

Connecting Local, Regional and Global Environment

CARIBBEAN OBSERVATIONS IN A GLOBAL CONTEXT

CPACC Workshop

W. Vergara, World Bank

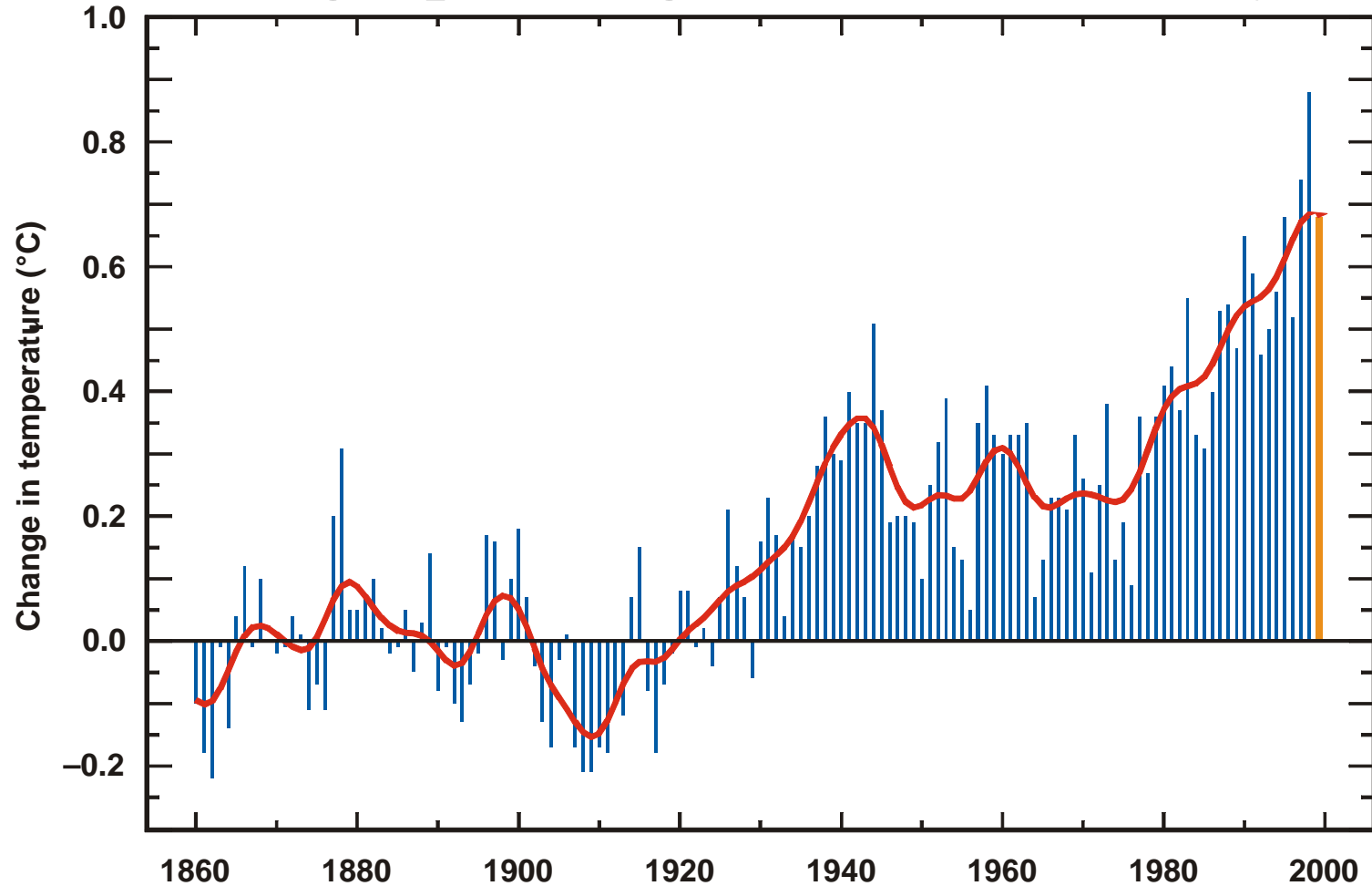
Barbados, February 28, 2001

Connecting Local, Regional and Global Environment

- Background.
- Adaptation in a hotter planet
- The challenge to sustainability
 - Do not stop with assessments
 - IMPACC
 - Linkages with mitigation efforts

