

GEF CReW

Caribbean Regional Fund for Wastewater

Institutional Financing Mechanism and Opportunities at Global Regional and National Levels – WCR Initiatives

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Outline



- The Global Context
- Regional Realities
- Changing the Storyline Linking Water and Waste Water
- The CReW Strategy
- The Project
- Project Objectives
- Testing Financial Mechanisms First Generation Projects
- Issues of Sustainability





The Project



CReW

- Caribbean Regional Fund in Wastewater Management

Funding Agency

- Global Environment Facility

Implementing Agencies

- IDB & UNEP

Value

- US\$20 million

Endorsing Countries

- 13 Countries (*Antigua and Barbuda, Barbados, Belize, Costa Rica, Jamaica, Guatemala, Jamaica, Guatemala, Guyana, Honduras, Panama, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago*)





The Project



Antigua and Barbuda

Barbados

Belize

Costa Rica

Jamaica

Guatemala

Guyana

Honduras

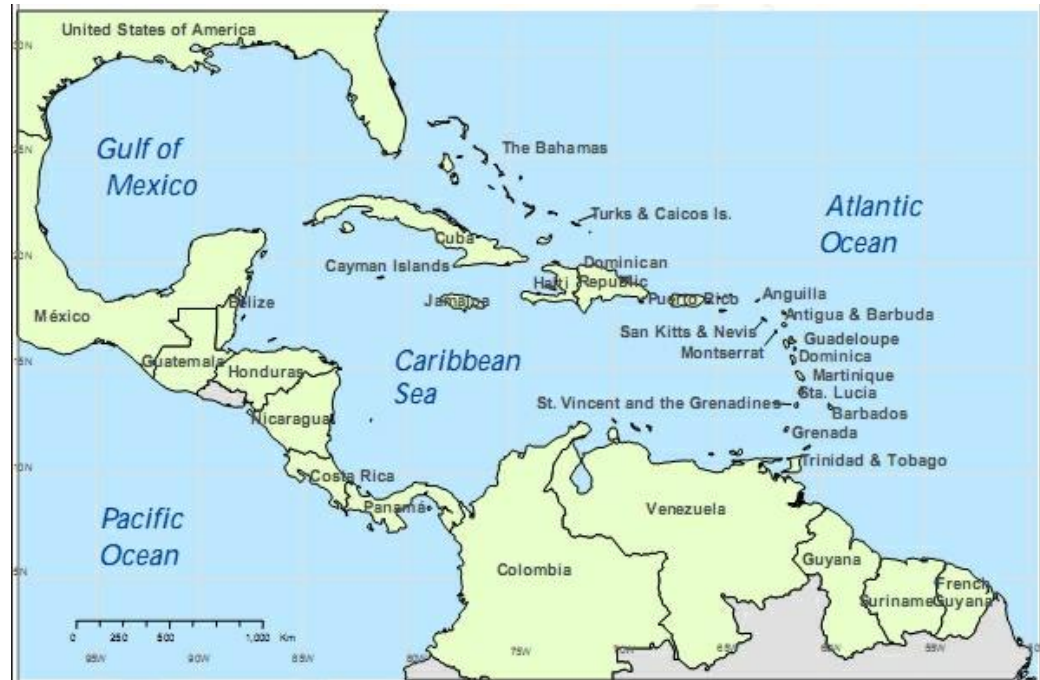
Panama

St Lucia

St Vincent and the Grenadines

Suriname

Trinidad and Tobago





Project Objectives



1

Establish innovative financing mechanisms for cost-effective and sustainable financing of wastewater management in the WCR

2

Improve national and local capacity for wastewater management through strengthened policy, institutional & legislative frameworks

3

Facilitate regional dialogue and knowledge exchange with the key stakeholders in the WCR





The Opportunity



- Waste is a **Resource** Out of Place
- Wastewater is a Resource – BUT requires treatment
- Business Opportunity





Is There A Demand



- In 2012 the World Economic Forum, ranked the water supply crises as the second global risk after major systemic financial failure, and ahead of food shortage.
- By 2025, 1.8 billion people will be living in countries or regions with absolute water scarcity, and two-thirds of the world population could be under water stress conditions shortage.





