



ENVIRONMENT RESEARCH AND TECHNOLOGY DEVELOPMENT FUND FY2013



Ministry of the Environment



What is the Environment Research and Technology Development Fund?

■ Objective

To contribute to the promotion of environmental policy through research and technical development

The aim of the Environmental Research and Technology Development Fund (ERTDF) is to collect scientific knowledge and accelerate technological development as necessary to promote policies such as global warming prevention, establishment of a sound material-cycle society and establishment of a society in harmony with nature, while ensuring security and safety through environmental risk management. The fund promotes research and development in the area of environmental issues overall.

■ Features

Adoption and execution of research proposals which meet administrative needs in accordance with environmental policies

The ERTDF is a policy-oriented, competitive research fund. It calls for proposals from industry, academia and government institutes. Proposals are expected to meet administrative needs, and are competitively examined and selected by the committee and appropriate subcommittees.

The ERTDF strongly promotes research and development in accordance with strategic administrative needs. For example, the selection system for the “Strategic Research and Development Area” consists of competition among research teams, based on an outline of research themes and project leaders established by the Ministry of the Environment.

Ensuring a transparent and fair evaluation process by using committees composed of outside specialists

The ERTDF comprises a committee and several subcommittees consisting of outside specialists. The committee is responsible for selection of proposals, intermediate evaluation and ex-post evaluation. Proposals are examined and selected by the committee and appropriate subcommittees in terms of the necessity and effectiveness of the research, and efficient use of funds.

To ensure transparent, fair and efficient fund management, the Ministry of the Environment refers to the results of these evaluations in the selection of research projects to adopt. As well as, at the mid-point of the research period, the projects are evaluated for their degree of progress in research and their cost performance. The results of each evaluation are used in the allocation of the research budget in order to promote the approved research projects.

■ Research Fields

In fiscal 2013, the seven former research fields have been reorganized into five fields, in line with the “Promotion Strategy for Environmental Research & Environmental Technology Development” (Policy Recommendation Report of the Central Environmental Council in June 2010).

• **Common to all fields / Cross-sectional through different fields**

- Research related to an ideal society (sustainable society) under a long-term state vision
- Win-win research and development that simultaneously contributes to multiple fields
- Research and development to eliminate trade-offs between fields
- Other related research and development

• **Low-carbon society**

- Formulating low-carbon scenarios that flexibly respond to climate change
- Clarifying the global warming phenomenon and measures to adapt to the situation
- Promoting low-carbon technology for the energy supply system
- Other related measures

• **Sound material-cycle society**

- Thorough implementation of the 3Rs (Reduce, Reuse, and Recycle), and optimal disposal
- Improving heat recovery efficiency
- Collecting rare metals and establishing recycling systems
- Other related measures

- **Society in harmony with nature**

- Protecting biodiversity
- Sustainably securing and using national land, water, and other natural resources
- Other related measures

- **Safe and secure society**

- Risk evaluation and management that takes account of previously unidentified risks (such as chemical substances and vulnerability)
- Healthy circulation of water and air
- Other related measures

*Research and technological development for CO₂ emission reduction at energy origin is funded not by the ERTDF, but by the Special Account for Energy Policy.

A website has been created which explains the ERTDF system and provides information on calls for proposals.

<http://www.env.go.jp/policy/kenkyu/suishin/english/index.html>

History of the ERTDF

The ERTDF originated through the integration of three competitive research funds, the Global Environmental Research Fund (GERF), the Environment Technology Development Fund (ETDF) and the Grant-in-Aid for Scientific Research about Establishing a Sound Material-cycle Society. In fiscal 2012, the Rehabilitation Adoption budget was established, in addition to the General Adoption budget of the ERTDF funded by the general account. The former is funded by Special Account for Reconstruction from the Great East Japan Earthquake, and solicits proposals for “contribution to earthquake restoration and reconstruction.” It was created to promote technical development and accumulation of scientific knowledge absolutely necessary for expediting rehabilitation in disaster areas.

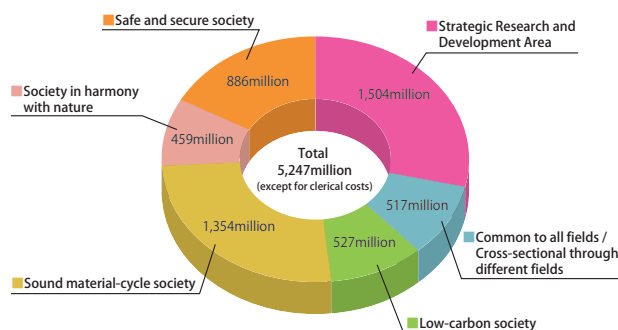
The Number of Research Projects Underway and Budget in Fiscal 2013

Under the General Adoption budget, a new strategic project in the Strategic Research and Development Area (“POST 2015 - Project on Sustainability Transformation beyond 2015 -”) has been launched along with 43 new research projects in the Environmental Problem Research Area. The research projects conducted in fiscal 2013 comprise six strategic projects and 159 research projects.

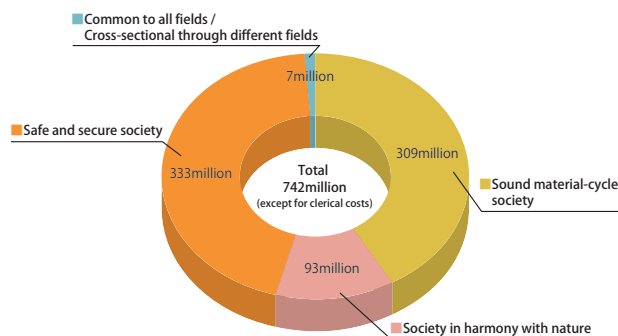
Meanwhile, under the Rehabilitation Adoption budget, 23 research projects are striving toward resolution of the various problems caused by the influence and damage from the Great East Japan Earthquake.



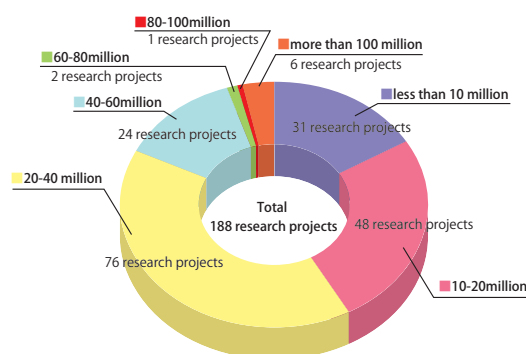
Research Projects Conducted in Fiscal 2013



Budget in General Adoption allocated for research fields (unit: yen)



Budget in Rehabilitation Adoption allocated for research fields (unit: yen)



Number of research projects per budget size (unit: yen)



Research Project to Establish a Methodology to Evaluate Middle to Long Term Environmental Policy Options toward Asian Low-carbon societies (Low-Carbon Asia Research Project)

(Period I: FY2009-2011)
(Period II: FY2012-2013)
Budget in FY2013: JPY 229,694,000