Global Temperature Observations

Annual averages plus long-term trends, to July 1999

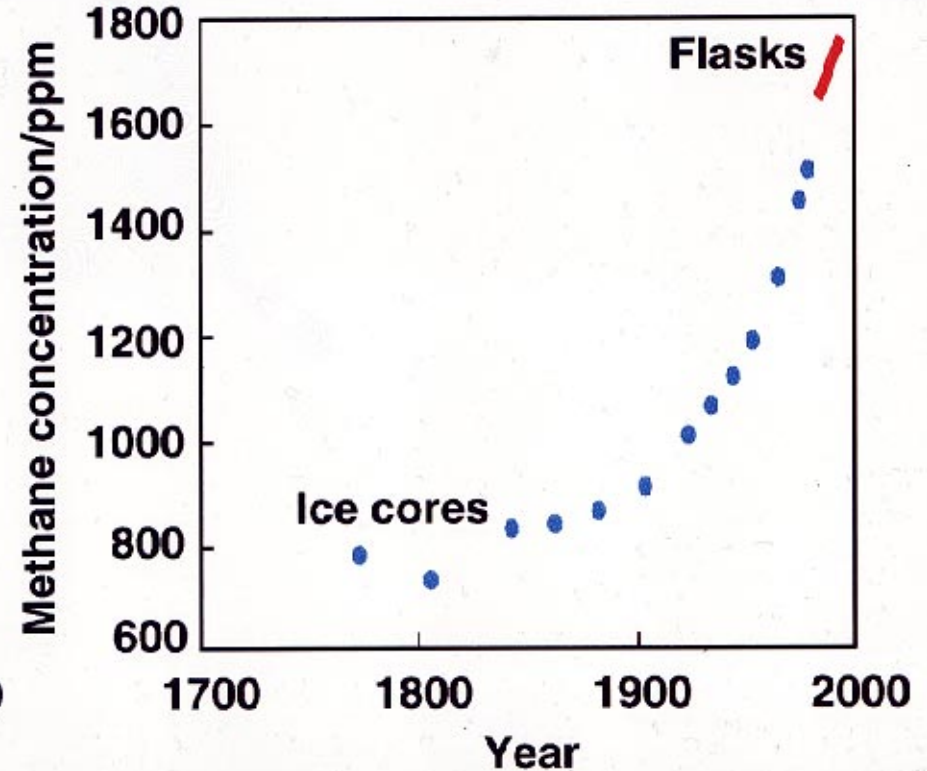
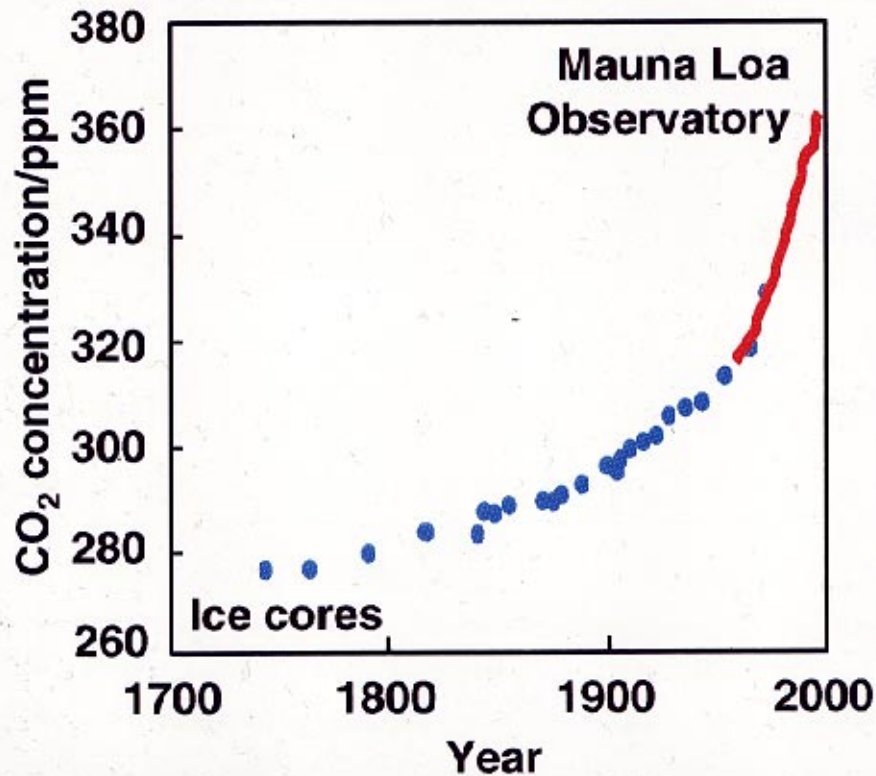