Is There A Demand



- Given the current trends, future demands on water to feed growing human populations, for intensive production of goods and to support growing economies will not be met.
- Nutrients - nitrogen and phosphorous - are key for maintenance of soil health to grow crops and thus ensuring world food security
- Food security of two-thirds of the world's population depends on availability and use nutrients in the form of fertilizers.
- Nearly 75% of added nutrients is lost to the environment, causing pollution -losses of nitrates (NO_3), phosphate and organic N and P compounds to water.

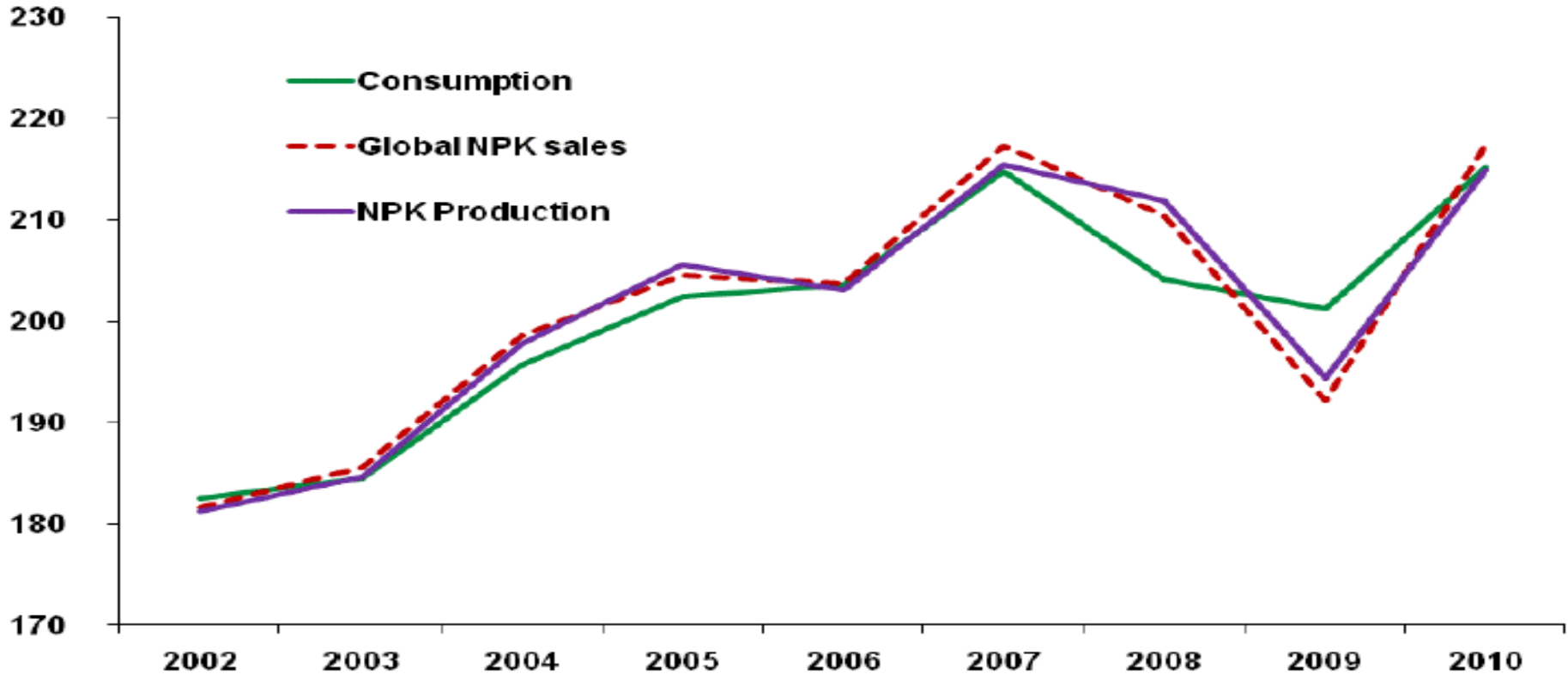




Is There A Demand



Mt nutrients



IFA PIT Committee, 2010



GLOC-2 October 2-4, 2013



Changing the Storyline



Increase of prices of fertilizers: 2005 to 2010

- ✚ Urea: 90%
- ✚ Phosphate rock: 156%
- ✚ Potassium Chloride: 113.5%
- ✚ Di-ammonium Phosphate (DAP): 113.5%
- ✚ Triple superphosphate (TSP): 108.7%

