

# Barbados' Green Economy Scoping Study

## Water Opportunities in a Green Economy

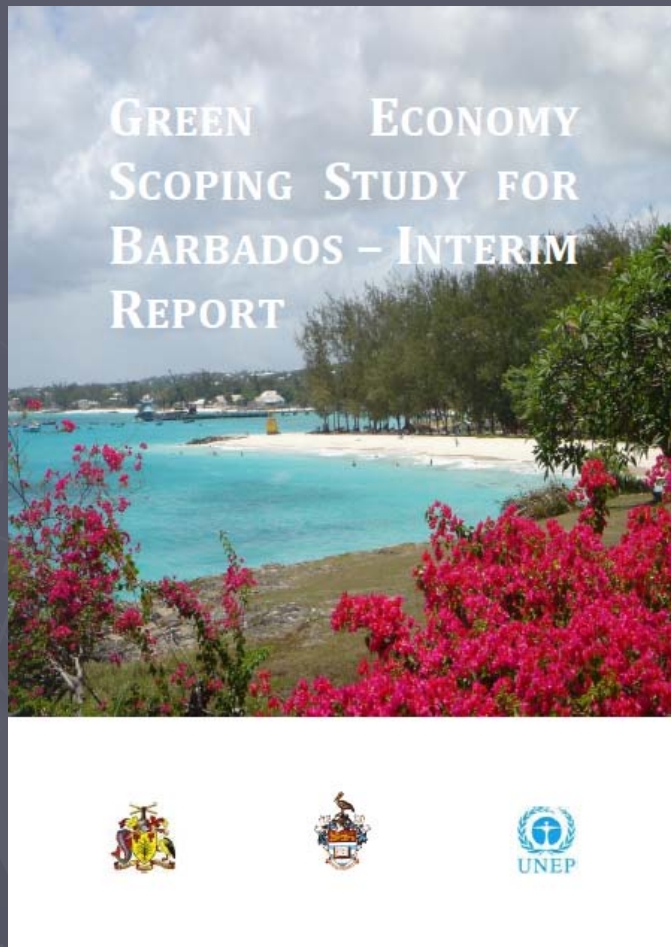
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**Water in the Green Economy in Practice: Towards Rio +20  
Zaragoza, Spain 3 – 5 October 2011**

# Study Background



- **Vision of Barbados as the foremost green economy in the Region**
- **Scoping Study covers:**
  - **Agriculture**
  - **Fisheries**
  - **Building/Housing**
  - **Transport**
  - **Tourism**
- **Water, Waste & Energy cross-cutting themes**

