

### DIALOGUE WITH CARIBBEAN AMBASSADORS

# Towards an Effective Sustainable Development Program for the Caribbean

Presentation by the Department of Sustainable Development to Caribbean Ambassadors

Washington D.C., March 31, 2009

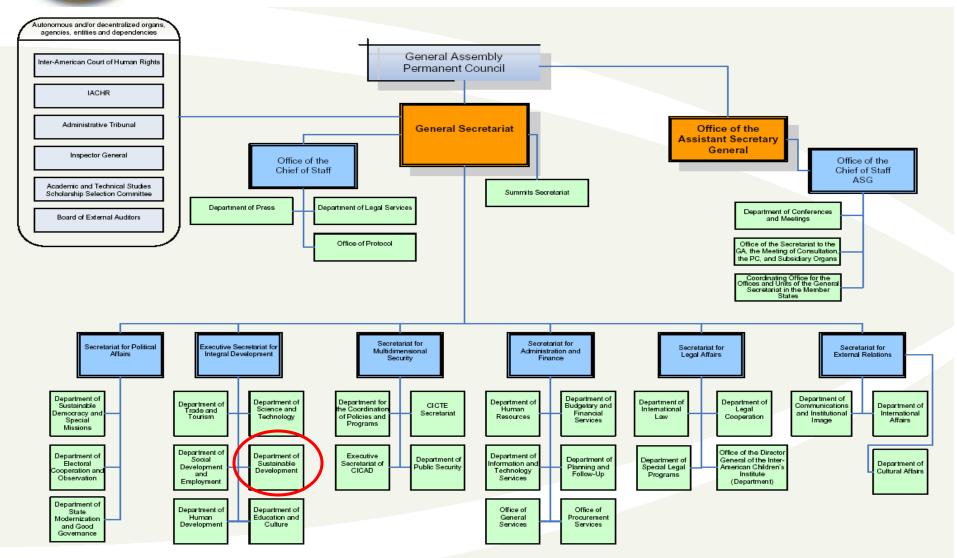


#### **About DSD**

- **+ 40 years** of experience on Sustainable Development and Environment in the Americas.
- Principal Technical Arm of GS/OAS, responsible for supporting Political Organs of OAS and meeting technical-policy needs of Member States on Environment and SD.
- Facilitates regional exchange of information and cooperation through project execution, policy recommendations, support to political bodies and Ministerial Processes.
- Vehicle for Public Participation in Sustainable Development and Environmental Management
- Supports Program of Work of the GS in addressing sustainable development and environment in its strategic areas (SG Program of Work for the GS/OAS 2006-2009)
- \* See (CP/CISC-17/03)

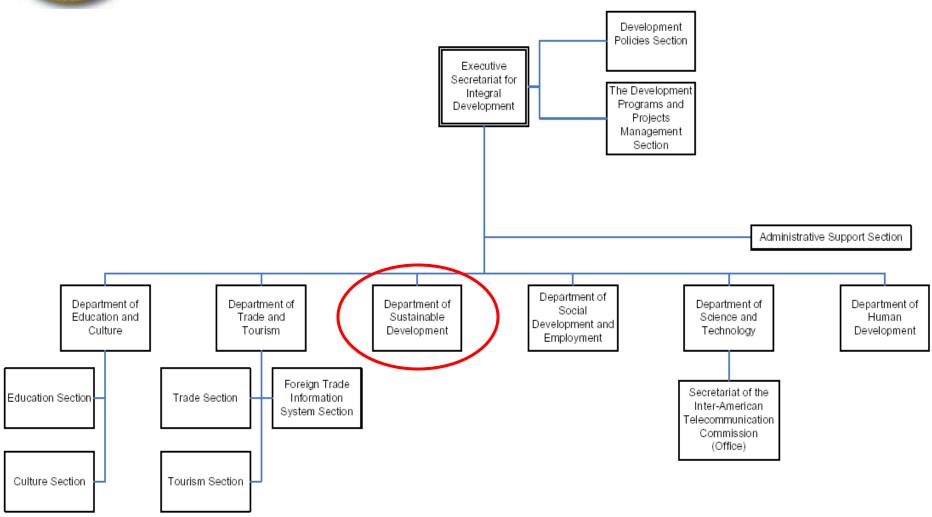


#### About DSD (2)





#### About DSD (3)





#### About DSD (4)

DSD Directors Office (Mr. Cletus Springer)

#### Divisions

- Integrated Water Resource management (Mr. Jorge Rucks)
- Conservation and Sustainable Use of Biodiversity (Mr. Richard Huber)
- Energy and Climate Change mitigation (Mr. Mark Lambrides)
- Environmental Law, Policy and Good Governance (Mrs. Claudia de Windt)
- Management of Natural Hazards Risk and Climate Change adaptation (Mr. Pablo Gonzalez)
- Our interns: Mauricio Solano, Cesar Garcia and Diana Galeano





#### **Our mandates**

- -Executive Order No. 96-6 (Creation of DSD)
- -Summit of the Americas Process
- -General Assembly Resolutions
- -CIDI and CIDS Resolutions
- -Santa Cruz +10 Declaration

"Securing Our Citizens' Future by Promoting Human Prosperity, Energy Security and Environmental Sustainability"



- -Inter-American Program on Sustainable Development (PIDS) 2006-2009
- -Strategic Plan for Partnerships for Integral Development 2006-2009
- -Declaration on Security in the Americas (October 28, 2003)
- -PC Committee on Hemispheric Security
- -Joint Consultative Organ (JCO) on Natural Disasters
- -National Focal Points



#### **Energy and Climate Change**

#### Purpose:

Support OAS Member States in efforts to increase the sustainability of the energy sector

- Reduce costs
- Increase reliability
- Expand access to modern energy services
- Reduce local and global environmental impacts



