

## **A national research initiative on climate change projection and its background science policy**

by

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Under the third phase (FY2006-2010) of Japan's **Science and Technology Basic Plan**, the same four fields are prioritized for allocating resources as under the second phase. One of them is **research on the environment**, within which **climate change research** is further focused together with other four areas.

According to this national strategy, the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) has launched a **5-year (FY2007 - FY2011)** initiative called the **Innovative Program of Climate Change Projection for the 21<sup>st</sup> Century (KAKUSHIN Program)**. It utilizes the Earth Simulator (ES) to address emerging research challenges, including those derived from the outcomes of the MEXT's *Kyosei Project (FY2002 - 2006)*, that has made substantial contributions to the Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC). The *KAKUSHIN Program* intends to further contribute to the Fifth Assessment Report (AR5).

Considering the strong worldwide concerns about global warming, and also its potential impact on natural disasters caused by increasingly severe extreme weather events, the KAKUSHIN Program is targeting three major themes:

- **Advancing climate modeling and projection** for better simulation of physical and biogeochemical processes by sufficient reflection of feedbacks;
- **Quantification and reduction of uncertainty** for more reliable projections of climate change using model comparisons and other methodologies;
- **Application of regional projections to natural disasters** for better assessments of natural disasters caused by extreme events using sufficiently high-resolution regional projection.

These three themes being are covered by each of three participating teams with targets of **Long-Term Global Change Projection, Near-Term Climate Prediction**

and **Extreme Event Projection**. In addition two other teams are conducting process studies.