

Support for development and application of renewables in small/island developing states (SIDS)

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Energy and Climate Policy -
Towards a Low Carbon Future

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Sustainable Development of the Caribbean

- The SEASCAPE 'patchwork' approach
- SIDS' vulnerabilities
- Multi-level governance
- Regional initiatives and key actors
- Issue linkages: ICZM, climate, energy, forests, fisheries, livelihoods > 'human ecology'
- Research questions

SEASCAPE: SIDS' SD Capacity

Domestic SD Capacity

- proponent/opponent balance
- legal and institutional framework
- civil society forces
- knowledge in policy
- technology in policy
- political opportunity structures
- market opportunity structures
- behaviour opportunity structures

SD Foreign Policy Capacity

- opportunities
- resources
- negotiating capacity

SIDS' vulnerabilities

- Indivisibility
- Lack economies of scale
- Narrow labour market
- Emigration/brain drain
- High level of dependence on global trade and donors (MICs/graduation)
- Remoteness/dispersal (for archipelagos)
- Vulnerability to natural disasters
- Lack regional integration

SIDS' energy issues

- Lack energy infrastructure, lack capital
- Utilities' ownership, structure
- 'Diesel' economies
- Low skills base (suitable for renewables?)
- Renewables and hurricanes/storms
- Sugar and bioenergy
- Geothermal
- The Chavez factor
- Trinidad & Tobago
- Timeliness

Multi-level Governance

- Vertical and horizontal policy integration
- Barbados Programme of Action (1994), Mauritius Strategy (2005)
- Regional specialists
- National generalists
- Key role of NGOs and IGOs in policy formulation and implementation
- Hispanic, anglophone, francophone, Dutch, lusophone language/policy communities

Regional initiatives

- Exogenous/endogenous initiatives
- EU ACP support (MICs & ODA) limited
- Canada out of 'environment'
- CCCCC, CRFM - not CREM (energy mechanism)
- CARICOM, CARIFORUM
- OAS manages REEEP Secretariat for Latin America and the Caribbean (LAC) through its Renewable Energy in the Americas (REIA) Initiative in the Unit for Sustainable Development and Environment
- UNDP, GEF SGP, UNECLAC, UNESCO
- Iceland and geothermal
- GSEII
- CREDP/CREBAP

EU

External action: Thematic programme for environment and sustainable management of natural resources including energy [COM (2006) 20] (Communication 25 January 2006) (“ecological dimension of development policy and the other external policies...to promote the environmental and energy policies of the European Union (EU) elsewhere in the world”)

Programme priorities:

- working to achieve **Millennium Development Goal 7** (Ensure Environmental Sustainability)
- promoting **implementation of EU initiatives and commitments at international level**
- improving the **integration by the EU of environmental questions**, particularly as regards combating poverty, by expanding the EU's responsibilities and through cooperation and specialist aid
- **improving international governance** as regards the environment and the EU's driving role, particularly by assisting regional and international environmental monitoring and assessment, aid for implementing multilateral agreements on the environment, and support for international organisations and processes concerned with the environment and energy;
- **promoting options for renewable energy**, particularly through institutional support and technical assistance, the creation of a legislative and administrative framework propitious for investment and business and encouragement for regional cooperation.

The Global Sustainable Energy Islands Initiative (GSEII)

Formed as an informal partnership in 2001 – in response to St. Lucia's commitment to become a sustainable energy demonstration country

