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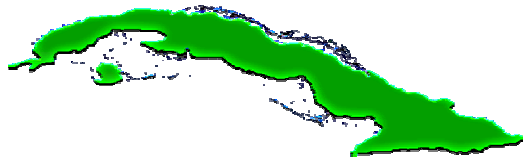
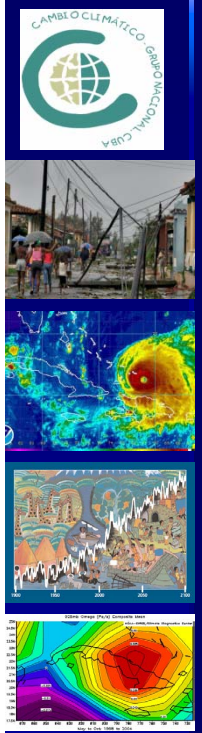


Advancing the integration of approaches to adaptation planning



The Cuban experiences in the Adaptation to Weather and Climate Hazards

A. Vladimir Guevara Velazco
Institute of Meteorology
Agency of the Environment
Cuba

Session I – Integration of adaptation planning across hazard types (current practices lessons learned, challenges and opportunities)

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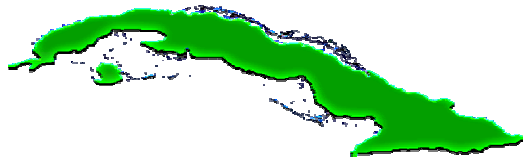

Advancing the integration of approaches to adaptation planning

Overview

1. Cuba: a fast look
2. Principal types of hazards in Cuba
3. Current strategies, programmes and practices to integrate adaptation planning
4. Lessons learned and good practices
5. Opportunities and challenges

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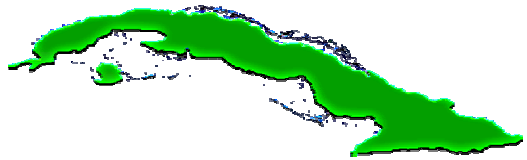

I. Cuba: a fast look

Island of Cuba: 104 945 km²

Isle of Youth: 2 200 km²

+ 1 600 small islands and keys: 3 715 km²

20 – 23º North
80 – 85º East

Extension: ***110 860 km²***

Capital: ***Havana***

Length of coasts: ***5 746 km***

Climate: ***Aw , Af, Cwa, BS***

Temp: 24 °C – 26 °C ; ***Rf:≈ 1300 m***

Rainy season: May - Oct - 80%

Less rainy season: Nov - Apr - 20%

Population: ***11 239 043 inhabitants*** (2007). *About **74.3%** lives in urban settlements.*

Population density: ***101,3 inhab./km²***

Rate of Growth: ***- 0.4***

Life expectancy: ***77,6 years***

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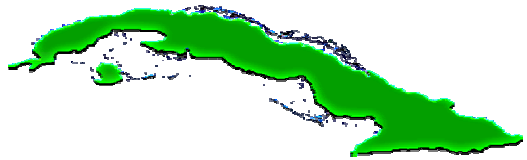
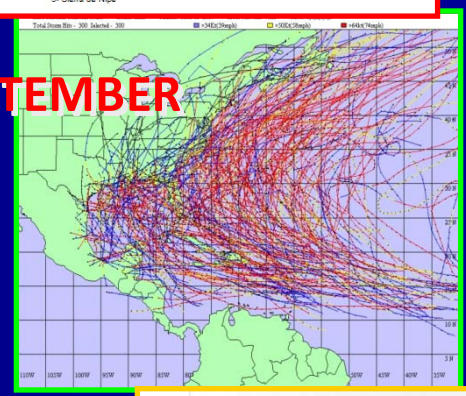


I. Cuba: a fast look

Cuba is a tropical island state

- ✓ with low-lying coastal areas
- ✓ with areas prone to natural disasters
- ✓ with fragile ecosystems
- ✓ with zones exposed to drought



It also is located in an area susceptible to be affected by extreme meteorological events: hurricanes, floodings by intense rainfalls or sea invasion, drought.

