

Wider Caribbean Region
United Nations Environment Programme

June 2003
Prepared by:
Tt
Tetra Tech EM Inc.
135 Main Street, Suite 1800
San Francisco, California 94105



- Costa Rica
- Saint Lucia
- Panama
- Barbados
- Suriname
- Antigua & Barbuda
- Guyana
- Honduras
- Guatemala



Timeline for CReW

GEF Work Programme

November 2008

Proposal Development

Jan – Dec 2009

GEF CEO Endorsement

March 2010

Implementation start

September 2010

Geographical Scope & Potential Partners

Wider Caribbean

UNEP & IADB – Implementing Agencies

UNEP CAR/RCU – Executing Agency

CEHI, CWWA, CDB – Regional Partners

PAHO – International Partners

National Ministries & Utilities

Local Communities

Private Sector

Proposed Components of CreW

Project Preparation Grant: 380,000

Financial Mechanism: 15,000,000

Pilot Projects

Capacity Building 2,500,000

Linkages 500,000

Project Management 2,000,000

**Not the answer to long-term Sustainable
Financing**

BUT

Support LBS Protocol Implementation

GPA Priority Pollutant

Millennium Development Goals

Model for Broader Framework of Support



Health



Jobs



Future





THANK YOU!

www.cep.unep.org