

# **Our recent and ongoing activities for the NWP**

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## **1. Introduction**

First of all I have to explain my (and our) present position before reporting our recent and ongoing activities with some internal details to clarify our situation. The Japan Agency for Marine-Earth Science and Technology (JAMSTEC), an independent administrative agency under the government funds of the Ministry of Education, Culture, Sports, Science and Technology (MEXT), just made substantial structural changes as of 1 April 2009 according to a new 5 year plan (FY2009-FY2013) of the JAMSTEC.

The former Frontier Research Center for Global Change (FRCGC) that I had represented as a focal point for our national research activities on Climate Modelling, Scenarios and Downscaling for NWP ceased to exist and has now been inherited to a few new bodies, including a newly created section under the name of “Global Warming Projection Research Project for Contribution to AR5 of IPCC” as a section name) to which I myself belong to now.

Due to the above changes, I need to consult with our colleagues how to represent our roles for the NWP as a revised focal point before coming back to you for pledge or other actions. Nevertheless, I report our recent and ongoing research activities that could eventually meet the objectives of the NWP.

## **2. Earlier stage of Earth Simulator based modelling outcomes applied to adaptation studies**

Under a 5-year national research initiative on climate change projection: “Kyo-sei Project” (FY2002-FY2006) based on the Earth Simulator (owned by the JAMSTEC) under the MEXT funds, Japan had worked out considerable research results, contributing to the IPCC Fourth Assessment Report (AR4).

In the course of its activities, I presented our model outcomes from the Project at our government side event during the COP10 (Buenos Aires, 2004). After the side event, the World Bank approached and asked us to cooperate with Caribbean countries (Barbados, Belize) and Colombia for adaptation research projects under the WB funds.

Since then we have provided our model outcomes from the 20 km super-high resolution global atmospheric model (developed by a group including the Meteorological Research Institute (MRI), in

which I have been partly involved) applied to simulated present climate and to projected future climate. We also invited researchers to the MRI from above countries for familiarization with numerical analysis of model outcomes, under the WB funds. We have also cooperated with other countries such as Mexico, Peru, Ecuador and Bolivia.

### **3. Ongoing cooperation with adaptation studies**

A new 5-year national research initiative (FY2007-FY2011) of “**KAKUSHIN Program**” (= Innovative Program of Climate Change Projection for the 21<sup>st</sup> Century) was launched and now ongoing under the MEXT funds to follow up the Kyo-sei Project and intending to contribute to the IPCC Fifth Assessment Report (AR5).

KAKUSHIN Program is:

- Aiming at not only (A) advanced modeling & projection and (A) uncertainty quantification & reduction, but also on (B) impact assessment on natural disasters.
- Being conducted under close coordination among the above three component themes.
- Making use of the ES further utilizing the ES, just updated early in 2009.
- Major Participating Teams are targeting (1) Long-term (300-500 years ahead) Global Environment Projection, (2) Near-term (25 years ahead) Prediction and (3) Extreme Events projection (for near-term future and end of the 21<sup>st</sup> century).

Close coordination is being developed between the KAKUSHIN Program and impact, adaptation and/or vulnerability studies, including national comprehensive IAV research projects under the funds of the Ministry of Environment (MOE).

The MRI team (= the group including the MRI) is now working for the target (3), further improving the 20 km super-high resolution global modelling. Model outcomes including those from the Kyo-sei Project have been and will be further provided to invited researchers from Brazil under the WB funds.

From 2008, the Japan International Cooperation Agency (JICA) has also been providing funds to our cooperation to invite researchers for familiarization in numerical analysis with our model outputs for their adaptation studies in Argentina and Asian countries (Bangladesh, Indonesia, Philippines, Thailand and Vietnam).

For your information, please refer to the PPT file on the KAKUSHIN Program separately attached to this document file. Details of our cooperation and studies addressed are shown in fifth slide of the PPT.