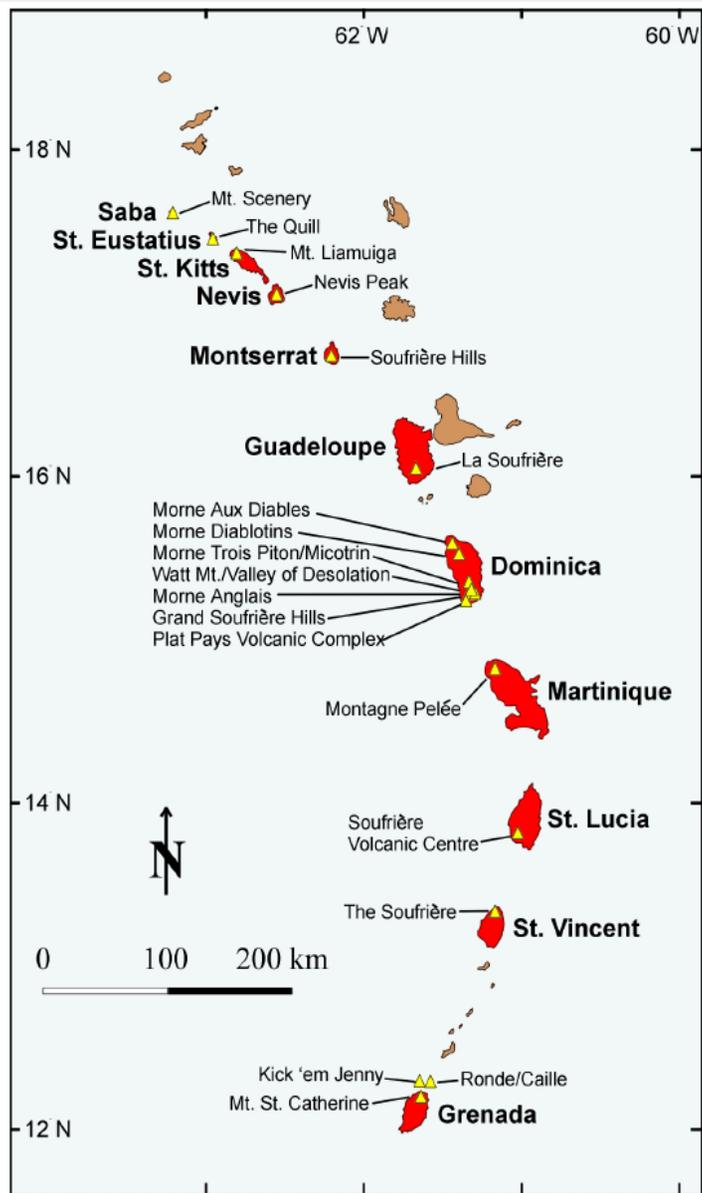
Partners:

- OAS
- Climate Institute
- UNIDO
- UNF
- Partner countries: St Lucia, Grenada, Dominica (2003), St. Kitts and Nevis, **Iceland**

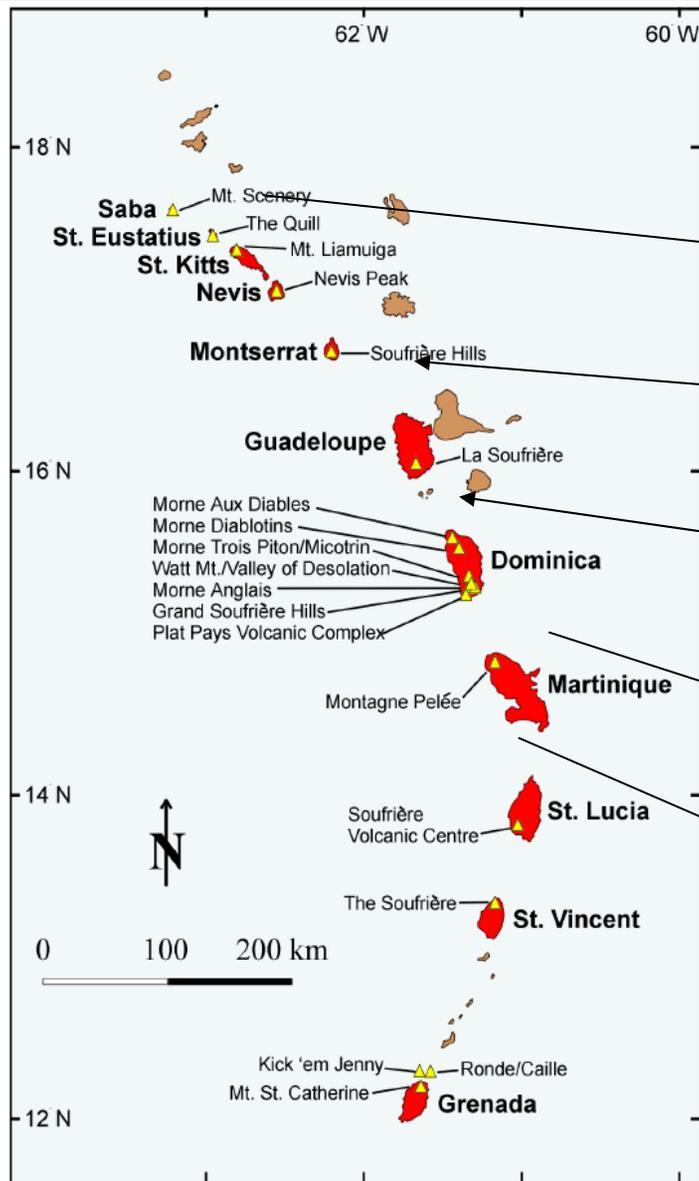
Strategic Energy Plans: existing partners 2002, future SEP's: Bahamas, St. Vincent & Grenadines, Antigua & Barbuda