#### **Energy and Climate Change**

- Strategies for energy sustainability in the Caribbean:
  - ◆ Diversify energy sources (i.e. renewables)
  - ◆ Efficiency and conservation
  - ◆ Increase cooperation and integration between countries
  - ◆ Improve governance and management of the sector



#### **Energy and Climate Change**

- Current activities for energy sustainability in the Caribbean:
  - ◆ Caribbean Sustainable Energy Program (CSEP)
  - ◆ US-Brazil Biofuels Partnership
  - ◆ "Bilateral" Technical Assistance Activities
    - Belize Cellulosic Ethanol
    - Geothermal Development (SKN, StL, Dominica)
    - St. Kitts and Nevis Renewables
    - Solar Hot Water Heating Initiatives (Grenada, StL)
  - ◆ Sustainable Energy Partnership for the Americas (SEPA)



## Caribbean Sustainable Energy Program (CSEP)

Project Purpose: Address market conditions for the development and use of renewable energy and energy efficiency systems by mitigating the barriers to their implementation and use

- Countries: Antigua & Barbuda, Bahamas, Dominica, Grenada, St. Lucia, St. Kitts & Nevis, St. Vincent & the Grenadines
- ◆ Project Partners: OAS\*, CARICOM, CARILEC, Renewable Energy and Energy Efficiency Partnership (REEEP)
- ◆ Project Duration: 36 months
- ◆ Project Funding: €1.4MM (EU) plus €0.570MM (partners in-kind)





# US-Brazil Biofuels Partnership

- OAS is providing technical assistance on behalf of the USA and Brazil to several "thirdcountries" in the Partnership, including:
  - ◆ Dominican Republic
  - ◆ Haiti
  - ◆ St. Kitts and Nevis
  - ◆ Jamaica

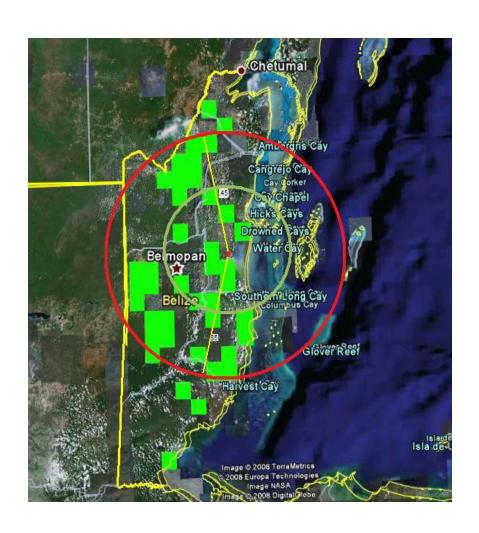






# Cellulosic Ethanol: An Assessment of the Potential Market in Belize

- Explore the potential for the development and use of cellulosic ethanol
- Undertook: Stakeholder consultations; research; field investigations; expert reviews...
- Results: Outline a pathway for development





## **Geothermal Technical Assistance Activities**







# What Next? Planned Activities

- Waste-to-energy program
- Belize sustainable energy
- Build on biofuels partnership
- Work with WB, OECS,
   CARICOM... toward regional electricity regulation



# Challenges and Opportunities

- Lack of energy sector governing capacity
- Monopolistic electricity sector
- Nationalistic versus regional approach
- "Shot gun" approach infrastructure development decisions







### World Summit on Sustainable Development [Plan of Implementation, Article 4]:

- Good governance
- sound environmental, social and economic policies
- democratic institutions responsive to the needs of the people
- the rule of law
- enabling environment for investment

...are the basis for sustainable development.



#### The DSD

- promotes environmental governance through national institutional capacity building and the strengthening of national environmental laws and their application; and
- works to improve sustainable development policies and programs, legal and institutional frameworks, including access to and the flow of information among key stakeholders through mechanisms that ensure civil society involvement.



#### **Objectives:**

- 1) Enhance the effectiveness of environmental laws, policies and institutions in the region.
- 2) Improve the capacity of government and civil society in the different areas of environmental law and enforcement, including the negotiation and implementation of agreements.
- 3) Promote mechanisms that advance the incorporation of sustainable development concerns into decision-making.



### The Environmental Law, Policy and Good Governance Division:

 Contributes to the growth and development of environmental institutions and law in member States on the subject of environment and sustainable development.

#### ...through platforms such as:

- The Inter-American Forum on Environmental Law (FIDA)
- The Environmental Law Advisory Group



#### **The Inter-American Forum on Environmental Law (FIDA):**

- Network of experts and officials in environmental law and enforcement
- Forum to exchange knowledge and experiences in environmental law
- Facilitates training and capacity building
- OAS-DSD serves as the Secretariat

#### 4 Priority Themes:

- 1) Trade, investment and environment
- 2) Water law and policy
- 3) Climate change and the domestic environmental law agenda
- 4) Conflict prevention and management of shared natural resources

**Most Caribbean Member States have designated Focal Points** 



#### **Current Initiatives in the Caribbean**

- Trade and Environment in the Americas Project
- Caribbean Emergency Legislation Project (CELP)
- Assessing and Mitigating the Impacts of Climate Change on Coastal Infrastructure in Jamaica (Coastal Vulnerability Assessment Project)
- Sustainable Development in the Caribbean: Contemporary Issues, Challenges and Opportunities (Publication)



#### **Trade and Environment in the Americas Project:**

- Respond to trade-related capacity building needs in the area of environmental management. The project addresses priority challenges of OAS member States in the following areas:
  - (a) Sound management of chemicals
  - (b) Public participation and effective enforcement of environmental laws
  - (c) Market-based approaches to the conservation of biological diversity, through the support of PES
  - (d) Trade and environment capacity building



#### **Trade and Environment in the Americas Project:**

#### Some activities:

- Database of existing and proposed trade Agreements that contain environmental provisions (including the recent EC-CARIFORUM Economic Partnership Agreement)
- Develop 'tool kit' on trade and sustainable development
- Drafted a Trade and Environment Program for the Caribbean



#### Caribbean Emergency Legislation Project (CELP):

#### **Objectives:**

- Build legislative capacity to enhance legal and institutional frameworks for state of emergency and budget appropriation.
- Develop recommendations on how to improve legislative channels and administrative procedures during, and immediately after, the occurrence of a natural disaster.