The Met.Office Hadley Centre for Climate Prediction and Research

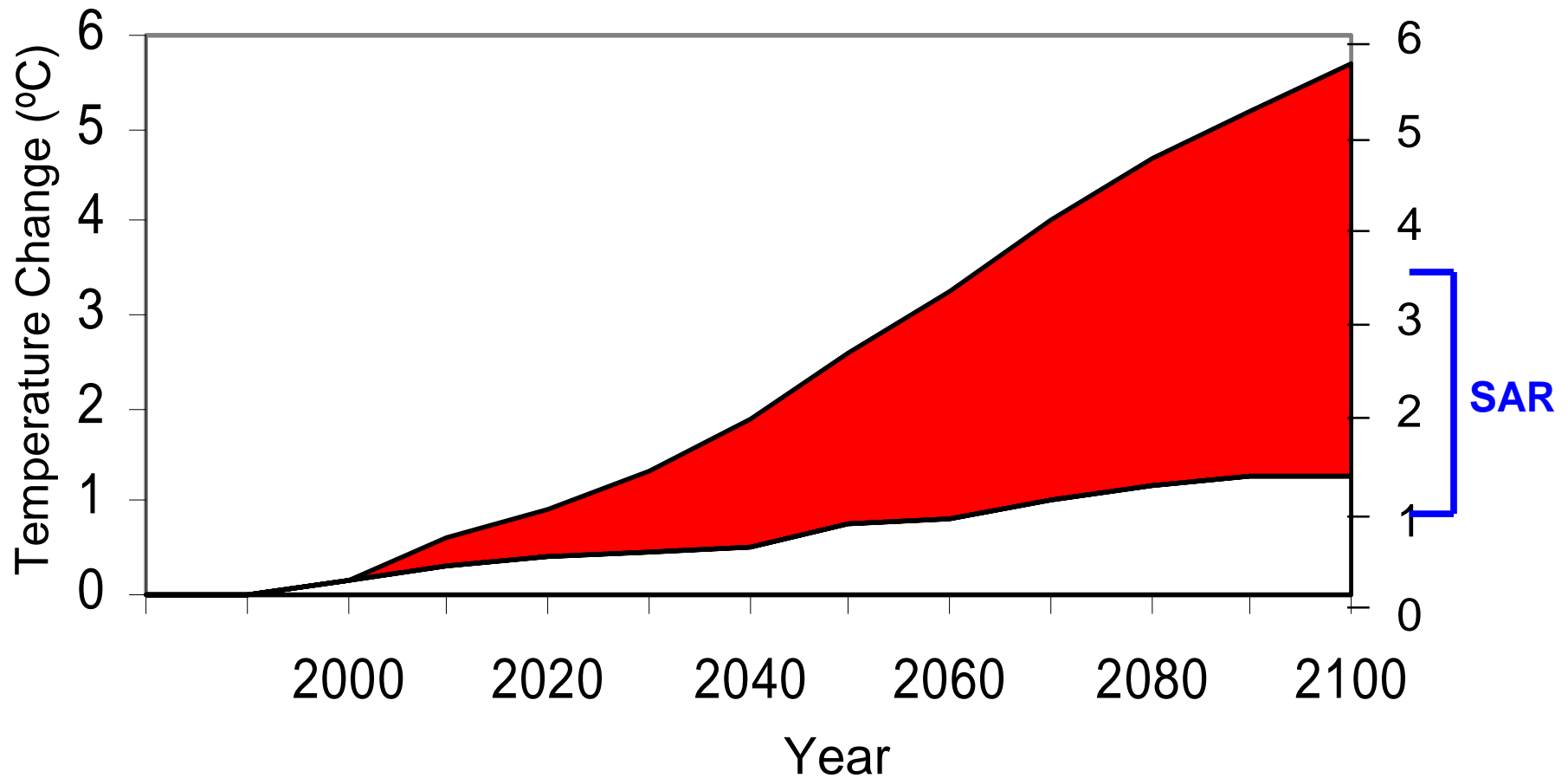
Concentration of Carbon Dioxide and Methane Have Risen Greatly Since Pre-Industrial Times