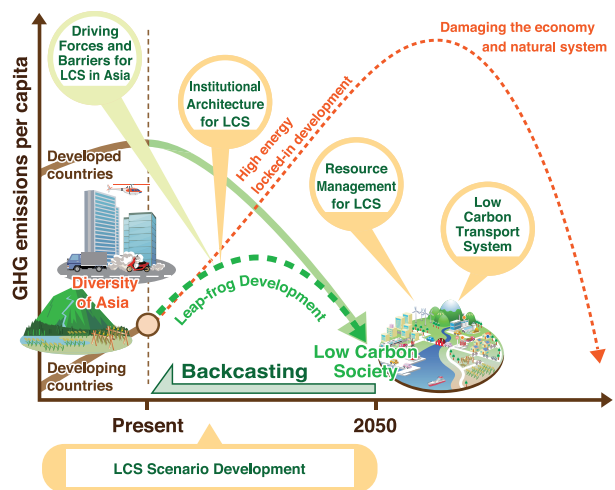
Mikiko KAINUMA, National Institute for Environmental Studies (cooperation of 16 institutions)

<S-6>

The international community has recognized the need to reduce greenhouse gas (GHG) emissions by 50% by 2050 in order to limit the change in global mean temperature to within two degrees centigrade compared to preindustrial times. In order to achieve this target, it is imperative to develop low-carbon societies (LCS) in Asia, as the Asian countries will account for more than half of the global population and GHG emissions in 2050.

The Low-carbon Asia Research Project aims to establish a vision for LCS in Asia, and to develop comprehensive methodologies to design and evaluate policy options based on robust scientific knowledge and the multifaceted needs of each country. The project explores and identifies such development pathways through four research perspectives: (1) LCS scenario development, using global-, national-, subnational- and city-scale models, (2) institutional architecture for LCS, (3) resource management, and (4) low-carbon transport systems. By integrating the outcomes of these studies, we are identifying policy roadmaps to

facilitate a transition to Asian societies characterized by low carbon emissions, low resource consumption and robust economic growth.



Scientific Analysis of Regional Air Pollution and Promotion of Air Pollution Management in East Asia Considering Co-benefits

(Period I: FY2009-2011)
(Period II: FY2012-2013)
Budget in FY2013: JPY 140,746,000

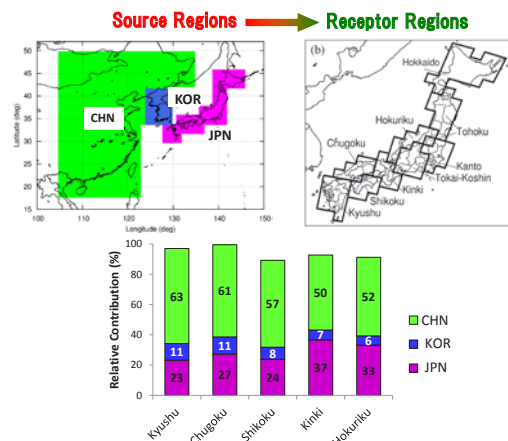
Hajime AKIMOTO, Asia Center for Air Pollution Research (cooperation of eight institutions)

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In recent years, emissions of ozone and aerosol precursors (NO_x, VOC, etc.) have been increasing rapidly in East Asia. From the standpoint of atmospheric environmental impacts in Japan, the contribution of transboundary air pollution to increased concentrations of ozone and aerosols (particularly PM_{2.5}) is a significant issue. In order to resolve this regional issue, there is a strong need to elucidate the present situation of regional air pollution in East Asia scientifically and to establish measures to promote strategic atmospheric environmental management in East Asia through international collaboration.

The objectives of this project are to quantify the contributions of regional air pollution in East Asia and hemispherical inter-continental transport of ozone and aerosol pollution affecting Japan. It also aims to develop a scenario for reducing regional air pollutants in East Asia considering a co-benefits approach that is effective for mitigating both transboundary air pollution and

global warming, with a focus on the reduction of short-lived climate pollutants (SLCP), and to consider routes for reaching an international agreement on the basis of scientific knowledge.



Relative Contribution for annual mean PM_{2.5} mass Concentrations



Comprehensive Study on Impact Assessment and Adaptation for Climate Change

(Period I: FY2010~2012)
 (Period II: FY2013~2014)
 Budget in FY2013: JPY 345,479,000

Nobuo MIMURA, Ibaraki University (cooperation of 30 institutions)

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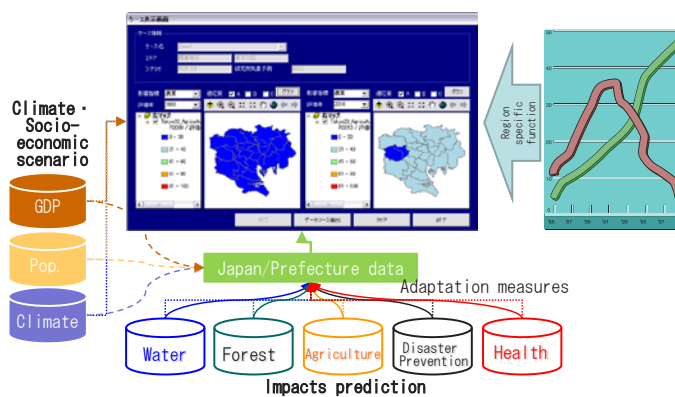
The major objectives of this research project are to form a scientific basis for detailed projection of climate change impacts on Japan and developing nations of the Asian region, and to enable development of adaptation countermeasures and policies. This research project consists of the following major research themes in line with the above objectives.

- To develop more detailed assessment models of physical and socioeconomic impacts due to climate change and to evaluate the effects of adaptation measures in Japan.
- To develop a simplified impact assessment method which can be applied to regional impact assessment at the local government level (Figure).
- To establish a regional adaptation forum for enhancing the capability of local governments to assess impacts and to implement adaptation measures.
- To help promote adaptation in Asian developing countries through development of indexes for impacts, vulnerability and effectiveness of adaptation.

This project is expected to contribute to the establishment

of a safe sustainable society which can adapt to climate change. To achieve this goal, we will pursue a systematic, interdisciplinary approach featuring active interaction among different research fields.

Simplified Impact Assessment Tool



Integrative Observations and Assessments of Asian Biodiversity

(Period I: FY2011-2013)
 (Period II: FY2014-2015)
 Budget in FY2013: JPY 301,327,000

Tetsukazu YAHARA, Kyushu University (cooperation of 19 institutions)

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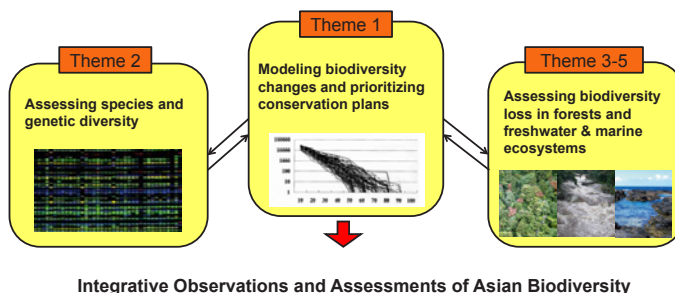
In this project, we are conducting an integrative observation of species together with genetic diversity and biodiversity of forest, freshwater and marine ecosystems; and we are assessing where, how and how much biodiversity is being lost in Asia.