# Vulnerability Assessment of the Coastal Infrastructures of the Caribbean to the Impacts of Climate Change:

#### Objectives:

- Assess the vulnerability risks and macro-economic impacts associated with the adverse impacts of climate change on the integrity of social and economic infrastructures.
- Identify engineering and other solutions for strengthening the resilience of infrastructure determined to be at the highest risk.
- Strengthen technical capacities of the building professionals in conducting effective vulnerability risk analyses.



# Publication: Sustainable Development the Caribbean: Contemporary Issues, Challenges and Opportunities:

- Only known publication on the subject contained a compilation of presentations made at an International Conference held in Jamaica in 1990 published by the International Institute for Research on Public Policy (IRPP).
- OAS-DSD Publication "was conceived to aggregate the diverse initiatives, including successes, challenges and opportunities of the Caribbean SIDS, related to key aspects of sustainable development..."



#### **Challenges**

- Financing
- Regional cooperation
- National and regional coordination
  - Communication

#### **Opportunities**

- Secure greater funding with the support of Member States
- Replicate successful initiatives
- Deepen cooperation with domestic and regional stakeholders



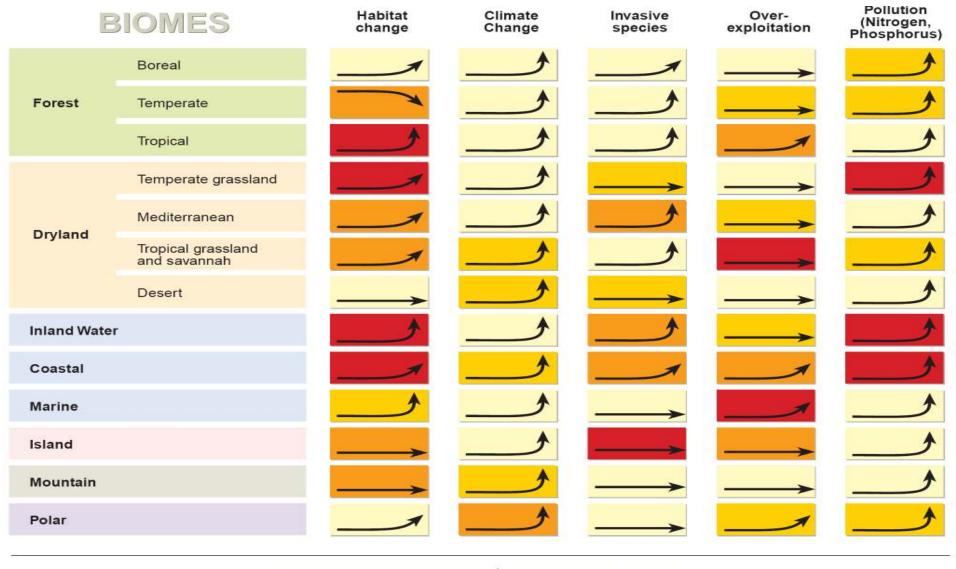
#### **Biodiversity and Land Management Division**

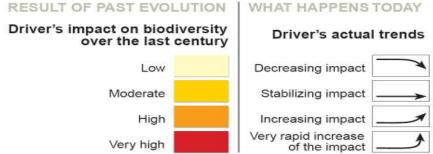
# Inter American Biodiversity Information Network (IABIN)

- 1. Specimens
- 2. Species
- 3. Ecosystems
- 4. Invasive Species
- 5. Pollinators
- 6. Protected Areas









#### ReefFix Valuation of Marine Ecosystems

- Parque Nacional del Este -- DR
- Moriah Harbour Cay National Park in Exuma in the Bahamas
- Grenada System Plan for National parks
- Haiti's Caracol's Mangroves Park (N-E of Haiti)
- Montego Bay Marine Park Trust, Jamaica



#### Establish Payments for Ecological Services

<u>Carbon markets</u> the absorption of carbon dioxide from the atmosphere.

Water markets (Mexico) provide payments for nature's hydrological services filtering of water through wetlands, creation from cloud forest.

Biodiversity markets (Costa Rica) pay annual fee e.g. \$40/ha/yr for the management and preservation biological processes as well as habitat and species.

**Bundled payments** (Caribbean?) secure all or a combination of carbon, water, and biodiversity services. Bundled payments also include certified timber or certified agricultural produce.



#### Shrimp farms replacing mangroves in Gulf of Fonseca, Honduras

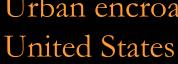




1987-1999: shrimp farms and ponds have mushroomed, carpeting the landscape around the Gulf of Fonseca, Honduras, in blocks of blue and black shapes



