

# Overview of OAS activities in the Caribbean

*Supporting a Transition to a Sustainable Energy Future*

*Sustainable Energy Project Development Workshop:  
Experience, Strategies and Implementation*

19<sup>th</sup> of August 2014



Organization of  
American States



# Outline

- OAS/DSD country-assistance
- Summary of OAS interventions
- Current Initiatives and main activities
- Briefing on SECBI Project



## Hemispheric Partnerships

- **Energy and Climate Change Partnership of the Americas**  
[www.ecpamericas.org](http://www.ecpamericas.org)
- **Renewable Energy and Energy Efficiency Partnership**  
[www.reeep.org](http://www.reeep.org)

## Policy/Technical Assistance

- Support Preparation of National Energy Policies, Plans, Laws, Regulations
- Build human and institutional capacity
- Identify/assess sustainable energy project opportunities, and support their development

## What is ECPA

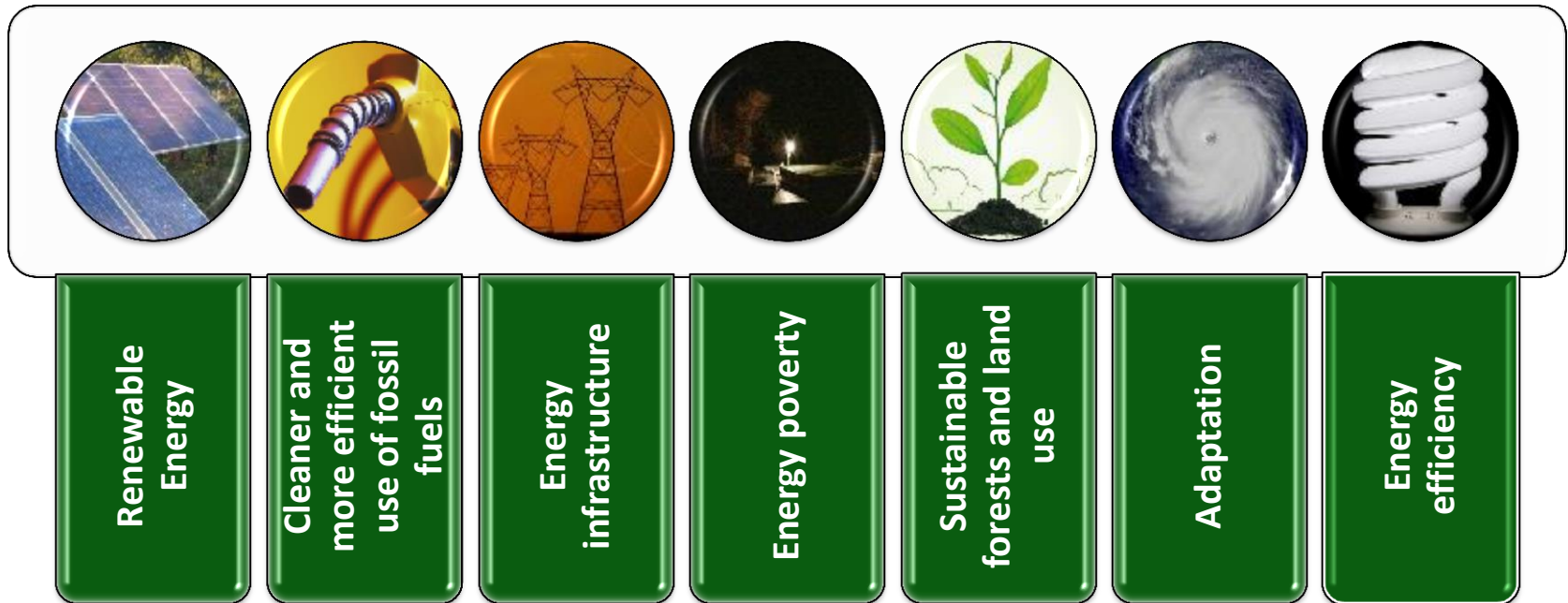
- **Launched at the 2009 Summit of the Americas held in Trinidad and Tobago.**

- Leaders underscored that energy and climate change are among the most important issues confronting our future and they reaffirmed their commitment to work together towards a clean energy future.

