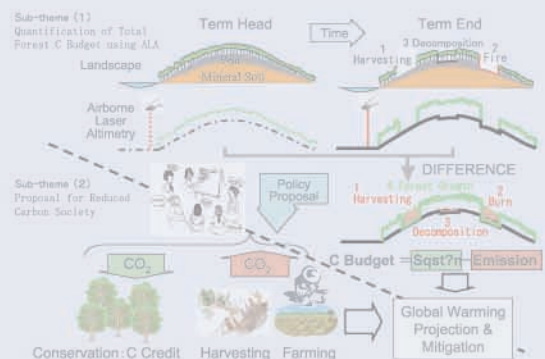
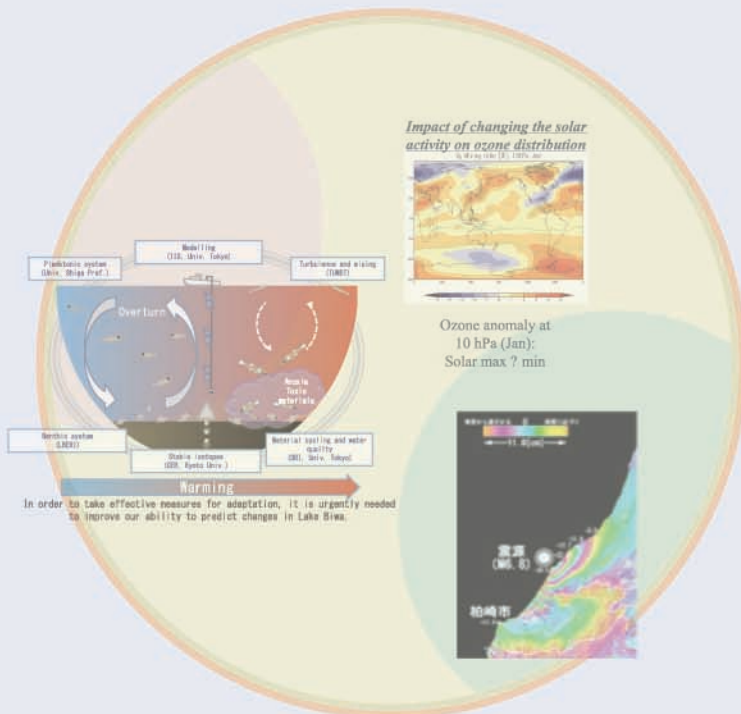
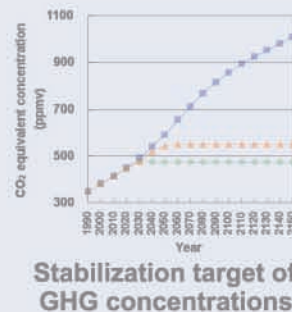
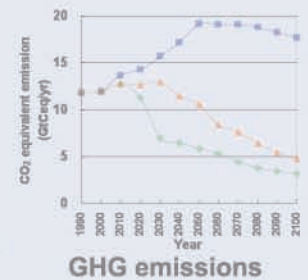


GLOBAL ENVIRONMENT RESEARCH FUND FY2009



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The Global Environment Research Fund in FY2009

■ Outline

Features:

- The GERF is a competitive grant scheme for global environmental research, initiated in 1990 with calls for proposals. Since then, the GERF has played a role as a core fund in Japan for promoting global environmental studies through interdisciplinary interaction among natural, social and political sciences.
- Each year, Ministry of the Environment formulates a "Global Environment Research Program" through consultation with external reviewers. Based on the program, research projects are conducted in timely fashion in accordance with the international situation, reflecting domestic/international trends in global environmental research.
- Applicants are to be researchers belonging to Japanese research institutions.
- The research projects will be evaluated in collaboration with external reviewers, weighing in such factors as degree of contribution (in terms of either policy or science) and feasibility, taking into consideration domestic/international trends in the global environment.

Research Priorities:

- In order to obtain scientific evidence necessary for drafting and implementing policies to protect the global environment, the administration indicates desirable themes for research.
- In FY 2008, we created two special recruitment divisions : the "Wise Adaptation to Climate Change" division and the "Low-Carbon Society" division.

