

Regionally detail climate modelling

applied to adaptation studies - by H. Kondo (Japan)

Super-high resolution (20 km)
global atmospheric modelling

<by MRI group under a MEXT project>

Earth
Simulator



Some of major outcomes

- ◆ Projection of **increased strength** of Typhoons & Hurricanes (new finding)
- ◆ Projection of **regionally detail extreme events** (heat waves, droughts, etc.) under sufficient regional geographic effects
- ◆ Projection of temporally detail behaviour such as **diurnal precipitation change**

IPCC

Fourth Assessment Report (2007)

Synthesis Rep.

Working Group III
(Mitigation)

Working Group II
(IAV*)

Working Group I
(Physical Science Basis)

Sound
Scientific
Basis for
**Adaptation
Measures**

Adaptation
Studies

(* IAV = Impact, **Adaptation** and Vulnerability)

Cooperation activities of the MRI group

(by **Earth Simulator** computed model outputs for adaptation studies)

Cooperation under the **World Bank** funds

- **Adaptation study in Coastal Zones of Caribbean countries:**
Barbados (one researcher, 2005) Belize (one researcher, 2005)
- **Adaptation studies in Colombian coastal areas, high mountain ecosystems:** *Colombia (two, 2005)*
- **Adaptation to Climate Impacts in the Coastal Wetlands of the Gulf of Mexico:** *Mexico (two, 2006)*
- **Adaptation to Rapid Glacier Retreat in the Tropical Andes:** *Peru (one, 2006), Ecuador (one, 2006), Bolivia (one, 2006)*

Cooperation under the **JICA** (Japan International Cooperation Agency) funds

- **Adaptation studies in agriculture in Argentina:** *Argentina (two being confirmed, 2008)*
- **Adaptation studies in monsoon Asia:** *being planned*