- **Fosters partnerships for greater dialogue, collaboration and awareness on energy and climate.**



## ECPA Seven pillars





Managed and  
hosted by the  
OAS

Technical  
assistance

Information  
access and  
exchange

Resource for  
governments  
and initiatives

Promotion of  
dialogue

Convening working  
groups, ministerial

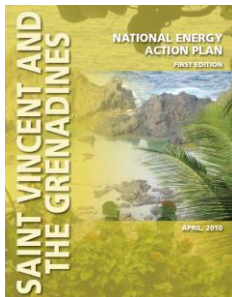
Focal points

# Policy Support

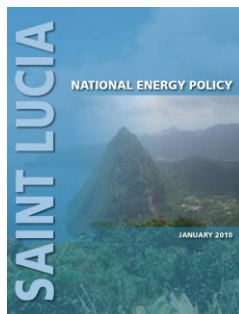


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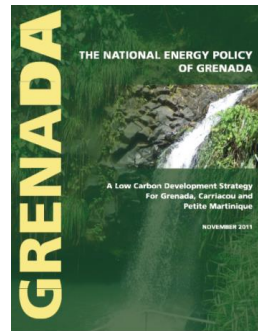
St. Vincent  
and the  
Grenadines  
(NEP 2009  
and SEAP  
2010)



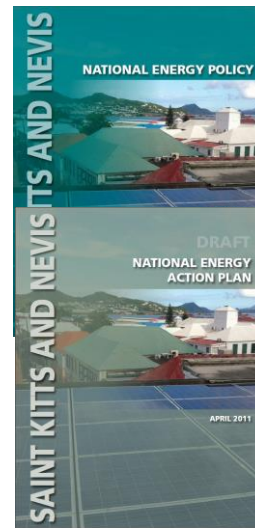
Saint  
Lucia  
(NEP 2011)



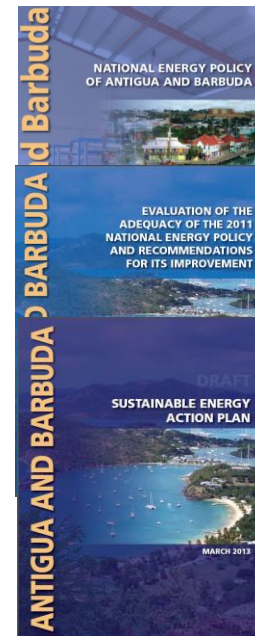
Grenada  
(NEP  
2011)



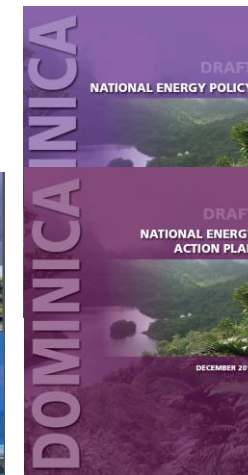
St. Kitts  
and Nevis  
(NEP and  
SEP 2011)



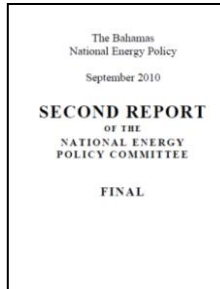
Antigua  
and  
Barbuda  
(NEP 2011,  
EAP 2013?)



Dominica  
(NEP/EAP  
2013?)



Bahamas  
(NEP  
2013?)



# Regulatory Support



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St. Lucia Final stakeholder consultation on Geothermal bill. Oct. 2011.

## Saint Lucia

(Final draft Geothermal Resource Develop. Bill 2012)

## Grenada

(Final draft Geothermal Resource Develop. Bill 2012)

## St. Vincent and the Grenadines

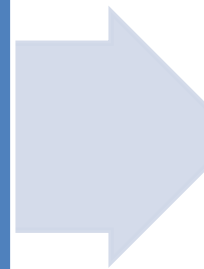
(Final draft Geothermal Resource Develop. Bill 2012)



## Demonstration Projects (RE)

Installation of PV  
systems in  
Government  
facilities

(Antigua and Barbuda,  
Dominican Republic, St Vincent  
and the Grenadines)



PV System National Energy  
Commission  
(Dominican Republic)  
Co-financed by CREDP/GIZ

## Demonstration Projects (EE)

Energy audits in office  
buildings

(Antigua and Barbuda,  
Dominica, Grenada, St Kitts  
and Nevis)



Hand-over audit tools in Dominica

## Demonstration Projects (EE)

Retrofit Government  
buildings  
(St Lucia and St. Vincent  
and the Grenadines)