■ System

Research Fields:

- **Global system changes**
Stratospheric ozone depletion, global warming, and hydrological circulation on a global scale
- **Transboundary pollution in the atmosphere, oceans and inland environments such as international rivers**
Transboundary pollution in the atmosphere, through oceanic and terrestrial areas, and along international rivers
- **Conservation and recovery of large-regional ecosystems**
Ecological disturbances, loss of biodiversity, tropical deforestation, desertification broadly occurring on a regional level (e.g. East Asia)
- **Sustainable societies and policies for their implementation**
Integrated research on global environmental conservation in relation to the environment, economy and society

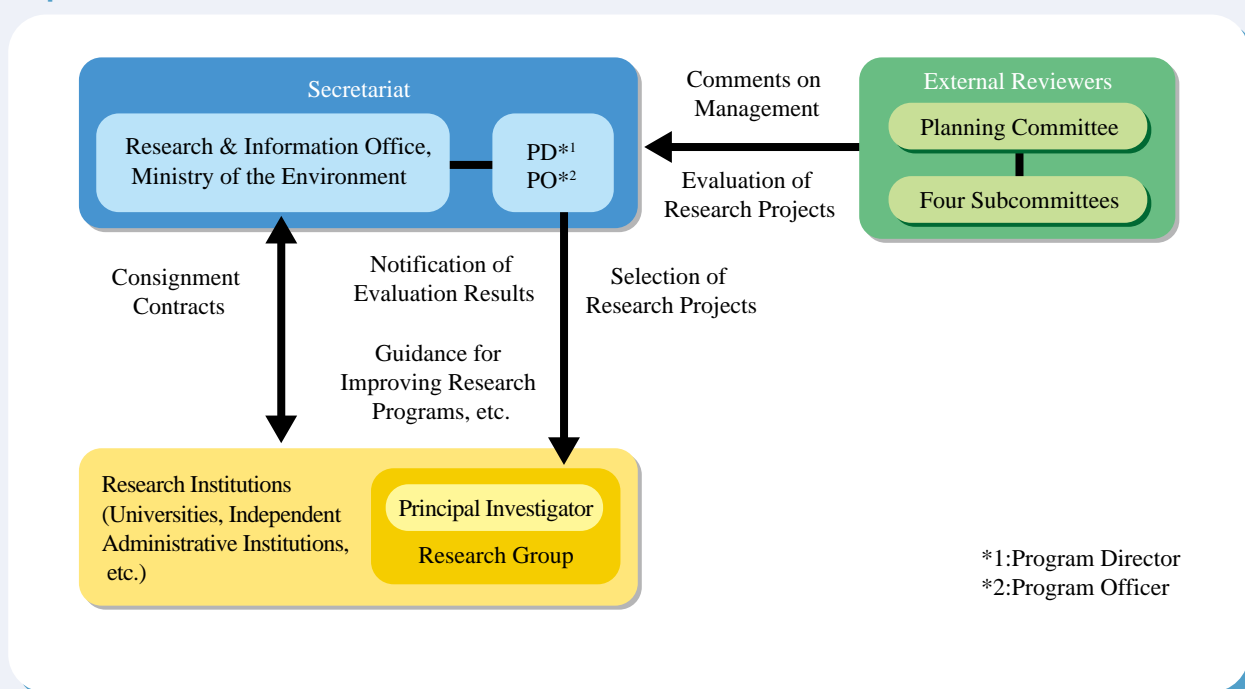
Areas of Projects:

Research Areas	Conditions	Research Period	Average of Annual Budget per Project (1US\$=120yen)
Strategic R & D Area	Large-scale projects for which Ministry of the Environment provides a research framework	5 years (three years for Period I and two for Period II)	About \$2 million
Global Environmental Research Area	Research contributing to solving individual or combinations of global environmental issues	3 years (could be extended to five years)	About \$0.4 million
Revolutionary Research in Feasibility Studies Area	Researchers required to be 40 year or younger in age	1 or 2 years	About \$80 thousand

Projects of the Strategic R & D Area:

- S-4 : Comprehensive Assessment of Climate Change Impacts to Determine Dangerous Level of Global Warming and Appropriate Stabilization Target of Atmospheric GHG Concentration (FY2005-2009)
- S-5 : Integrated Research on Climate Change Scenarios to Increase Public Awareness and Contribute to the Policy Process (FY2007-2011)
- S-6 : Research Project on Establishing of Methodology to Evaluate Middle to Long Term Environmental Policy Options toward Asian Low-Carbon Society (Low-Carbon Asia Research Project) (FY2009-2013)
- S-7 : Synthetic Research on Elucidation of Regional Air Pollution in East Asia and Promotion of Atmospheric Environment Management Considering Co-benefit with Global Warming Measures (FY2009-2013)

Implementation Structure:



Intermediate Evaluation

- Research projects in the Global Environmental Research Area (for which the research period is three years) will undergo intermediate evaluation in their second year.
- Research projects in the Strategic R & D Area (for which the research period is five years) will undergo intermediate evaluation in their third year.
- Research projects in the Global Environmental Research Area rated highly in the evaluation will be considered for an extension. Research projects that achieve good results in the examination will be allowed a two-year extension (bringing the total to five years).