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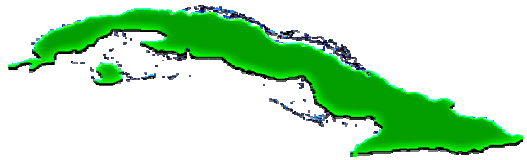

II. Principal types of climate hazards in Cuba

Short - term

1. Tropical cyclones or hurricanes
2. Local severe storms (thunderstorms, tornados, downburst, hailstorm, etc.)
3. Floods
4. Drought
5. Increasing temperatures
6. Sea level rise

Long - term

***Current** Climate Variability and Change*

***Future** Climate Variability and Change*

Source: *First National Communication of Cuba to UNFCCC*

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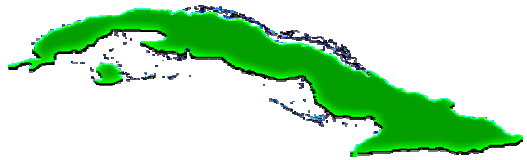

III. Current strategies, programmes and practices

Adaptation Planning in Cuba

Short - term

Long - term

Current adaptation planning

Capacity building and preparedness

DRR Early warning system and weather/climate prediction (hurricanes, drought, floods)

Studies of Hazard – Vulnerability and Risk - PVR (in Spanish)

Future adaptation planning

Capacity building and preparedness

Research projects about Sea Level Rise

National Communications to UNFCCC

Development of the National Adaptation Strategy

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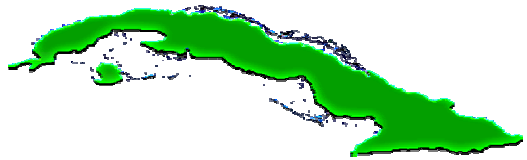


III. Current strategies, programmes and practices

Main principles of the Cuban model to Disaster Risk Reduction

- *Support and concern of the Government and the State*
- *A legal and institutional framework that ensures compliance in this area*
- *Close relationship among all areas involved in case of disaster*
- *Use of the latest technology and technical means, procedures and methodologies, as well as the expertise of specialists who study characteristics and future projection of the phenomena*
- *Role of mass media*
- *Awareness and education of people about disasters*

a) Process to reduce the risk of disaster - Hurricanes

INFORMATION INPUT

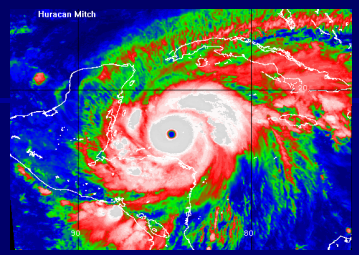
SATELITE

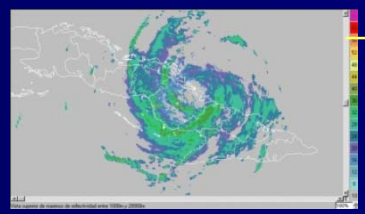
RADAR

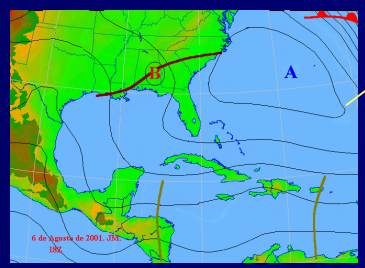
MET. STATIONS
SOUNDING
SHIPS
BUOYS
AIRPLANES

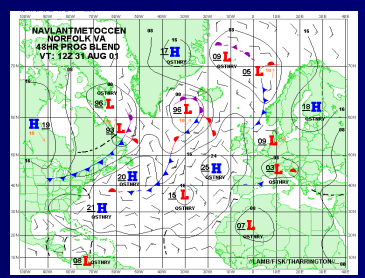
FORECAST
NUMERICAL
MODELS

INFORMATION ANALYSIS









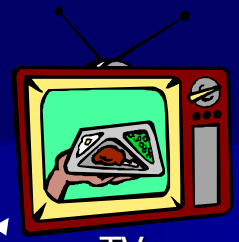
ELABORATION OF FORECASTS AND WARNINGS

FORECASTERS´
WORK
STATIONS

More information:

jose.rubiera@insmet.cu

BROADCASTING



TV

RADIO

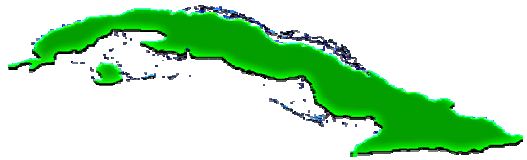
FAX

PHONE

INTERNET

ACTIONS OF TH CIVIL DEFENCE AND PEOPLE

CUBA



III. Current strategies, programmes and practices

b) PVR Studies (Hazard – Vulnerability – Risk)

Steps:

- A national expert group is created.
- It prepares, reviews and approves the Guidelines of certain hazard.
- The Guidelines reviewed and approved for the Advisory Council.
- Seminars start in the 15 territories.
- A follow up is made by the permanent group until the province finishes the PVR study.