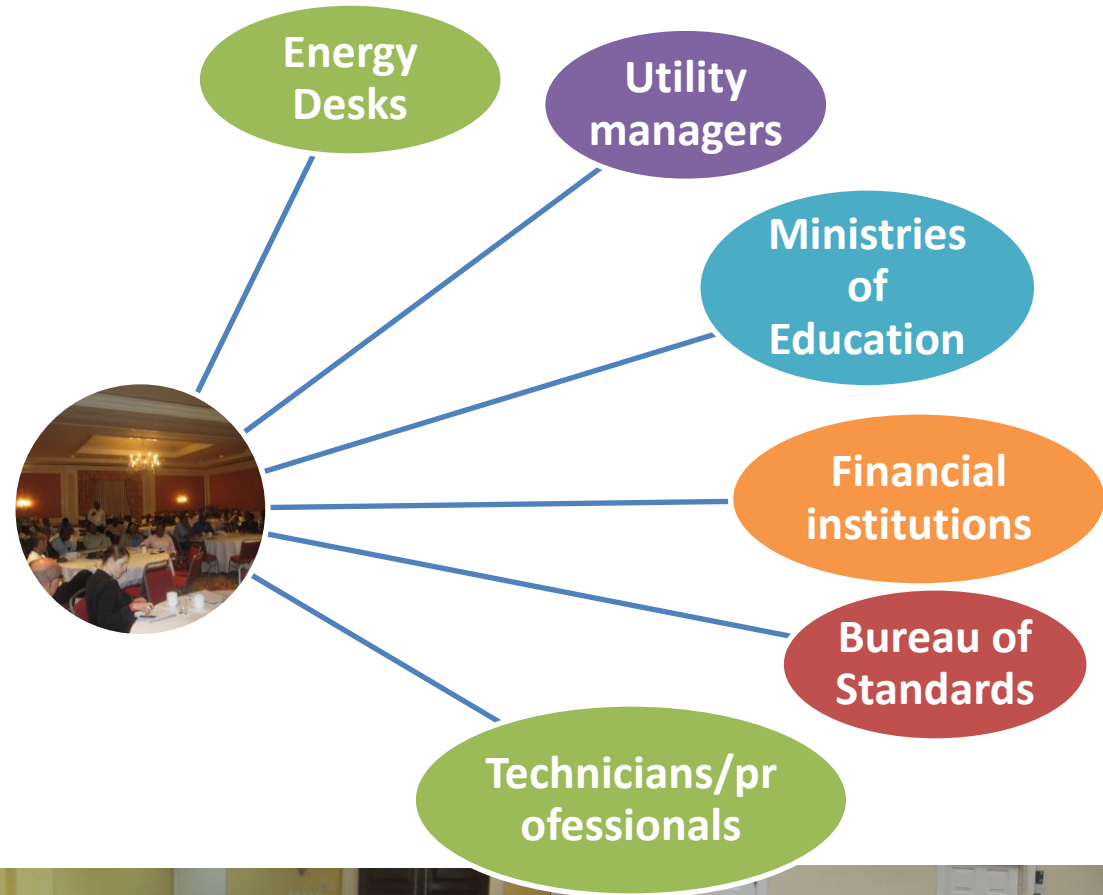
LED Retrofit at the Ministry of Infrastructure,  
Port Services and Transport in Saint Lucia

# Capacity Building



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## Public awareness on energy solutions

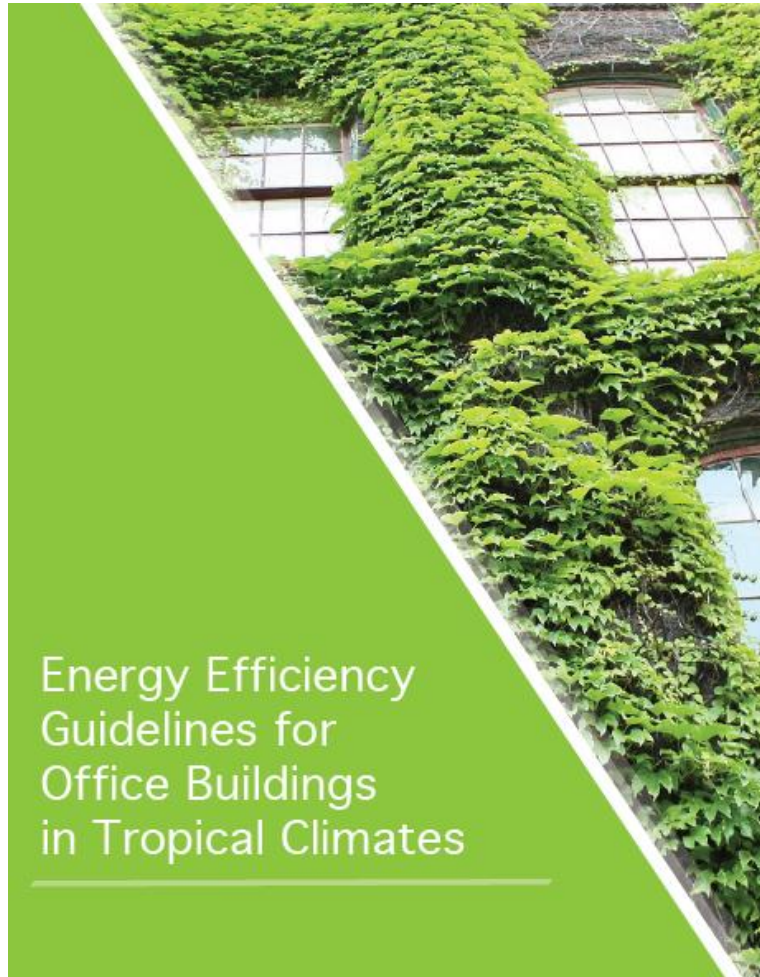


# Capacity Building

Bureau of Standards, architects, engineers



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Energy Efficiency  
Guidelines for  
Office Buildings  
in Tropical Climates

Deliver direction on how to overcome common challenges linked to implementing EE measures and using RE technologies.