ONE PLANET MANY PEOPLE Atlas of Our Changing Environment



### Urban encroachment on Florida's Everglades,

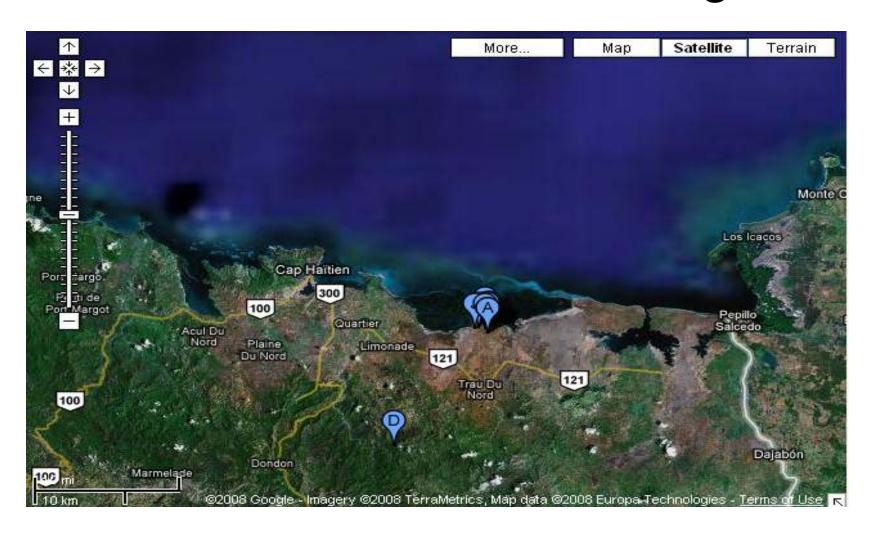




- 1973: Rapid urban expansion has converted farmlands to cityscapes
- 2002: Existence of vast wetlands "Everglades" threatened by urban encroachment



#### Haiti – Value of Reefs, Mangroves



#### **Ecosystems under threat from Climate Change**

Coral Reef bleaching/ Marine Parks with no take fishery zones



Integrated coastal zone management/Ecotourism



Contract Entered Contract

| Contract Contract
| Contract Contract
| Contract

Forest/wetlands

Payments eco services



Deforestation/Smartwood



Monoculture/Shade Nutmeg, Cacao, coffee alternative



<u>Areas of work</u>: policy strengthening – technology transfer/data – capacity building - strategic alliances – adaptation measures –