CEPAL/FAO/IICA, 2011

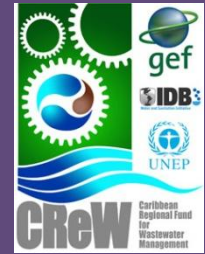


Fuente: Fertilizer Week





Regional Realities



- ✦ 7% of the world coral reefs are located in the Caribbean (CARSEA, 2007)
- ✦ In the Caribbean, less than 20% of wastewater is treated before entering the ocean (Burke and Maidens, 2004)
- ✦ Coral reefs develop in waters with low levels of nutrients
- ✦ Untreated wastewater is a major source of nutrients in coastal waters that would not normally contain them
- ✦ These nutrients foster the growth of algae at the expense of coral (Souter and Linden, 2000), since coral reefs develop in waters with low concentrations of nutrients

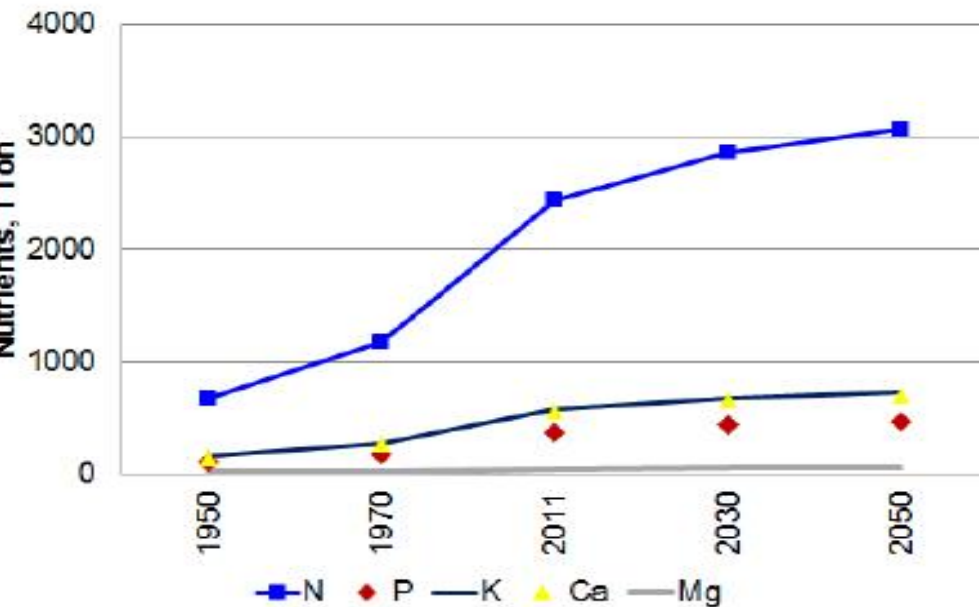




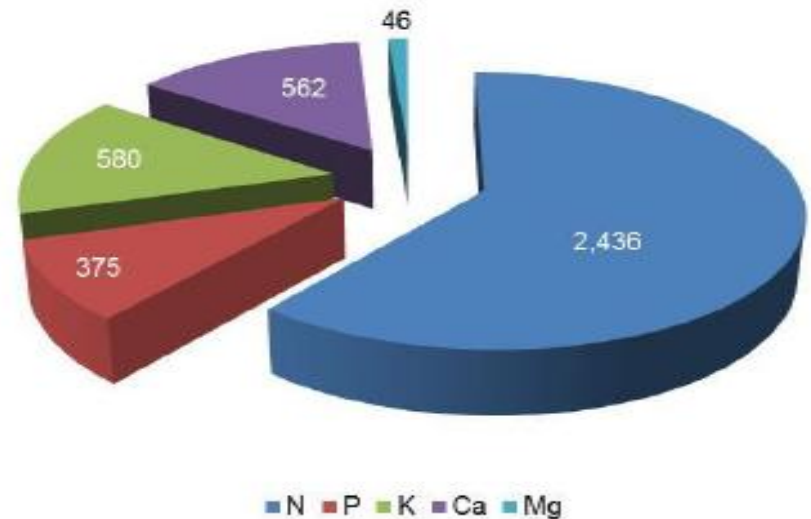
Regional Realities



In Latin America, 86% of domestic wastewater is discharged, untreated, into rivers and oceans. In the Caribbean, this figure could be 90% (UNEP, 2007)

