



SUMMIT IMPLEMENTATION REVIEW GROUP (SIRG)

First Regular Meeting of 2009

January 12-16, 2009 (Working Group Sessions)

January 14-16, 2009 (Plenary Sessions)

Padilha Vidal Room– 1889 F Street NW, DC 20006

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**PRESENTATION ON ENVIRONMENTAL SUSTAINABILITY
CARIBBEAN COMMUNITY CLIMATE CHANGE CENTRE (CCCCC)**



Vth SUMMIT OF THE AMERICAS SRIG MEETING

CLIMATE CHANGE ISSUES

WASHINGTON DC FEB. 14TH 2009

CARIBBEAN COMMUNITY CLIMATE CHANGE CENTRE

The Global Climate Projections

- **Unequivocal evidence that the earth's temperature is rising and attributable to anthropogenic activities – Green House Gases**
- **Projected trends through 2100**
 - **rise in global temperatures of between 2 – 4.5°C**
 - **Sea level rise of between 11 -77 cm**
 - **Changed weather patterns**
 - **More intense extremes –drought ,floods**
 - **More intense hurricanes**

Direct Regional Evidence

- **Temperature trend**

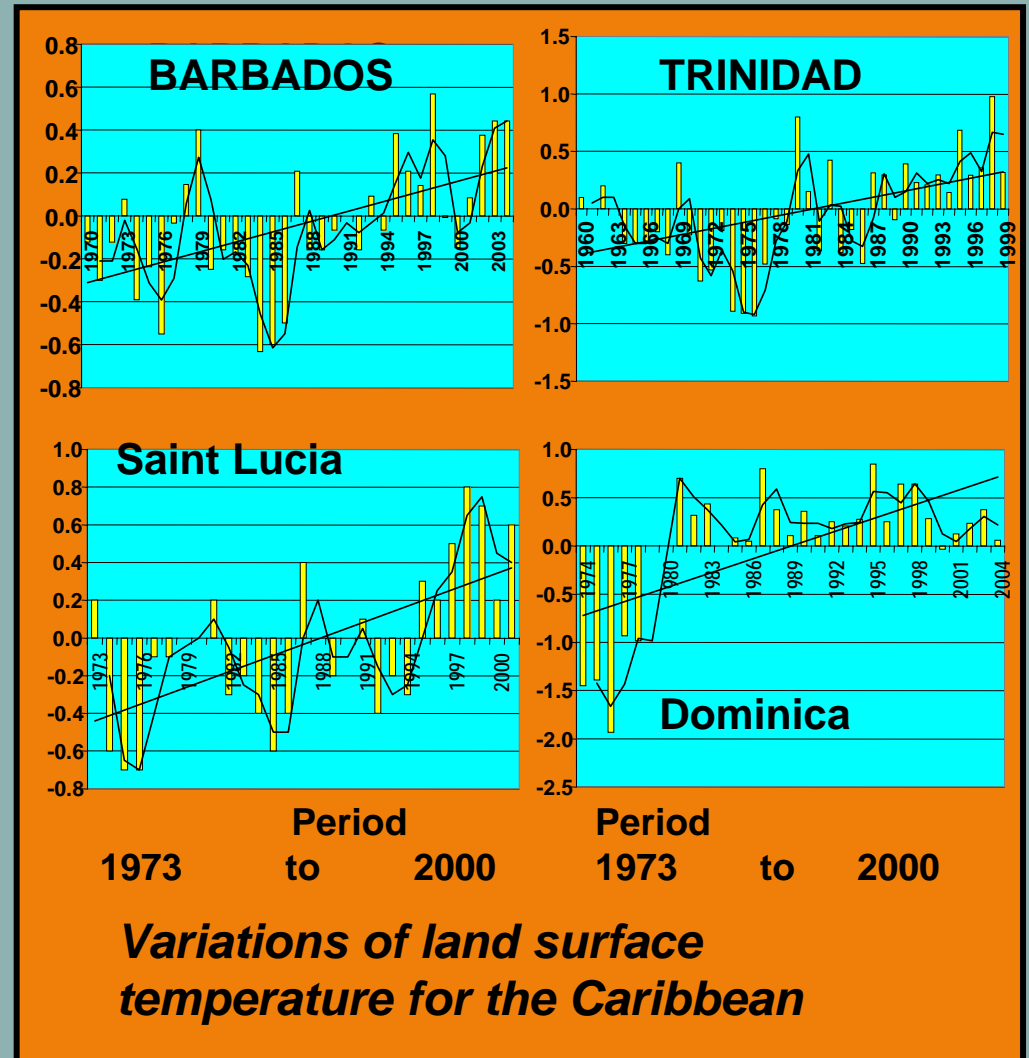
- Temperature records have shown an increase in the last century, with the 1990s being the warmest decade since the beginning of the 20th century.