# Economic Valuation of the Montego Bay Marine Park

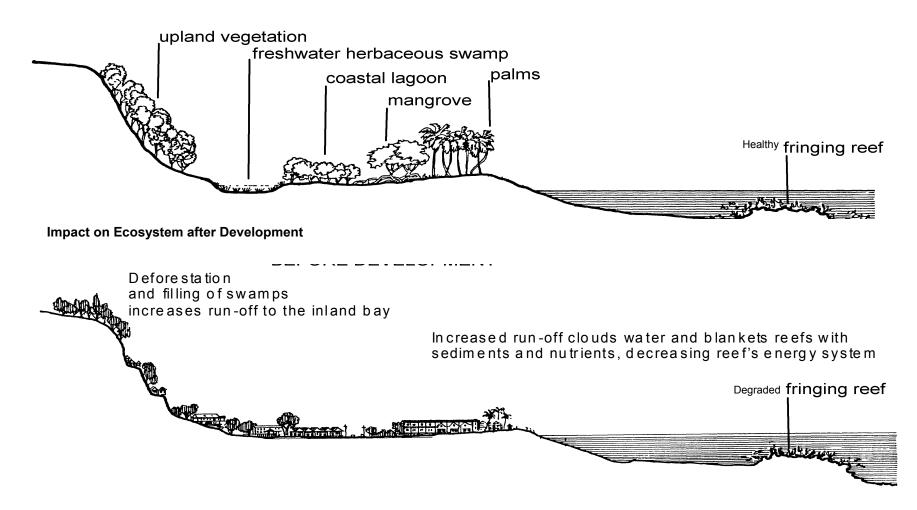




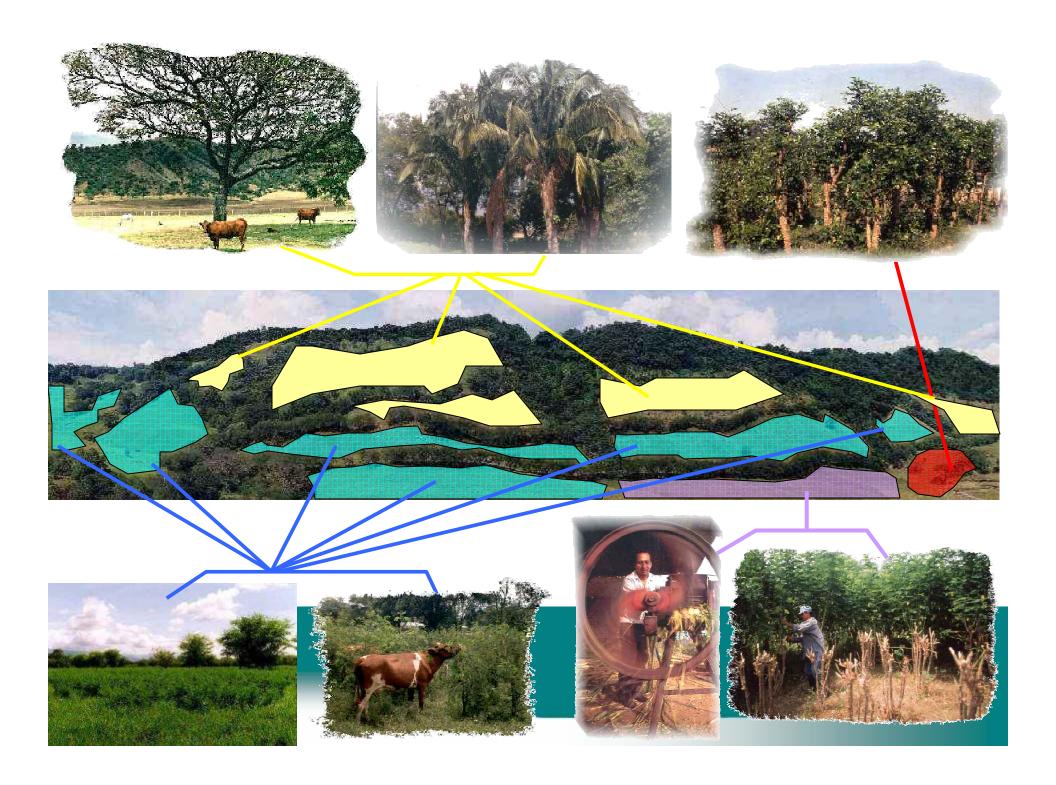


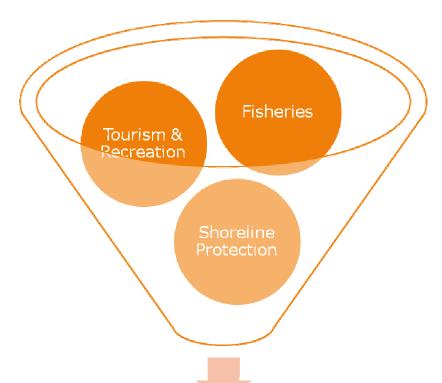


#### **Natural Environment before Development**









# Economic Valuation of Coral Reefs

Theory

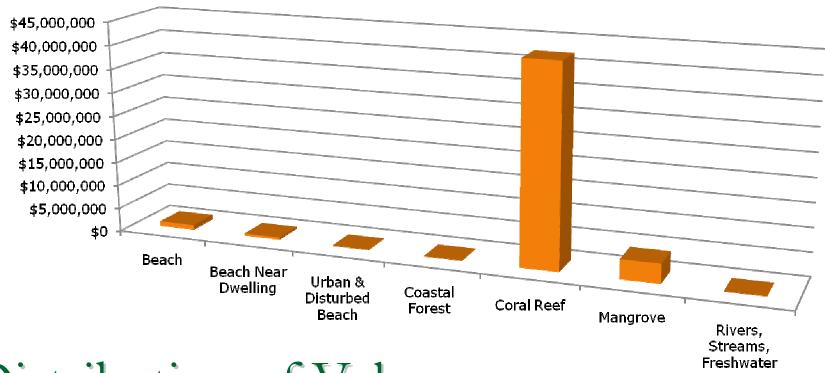


			Total
<b>Ecosystem Type</b>	\$/ha/yr	<b>Total Hectares</b>	Contribution
Beach Near	\$88,000	10.92	\$960,849.54
Dwelling	\$117,000	3.47	\$405,493.69
Urban & Disturbed			
Beach	\$0	0.46	\$0.00
Coastal Forest	\$1,826	23.41	\$42,749.49
Coral Reef	\$100,000	422.27	\$42,226,522.50
Mangrove	\$37,500	108.61	\$4,072,913.20
Rivers, Streams,			
Freshwater	\$1,595	2.10	\$3,348.74
MONTEGO B	\$47,711,877.16		

#### Value Transfer - Results



#### **MBMP Ecosystem Service Values**



#### Distribution of Values



### Economic benefits: Diving in the Caribbean

- The Caribbean attracts about 57% of the worlds 10 million active SCUBA divers
- By the year 2005, diving would generate about \$1.2 billion annually
- Dive tourism growing at a rate of 20% per year