Our specific tasks are as follows:

- Developing methods and models to quantify the rate of biodiversity loss in Asia.
- Exploring methodologies to assess biodiversity loss from time-series data.
- Developing a database of ground-based observations in the Asia-Pacific area so as to enable assessment of biodiversity loss at the Asia-Pacific regional scale.
- Modeling the relationship between species richness and ecosystem functions/services.
- Developing methods for prioritization of candidate protection areas in conservation planning.

By resolving these issues, we will provide a scientific

basis for developing and prioritizing policies effective at reducing biodiversity loss. We also expect that the results of this project will contribute to global efforts toward biodiversity assessment and national efforts to revise Japan's biodiversity strategy and outlook.



Integrative Observations and Assessments of Asian Biodiversity



Integrated Research on the Development of Global Climate Risk Management Strategies

(Period I: FY2012~2014)
 (Period II: FY2015~2016)
 Budget in FY2013: JPY 287,352,000

Seita EMORI, National Institute for Environmental Studies (cooperation of 15 institutions)

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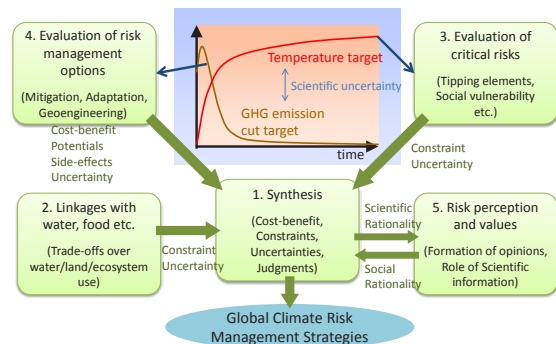
In this study, we adopt a risk management approach to tackle the long-term global aspects of climate change issues and explore them as one way of decision-making at the human level.

We are conducting research under the following five themes:

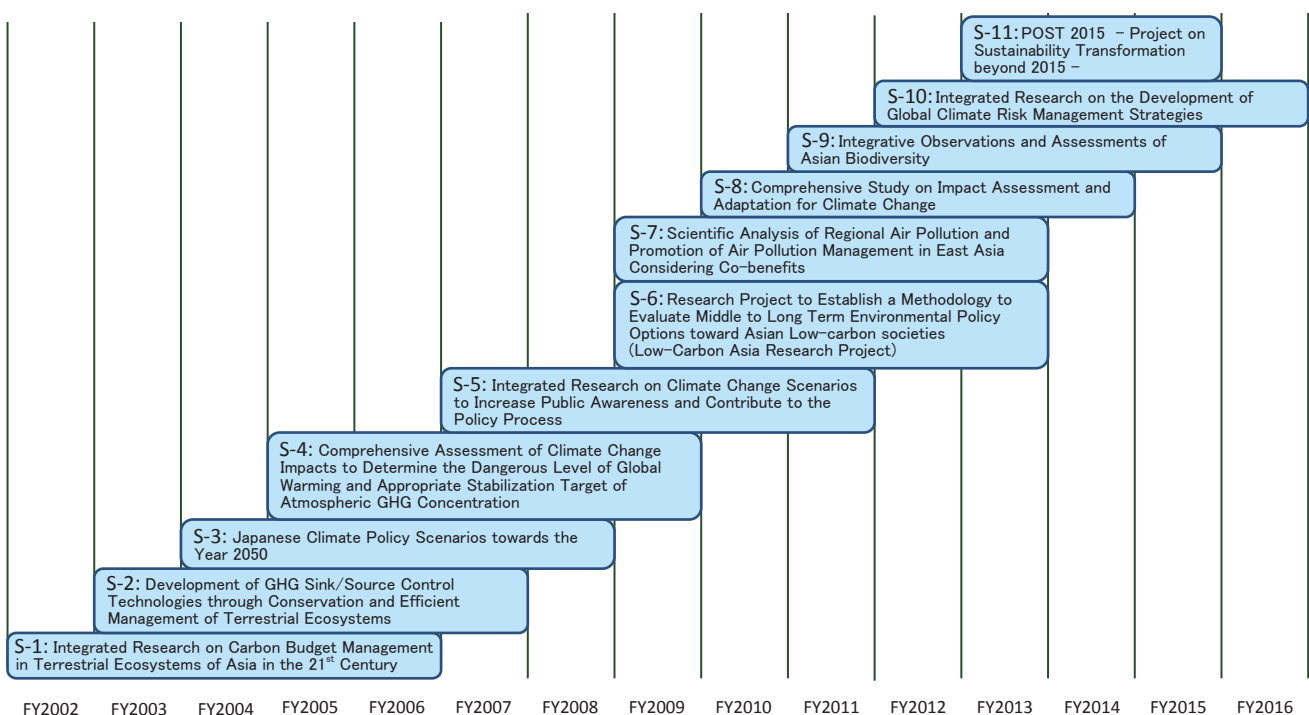
- (1) Synthesis of global climate risk management strategies,
- (2) Optimization of land, water and ecosystem uses for climate risk management,
- (3) Analysis of critical climate risks,
- (4) Evaluation of climate risk management options under technological, social and economic uncertainties, and
- (5) Interactions between scientific and social rationalities in climate risk management.

Through this research, we will develop and provide concepts and options for climate risk management

strategies which can be considered rational from both scientific and social standpoints, by comprehensively taking into account various constraints, uncertainties, risk management options, social value judgments and other factors. This will help us to contribute to international consensus building, national policy planning and deeper public understanding on climate issues.



Strategic Research and Development Area – Projects and Research terms –





POST 2015 - Project on Sustainability Transformation beyond 2015 -

(Period I: FY2013~2015)
Budget in FY2013: JPY 199,526,000

Norichika KANIE, Tokyo Institute of Technology (cooperation of twelve institutions)

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In June 2012, the United Nations Conference on Sustainable Development, known as Rio+20, agreed to consider a set of Sustainable Development Goals (SDGs) to be integrated into the Post-2015 Development Agenda. SDGs should be built upon the experience of the Millennium Development Goals (MDGs), which are expected to expire in 2015, but this task is not as easy as a simple extension of the MDGs. We know that the current political dynamics differs from that of 2000, with growing political and economic power among emerging economies, for example. We also know that a growing volume of scientific evidence suggests the transformation of the Earth system. New dimensions should be taken into account when considering SDGs.