Recent Major Achievements

- **AIM (Asian-Pacific Integrated Model):**

The analytic results of the AIM are utilized for policy analysis including tax systems, subsidy policies, presumed effects on the Kyoto Mechanism, and presumed effects on global warming and impacts on economics through the introduction of new technologies, etc.

- **Desertification Early Warning System (EWS):**

The analytic results of an integrated model will be submitted to CRIC5 (Committee for the Review of the Implementation of the Convention) as a representative example of Japan's efforts.

- **Impact of Invasive Alien Species on Ecosystems:**

The research on alien species has been helping policymakers shape the Invasive Alien Species Act, and has been utilized in the establishment of protected forest ecosystem areas in the Ogasawara Islands.

- **Japan Low-Carbon Society 2050:**

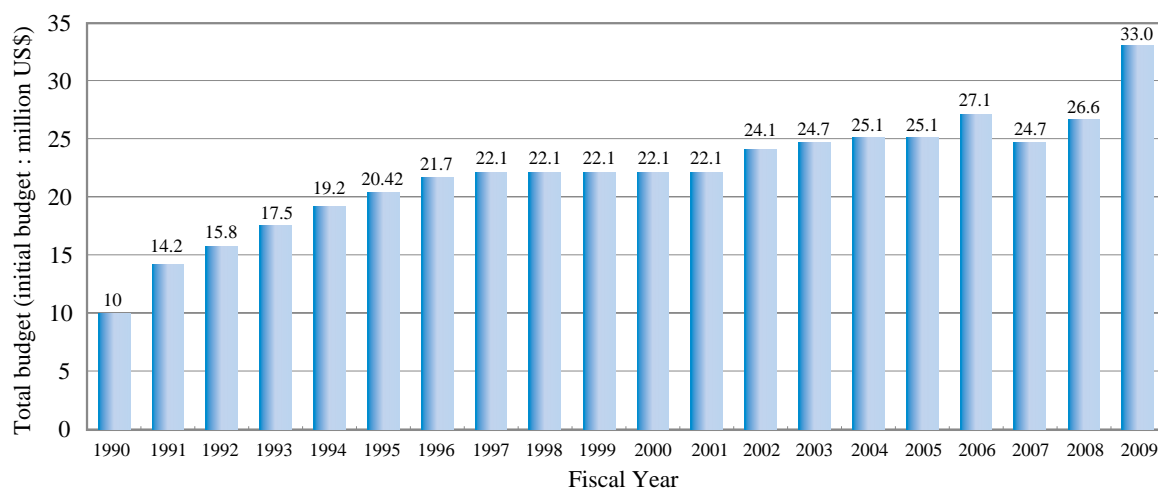
This is a cooperative scientific project between Japan and the UK started in February 2006. The research results are influencing formal/informal international negotiations for the Framework Convention on Climate Change.

- **Dust and Sandstorm (Kosa) Monitoring Network:**

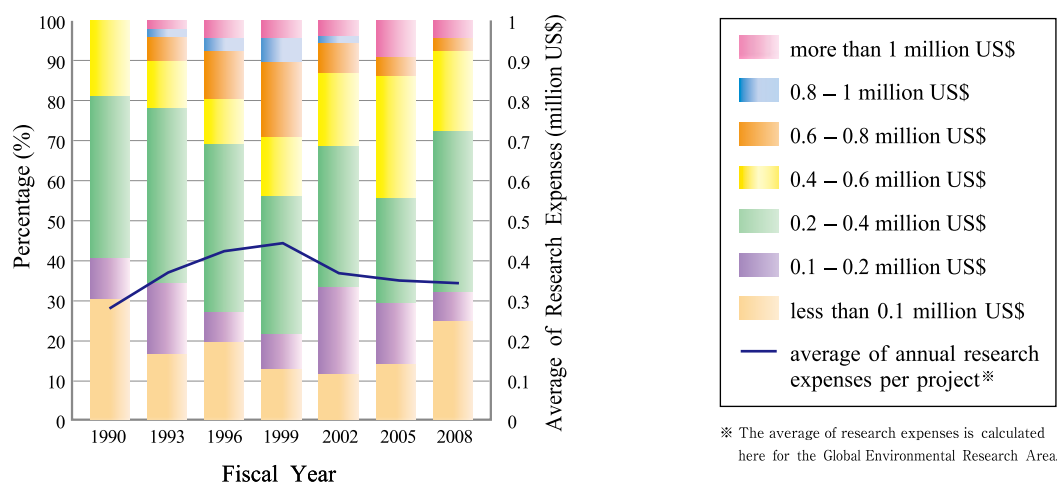
The research on Kosa has been contributing to the devising of policies aiming to solve the Kosa problem, which is a shared concern understood in common by all parties at the Tripartite Environment Ministers Meeting among China, Japan and Korea (TEMM).