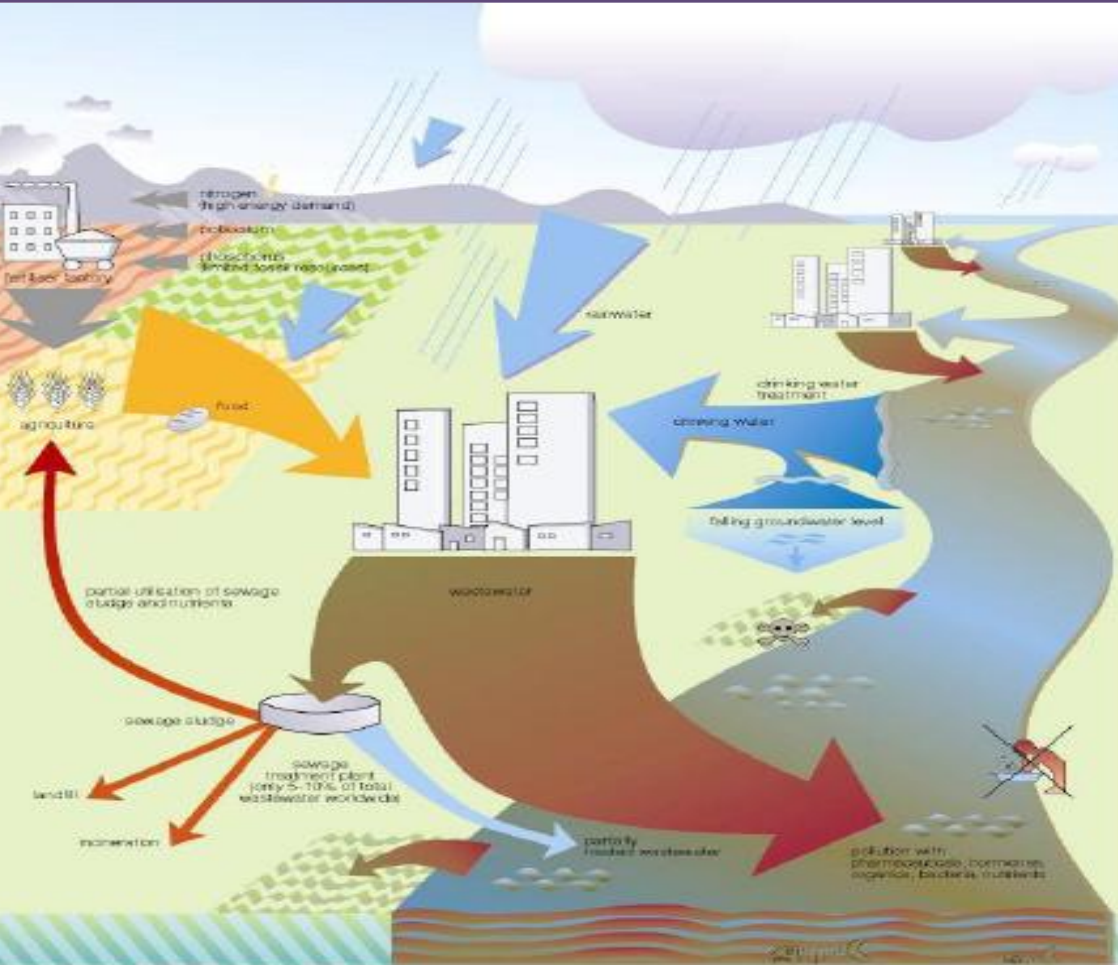
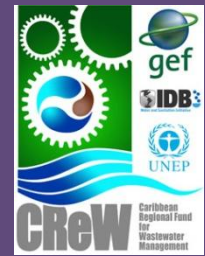


Discharge of nutrients in LAC in 2011: Tton





Regional Realities



- ✦ Pollution of waters by organics, **nutrients**, hazardous substances, pathogens, pharmaceutical residues, hormones, etc.
- ✦ Unbearable health risks and spread of disease
- ✦ Severe environmental damage and **eutrophication** of the water cycle
- ✦ Consumption of precious water for transport of waste (water carriage waste disposal system)
- ✦ High investment, energy, operating and maintenance costs
- ✦ Frequent subsidization of prosperous areas and neglect of poorer settlements
- ✦ Loss of valuable nutrients and trace elements contained in excrements due to discharge into waters
- ✦ Impoverishment of agricultural soils, increased dependence on chemical fertilizers





Changing the Storyline



- What water “reuse”?
- **Water Reuse:** The sustainable use of effluent from wastewater treatment plants for beneficial purposes.