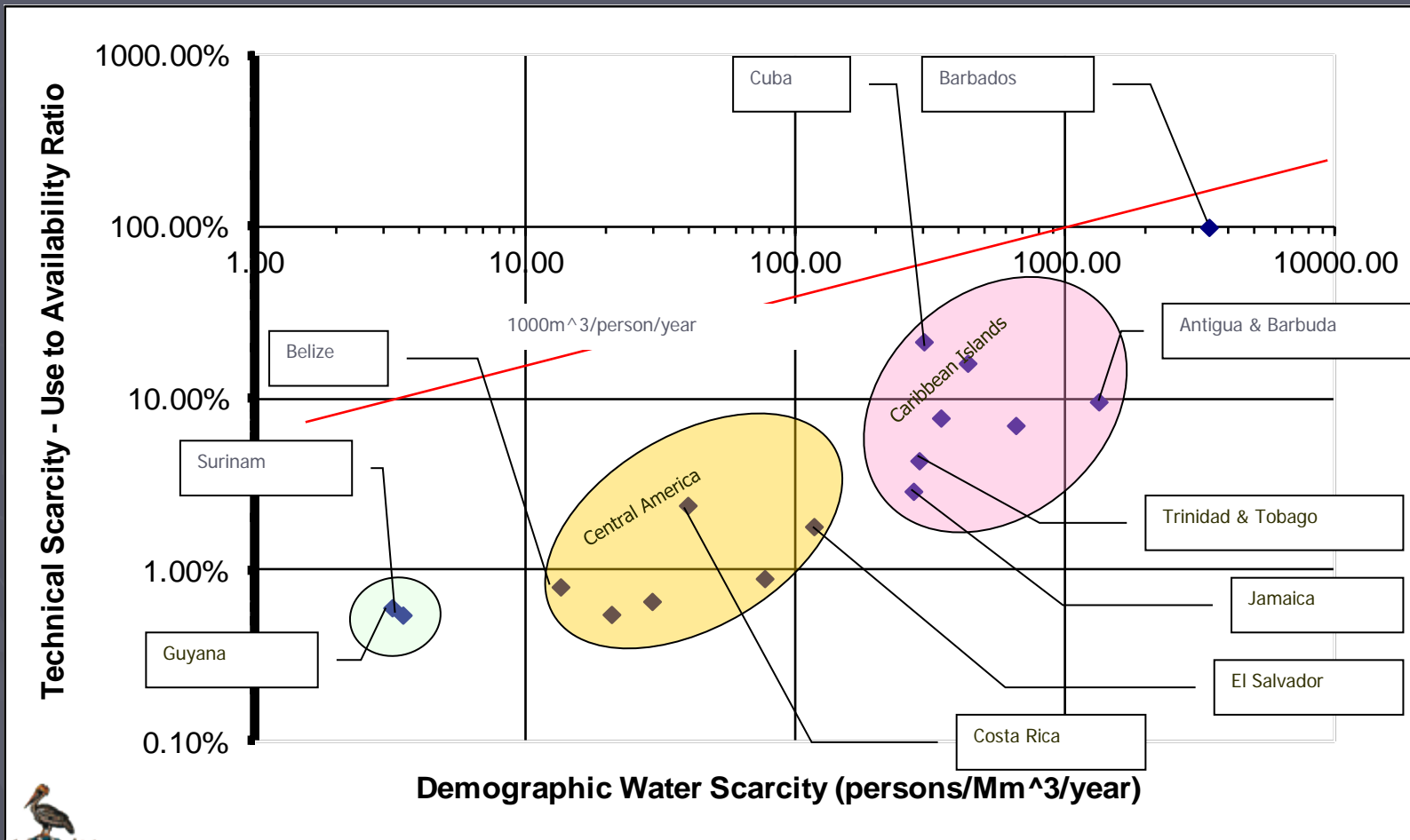
# Barbados Background Facts

- **Water resources**
  - ~300 m<sup>3</sup>/person/year
  - Groundwater & Desalination
- **Water services**
  - Statutory corporation (BWA)
  - Almost universal water supply coverage
  - 98% access to improved sanitation

# Availability of Water Resources

Country	Total Renewable Water Resources, in Km <sup>3</sup> /year	TRWR per head of population, in m <sup>3</sup> /capita/year	Total withdrawals per capita, in m <sup>3</sup> /capita/year	Agricultural Use, in percent	Industrial Use, in percent	Domestic Use, in percent	Desalination, in Mm <sup>3</sup> /a
Antigua & Barbuda	0.052	702	78.13	20	20	60	3.3
Barbados	0.080	294	334.6	22	44	34	44
Belize	18.560	69 756	597.6	20	73	7	6.9
Cuba	38.120	3 358	727.5	69	12	19	
Grenada	-						
Guyana	241.000	313 802	2 147.0	97	1	2	
Jamaica	9.404	3 482	156.1	49	17	34	0.5
St Vincent & Grenadines	-		85.78				
Trinidad & Tobago	3.840	2 929	238.8	6	26	68	36.5

# Water Availability



# Water Scarcity Water Footprints

Country	Water Scarcity %	Water Import Dependency
Barbados	445	55%
Belize	2	9%
Cuba	50	10%
DR	39	6%
Haiti	48	1%
Jamaica	28	32%
Suriname	0.51	6%
T&T	35	46%



# Concerns (= Opportunities)

- **Groundwater pollution**
- **System losses**
- **Network coverage**
- **Sustainability**
  - **Economic**
  - **Environmental**
- **Climate change (may be)**

# Scoping Study Outcomes

**Overview of the Sectors considered with respect to water opportunities**





# Agriculture

**Mostly small farmers involved, for non-sugar crops irrigation is a necessity, drip irrigation is the norm.**

- **Provide better access to water through infrastructure**
- **Expand use of Rainwater Harvesting**
- **Need to improve on-farm water use efficiency**
- **Application of new technologies (e.g. green houses)**
- **Improve tillage and application of agrochemicals**
- **Move to higher value-added production**

# Fisheries

**Dominated by pelagic & flying fish (seasonal),  
better integration with agriculture**

- **Improvements in water use at processing facilities**



# Building & Housing

## Densely developed coastal corridor

- 25% of population is within 2km of coast
- Need to introduce newer technologies
  - Scope in the wastewater treatment field
  - Improve use efficiency generally
  - Supply augmentation (RWH)
- Government needs to lead through procurement



# Transport

## Car ownership dominates transport

- 90,000 private cars growing at ~4% pa
- Stormwater disposal is to either suckwells or to the marine environment



# Tourism

**Hotels are doing a lot but this needs to expand whole of tourism sector**

- **Financial incentives to improve water use efficiency**
- **There is a need for standards and certification**



# Issues and Constraints

Water sector governance needs to be brought up to date to better cope with challenges

- High cost of capital is problematic
- Uncertain role for the private sector in a sector normally dominated by the public sector
- Standards and regulations are often unclear
- Supportive policies are in place but need clarification and refining
- Access to technology is not a problem the knowledge and ability to apply is a challenge



# In Conclusion

There are new 'green' opportunities for the water sector.

There are opportunities to highlight existing or proposed initiatives as making a 'green' contribution

It's not rocket science, many of the opportunities will contribute to sustainability