Carbon dioxide: 33% rise

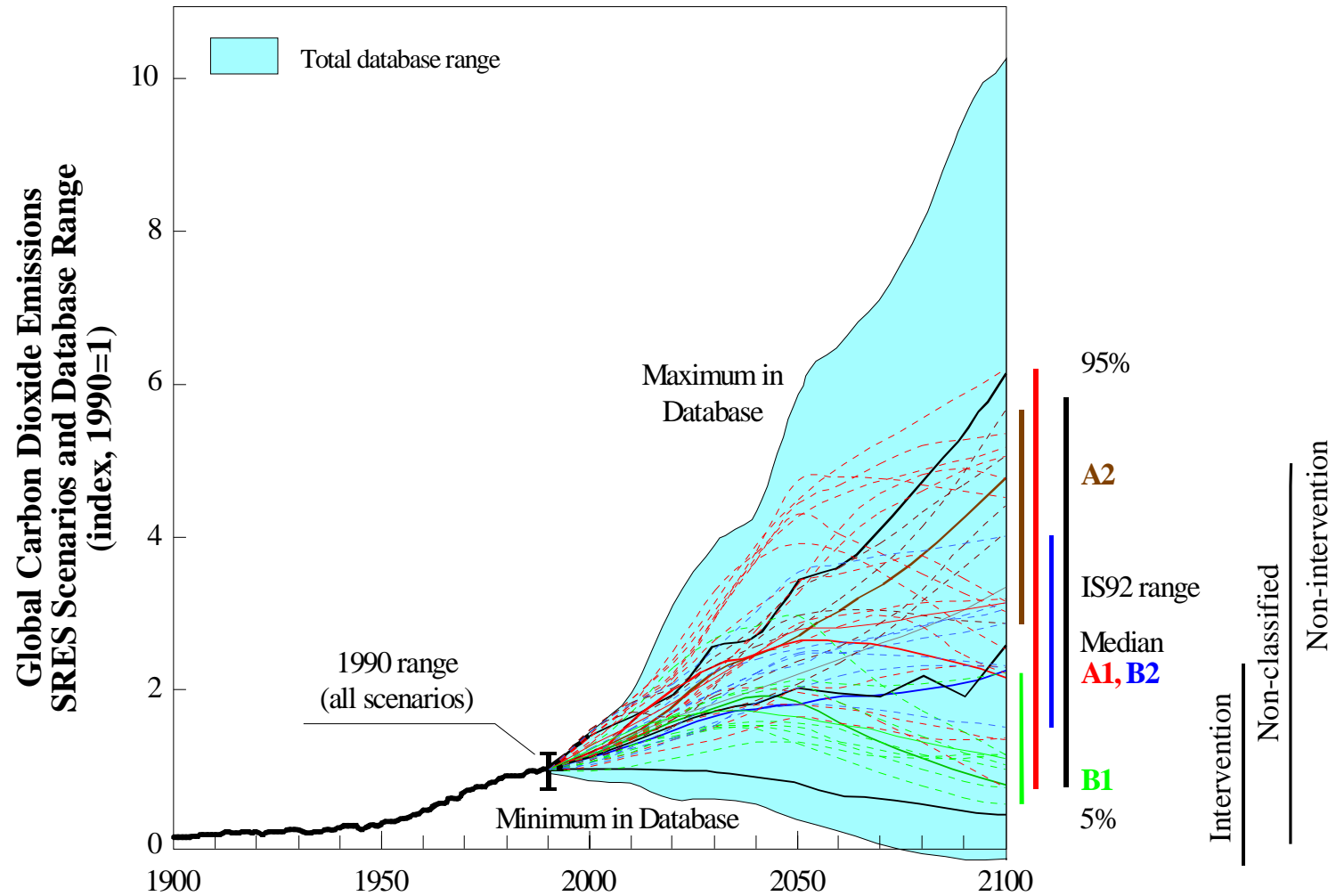
Methane: 100% rise



Projected Change in Global Mean Surface Temperature from Models using the SRES Emissions Scenarios