- 1998 also appears as the warmest year on record.

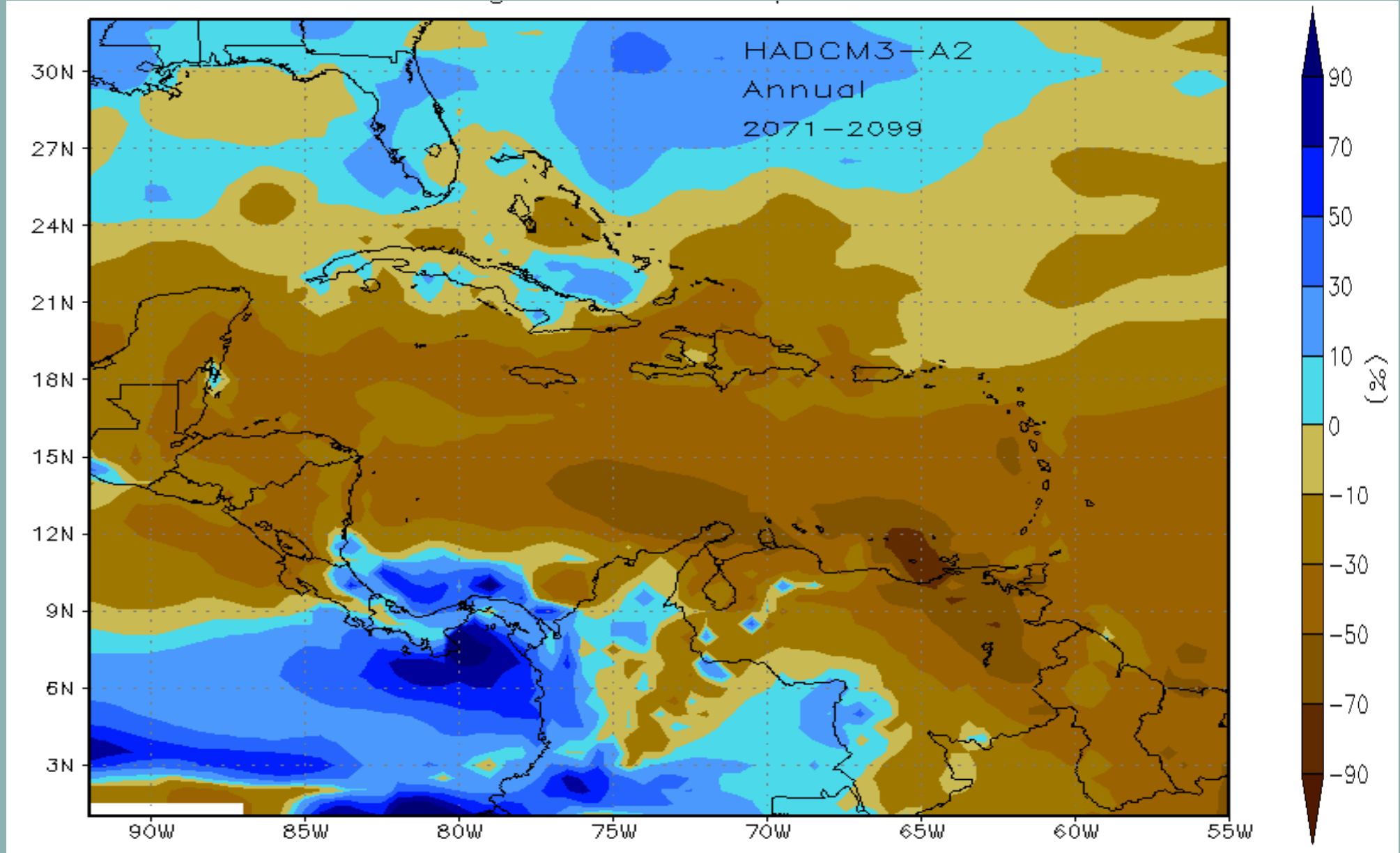
- **Rainfall trend**

- Records have shown changing patterns.