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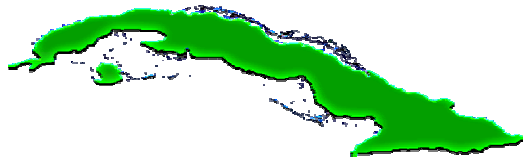

III. Current strategies, programmes and practices

b) PVR Studies (Hazard – Vulnerability – Risk)

For disasters due to natural (climate) events:

- *Flooding (on implementation)*
- *Coastal flooding (on implementation)*
- *Strong winds (on implementation)*
- *Rural fire (on validation)*
- *Landslide (on seminars)*
- *Drought (on guidelines)*

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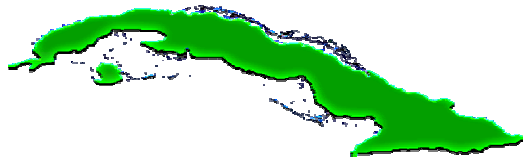
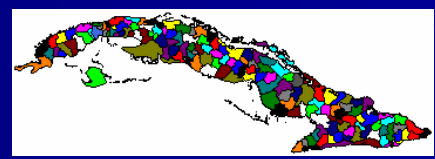


III. Current strategies, programmes and practices

b) PVR Studies (Hazard – Vulnerability – Risk)

Outputs per hazard



- *One report per municipality (169)*
- *One report per province (14+1)*

- *Hazard, vulnerability and risk maps*
- *Recommendations for Disaster Reduction Plans considering the disasters reduction cycle*

More information: herminia@ama.cu

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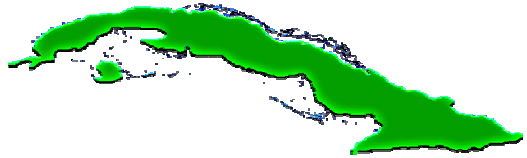
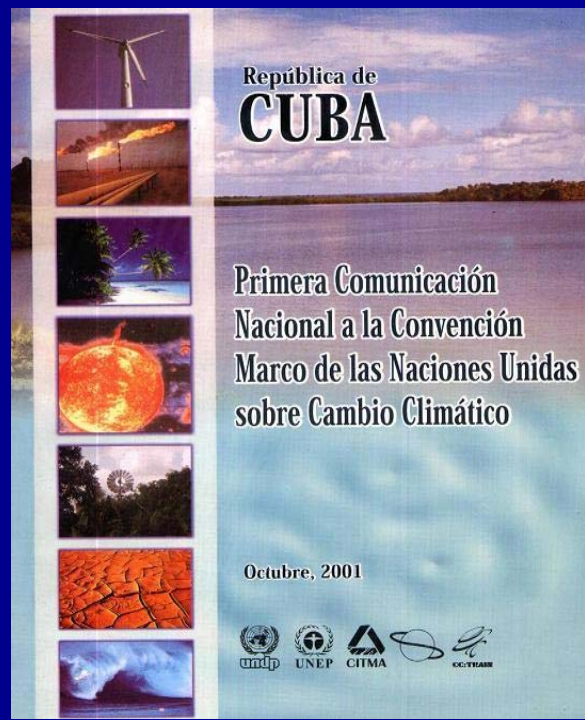


III. Current strategies, programmes and practices

C. National Communications to UNFCCC

Guarantees of the adaptation strategy from the 1st NC:

- ✓ *The rational use and protection of water resources*
- ✓ *The conservation and protection of beaches and mangrove areas*
- ✓ *The improvement of Cuban agriculture and the conservation and protection of forest resources*



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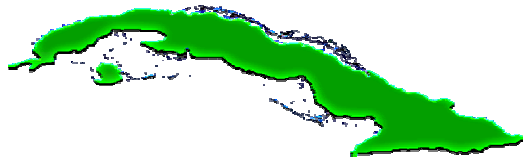
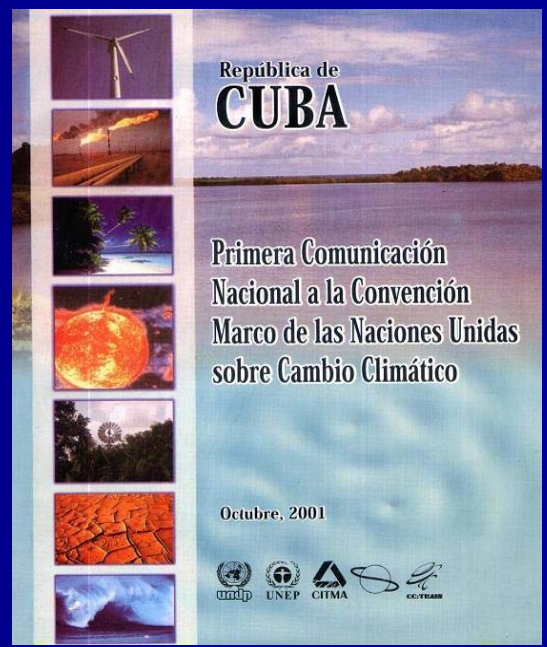


III. Current strategies, programmes and practices

Guarantees .....