# Capacity Building

Credit unions, commercial & develop banks)



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The Financiers' Guide to Sustainable  
Energy Lending in the Caribbean

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Serve as a primer for financial institutions interested in providing capital for sustainable energy projects.



# Caribbean Energy Education and Awareness Program



**Executed by:**



Organization of  
American States

**Financed by:**



European Union

**Partners:**



CARILEC  
An Association of Energy Utilities



reep  
renewable  
energy  
& energy  
efficiency  
partnership

- Builds human and institutional capacity to support sustainable energy projects and programs
- Teachers, students, and the general public.
- ECPA will adapt this program in the Dominican Republic in 2014-2015.

# Outcomes



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Caribbean Energy Education  
and Awareness Programme



The Pilot Program  
includes a Teachers'  
Guide, Learn and  
Save Textbook for  
students, interactive  
DVD, and educational  
games





The Caribbean  
Educator's Guide  
to Sustainable  
Energy Education  
and Awareness

*Working together to usher in an era  
of sustainable economic development  
in the Caribbean region*



Deliver direction to develop  
programs to address **myths  
and misconceptions** about  
sustainable energy  
in schools.

A promising avenue for widespread  
**social change!**

A decorative graphic on the left side of the slide. It consists of several colored rectangular blocks: a yellow block, an orange block, a teal block, a purple block containing text, a light yellow block, a red block, a teal block, and a light green block. A photograph of three students in a classroom is positioned in the middle-left area. The Organization of American States logo and name are located at the bottom of this graphic.

Teachers' Resources Booklet for  
Integrated Instruction in  
Sustainable Energy (Grades 5-7)

The logo of the Organization of American States, featuring a circular emblem with flags of member states and the text "ORGANIZATION OF AMERICAN STATES" around the perimeter.

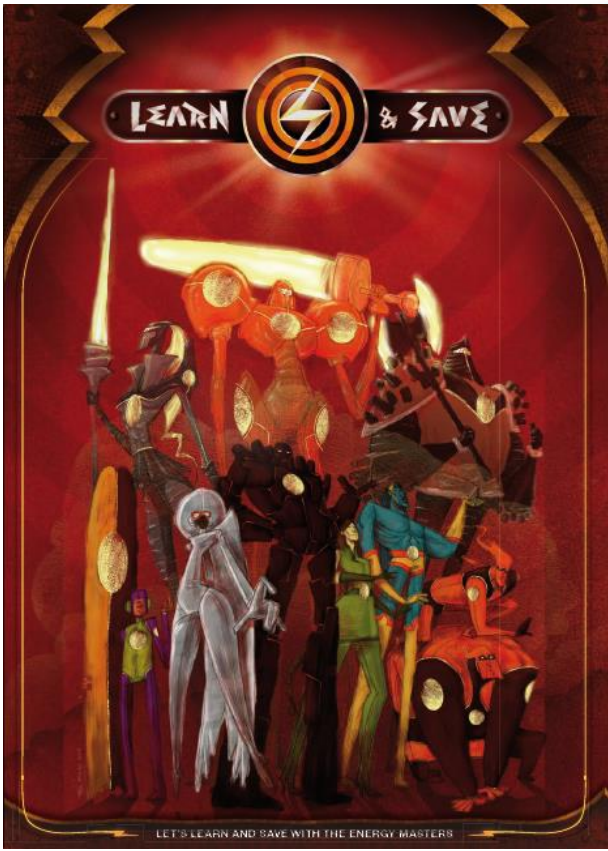
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Deliver direction to educate the **next generation** of scientists, engineers, and decision-makers to make **smarter, more informed choices**

# “Learn and Save” Text Book



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### HYDROPOWER

**DEFINING HYDROPOWER**  
Moving water is one of the oldest sources of energy in your planet. It was used thousands of years ago to turn a paddle wheel for purposes such as grinding grain. In this case, mechanical energy is harnessed from moving water. The amount of available energy in moving water is determined by its flow or fall. The faster the flow, the more energy it will generate and the greater the water head, the more energy it will produce. In hydroelectric production, water is accumulated in reservoirs created by dams, then released as needed to generate electricity. The potential energy of water held back by a dam is converted to kinetic energy as the water falls down a penstock, where it turns turbines to generate electricity.

**PRODUCING ELECTRICITY FROM MOVING WATERS**

**Gander Male**

### SOLAR

**DEFINING SOLAR**  
Solar Energy has been produced since the beginning of all universes. One of the attractive alternative sources, is the sun's rays (solar radiation) that reach the Earth, can be converted into other forms of energy, such as heat and electricity.

