

Third Japan-EU Workshop on Climate Change Research

Yokohama, 20-21 January 2005

Joint Statement

The Third Japan-European Union (EU) Workshop on Climate Change Research was held at the Miyoshi Memorial Auditorium of the Yokohama Institute for Earth Sciences in Yokohama, Japan and hosted by the Frontier Research Center for Global Change (FRCGC) of the Japan Agency for Marine-Earth Science and Technology (JAMSTEC). The Workshop was organized under the framework of the Japan-EU Science and Technology Forum with the main objective of promoting further closer links and collaboration in the field of climate change research.

There were about 80 participants in the Workshop, consisting of researchers from European and Japanese institutions and science policy makers from the European Commission and Japanese ministries and agencies. The Workshop was organized in six sessions under the headings: 1) Climate Research Strategy in Japan and EU; 2) Carbon Cycle; 3) Climate Change Projection Modelling (including EU-funded ENSEMBLES and Japan's 'Kyousei' Project); 4) Atmospheric Composition; 5) Monsoons and Water Cycle; and 6) Global Earth Observation. It was noted that this Workshop covered a wide span of research topics related to climate change. The agenda of the workshop is attached.

It was noted with satisfaction that various valuable collaborations had been initiated and are ongoing following the first Japan-EU Workshop/Symposium on Climate Change held in Hakone/Tokyo in 1999 and the second EU-Japan Symposium on Climate Research in Brussels in 2003. Collaborations such as on climate modelling research using the Earth Simulator facility as being promoted between the Japanese 'Kyousei Project 1-1 (K-1)' group and the Hadley Centre of the UK Met Office were particularly welcomed and encouraged. Such collaboration is contributing to the forthcoming Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC). Moreover, EU and Japan are playing a leading role in the Group on Earth Observations (GEO) aiming at comprehensive, coordinated and sustained observations of the Earth system in order to provide better data support for effective decision making with regard to sustainable development and the use of natural resources.

The Workshop provided a valuable forum for exchanging information on ongoing activities of the Japanese climate change research programmes including the 'Project for Sustainable Coexistence of Human, Nature and the Earth' and Greenhouse gases Observing SATellite (GOSAT) related projects, and the 6th EU Framework Programme, sub-priority on 'Global Change and Ecosystems'. It was recognized that common objectives exist between these programmes which provide new opportunities for further strengthening research cooperation in the near future. Moreover, it was stressed that such cooperation would help providing solid scientific input to Kyoto Protocol process and post-Kyoto strategies in which both Japan and EU are engaged (e.g. on a full carbon accounting system in post-Kyoto decisions).

The participants recognized that there were already existing collaborations in international coordination activities but at the same time identified a number of emerging research themes promising for future collaboration with a view to improving the detection and projection of climate change, including:

- Exchanges of methodologies and data on flux and other related ecological measurements by flux tower and aircrafts; development and implementation of experimental methods for conducting mesocosm (semi-enclosed ecosystem) studies of ocean biogeochemical feedbacks in response to climate change and increased CO₂; and biogeochemical model development (both terrestrial and oceanic), including data assimilation systems and inversion modelling activities (from the Carbon Cycle session).
- The identification of several areas of mutual interest in climate change projection modelling such as high resolution global and regional modelling techniques; access to data from Japanese high resolution global model runs for intercomparison studies and invitations to attend relevant EU project meetings to be implemented as have been agreed (from the Climate Change Modelling session).
- The recognition of East-Asia as a region of intense scientific interest over the next years in terms of atmospheric changes relevant for regional pollution, global tropospheric and stratospheric composition; and early discussions between European and Japanese scientists on plans for future large-scale

research projects in the field of atmospheric changes, which would be scientifically valuable as well as important in the development of collaborations (from the Atmospheric Composition session).

- The roles of land surface properties and of land use change on regional climate, with a special emphasis on precipitation and on water cycle; land surface processes in triggering of monsoons and in monsoon inter- and intra-annual dynamics; and coupled climate-hydrology-water resources modelling and water balance studies, with emphasis on changing hydrological regimes and on the effects of these on water management (from the Monsoons and Water Cycle session).
- The identification of gaps in climate ground- and ocean-based observations, especially in Asia and Africa; access to the data from various existing observation systems and data archiving and distribution as essential steps towards successful cooperation; and the development of GEOSS to provide an opportunity for real progress in the area (from the Global Earth Observation session).

It was recommended that involvement in existing and future research projects should take place in case of common interest, and joint scientific events (e.g. symposia, courses) on specific topics could be organized on a regular basis to further enhance collaboration. Support could be sought from existing activities under the Global Warming Research Initiative of Japan and the 6th Framework Programme of the EU.

It was agreed that the fourth EU-Japan Workshop on Climate Change Research be held in Europe early 2007.