Geothermal project (Geo-Caraibes)

promising for Dominica, St. Lucia, and St. Kitts and Nevis (also Guadeloupe, Martinique)



<i>Volcanic Islands</i>	<i>Survey</i>	<i>Pre-feasibility</i>	<i>Deep drillings</i>	<i>Installed capacity (MWe)</i>	<i>Expected Potential (MWe)</i>
Saba	yes				
St Eustatius	yes				
St Kitts	yes				
Nevis	yes				10-50
Montserrat	yes	yes			
Guadeloupe	yes	yes	yes	15	30 - 50
Dominica	yes	yes			50 -100
Martinique	yes	yes	yes		10- 50
Ste Lucia	yes	yes	yes		10-50
St Vincent	yes	yes			
Grenada	yes				



Geothermal resources might contribute to power generation in some islands instead of fossil fuels

St Kitts and Nevis, promising areas

Bouillante, the case history in Caribbean

Dominica, the most promising geothermal potential

Martinique, promising areas in the north and in the south

St Lucia, promising areas

Expanding Bio-Energy Opportunities in the Caribbean Region

Georgetown, Guyana, August 2007

The EU will reduce its preferential price of sugar to the African Caribbean and Pacific (ACP) countries by 36% over a three-year period starting in 2008. (Guyana, Barbados, Jamaica working together.)

Objectives of seminar:

- to disseminate the results of recent studies on Bio-energy in the Caribbean, including the potential for **regional carbon finance opportunities** under the Clean Development Mechanism (CDM)
- to convey and formalize the regional efforts towards the development of the **Caribbean Renewable Energy, Energy Efficiency and Bio-energy Action Program (CREBAP)**
- to initiate a dialogue towards the organization and preparation of **regional agroenergy strategy**, including bio-ethanol, bio-diesel and bagasse cogeneration opportunities
- to facilitate **dialogue between the public sector, private investors, carbon financiers and project developers** interested in the Caribbean bio-energy industry

Caribbean Regional Sustainable Energy High Level Seminar

Nassau, Bahamas 23 July 2008

Outcome

Caribbean Renewable Energy, Energy Efficiency and Bioenergy Action Programme (CREBAP) established (successor to CREDP) Memorandum of Understanding (MOU) initially signed August 6th, 2007 by the OAS, the IDB, the IICA, and the Republic of Guyana.

Actors

The Organization of American States (OAS) Inter-American Development Bank (IDB), Inter-American Institute for Cooperation on Agriculture (IICA)

Context

"In 2004, the Caribbean region imported about 163 million barrels of oil at a cost of \$ 6.5 billion. At current crude oil rates, the same amount of petroleum will cost our countries more than \$24 billion if we take into account growth in energy demand. Also, energy costs have risen by 370% in less than four years." (Albert Ramdin).

Opportunities

- Wind, solar, geothermal, biomass, hydro, and ocean energy technologies
- Maximizing the efficiency of energy production and consumption
- Expand the level of energy integration throughout the Caribbean

CREBAP

- Policies, legislation, regulations
- Innovative financing mechanisms
- Capacity building in RE field
- Improve regional RE information network

National initiatives: Cuba

- Policy style
- Infrastructure improvements
- Electricity saving: light bulbs replaced (1yr 8M)
- Replacing appliances, regulating market
- Industry: improved plant, displacing load peak to off-peak
- "Create new energy-saving culture" (curriculum, campaigns)
- Experience of green revolution in 'Special Period'
- Local assembly of European equipment (buildings, solar)
- "Use all options" - biomass, wind (100Mw), solar (426Kw, 5318 systems), water/hydro
- Democracy or hard hats?

Opportunities for Research

- Capacity analysis and development
- Advocacy projects: OAS, CHOGM in Trinidad, 2009
- Energy policy training, infrastructure (incl. utilities, ownership structures)
- Personal carbon allowances/budgets and individual carbon trading
- Integrated policy approaches - regional energy governance
- The University in SD (energy) of its Community
- Building design - no design school in SIDS
- Solar??