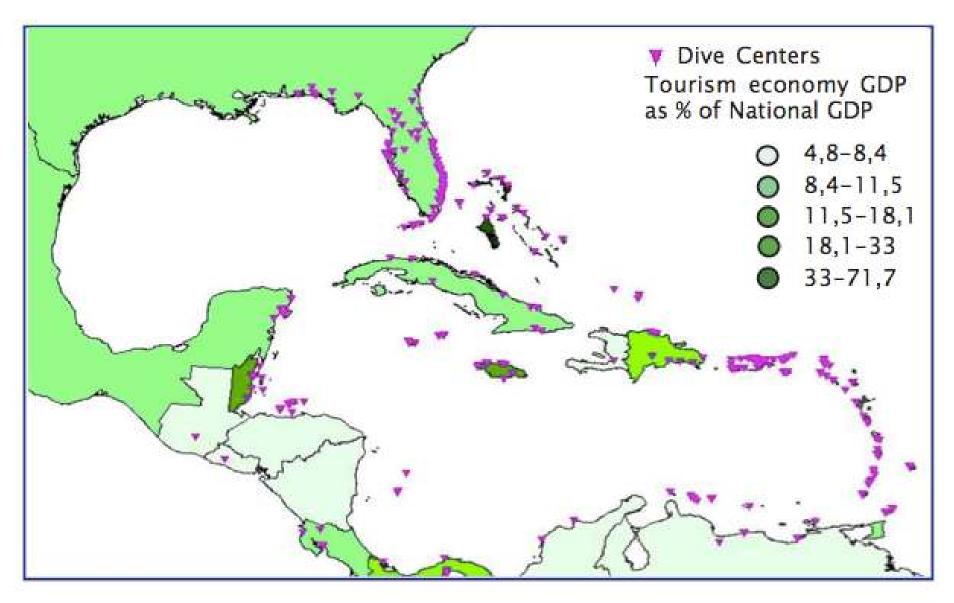
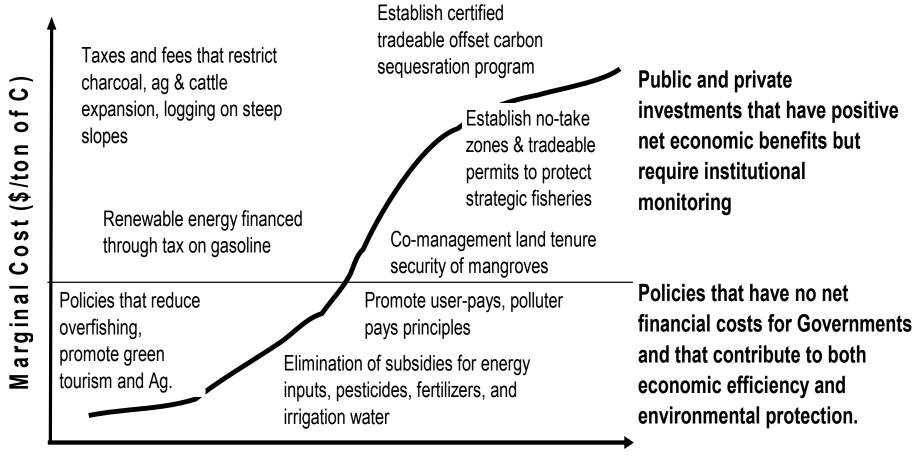
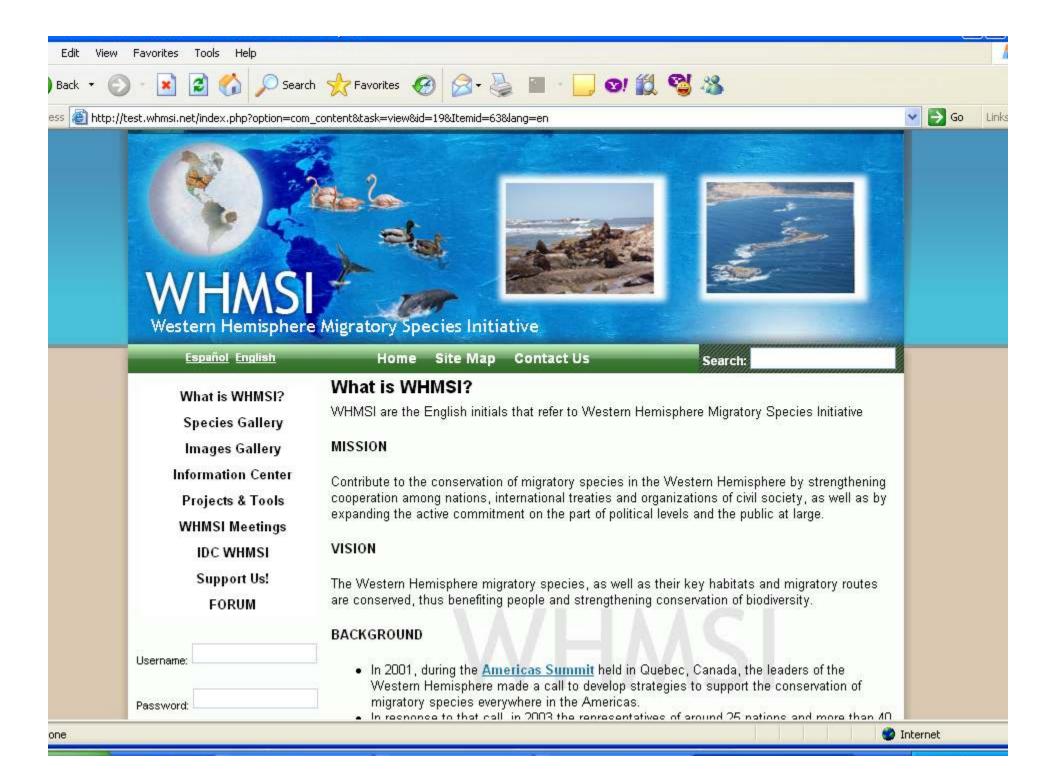


Figure 5: Dive Centers and Tourism Economy as percentage of GDP in the Caribbean Source: Preliminary data from Reefs at Risk in the Caribbean project, WRI (unpublished), based on [15] and UNEP-WCMC dive centers.

### Marginal Cost Policies for Improved Coastal Zone Management



**Improved Coastal Zone Ecosystem Health** 





Sudy of Caribbean Pilds

Members

Calendar

Discussions

Files & Pages

RSS Feed/Updates

23, 2009.

This is a Western Hemisphere Migratory Species Initiative (WHMSI) project, funded by OAS and USFWS (Div. of International Conservation). We are very grateful for the support we have received from many partners and sponsors. As new material

becomes available it will be added to the workspace, so check back often.





### Marine turtle tourism in the Western Hemisphere

- Barbados, Brazil, Cayman Islands, Costa Rica, Ecuador, Grenada, Guyana, Mexico, Panama, Puerto Rico, St Lucia, St Vincent, Suriname, Trinidad & Tobago, USA (Florida), ...
- 15 nations, at least 50 sites, and increasing ...

















#### Marine turtles: a driver of cash income



- •Two thirds of countries with developing economies have marine turtles
- •175,000 turtle tourists / year, more than 90 sites in more than 40 countries.
- 2002 US\$ 6.7 mio in Tortuguero (235 guides, 26.292 visitors)
- 1,280 employees (60% female) in Brazil by Projeto TAMAR (merchandizing & tourism)
- Gross revenue 3 x higher for use of turtle alive than dead

**Financial** 

Natural

Vital Economy
Social Well-Being
Cultural

Human

Social
Human

Built





- Implementing the Hyogo Framework for Action Regional Platform of the Americas with United Nations International Strategy for Disaster Reduction (UN/ISDR), and other Inter-American and UN System agencies
- Sharing information and knowledge and good practices on disaster mitigation: Inter-American Network for Disaster Mitigation (INDM) –AG/RES. 2314 (XXXVII-O/07)
- Increasing resilience and adaptive capacity of local communities to Climate Variability and Climate Change



- Integrating natural hazards risk into land-use planning and physical infrastructure retrofitting (i.e. schools)
- Promoting community-centered EWS for floods, integrating weather forecast and remote sensing data into community-operated systems, and ICT applications for Disaster Mitigation
- Using cost-benefit analyses, residual risk transfer, and financial instruments to urge more investments in vulnerability reduction.