Solar energy is used to heat water, spaces and fluids, but it can also be converted to:

- Photovoltaic (PV) devices or "solar cells"
- Concentrating solar power plants

**HOW DOES PHOTOVOLTAIC WORK?**

### WIND POWER

**DEFINING WIND POWER**  
The wind is air in motion. It is caused by the uneven heating of the Earth's surface by the sun. Farmers have been using wind energy for many years to pump water from wells using windmills. During the day, the air above the land heats up more quickly than the air over water. The warm air over the land expands and rises, and the heavier, cooler air rushes in to take its place, creating wind. At night, the wind is reversed because the air cools more rapidly over land than over water. Today, wind is used to generate electricity.

**Wonder Winder**

**ADVANTAGES AND DISADVANTAGES**

In spite of the fact that solar is a renewable source of energy, it has some disadvantages. It is not available at all times of the day or in all areas of the Earth. It varies depending on location, time of day, and weather.

### WIND

**DEFINING WIND**  
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**Wonder Winder**

**Gander Female**  
Age: 70 years old  
Height: 2 meters 3.5 feet  
**Characteristics:** She is the biggest witch of the Winders' tribe. Her power allows her to manage air currents, storms and typhoons and modify the weather at her whim. Only energy circulates within her organs, so she is very light and can fly. When she is static, she wears a wind-up hat, when she flies, she wears a wind-up hat that can also transform into a wind-up hat that she uses to fly. Her cape can also transform into a wind-up hat.

### GEOTHERMAL

**DEFINING GEOTHERMAL**  
Like in Energy, geothermal energy in your planet comes from the Earth's deepest parts. The temperature below the sun's surface is continuously produced inside the Earth by the slow decay of radioactive particles, a process that happens in all rocks. When these substances, called magma, come out from the Earth's core, they can recover the heat as steam or hot water.

**PRODUCING ELECTRICITY FROM GEOTHERMAL SOURCES**

**ADVANTAGES AND DISADVANTAGES**

Geothermal energy is used to heat homes and to produce electricity by digging deep wells and pumping the heated underground water or steam to the surface.

Geothermal energy does not produce any pollution, and does not contribute to the greenhouse effect, because no fuel is needed. Once a geothermal power station has been built, the energy is almost free. It may require little energy to run a pump, but this can be taken from the energy being generated.

**Did you know?**

- At least six Caribbean islands — Cuba, Grenada, Comoros, St. Lucia, Guadeloupe, St. Vincent and the Grenadines — are located in areas with good potential for harnessing geothermal power.
- Guadeloupe has a geothermal plant. The nation's rock, hills and forest, and St. Vincent and the Grenadines have geothermal plants scheduled for construction.
- 10 Islands (Antigua and Barbuda, Barbados, Dominica, Grenada, Guadeloupe, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and the British Virgin Islands) are powered by geothermal energy.

### VOLCANO

**DEFINING VOLCANO**  
A volcano is a mountain that has a hole in the top. The hole is called a crater. The magma that comes out of the hole is called lava. The lava is very hot and can burn things. The lava can also be used to make things like bricks and tiles. The lava can also be used to make things like roads and bridges. The lava can also be used to make things like houses and schools. The lava can also be used to make things like cars and planes. The lava can also be used to make things like boats and ships. The lava can also be used to make things like airplanes and rockets. The lava can also be used to make things like spaceships and satellites. The lava can also be used to make things like computers and televisions. The lava can also be used to make things like radios and telephones. The lava can also be used to make things like cars and planes. The lava can also be used to make things like boats and ships. The lava can also be used to make things like airplanes and rockets. The lava can also be used to make things like spaceships and satellites. The lava can also be used to make things like computers and televisions. The lava can also be used to make things like radios and telephones.

**Volcano**

**Gander Male**  
Age: 10 years old  
Height: 2 meters 8 feet  
**Characteristics:** The volcano is a mountain that has a hole in the top. The hole is called a crater. The magma that comes out of the hole is called lava. The lava is very hot and can burn things. The lava can also be used to make things like bricks and tiles. The lava can also be used to make things like roads and bridges. The lava can also be used to make things like houses and schools. The lava can also be used to make things like cars and planes. The lava can also be used to make things like boats and ships. The lava can also be used to make things like airplanes and rockets. The lava can also be used to make things like spaceships and satellites. The lava can also be used to make things like computers and televisions. The lava can also be used to make things like radios and telephones.

# “Learn and Save” short video clip



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**01** | REPLACE INCANDESCENT BULBS BY  
COMPACT FLUORESCENT LIGHT BULBS