Changing the Storyline



Wastewater anyone?

Beattie ready to embrace 'Armageddon solution'

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 The Premier has said he is ready to embrace a 'last resort' solution to deal with the state's wastewater crisis. He said he would support a 'last resort' solution to deal with the state's wastewater crisis. He said he would support a 'last resort' solution to deal with the state's wastewater crisis.

A taste for waste

A taste for waste
 San Diego's 'toilet to tap' plan is back once again, courtesy of Water Department bureaucrats who are prodding the City Council to adopt this very costly boondoggle. The project was rightly shelved seven years ago amid a public backlash.



San Diego should flush "toilet to tap" plan

San Diego should flush "toilet to tap" plan
 Your golden retriever may drink out of the toilet with no ill effects. But that doesn't mean humans should do the same. San Diego's infamous "toilet to tap" plan is back once again, courtesy of Water Department bureaucrats who are prodding the City Council to adopt this very costly boondoggle. The project was rightly shelved seven years ago amid a public backlash.

The Public Rejects Water Solutions Based on Stigma, Fear, and Disgust

CADS gathers to voice defiance



If You Vote YES Look At The PURIFIED WATER You WILL BE Drinking from





Changing the Storyline



- OPPORTUNITY - Linking effective wastewater treatment with water reuse for these products :