#### Some projects in the Caribbean:

- "Central America Small Valleys Flood Alert and Vulnerability Reduction Program (SVP): Regional Platform Development" – with support from the German Government through the United Nations Platform for the Promotion of Early Warning (UN/PPEW), the United Nations International Strategy for Disaster Reduction (UNISDR),
- "Applying Information and Communication Technology for Disaster Mitigation" – with support from ICA-IDRC
- Regionalization of the Construction Quality Assurance (CQA) Program in the Caribbean: Haiti



### The Inter-American Network for Disaster Mitigation (INDM) Background:

- Dec 3-5, 2006: Santa Cruz +10, First Inter-American Meeting of Ministers and High-level Authorities of Sustainable Development;
- Jun 5, 2007: XXXVII (AG/Res. 2314), OAS Member States resolved to "recognize the Inter-American Network for Disaster Mitigation (INDM) as the permanent hemispheric mechanism for strengthening practical cooperation among intergovernmental agencies in the area of disaster reduction, especially by sharing technical information and best practices".



DEPARTMENT OF SUSTAINABLE DEVELOPMENT

**INDM** - Who are its Inter-Governmental members? Segment NGO University Segment **National** Segment **Operational Focal Points** Internationa IFI (NOFP) Cooperation Segment Segement

**Private Sector** 

Segment

Co-chair:
Office of
Disaster
Preparedness
and
Emergency
Management
(ODPEM) of
Jamaica



#### **Inter-American Network for Disaster Mitigation Products and services**





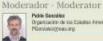
Cuerca del Rio Cabra Las Guerina de Cassellia Empresa de Paramaido Eléchia, S.A. de Panama eq you sayouthatas



The Supporturns & San Antonio River amount Assertant Androbys Expressing Center, USARTY Copy of Engineers Cyclerian CAsbert Carabassoc array rel



Juan Cartes Villagion Linker Kations University

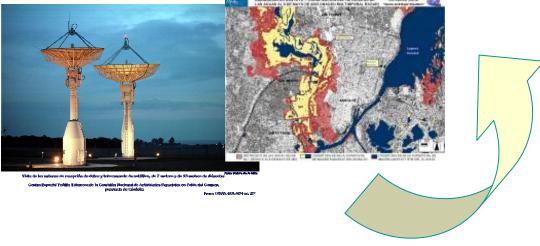


Public Generales Dirganización de los Estados Americanes (CEA)

INDM - Technical Securation Department of Sestimate Development Govern Secretarion of the Organization of American Status (CS-CAS)









WHAT'S AHEAD?



- 1 An **online Dynamic Institutional Mapping Tool (DIMT)**: with multiple functions and tools for networking among organizations, individuals —experts and policy-makers, and for surfing multiple information sources. *i.e. Calendar of Events*.
- 2 An **online Virtual Discussion Forum Platform** for the exchange and sharing of practical experiences and lessons learned, which through expert judgment and criteria provide the bases for the identification and replication of "good" practices. *i.e. Flood EWS, CQA, Public-private partnerships, School Retrofiting, etc.*



- 3 Face-to-face Thematic Encounters for promoting exchanges and sharing of practical as well as policy experience and the identification of South-South Cooperation Initiatives (SSCI). i.e. Second Hemispheric Encounter on "Cost-Benefit Analysis: Making a case to invest on Vulnerability Reduction in the Americas"
- 4 South-South Cooperation Initiatives drawn from face-to-face Thematic Encounters and Virtual Discussion Forums.
  i.e. Expert support for the formulation of project proposals, and mutual cooperation



5 Training and capacity building within specific areas, partnering with Centers of Excellence in High-tech Applications related to Disaster Mitigation. Also partnering with Leading Institutions (involved in Policy Formulation), Universities and Research Institutions specializing in Risk Management Policy. i.e. Workshop on Applying Remote Sensing Technology for Flood Risk Management, National Commission on Space Activities (CONAE) of Argentina



Recommendations from the

Meeting with the

National Operational Focal Points from the

Caribbean Small Island States

(CARICOM-CDERA Members)

1st Session of the Hyogo Framework for Action (HFA), Regional Platform of the Americas in Panama City, Panama on March 18, 2009



- Rationalize all regional initiatives and promote cooperation among Regional Inter-governmental Organizations, such as CDERA, CEPREDENAC and ACS;
- Use INDM to support the implementation of the National Platforms, by exchanging practical experiences, and promoting exchanges of government officials and specialist who can help other member States in developing their platforms;



- Use INDM to capture and make available good practices from the Caribbean among member States of other regions, namely South America and Central America;
- Incorporate UWI and other Caribbean universities, into the Network's segment of universities; and
- Support a broader discussion on Legislation for State of Emergency, throughout the OAS/CARICOM/WB Project; and utilize the Project to convene meetings of the Caribbean National Operational Focal Points.



### **Department of Sustainable Development**Organization of American States

# Integrated Water Resources Management



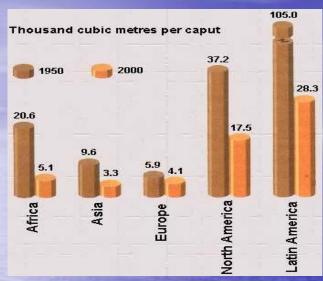


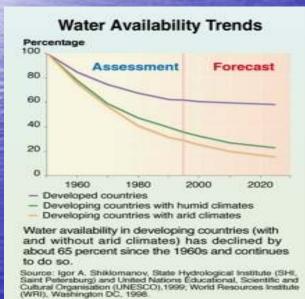
- 1/3 land arid or semiarid
- 1/4 population (100 million) in water-stressed areas
- Drought as a recurring natural phenomena
- 76 million with no access to potable water
- 116 million with no sanitation services