**02** | TURN OFF THE TV AND LIGHTS  
WHEN YOU ARE NOT USING THEM



**03** | USE NATURAL VENTILATION AND  
LIGHT AS MUCH AS POSSIBLE



LET'S LEARN AND SAVE WITH THE ENERGY MASTERS



*Students using the Learn and Save Board Game in St. Lucia*



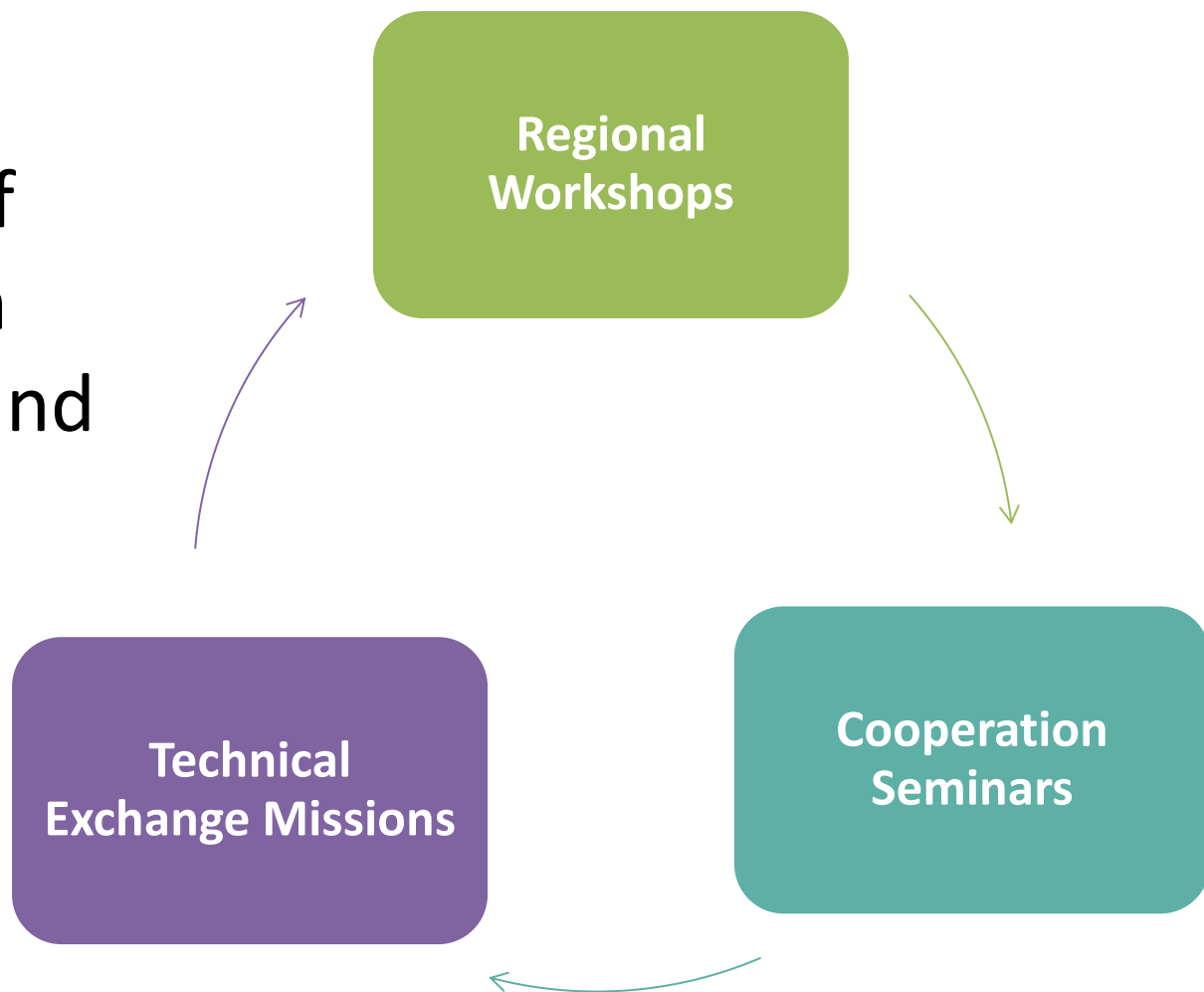
*Solar water heaters – Teachers in Bahamas*



*Wind Turbine – Students in Antigua and Barbuda*



Provide  
dissemination of  
best practices in  
energy efficiency and  
conservation