Management Performance

Trends in the Total Budget (1 US\$ = 120yen) :

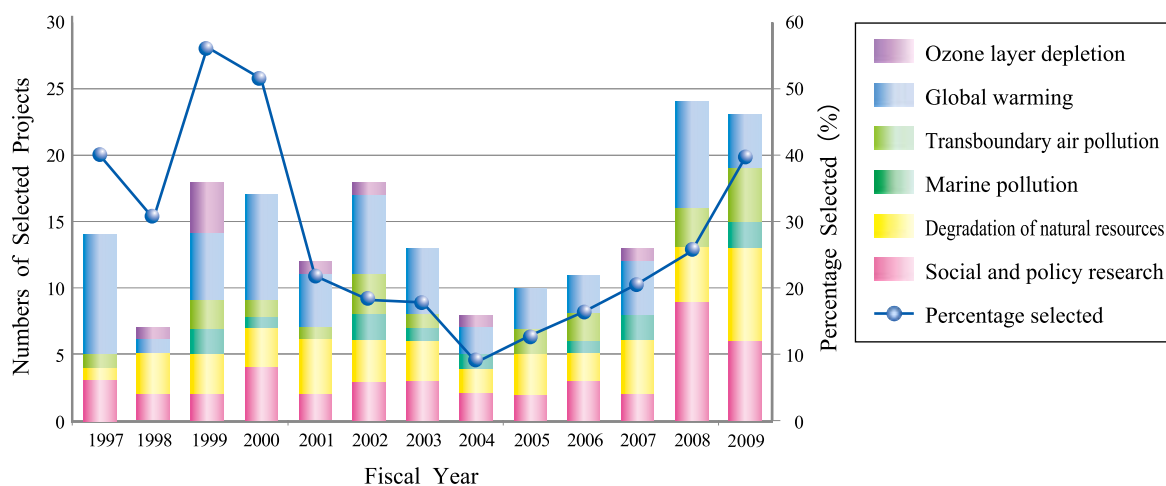


Trends in Annual Research Expenses per Project (1 US\$ = 120 yen):



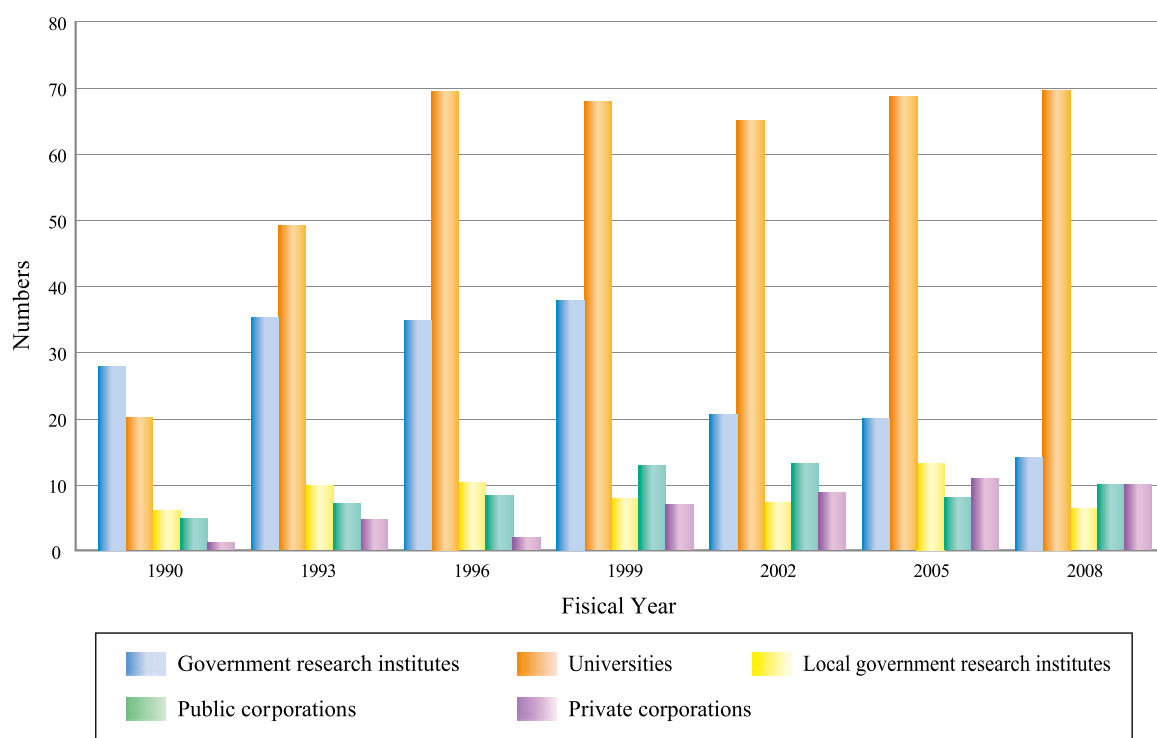
Percentages of Research Projects Selected:

Numbers of selected projects and trends in the selection ratio (Global Environmental Research Area)



Numbers of Participating Institutions:

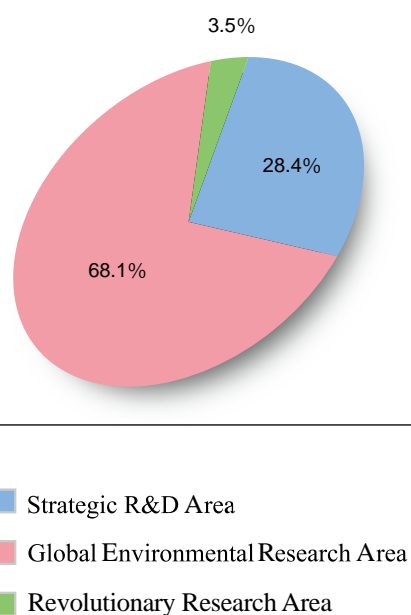
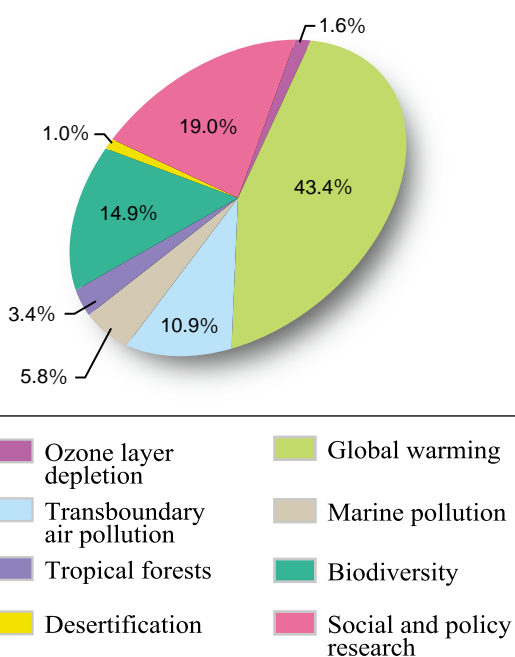
Trends in numbers of research institutions (in the case of universities, counted by university rather than faculty)



State of Implementation of Research Categories and Research Areas (based on the budget distribution):

Ratios of research categories conducted in FY2009
- except for the Revolutionary Research Area -

Ratios of research areas conducted in FY2009



Strategic R&D Area

Global System Changes

Comprehensive Assessment of Climate Change Impacts to Determine the Dangerous Level of Global Warming and Appropriate Stabilization Target of Atmospheric GHG Concentration

(Period I : FY2005-2007)

(Period II : FY2008-2009)

Project Leader : **Nobuo MIMURA**, Ibaraki University

<S-4>

Ibaraki University, National Institute for Environmental Studies, Tohoku University, National Agriculture and Food Research Organization, The University of Tokyo, National Institute for Land and Infrastructure Management, University of Tsukuba, National Institute of Infectious Diseases, National Institute for Agro-Environmental Sciences, Japan International Research Center for Agricultural Sciences, Forestry and Forest Products Research Institute, Kyushu University, Meijo University, The Institute of Statistical Mathematics

This project aims at assessing the physical and socioeconomic impacts of climate change in Japan and the Asia Pacific region, focusing on water resources, human health, agriculture, forest ecosystem, coastal zones, and disaster prevention. Studies of spatial and temporal distributions of the impacts

and adaptation to them are coordinated to determine the dangerous level of global warming. Appropriate emission paths are also studied to build a scientific basis for the stabilization target of atmospheric GHG concentration.