- ✓ *The appropriate use of territorial zonation in the human settlements and land use system*
- ✓ *The protection of biodiversity and wildlife*
- ✓ *The improvement of the Cuban health system*



Adaptation to current climate variability? ..... Yes, but it ALSO to climate change!!!

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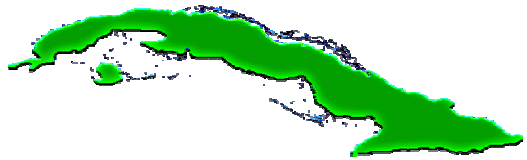

III. Current strategies, programmes and practices

After the 1st NC (2001)

- *Project to increase Cuban ability to adapt and respond to risks due to Climate Change. Directed to industry and Government executives.*
- *Project for increasing the adaptation capacity to climate change in Dominican Republic and Cuba. Integrated study of drought risk and adaptation policies assessment, using the Adaptation Policy Framework.*
- *GEF/UNEP Regional Project on Capacity Promotion for Stage II of Climate Change Adaptation in Central America, Mexico and Cuba. In Cuba: Adaptation to drought in Eastern region.*

To be included in 2nd NC

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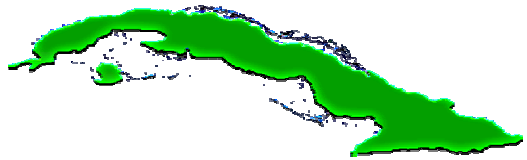
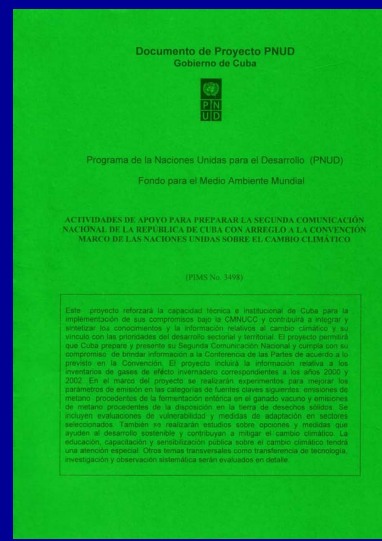


III. Current strategies, programmes and practices

In the 2nd NC:

- ❑ The six initial sectors are maintained.
- ❑ Two integration exercises (cases studies) will be done:
  - ✓ *In a vulnerable area: South of the Havana province*
  - ✓ *Through the impacts of drought in water resources: Guaso - Guantánamo Basin*
- ❑ Ultimate aim: *To formulate adaptation options on the basis of integrated analysis of impacts and vulnerability to climate variability and change*



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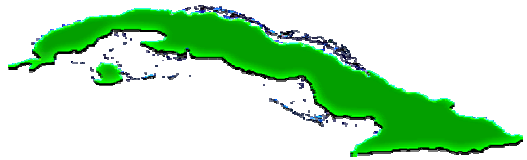

IV. Lessons learned and good practices

- The use of adaptation options to climate variability in the adaptation planning to climate change (combination of the long and short - term actions)
- The adaptation planning processes are always started with actions of knowledge dissemination, capacity building or training (.. Adapt to what? When? Where ..?)
- The approaches, systems, measures, options, and so on, cover different administrative levels, sectors and hazards
- Everybody needs to adapt but everyone in different ways

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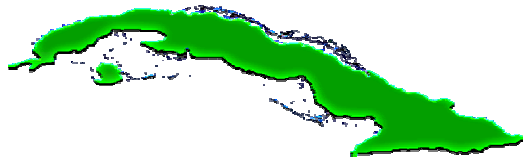

Va. Opportunities

- To make use of the synergies among the different approaches, systems and options ongoing for adaptation to climate change in Cuba
- To use advantages of political, administrative, social or religious characteristics of the country to facilitate the adaptation

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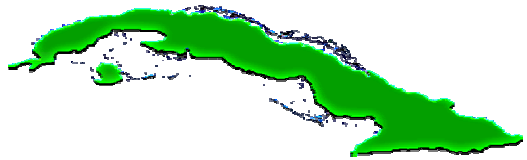

Vb. Challenges

- To integrate the different actions ongoing for the adaptation planning
- To identify and capture personnel enabled to achieving an effective adaptation

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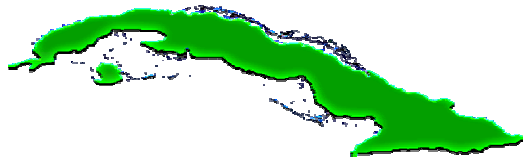

Advancing the integration of approaches to adaptation planning

Thank you
for
your attention!!