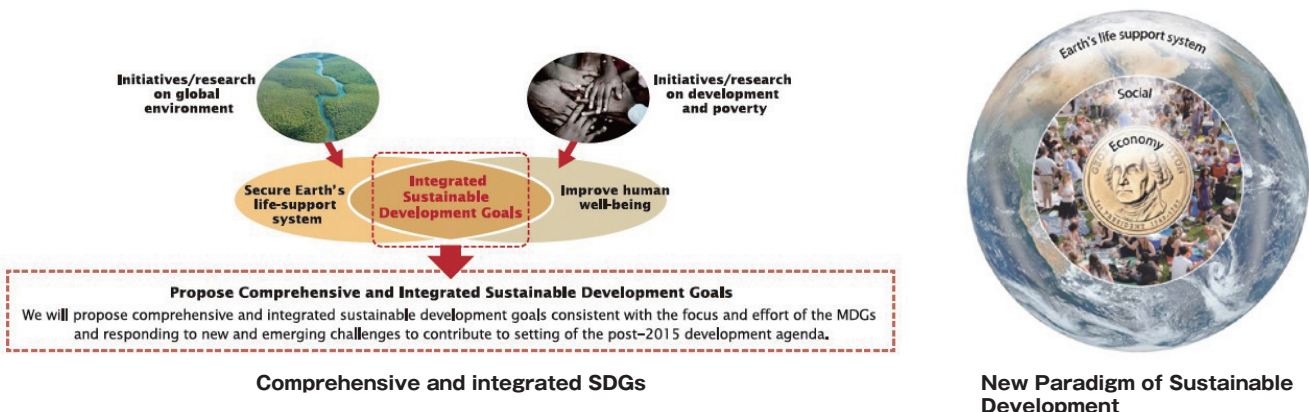
The short-term aim of this research project is to contribute to the establishment of SDGs, but we also aim to propose policies and frameworks for a long-term transformation of human behavior toward a sustainable society. Specifically, we have the following five objectives:

1. Contribute to establishing a post-2015 development agenda.
2. Promote trans-disciplinary research in ways that harmonize environment and development by leveraging sustainable development goals.
3. Create a new trans-disciplinary epistemic community by promoting research-based collaboration. The purpose of this is to address the lack of communication between research communities dealing with environmental issues and development issues.
4. Aim to become an international research center through

- relevant international collaboration and networks.
5. Through these activities, contribute to a broad societal debate about sustainability transformation.

Recognizing the changing political and natural circumstances is the first step in the scientific investigation of SDGs. Many recent scientific findings recognize that the Earth system is in transition due to the intensive use of the natural environment and resources by humans. In such a new era of the “Anthropocene,” when the Earth system is dependent upon human behaviors, sustainable development should be defined as “meeting the needs of the present while safeguarding Earth’s life-support systems, on which the welfare of current and future generations depends.” The prospects for human well-being are worsening due to the state of global environmental destruction exceeding the boundaries in some areas. The new paradigm should therefore be one of social and economic sustainability nested into the Earth’s life support systems as the foundation of all development.

This approach implies that SDGs should integrate different dimensions of sustainable development, which requires scientific investigation of a trans-disciplinary nature — involving not only natural and social sciences but also stakeholders for better governance. We hope to promote communication and collaboration between fields focusing on environmental and development issues, and to propose comprehensive and integrated sustainable development goals.





District-Based Modeling of Energy-Related Urban Activities Towards Sustainable Cities and Proposals for Policy Measures

(FY2012-2014)

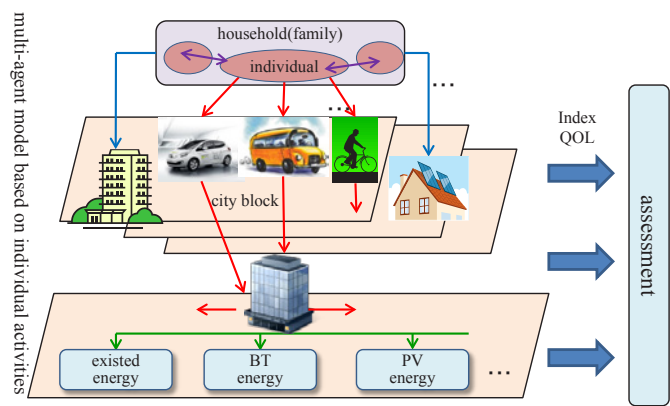
Budget in FY2013: JPY 11,597,000

Keiichi KITAZUME, Kansai University

<1E-1202>

Infrastructure such as energy networks and transportation systems which is designed from an environmental viewpoint should maintain its value as a sustainable stock in the future. Assessment of the value requires a tool which is able to analyze the activity of individuals/firms based on city blocks as spatial units which are matched for these people's awareness of the value of such infrastructure. The current research is developing a simulation model which consistently represents access to town facilities with transportation modes and energy systems, along with activities in daily life that involve choices, and a management model of infrastructure, which taken together cover a variety of situations in future cities. For that reason, the researchers are developing three sub-models as stock-management models of infrastructure, town facilities with their access and the urban environment, which cover the theory of compact cities, QOL(quality of life) improvement and re-design of energy infrastructures.

The models will be tools for enabling people to discuss and propose environmental policy measures in cooperation with other stakeholders and are anticipated to contribute to the maintenance or improvement of infrastructures for realization of "the Future City."



Development of a "Motase-type" Decentralized Energy System based on Cooperation between Demand-Supply Units at the Lowest Level Where Renewable Energy is Produced Effectively

(FY2012-2014)

Budget in FY2013: JPY 36,477,000

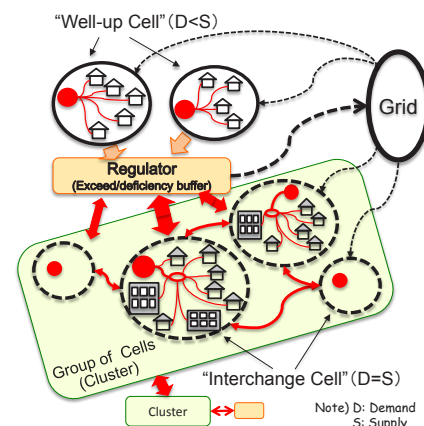
Hisashi KOBAYASHI, Ibaraki University (cooperation of four institutions)

<1F-1201>

Expansion of the number of renewable energy facilities and facility areas is required in order to introduce renewable energy on a large scale. In addition, the renewable energy supply may be wasted if managed by larger electric power systems. To introduce a large quantity of renewable energy effectively, we must develop an energy system in which dispersed energy sources fill community demands and then meet group needs by having energy interchanged among communities through local distribution systems to supply surplus energy outside of the community group into the bulk power system.

To achieve a decentralized energy system, it will be necessary to design an individual autonomous decentralized unit at the lowest level ("cell") and a collaborative "cell cluster." In a "cell" with rich renewable energy sources, there would be a "well-up cell" in which the supply of renewable energy always exceeded demand, and an "interchange cell" in which supply matched demand on

average. The design of such an energy system comprising "cells" and "cell clusters" based on the above viewpoint would give a clear basic picture of a decentralized energy system.