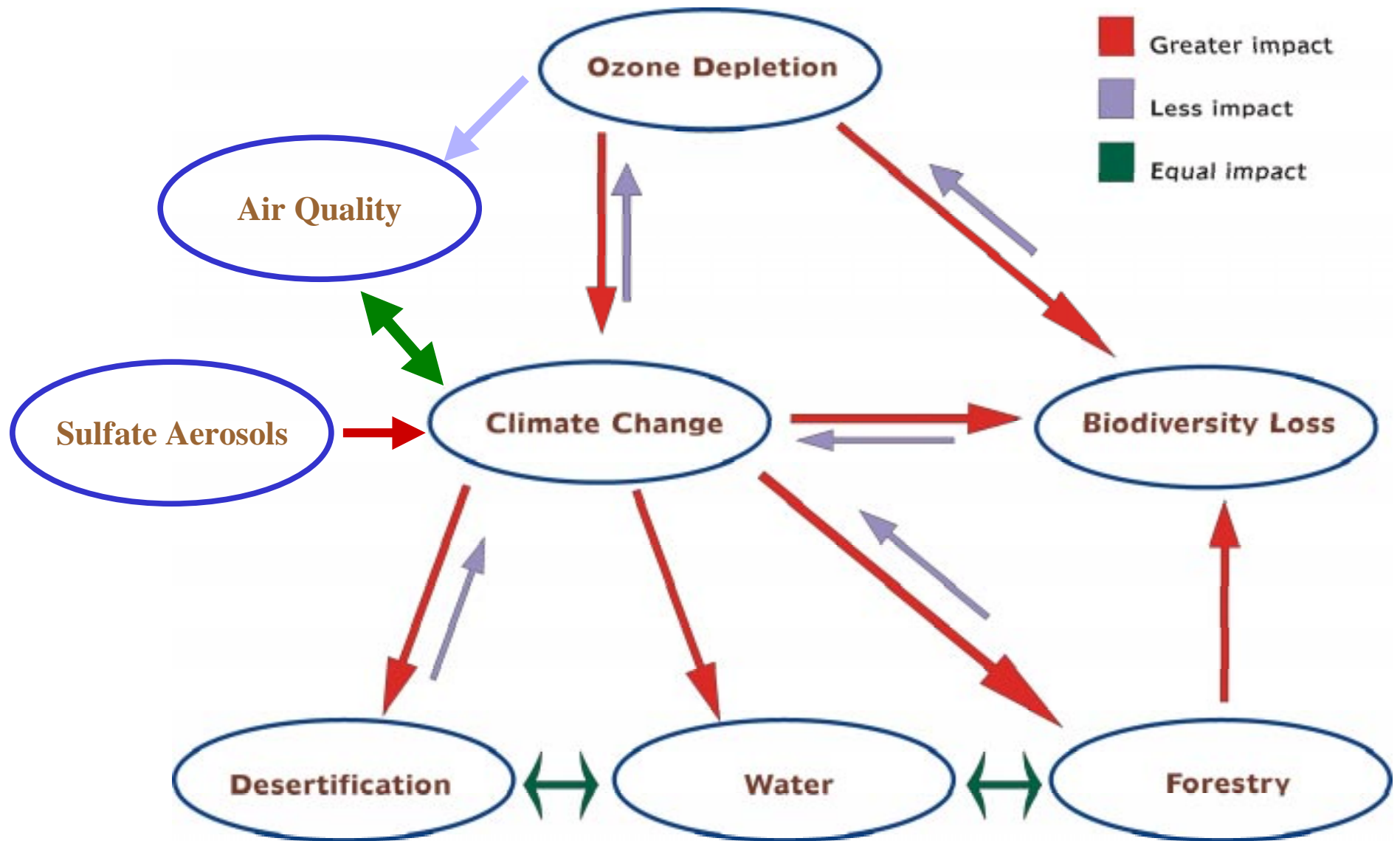


Global CO₂ Emissions from Energy & Industry