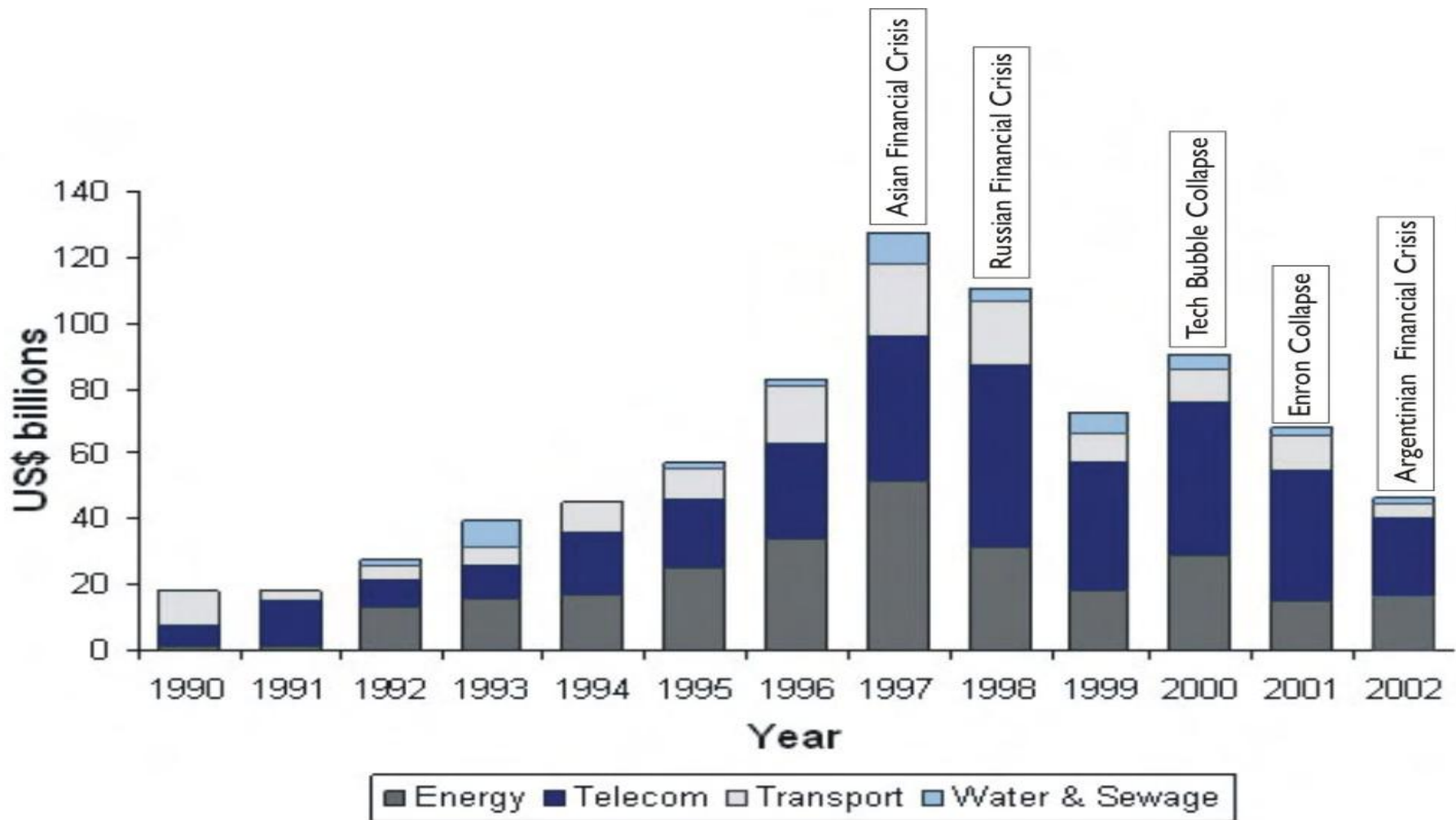
–ENERGY

–WATER

–NUTRIENTS



Financing Wastewater





Financing Wastewater



- Utilities in English Speaking Caribbean low expenditure on wastewater.
- For example in Jamaica only seven percent of the NWC's total average annual capital expenditure account for investments in wastewater systems.
- Some utilities such as WASA in Trinidad and Tobago have not carried out any substantial investments in wastewater.





The CReW Strategy



Change Management Project –Funding Infrastructure in Wastewater Sector

- Testing approaches to sustainably finance wastewater treatment systems sector at low/competitive market rates
- Developing enabling environment to support the development of such financial mechanisms