Conceptual diagram of demand-supply unit at the lowest level ("cell") and "group of cells (cluster)"



Studies on Future Climate Projection in the Asian Region Utilizing CMIP5 Multi-Model Ensemble Data

(FY2012-2014)

Budget in FY2013: JPY 43,811,000

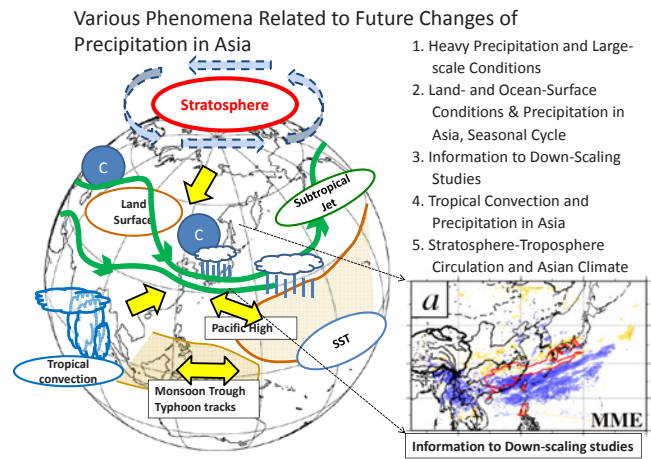
Yukari N.TAKAYABU, The University of Tokyo (cooperation of four institutions)

<2A-1201>

Possible changes in characteristics of phenomena such as the frequency of extreme rainfall, intensity of water famines, or changes in typhoon tracks associated with global warming, may affect our everyday lives more seriously than expected. In order to project the future climate, we rely on the numerical experiments using climate models. However, discrepancies may appear, depending on physical assumptions. Besides, small-scale phenomena cannot be resolved in the coarse grids of climate models in the first place.

In this study, we aim to extract information which is as reliable as possible about how everyday life-related phenomena may change in association with global climate change, by comparing the climate model outputs ensemble of Coupled Model Intercomparison Project Phase 5 (CMIP5) for the 5th Assessment Report of the International Panel for Climate Change with observational data. We specifically focus on phenomena related to precipitation in Asia, which have large impacts on our everyday lives.

Through this activity, we expect to be able to provide basic knowledge for more concrete and appropriate political judgments in preparation for accommodating the impacts of global warming on our lives.



Experimental Study of Multiple Impacts of Global Warming and Ocean Acidification on Marine Species

(FY2012-2014)

Budget in FY2013: JPY 42,626,000

Yukihiro NOJIRI, National Institute for Environmental Studies (cooperation of four institutions)

<2A-1203>

Increased atmospheric CO₂ concentration is causing global warming and ocean acidification simultaneously. Since marine species will endure multiple impacts of warming and acidification, multiple stress studies are necessary. In this study, the target species are northward migrating corals, fishery fish and phytoplankton around the Japan coast. A newly designed CO₂ control technique is applied for manipulation studies. The results will give basic knowledge for predicting coastal marine ecosystem changes, future fishery resources, and marine carbon cycles.

Preliminary results demonstrate that the Japanese whiting (*Sillago japonica*) can reproduce even under very high, unforeseen CO₂ levels of ocean acidification as high as 4000 ppm. This is the first study in which elevated CO₂ level was maintained throughout the reproductive cycle of a marine fish in a seawater tank with large volume. The finding suggests marine fish may be more tolerant of ocean acidification than has been generally thought. On the other

hand, our CO₂ manipulation experiments suggest that the coral species along the Japanese islands may be impacted negatively by acidification, suppressing their northward migration.



Reproduction experiment for Japanese whiting (*Sillago japonica*) under elevated CO₂ level in large seawater tanks (left panel, 1 ton seawater tank for the manipulation experiment, upper right, Japanese whittings and CO₂ equilibrator in the tank, lower right, fertilized eggs just before hatch)



Establishment of an Environmentally Sound Quality Control Method for Wastes and By-Products toward an East Asian Standard

(FY2011-2013)
Budget in FY2013: JPY 24,165,000

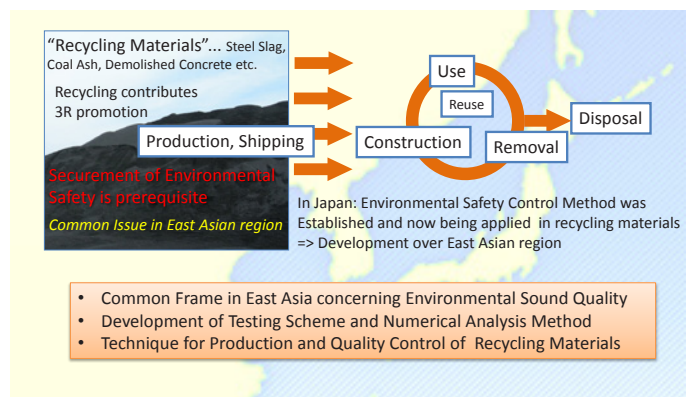
Hirofumi SAKANAKURA, National Institute for Environmental Studies

<3K113004>

Securing environmental safety is of the most important issues in the recycling of by-products and wastes, e.g., steel-making slag, coal combustion ash, demolition concrete (hereafter referred to as “recycled materials”), for the sustainability of these industries in East Asian nations.

Recently in Japan, a common basic concept was established in setting environmentally sound quality in recycled materials. This concept involves a life-cycle viewpoint and a rational testing scheme. This research aims at sharing this basic concept among researchers and policy makers in the East Asian nations toward standardization. Testing schemes and analytical methods for evaluating recycled materials are also being developed. Moreover, upgrading of technology for recycled materials such as municipal solid waste incineration ash is being implemented. This research is expected to resolve common issues involving recycled materials in East Asia, to bring fair responsibility for the burden of the environmental safety among East Asian

nations, and to make international progress in high-quality technology and measures for recycling by-products and wastes.



Study on Household Hazardous Waste (HHW) Management with a Main Emphasis on Household Chemicals

(FY2011-2013)
Budget in FY2013: JPY 21,563,000

Toshihiko MATSUTO, Hokkaido University

<3K113023>

Leftover chemical products such as agrichemicals and paints in households are called “household hazardous waste” and collected in Europe and the United States. In Japan, although the problem has been known for some time, their disposal is prohibited because municipalities say they are unable to treat them. This study is being conducted to enable a practical collection system to be proposed.

First, we confirmed that municipalities do not collect these items, and got a grasp of the purchase and disposal situation using a resident questionnaire. Meanwhile, we clarified the legal system and collection and disposal conditions in the West. In the second year, a half-year test collection in all areas of Asahikawa City, Hokkaido brought in about eight tons of waste from 1000 households, and we made a list of collected agrichemicals, paints, cleaning agents, etc. In the final year, we will define and list items for collection according to characteristics of toxic

substances contained, and other factors. Then, we will propose a practical collection system, including regulations, referring to interviews with disposal operators and cases from Western countries.