# ECPA Energy Efficiency Working Group



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American States



**Promoting Energy Efficiency Seminar  
June 17-20, 2014 Haiti**



**Regional Workshop on EE Designs for Office and Public Buildings  
Feb 28-Mar 1, 2013 . Saint Lucia**



**Exchange Mission on energy efficiency in the  
residential sector .May 22-23, 2014. Uruguay**



**Seminar on Innovation, Science and Technology for the  
energy-Efficient Development. May 8-9, 2014. Mexico**

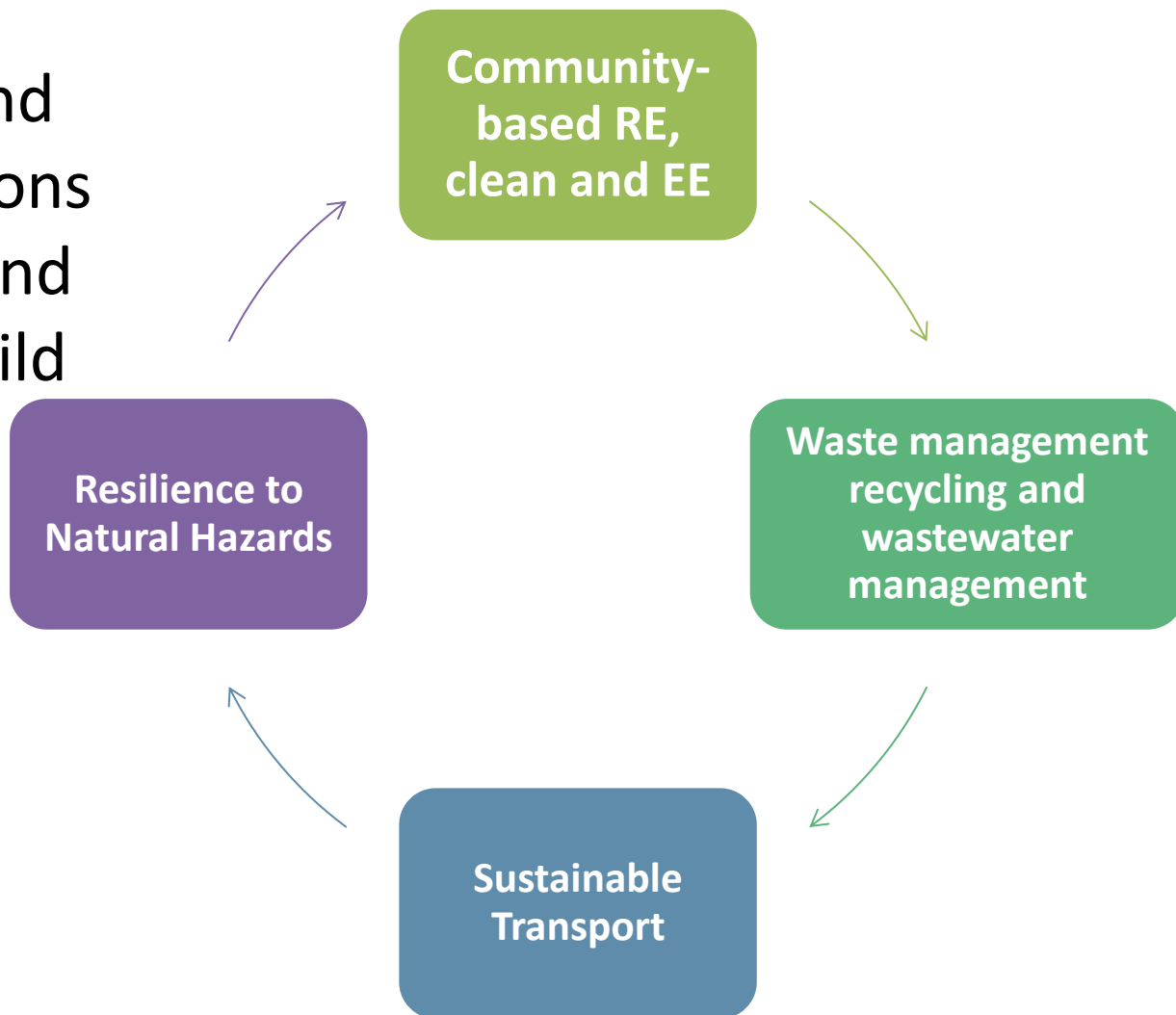


# ECPA Sustainable Communities In Central America and the Caribbean



Organization of American States

Strengthens the capacity of NGOs and community associations in Central America and the Caribbean to build sustainable communities



# ECPA Sustainable Communities In Central America and the Caribbean



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American States



**Dominican Republic**



**San José, Costa Rica**



**La Salle, Nicaragua**



**San Salvador, El Salvador**

# State of the market today...



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- Demonstrated interest among leaders in the Caribbean to use RE/EE...but,
  - Slow development of commercial sustainable energy projects
- Numerous grant/demonstration/pilot projects





# What remaining challenges limit sustainable energy uptake?

- Inadequate Legal & Regulatory frameworks
- Organizational structure of electric utilities
- Weak capacity for developer/technology selection
- Weak capacity for contract negotiation (PPA, construction contract, exploration rights)
- Limited access to cost effective financing (high levels of indebtedness)
- Public opinion/knowledge regarding alternatives remains limited

# Sustainable Energy Capacity Building Initiative (SECBI)



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Addresses critical commercialization challenges related to expanding the development and use of sustainable energy alternatives

Sustainable Energy  
Project  
Development  
Workshops

Sustainable Energy  
Education  
(DR only)

Advisory Financing  
Services on Project  
Development

# Sustainable Energy Education



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Review  
existing  
energy  
educational  
materials

**Nov. 2014**

Massive Online  
Course on  
sustainable  
development  
inclusive of  
sustainable energy