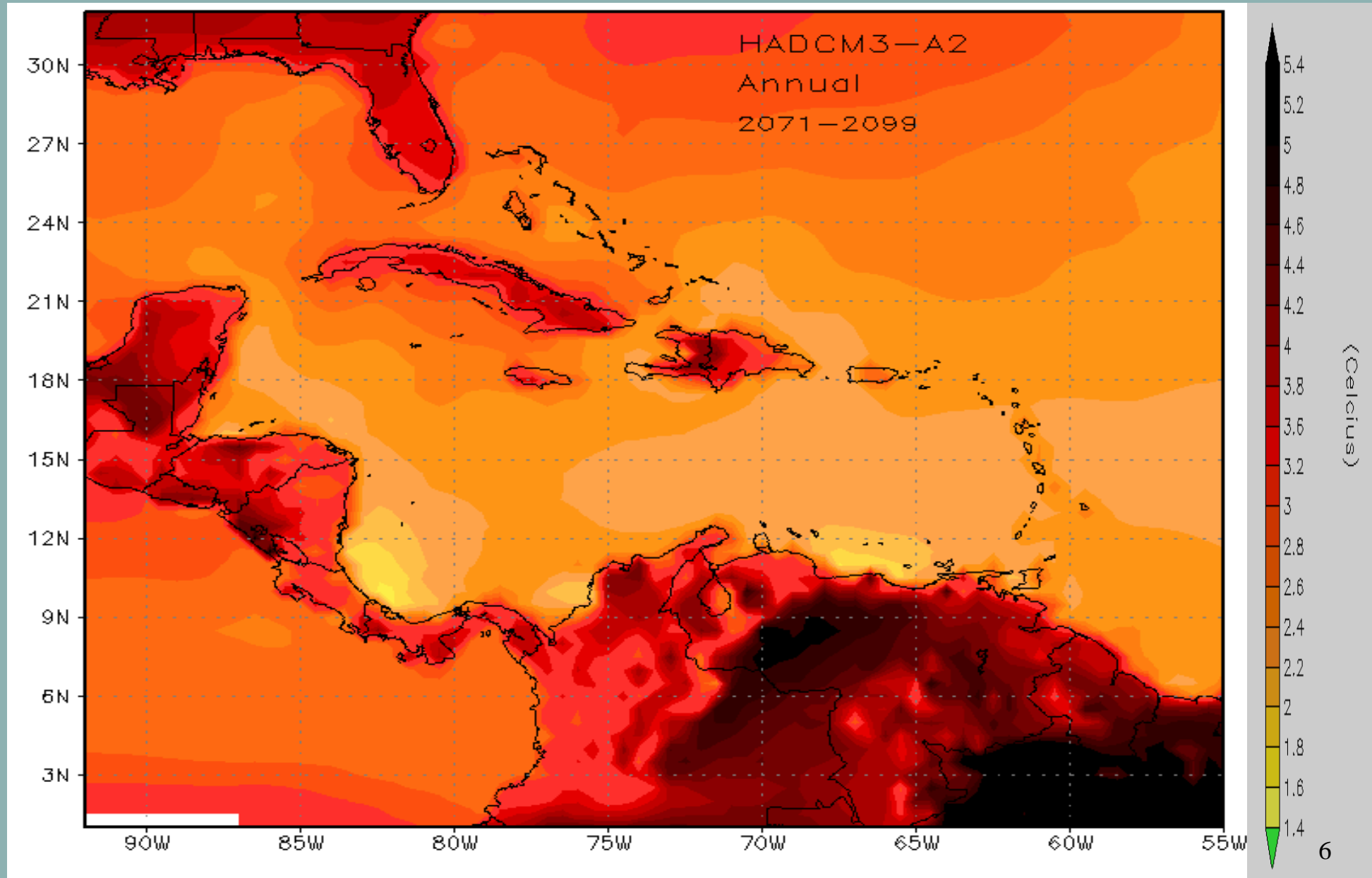
- Floods in some areas and droughts in other areas



FUTURE PROJECTED % CHANGES IN PRECIPITATION



MODEL PROJECTION OF FUTURE INCREASES IN THE REGIONAL TEMPERATURES



Consequences Of Climate Change.