Biodiversity Conservation Represented by *Ketupa blakistoni blakistoni* and *Grus japonensis*: Comparison of Hokkaido with the Russian Far East

(FY2012-2014)

Budget in FY2013: JPY 37,539,000

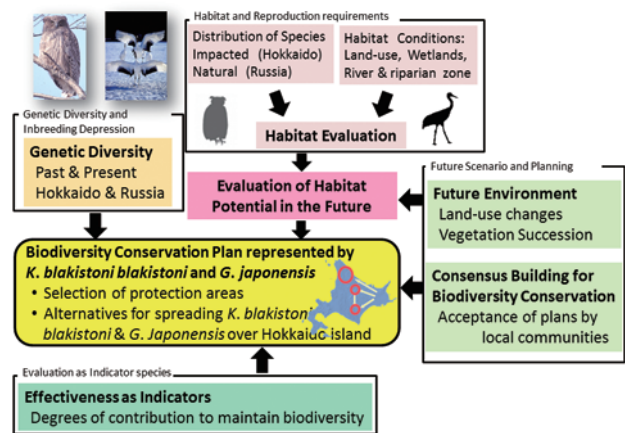
Futoshi NAKAMURA, Hokkaido University (cooperation of two institutions)

<4D-1201>

A healthy river and riparian ecosystem is necessary for maintaining populations of *Ketupa blakistoni blakistoni* and *Grus japonensis*. Both bird species have been revered by people since ancient times, but are currently listed as endangered due to their small population size. Their genetic diversity is expected to be low, but populations are recovering due to protection and reproduction projects in recent years. However, their natural riparian habitats have been damaged by intensive land use and, therefore, a comprehensive management plan is required to reestablish them throughout the island of Hokkaido.

We evaluate their habitat and reproduction requirements and predicted future habitat changes associated with the abandonment of current land use activities. This prediction, together with genetic diversity data, would enable the development of a restoration plan that maintains genetic diversity. We also assess the contribution of these species to regional biodiversity (as umbrella species) by

calculating their habitat overlap with those of other bird species. Furthermore, we propose alternative conservation plans for the two species, to ensure social acceptance by local communities.



Robustness and Fragility of Spring Water Ecosystems: Restoration of Ecosystem Functions after the Tsunami

(FY2012-2013)

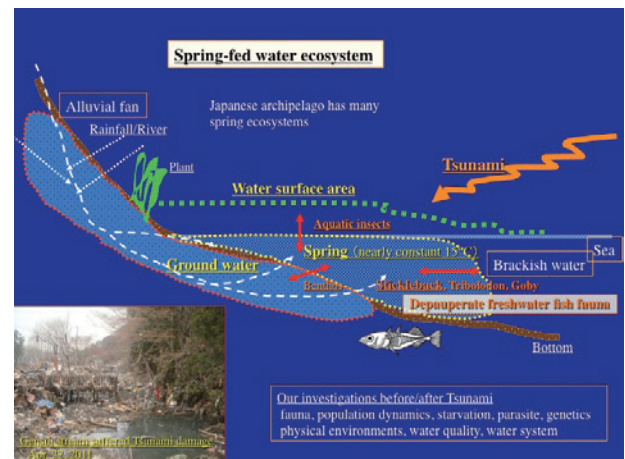
Budget in FY2013: JPY 15,003,000

Seiichi MORI, Gifu-Keizai University (cooperation of three institutions)

<4ZD-1203>

Spring water provides a relatively stable environment, thereby potentially contributing to the robustness of ecosystems under environmental perturbations. Spring ecosystems are, however, often fragile, because depletion of water can easily occur due to urban development and human activities. In this project, we investigate the recovery power as well as the negative human impacts that can prevent the natural recovery of spring ecosystems in Otsuchi, Iwate Prefecture, where we have been conducting field research for over ten years, including before and after the big tsunami, which was triggered by the magnitude-9.0 Tohoku-Oki Earthquake on March 11, 2011. Specifically, we investigate changes in the distribution, morphology, trophic ecology and population genetic structure of a keystone species, the threespine stickleback (*Gasterosteus aculeatus*). We also conduct ecological and hydrological surveys to investigate the recovery of compositions of other organisms and water quality and the hydrodynamics

of spring water. Through this research, we will propose conservation of spring ecosystems to policy makers and explain that it would be essential for maintaining biodiversity and sustaining ecosystem functions.





Exposure Assessment to Plasticizer and Flame Retardants and their Risk on Children's Allergies

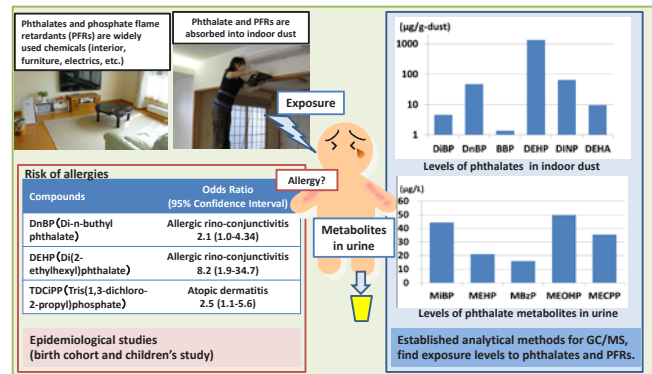
(FY2011-2013)

Budget in FY2013: JPY 28,655,000

Reiko KISHI, Hokkaido University Center for Environmental and Health Sciences (cooperation of two institutions) <5C-1151>

Phthalates and organophosphate triesters are chemicals categorized as semi-volatile organic compounds (SVOC), and used as plasticizers and flame retardants. In recent years, their association with allergies has become a matter of concern. To assess the risk of children's asthma and allergies from exposure to phthalates and phosphate flame retardants (PFRs), we are conducting an epidemiological study targeting elementary school children. Simultaneous analytical methods of measuring phthalates and PFRs in dust, as well as their metabolites in urine through gas-chromatography/mass spectrometry (GC/MS) have been established. Indoor dust and urine samples were collected and analyzed. As a result, we found the median concentration of DEHP, one of phthalates, in dust to be 1107 µg/g and it was higher than that found in Swedish and German studies. The risk among children of allergic rhino-conjunctivitis was 8.2 times higher when the DEHP level in dust was ten times higher. The effects of prenatal phthalate exposure, as well as exposure at seven years

of age in causing allergic symptoms among toddlers and children are being examined in the Hokkaido Birth Cohort Study. Our achievements can provide scientific evidence for implementation of environmental policies as well as risk management.