**Sep-Dec 2014**

Tailor existing  
sustainable  
energy  
curriculum/m  
ethodology

**Mar – Nov 2015**

Develop  
educational  
materials

Conduct  
training  
seminar for  
teachers in the  
Dominican  
Republic

**Sep-Nov 2015**



**iten**

Inter-American Teacher Education Network

# Sustainable Energy Project Development Workshops. Necker and Moskito Islands. Feb 2014



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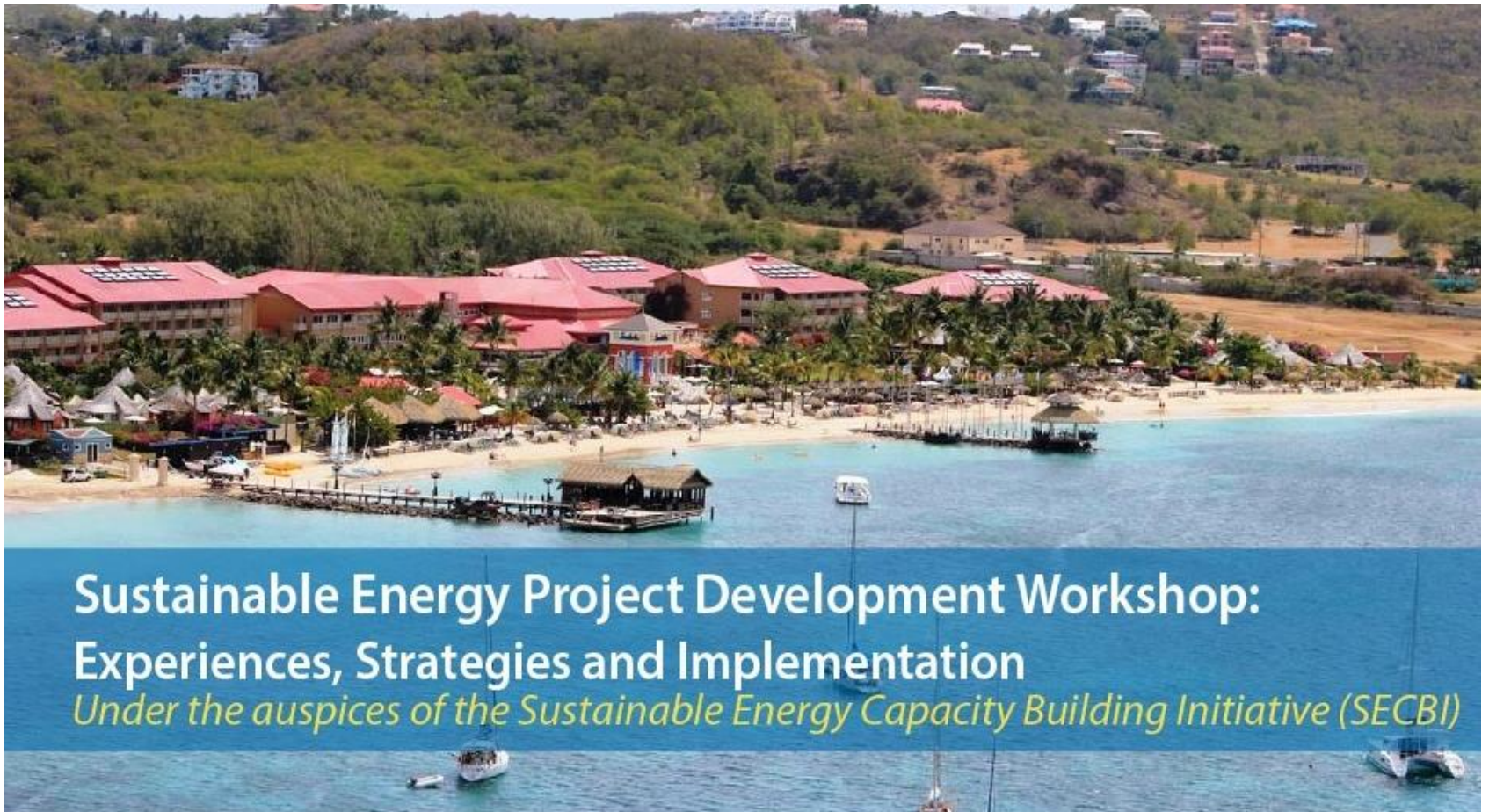


**“Creating Climate Wealth” Summit “10 Island Renewable Challenge”**

# Sustainable Energy Project Development Workshops. Aug 19, 2014. Saint Lucia.



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**Sustainable Energy Project Development Workshop:  
Experiences, Strategies and Implementation**

*Under the auspices of the Sustainable Energy Capacity Building Initiative (SECBI)*





## Project Development Capacity Building Support



## Key themes likely to be included:



**Tendering process** (preparation of bidding documents, bidders' lists, securing and evaluating technical proposals, procurement studies for commercial and bankable project opportunities).



**Project finance assistance**  
(identifying sources of project funding, public-private partnerships);



**Contract negotiations** (Assist on the negotiations of power purchase agreements);



**It's all about balance, choice, consequence...**





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American States



# Thank you!

**Carolina Peña**

Department of Sustainable Development

Organization of American States

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