- Change in rainfall regimes
- Increased evaporation with higher temperature
- Increased evapo-transpiration (soil moisture)
- >> SLR – salt water intrusion (estuarine, aquifers)
- Decreased precipitation
- Increase in extreme events – droughts, floods
- Increased intensity of heavy rain events – rapid run off / flash floods, >> soil erosion, >> run off of contaminants
- >> intensity of hurricanes
- Adverse effects on coastal water

IMPACTS

- Impact studies on vulnerable elements – some indications :
 - Less precipitation - less available water;
 - Changing weather patterns – agriculture adversely affected.
 - Increased frequency of extreme events
 - Sea level rise – coastal inundation, storm surge exaggeration (tourism, aquifers, agriculture, infrastructure, human settlement)
 - Increased intensity of hurricanes (human settlements, tourism, infrastructure, livelihoods.
 - Increased temperature (agriculture, health, coral reefs)

IMPACTS

Dire consequences for

- Economic activities
 - Tourism
 - Agriculture
 - Financial sector
- Property and infrastructure
- Human welfare
- Livelihoods
- Regional natural resource base
- Attainment of MDGs in prescribed time frame.
- Indeed for realization of sustainable development goals.

2008 Atlantic hurricane season

- Tropical Storm Arthur caused the season to start two days early. – 9 deaths , \$78M US damage in Belize.
- Third most costly season on record, behind only the 2004 and 2005 seasons, with up to \$45 billion in damage (2008 USD).
- the only year on record in which a major hurricane existed in every month from July through November in the North Atlantic.^[1]
- particularly devastating for Haiti, where over 800 people were killed by four consecutive tropical cyclones (Fay, Gustav, Hanna, and Ike) in August and September.^[1]



2008 Atlantic hurricane season

Season summary map

First storm formed: May 30, 2008
 Last storm dissipated: November 10, 2008

Strongest storm: Ike - 935 mbar (hPa) (27.62 inHg), 145 mph (230 km/h)

Total depressions: 17
 Total storms: 16
 Hurricanes: 8
 Major hurricanes (Cat. 3+): 5

Total fatalities: 836 direct, 104 indirect
 Total damage: ~ \$45 billion (2008 USD)

Atlantic hurricane seasons
2006, 2007, 2008, 2009, Post-2009

• Timeline of the 2008 Atlantic hurricane season

REGIONAL ISSUES

- Support efforts for **ADAPTATION**
- **Monitoring and observation systems**
- **Capacity building –Implementation of the Bali Action Plan**
- **Transfer of Environmentally Sound Technologies**
- **New resources to support ADAPTATION**

SUCCESSOR AGREEMENT TO Kyoto Protocol

- Region already finding difficulty to cope with present day climate.
- Proposed stabilization of global GHG emissions at 450 ppm requires 20% cut by 2020 & 50% by 2050 resulting in 2°C avg. rise in global temp.
- Region should strive to get agreement on 350 ppm stabilization level which would require a 30% cut by 2020 and an 80% cut by 2050(in keeping with a EU proposal)
- This will result in a 1.5°C avg. rise in global temp.

ENERGY – CARIBBEAN CONTEXT

- All CARICOM countries except T&T net energy importers.
- Strong dependence on fossil fuel – potential to reverse developmental gains achieved over the last 2-3 decades.
- Regional scenario of limited resources & >> cost of energy putting a severe drain on limited financial resources
 - 116 Mb in 1985 costing US \$ 530 m
 - 160 Mb in 2004 costing US \$6.5 B
 - At 2008 prices US \$15b – in some cases requiring countries to devote 50% of foreign exchange earnings to purchase fuel
- wrt to CC mitigation region contributes << 1% to global GHG budget however opportunity to place the regional energy sector on a more sustainable footing

ENERGY - CARIBBEAN CONTEXT

- Take advantage of innovative financing mechanisms (CDM) & provision of favorable terms for Tech. Transfer to decrease the Carbon Footprint in the region's energy sector through investment in:
 - Energy Efficiency
 - Renewable Energy
 - Solar ,Wind ,Geothermal, Hydro ,OTEC ,Tidal.
 - **Biomass including bio-fuels.**
 - **Establishment of a hemispheric emissions trading regime akin to the existing regime in the EU to create market incentives for mitigation.**



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The best way to predict the future...is to create it ...

THANK YOU