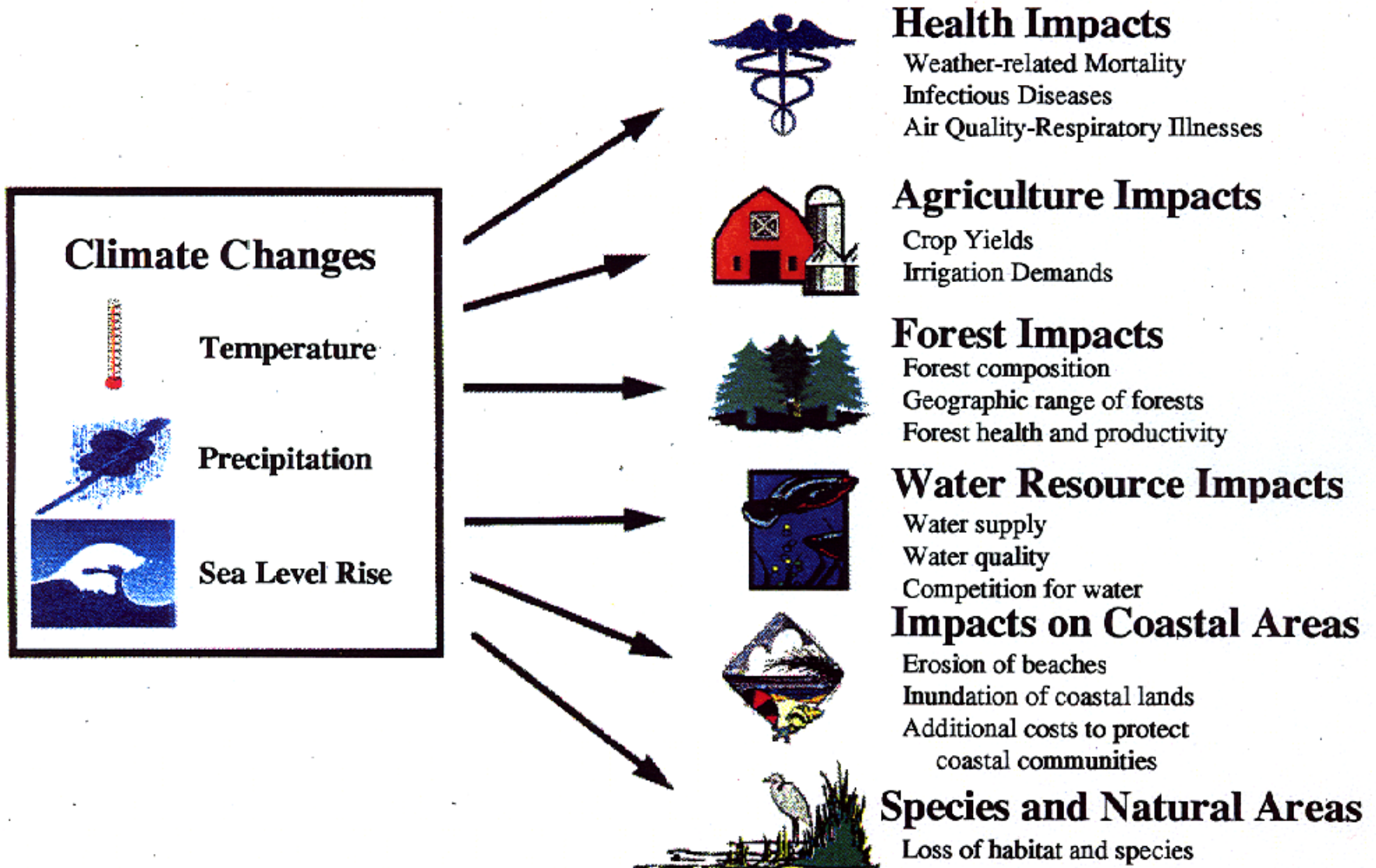


Source: IPCC. 2000. *Emissions Scenarios*. Working Group III. Cambridge.