Provide scientific evidences for implementation of environmental policies and risk management

Current Status Elucidation and Source Contribution Assessment of PM_{2.5} Pollution in Collaboration with Environmental Research Institutes across Japan

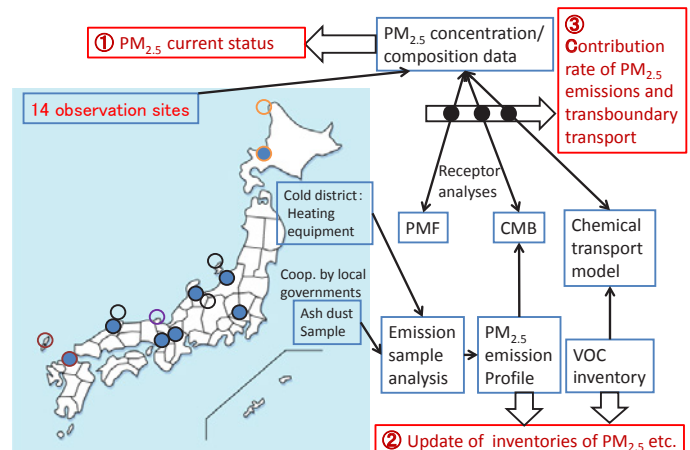
(FY2011-2013)

Budget in FY2013: JPY 59,342,000

Seiji SUGATA, National Institute for Environmental Studies (cooperation of seven institutions) <5B-1101>

Following the environmental standards of PM_{2.5} announced publicly in 2009, each local government has been developing a monitoring network for PM_{2.5} for three fiscal years from 2010. It is thought worthwhile to conduct observation and research on PM_{2.5} at this time just before a monitoring organization is to be established. In this research, an observation site network of 14 points across the country was developed by cooperation between NIES and several local governments. Through this, concentration and componential analysis data, the time resolution of which is higher than that of air pollution monitoring, are being collected for PM_{2.5}. Moreover, PM_{2.5} source profiles are being created through sample collections, and numerical analyses using a chemical transport model, and receptor models are being conducted. Based on these analyses, we can get a grasp of the nationwide current state of PM_{2.5}, and source/transboundary transport contributions.

Scientific knowledge on the actual state of PM_{2.5} and the source contribution, which are being gathered through this research, will be used as fundamental data for governments working on measures for reduction of PM_{2.5}.



List of Research Projects Conducted in FY2013

Project Code / Research Title
Project Code Special Account for Reconstruction from the Great East Japan Earthquake

Strategic Research and Development Area total 6 research projects

- S-11/POST 2015 - Project on Sustainability Transformation beyond 2015 -
- S-10/Integrated Research on the Development of Global Climate Risk Management Strategies
- S-9/Integrative Observations and Assessments of Asian Biodiversity
- S-8/Comprehensive Study on Impact Assessment and Adaptation for Climate Change
- S-7/Scientific Analysis of Regional Air Pollution and Promotion of Air Pollution Management in East Asia Considering Co-benefits
- S-6/Research Project to Establish a Methodology to Evaluate Middle to Long Term Environmental Policy Options toward Asian Low-Carbon Societies (Low-Carbon Asia Research Project)

Common to all fields / Cross-sectional through different fields total 21 researches

(incl. one research project under the Special Account for Reconstruction from the Great East Japan Earthquake)

- 1-1301/Development of LCA Introduction System to Achieve both Reducing Environmental Impact and Cost Savings
- 1-1302/Development of LCA Database and Educational Materials about Daily Behaviors aiming for Common Platform Provision
- 1-1303/Tradeoff Analysis and Local Governance Model of Satoyama Ecosystem Services
- 1-1304/Study on Development of a Policy Model for Resilient City and its Application
- 1B-1103/Development of Low Environmental Impact-systems to Attain Co-benefits Piggery Wastewater Treatment and Forage Rice Production
- 1E-1202/District-Based Modeling of Energy-Related Urban Activities towards Sustainable Cities and Proposals for Policy Measures
- 1E-1101/Strategy to Enhance Resilience to Climate and Ecosystem Changes Utilizing Traditional Bio-production Systems in Rural Asia
- 1E-1103/Environmental Friendly Agriculture Based on Community Resources: A Strategy for Sustainable Development and Biodiversity
- 1E-1104/Development and Practice of Advanced Basin Model in Asia -toward Adaptation of Climate Changes-
- 1E-1105/Design and Implementation Process of Building Blocks for Realizing Low Carbon Society
- 1E-1106/Study on Supply Chain for Low Carbon in the Area Including Asia
- 1F-1201/Development of "Motase-type" Decentralized Energy System based on Cooperation of Demand-Supply Units at the Lowest Level Where Renewable Energy is Produced Effectively
- 1F-1101/Development of Evaluation Method of Ecosystem Services to Find Good Balance between Climate Change Prevention and Biodiversity Conservation
- 1F-1102/Ecological Evaluation and Material Flow Analysis of Tidal Flat and Eelgrass Bed Ecosystems Constructed with Steel Slag and Dredged Material
- 1RF-1301/Research on the Realization of Mid-Long Term Low-Carbon Pathways for the Iron and Steel Industry in Japan and Asia
- 1RFF-1201/A study of the Red-tide Damage Mitigation to the Aquaculture Industry using the Red-tide Observations System
- 1ZE-1202/A Study for Changing Values, Risk Perception and Acceptance towards Technology and the Society
- 1ZE-1203/Action Research on Effective Decontamination Operations with due regard to Local Conditions in Fukushima
- 1ZF-1201/Study on Scenarios and Measures for Realizing Changes in the Electricity Supply Mix after the Great East Japan Earthquake
- 1ZF-1202/A study on Public Perception of Environmental Health Risk and the Change after the Great East Japan Earthquake
- 1ZF-1203/Rapid Rendering of Harmful Matter in Rubbles by Microwave Processing -Protection of Asbestos and Dioxin Scattering-

Low-carbon society total 17 researches

- 2-1301/Scenario Analysis of CO₂ Reduction, Economic Impact, and Effective Policy to Realize Co-generation Network System
- 2-1302/Development of Methodology of Value Assessment and Strategy Planning for Renewable Energy Technologies
- 2-1303/Effects of Additional CFC Regulation on Fragility of Ozone Layer under Future Global Warming
- 2-1304/Spatiotemporal Variation of Carbon Budget in Arctic Pedosphere concerned with the Prediction of Global Climate Change
- 2A-1201/Studies on Future Climate Projection in the Asian Region Utilizing CMIP5 Multi-Model Ensemble Data
- 2A-1202/Characterization and Quantification of Global Methane Emissions by utilizing GOSAT and In-Situ Measurements
- 2A-1203/Experimental Study of Multiple Impacts of Global Warming and Ocean Acidification on Marine Species
- 2A-1101/Assessment of the Effects of Reductions of Black Carbon Aerosols as a Measure for Slowing down Global Warming
- 2A-1102/Study on Precision Improvement of Greenhouse Gas Concentrations Obtained by Analysis of the "IBUKI" Observational Data
- 2A-1103/Assessment of Impacts of Climate Policy in Japan in the Backdrop of Global Climate Policy Using Integrated Assessment Model
- 2E-1201/Study on an Agreeable and Effective International Institution concerning Climate Change for Years After 2020
- 2E-1203/Vulnerability Assessment and Adaptation Strategies for Permafrost Regions in Mongolia
- 2RF-1301/Development of Field Sampling Techniques for Biomass Monitoring
- 2RF-1302/Assessment of Environmental Effects caused by Various Mitigation Plans of Greenhouse Gases (GHGs) and Short-lived Climate Pollutants (SLCPs)
- 2RF-1303/Design of New Lifestyles and Regional Development for Low Carbon Society and Economic Revitalization
- 2RF-1304/Analysis for Climate Change in Water Vapor Variation
- 2RFa-1201/Refinement of Terrestrial Carbon Cycle Models through Model-Data Fusion Constrained by Multiple Satellite-based Products