Testing Financial Mechanisms



Jamaica

Credit
Enhancement
Facility

US\$3 million

Rehabilitation
of 13 existing
WWTP

Belize

Belize
Wastewater
Revolving Fund

US\$5 million

WWTP
Belmopan &
Placencia

Guyana

Guyana
Wastewater
Revolving Fund

US\$3 million

Public Private
Partnership

Trinidad & Tobago

T&T
Revolving
Fund

US\$2 million

Rehabilitation
of Scarborough
WWTP

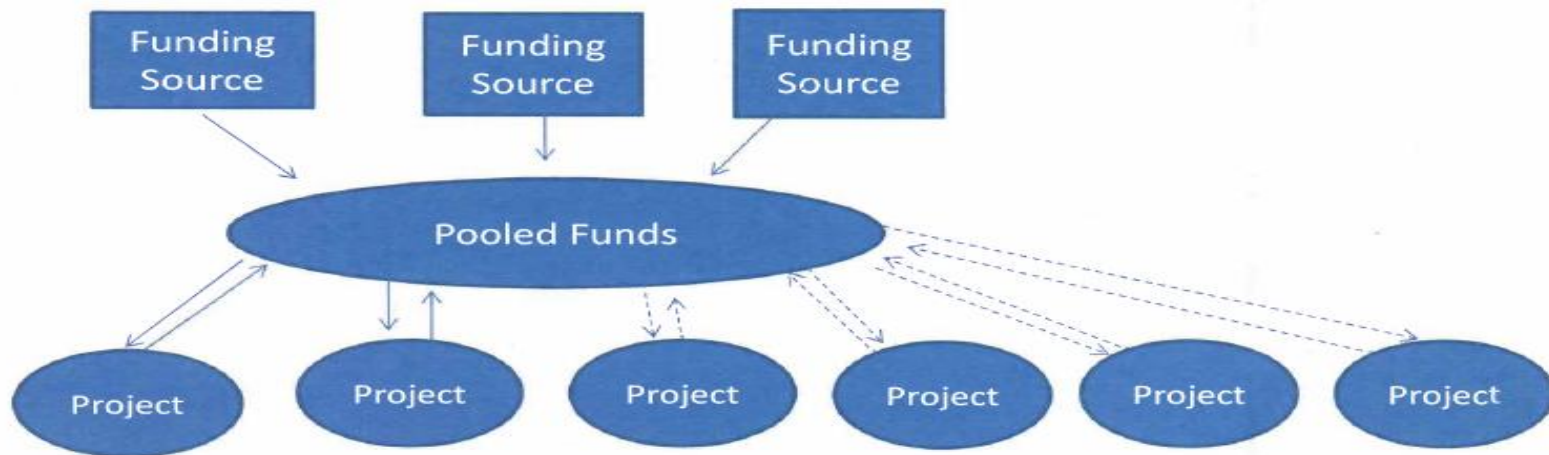




Testing Financial Mechanisms



Revolving Fund Structure



- As project borrowers repay the loan to the pool, the money is then available to lend for new projects.