Linkages Among Environmental Issues



Potential Climate Change Impacts in the Caribbean

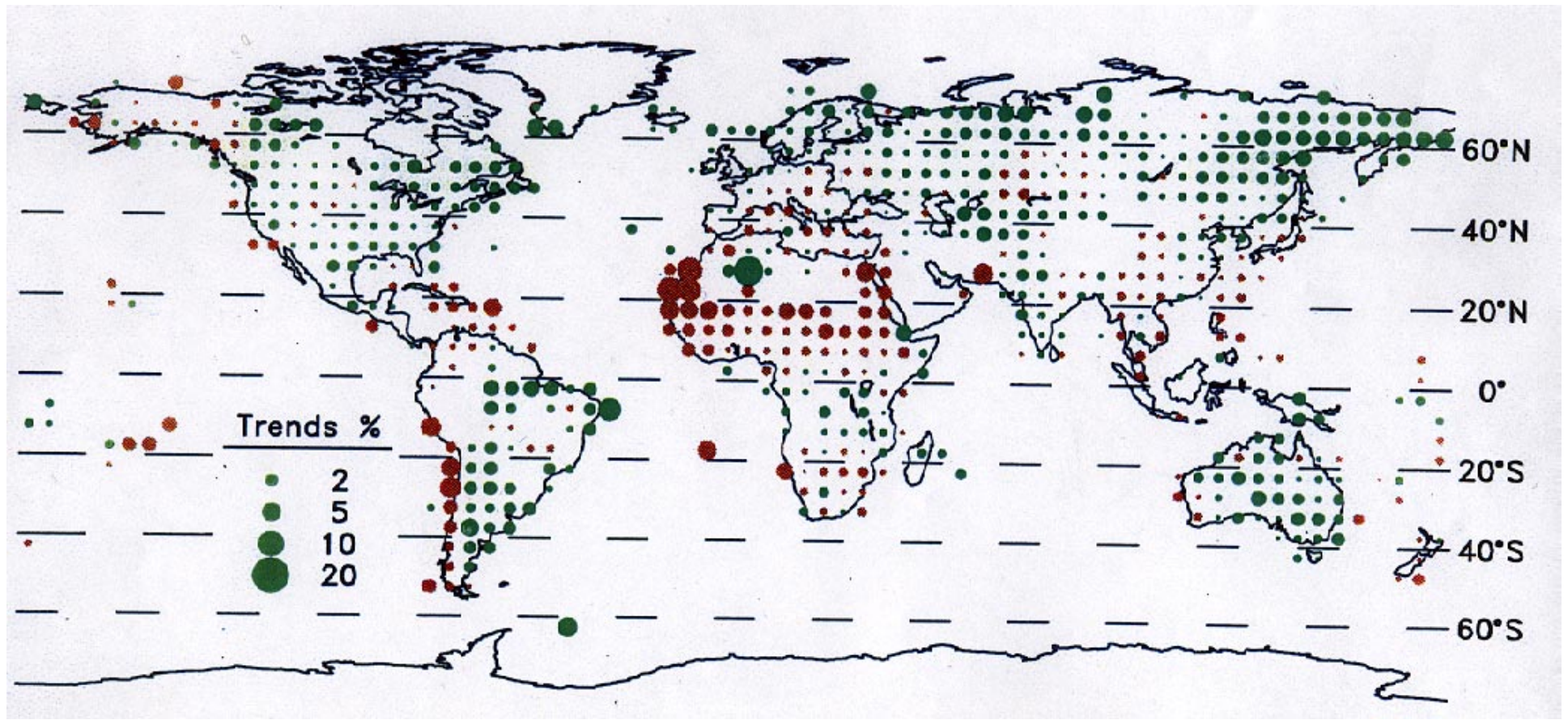


Climate Change Impacts of relevance to the Caribbean Region

- UNFCCC identifies island nations as among the most vulnerable
- IPCC now forecasts faster warming (0.4 °C in past 30 years, up to 6 °C by 2100)
- Caribbean would receive from one to one and a half mm less of rain a day
- In a double CO₂ atmosphere, sea level rise would be 0.2-0.4 m by 2100
- 75% of coral reefs monitored by the GCRA show some bleaching
- There may be a linkage to weather events and intensity of fluctuations

Precipitation Trends (%) per Decade (1900-1994)

Green ● = increasing / Brown ● = decreasing





Local and Regional Impact of Global Climate Change

SIDS and lowland areas among the most affected

IPCC now estimates that the aggregated effect of GCC in the economies of SIDS may equal 10% of GNP in medium term (2050)

Serious impact on sustainability of local/regional economies

Survival of the most vulnerable in a hotter planet

- Sustainability and trans-generation
- Impacts on:
 - Fisheries
 - Coastal development
 - Agriculture
 - Water Supply
 - Tourism

The local and regional

- CPACC addresses adaptation needs at a regional level
- Concerns are local/regional but have a global expression
- The global linkage brings the global community through the GEF

Red de Observacion del Nivel del Mar para America Central (RONMAC)

Caribbean: Planning for Adaptation to Global Climate Change (CPACC)



Coral Reef Monitoring for Climate Change Impacts.

Globally, coral reefs show signs of unprecedented stress.

A component of CPACC Project is a designed to **increase existing knowledge about the extent and sources of coral reef degradation resulting from the impacts of Climate Change.**

This component is being implemented in the Bahamas, Belize, and Jamaica.



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Do not stop here

- Integrate climate change adaptation into the planning process;
- Expand and strengthen local/regional monitoring efforts (**improve linkage with global efforts**);
- Link adaptation with mitigation

Scope for IMPACC

- mainstream climate change into development planning
- implement adaptation activities
- support the 2nd National Communications of the Caribbean countries
- expand and strengthen the monitoring network
- promote carbon trade as a tool for sustainable development

Mainstreaming adaptation

- **Assisting the water resources planning boards to assess the impact of climate change impacts on freshwater availability**
- **Assisting the fisheries departments to understand the impacts of shifting fishing grounds, impact on total stocks and the bleaching and death of coral reefs.**

