

# Council for Science and Technology Policy Launched Environmental Research Initiatives

Council for Science and Technology Policy (CSTP) was established within the Cabinet Office through the reform of Japan's governmental administrative system in 2001. CSTP is expected to act as a leader with strong vision and responsibility to promote broad strategic scientific and technological policies. The year 2002 held special significance as an epoch-making year in the environmental research in Japan. CSTP initiated the "Environmental Initiative," a Japanese research framework, to promote interdisciplinary research among governmental ministries and agencies in the environmental field. This is a new national program to pursue environmental research in a more comprehensive manner.

## Promotional Strategies in Prioritized Fields

The Second Basic Plan for Science and Technology (2001-2005) enacted in 2001 defines a prioritization policy for research and development (R&D). Based on this plan, CSTP focuses on four fields: life science, information technologies, environment, and nanotechnology. Also prioritized were the four fields of energy, manufacturing technology, social infrastructure, and space science and marine frontiers, necessary for building a strong foundation for a viable society. Objectives were clarified, and five-year R&D plans were set for these fields.

Today's environmental problems are extremely complex and diverse. Therefore, a comprehensive framework is essential for promoting research across existing academic boundaries. Environmental R&D policies foster coordination and cooperation among ministries and between industry and academia, both domestically and internationally. To fulfill these objectives, five research initiatives have been established. (1) Global Warming, (2) Waste-Free and Resource Recycling Technologies, (3) Eco-

Harmonious River Basin and Urban Area Regeneration, (4) Chemical Substance Risk Management, and (5) Global Water Cycle.

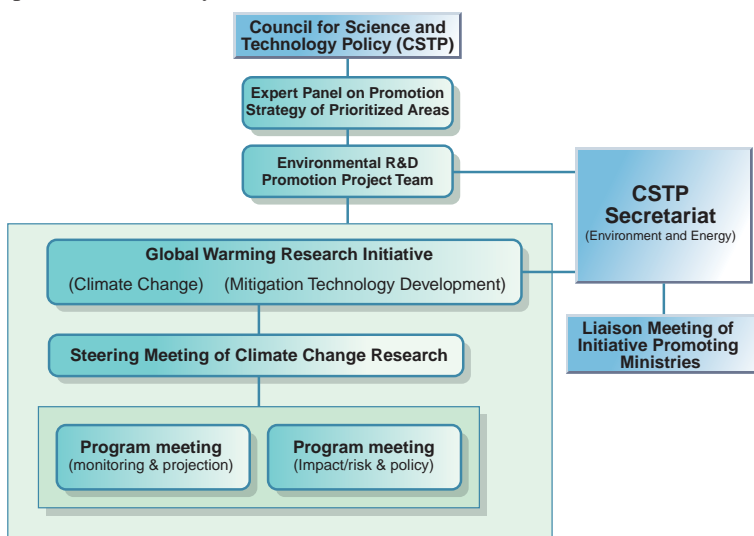


Fig. 1. Initiative Promotion System.

## Changing Climate, Changing Earth, and Changing Society

Climate is a fundamental component of the Earth's natural system. Under a relatively stable climate, civilizations have developed and mankind has enjoyed prosperity for several millenaries. In response to global warming caused by anthropogenic emission of CO<sub>2</sub> and other greenhouse gases, the climate system is now changing.

Effects of global warming are already visible. The global mean temperature has increased by 0.6 degrees Celsius over the last century, and many organisms and ecosystems have experienced changes. There is a perception that extreme natural disasters, such as floods, droughts, and heat waves, have become more frequent. This change in climate plays an important role in the Earth's sustainability.

How will climate change proceed in the future? How significant will the effects be to humanity? If humanity changes, what will be the relationship between human activities and climate? Do we have effective measures to prevent or to adapt to climate change?

To answer these questions, we need a comprehensive set of scientific knowledge collected through the collaborative research pursued in an inter-disciplinary manner. Japan's Global Warming Research Initiative is one answer to this challenging task.



Photo: Year 2002 Flood Disaster Investigation in Europe Summary Report, Japan Society of Civil Engineers, March 2003.