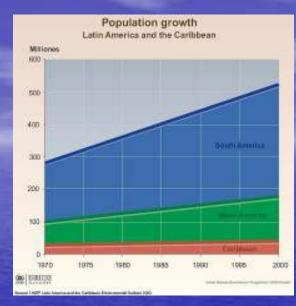
Water Supply ... water capital

	vvater Supply	water capital	
	Country	Water resources available per capi (m3/cap)	
	Jamaica	3,651	
100.00	Frinidad & Tobago	2,968	
	Puerto Rico	1,814	
	Antigua & Barbuda	800	
	Saint Kitts & Nevis	621	
	Barbados	307	
	Bahamas	66	
	Central America	31,064	
Con the second	Bolivia Bolivia	74,546	
ALLES THE VALUE	Peru	74,546	
	Paraguay	61,135	
2.50	Chile	60,164	
	Venezuela	51,021	
	Colombia	50,635	
	Brazil	48,314	DE LA PROPERTIE

#### Pop. & Econ. growth → Demand Growth









- Last 100 years: Pop. x 3; water use x 6
  - In 20 years, water supply/person to be reduced by a third
    - In 2050, 7 billion people in more than 60 countries will be affected by water scarcity

Projected increases in sectorial demands for water:70% in 25 years





Degradation of Upper watersheds

Contamination of water sources

Poor farming practices

Agricultural runoff

Mining/industrial residues

Overexploitation of Aquifers

Water losses

Management frameworks

#### CLIMATE CHANGE

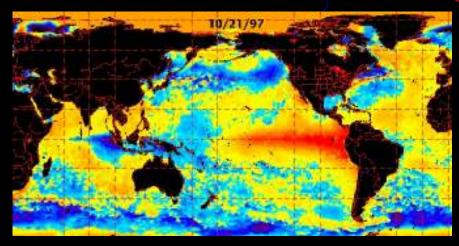


#### Water supply climate dependant....

**Droughts** 

Climate variability

Floods







Climate Change

Changes in rainfall patterns Increase in extreme events

Water Security implications



#### **OAS/DSD Water Resources Program**

Objective: Support member States in their efforts to improve the management, conservation and sustainable use of water resources, within the framework of social and economic growth

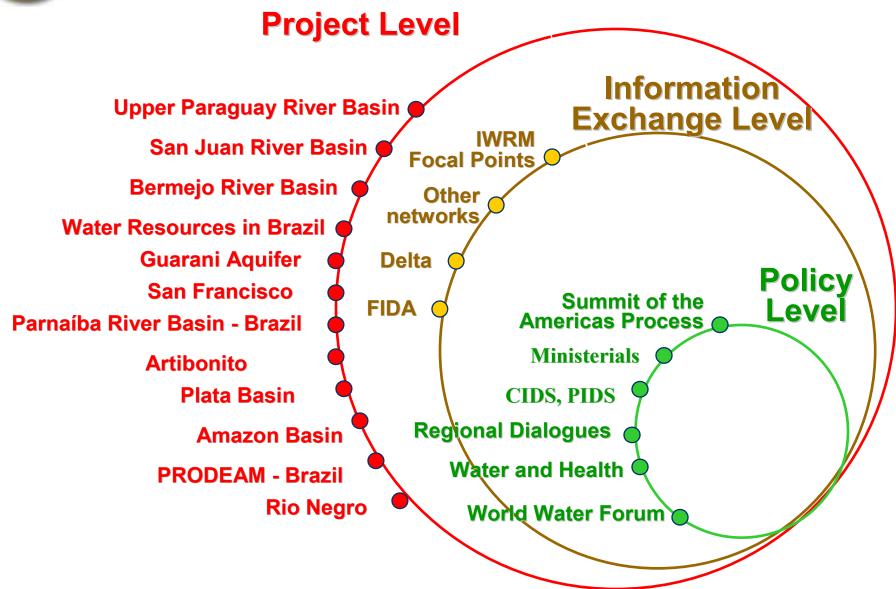
Development of policies and strategies for integrated water resources management



#### **Specific Actions**

- Focus on transboundary river basins
- Policy dialogues for Integrated Water Resources Management
- Generation and exchange of information and experiences
- Support to the development of legal and institutional frameworks for IWRM
- Capacity building in regional, national and local institutions
- Awareness and public participation











#### Actions in the Caribbean

- Strategic Utilization of the Transboundary Groundwater Resources of Hispaniola (Artibonito/Masacre)
- Development of Integrated Water Resources Management Policies in the Americas
- Potential areas for action: (regional approach)
  - Water and sanitation (wastewater plans)
  - Strengthen institutional capacities for forecasting and adaptation
  - Aquifer management/Saline intrusion
  - Alternative technologies for freshwater augmentation
  - Water resource legislation



#### Organizational Challenges

- Absence of an effective national and regional policy framework
- Lack of absorptive capacity due to brain drain and staff turnover
- Inefficient use of resources
- Preoccupation with meeting ISDA requirements over national imperatives
- Fragmented institutional arrangements lack of effective coordination mechanisms
- Absence of country ownership
- Lack of sustainability
- Way OAS-DSD is perceived locally as a foreign entity not as an extension of Governments

### Financial Challenges

- Dramatic decline in funding to region due to change in geographic focus of donors
- Donor fatigue
- More intense competition for available resources
- Presence of more and stronger regional intergovernmental agencies
- Changes in operational policies of donors such as GEF
- Lack of transparency and predictability in operational procedures of some donors

#### Opportunities

- Non-traditional donors
- Fostering closer fit between diplomatic relationships and national/regional interests
- Emphasizing enhanced technology transfer
- Emphasizing enhanced technical cooperation
- Promoting stronger role for national level agencies in program design, implementation and evaluation