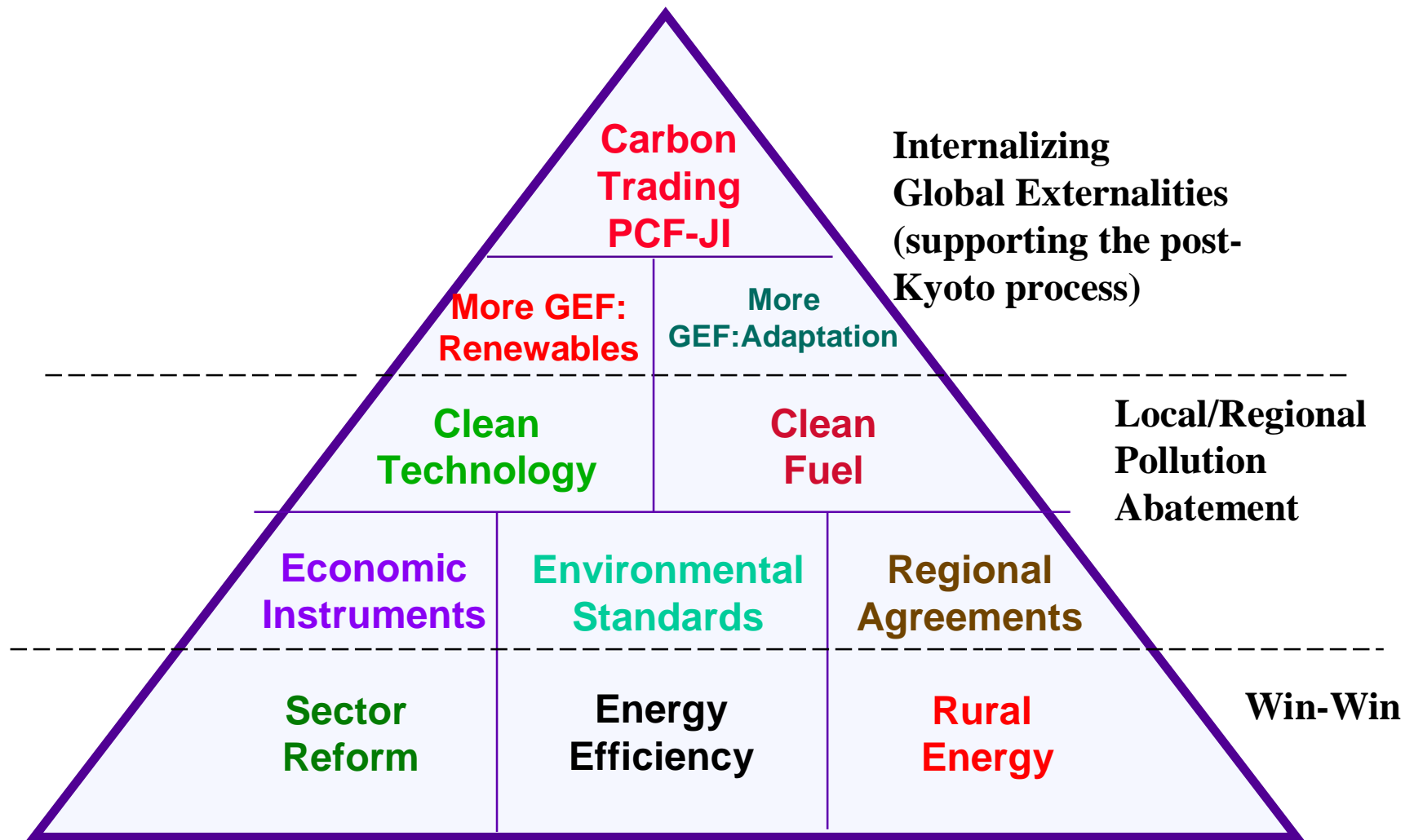
Mainstreaming Adaptation

- assist farming communities in the countries with the identification and development of crops and agricultural practices
- revamp land use planning and coastal zone management
- link disaster management with adaptation

Strengthen Monitoring Efforts

- Strengthen the climate monitoring network
 - expand the coverage and scope of the efforts
 - strengthen linkage and complementarity with other regional/global efforts
- Downscaling of global climate models
- Assess coastal vulnerability under different scenarios

Local-Regional-Global Strategies for making it happen!!



Bring the “global” home

- Assess the opportunities for carbon trade
 - build a regional capacity for promotion of carbon trade
 - information and training
 - development of a ECT Project Portfolio



Local and Regional Impact of Global Climate Change

We have the interest of the global community

GEF; CCCF; PCF; Carbon Trade

Provide the data locally, link it globally, identify the IMPACTS,

Help adapt to the future through adaptation,

Benefit the local economies through implementation

WE ARE NOT ALONE

- 11% of bird species (900), 5% of marine fish &
- 25% of all mammals (2100) are vulnerable to extinction