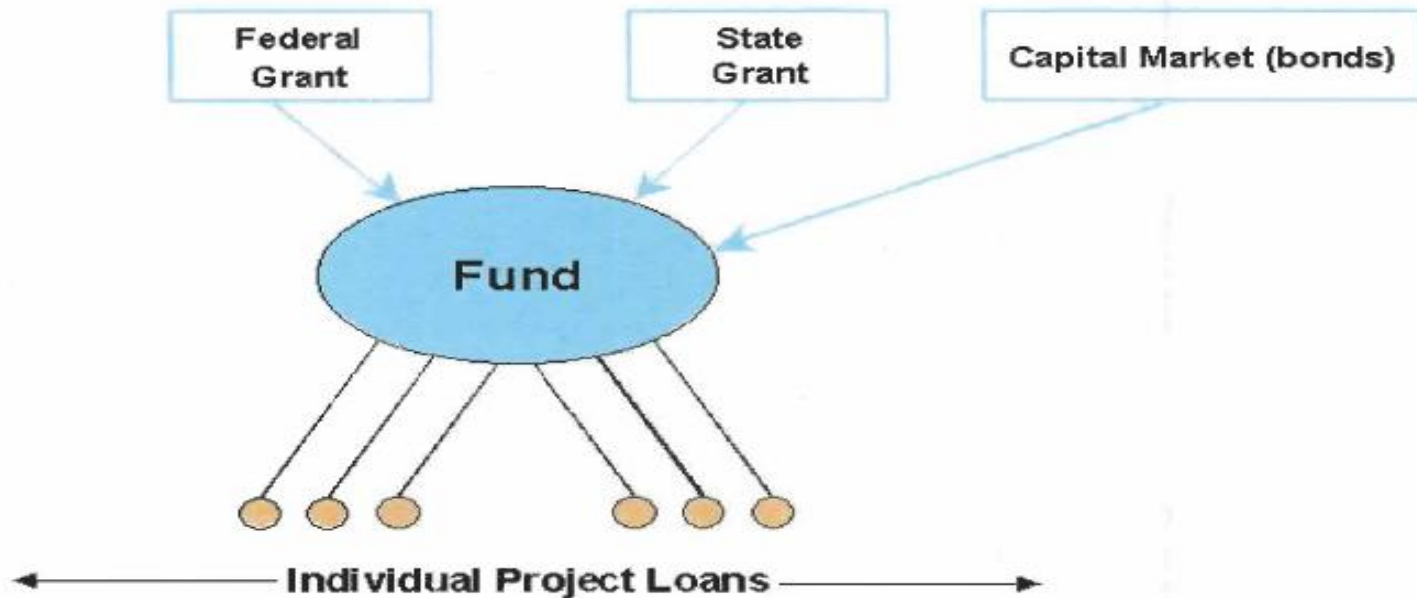


Issues for Sustainability



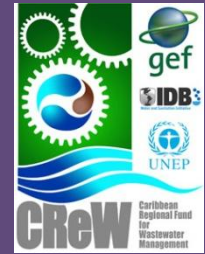
Structures Used Around the World - 3

The Cash Flow Model





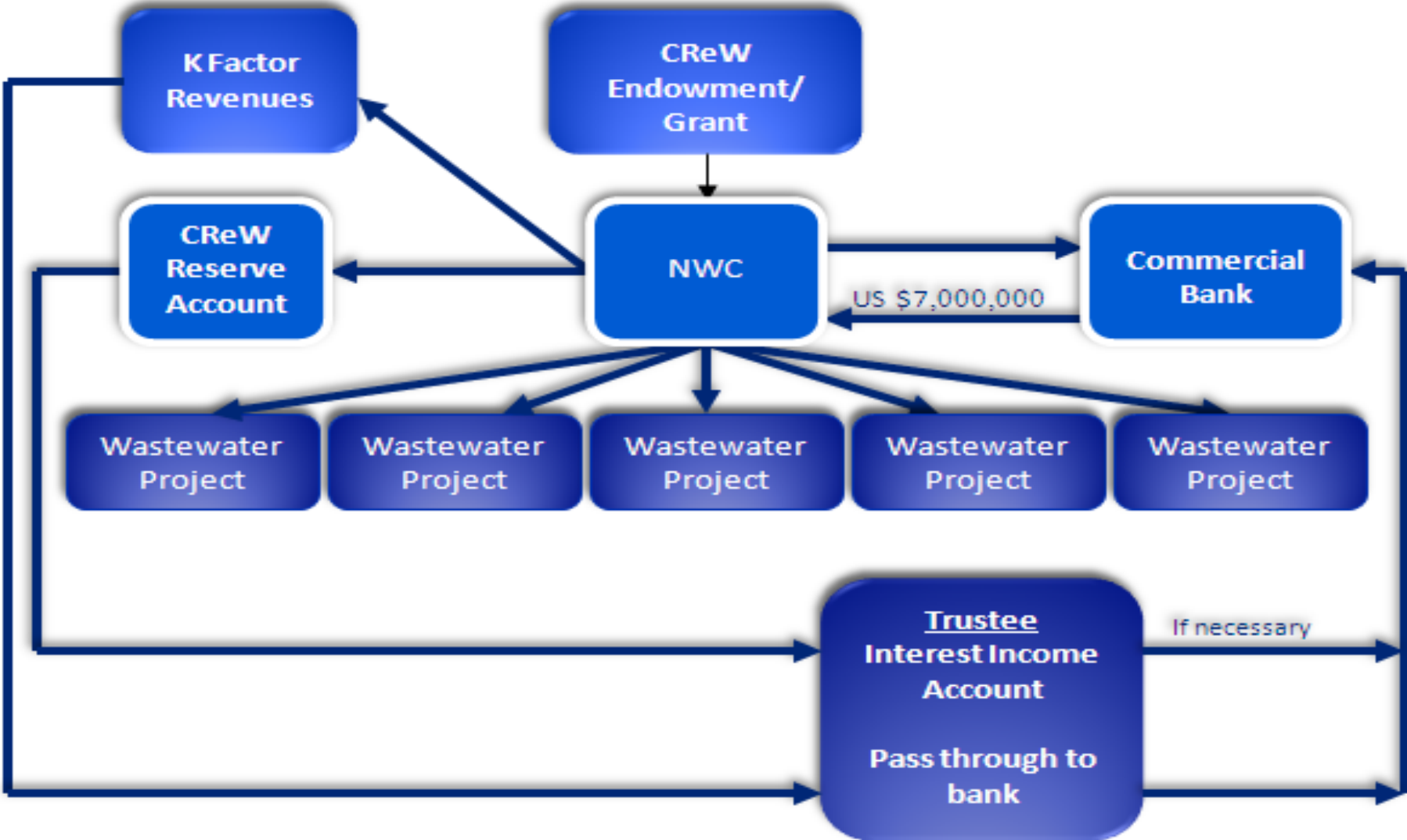
Testing Financial Mechanisms



- Structure of fund
 - Capitalization
 - Source(s) of capitalization?
 - – Initial
 - – Long-term
 - Amount(s) of capitalization?
 - Match requirements?
 - Leverage possibilities?
 - Protecting the corpus



Testing Financial Mechanisms





Issues for Sustainability



- Change the paradigm
 - waste as a resource
 - thinking of investors, users, govts
- Enabling environment – policy, laws, standards, tariff structures etc.
- Active engagement private sector
- Public Education
- Growing the fund - Sourcing capital to grow the fund
- Pipeline of projects





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THANK YOU