Sound material-cycle society total 81 researches

(incl. nine research projects under the Special Account for Reconstruction from the Great East Japan Earthquake)

- 3J132001/Development of a High-Efficiency Waste Gasification and Power Generation Process
- 3J132002/Establishing the Recycle System of the Non-Electrolytic Nickel Plating Waste Solution
- 3J122001/Development of a High-Performance and Low-Cost Stoker Type Incinerator using New Combustion Technology
- 3J123002/Use of Soft-Hydrothermal Processing to Improve and Recycle Waste Mushroom Substrate for Sawdust and/or Corn-Cob Substrate Cultivation Media
- 3J123003/Development of an Advanced Glass Recycling System for End-of-life Products such as Liquid Crystal Displays and Vehicles
- 3J122004/Technical Development for Recycling the Water-Purifying Sludge in the Gardening Soil
- 3J113003/Development of a Sorting System for Asbestos Containing Construction Material
- 3J113005/Cooperative Research and Development of Hollow Carbon Microparticles from Lignin by Utilization of Black Liquor
- 3J113007/Development of Composites with Cellulose Nanofiber (CNF) Derived from Untapped Biomass and Wasted Fiber-reinforced Plastic (FRP), and its Small Batch Production System
- 3K133001/Study on the Hazard/Resource Management of Product Chemicals and Their Impurities
- 3K133002/Effective Recycling Process of Titanium Alloy Machined Chips by using Hydrogen
- 3K133003/Soils Recovered from Disaster Debris - Characterization, Standardization, and Strategic Utilization
- 3K133004/Simultaneous Recovery of Mn, Ni, Co from Rechargeable Battery Waste with Dissolution Treatment by Bioreactor

- 3K133005/Establishment of Environmentally-Friendly Recycling System for Rare Metals from Electronic Wastes Based on Solvent Extraction Techniques
- 3K133006/Development of Recovery System for Precious and Rare Metals using Copper Bromide Leaching.
- 3K133007/Study on Influence and Measure which an Incineration Exhaust-Gas-Treatment Medicine and Fly Ash Processing Chelates give to MSW Landfill Management.
- 3K133008/Development of a New Green Process to Selectively Recover Noble Metals from Waste Solutions using an Inorganic/Organic Hybrid Photocatalyst
- 3K133009/Studies on the Environmental Behaviors of Flame Retardants in Waste Electrical and Electronic Equipment for the Establishment of Appropriate Management Techniques
- 3K133010/Establishment of Measurement Method for Chlorinated and Brominated Dioxins by using in vitro Bioassay for Advanced Use as Screening Tool
- 3K133011/Mechanical and Environmental Properties of Plastics-included Landfills with Elastic Behavior
- 3K133012/Development of Recovery System of Valuable Metals from Printed Circuit Board using Bioleaching and Mineral Processing Techniques
- 3K123001/End of Life Vehicles (ELVs), Their Resource Potential and Environmental System Analysis
- 3K123002/Comprehensive Studies on Development and Expansion of a Recycling-System for a Purpose of Cultivating Venous Industries in Developing Countries
- 3K123003/A 100% Dry System for the Complete Decomposition of Fiber Reinforced Plastics and Their Recycling Technology
- 3K123004/Development of Waste Biomass Gasification and Multi-Stage Catalytic Gas Conversion Processes for Providing Regional Energy
- 3K123005/Development of Deliquoring Method of Biological Sludge by Ultrahigh-Pressure Expression Combined with Breakage/Aggregation Process
- 3K123006/Development of Selective Recovery Processes for Gallium and Valuable Metals by Using Foam Chromatography
- 3K123007/Biofuel Production from Glycerol Discharged after Bio-Diesel Manufacturing Process
- 3K123008/Development of Microbial Conversion Technologies Related to Utilization of Waste Mushroom Bed as the Local Biomass Resources
- 3K123009/Development of 3-hydroxybutyric acid Production Technology from Wood using Halomonas
- 3K123010/A Development of Efficient Recycling Technology for Waste Organic Solvent
- 3K123011/Innovative Enhancement of Power Generation Efficiency in Waste Incinerators by Surface Treatment Technology on Heat Exchanger Tube
- 3K122012/Development of A Removing Technique in Rinsed Aqueous Waste of Incineration Ash Based on A Capacitive Deionization
- 3K122013/Material Recycle of Used Primary Battery
- 3K122014/Characterization of Oil-Degrading Enzymes from Thermophilic Microbes and its Application to the Aerobic Fermentation System Supplemented with Waste Cooking Oil
- 3K123015/A Development Study on Reinforced Concrete Elements with Clinker-Free Concrete Consisting of Waste-concrete-slug Recycle Cement and By-product Admixture
- 3K123016/Development and Application of 14C Method for Measuring Fossil CO₂ Emission from Waste Incinerator with High Precision
- 3K122017/Development of Efficient Bioethanol Production Method from Paper Manufacture Waste by Using Ethanol-fermenting Fungi
- 3K123018/Development of Energy-saving Recovery Process for Rare Earth Metals Applied for Wet Separation and Electrodeposition from Ionic Liquids
- 3K123019/Several Metal Recovery System from Waste together with Lead Glass based on Dry Assay
- 3K123020/Simple Degradation and Partial Biodegradation of Mixed Plastic Waste with a Quasi-Enzymatic Photocatalyst System
- 3K123021/Recovery of Phosphorus from Incineration Ash of Night Soil Treatment Sludge
- 3K123022/Development of Micro Reaction System for On-site Separation of Rare Metals with Host Compounds
- 3K123023/Research and Development for Material Processing of Bamboo for Next-Generation Electrochemical Power Sources
- 3K122024/Effects of Reduce, Reuse and Recycling (3R) on Global Supply Chains of Rare Metals Associated with the Japanese Economy
- 3K123025/The Study of Novel Sludge Treatment System with Hydrothermal Technology
- 3K123026/Researches and Development of Non-Heating Resource Recovery Process from Spent Ne-Fe-B Magnets
- 3K122101/Development of Waste Water Treatments System with Photocatalyst-Coating Electrodeless Lamps
- 3K122102/Characteristics of Municipal Solid Waste Incineration Residues Containing Radioactive Cesium and Development of Appropriate and Efficient Disposal Technology
- 3K122103/Studies for Establishment of Long-Term Management Methods for Disposal Facilities of Radioactively Contaminated Wastes
- 3K122104/Development of Functional Cover Soils by Using Tsunami Sludge to Cover the Excavated Soils of Radiological Contamination
- 3K122105/Development of Imaging Analysis Method for Radioactively Contaminated Objects by Semiconductor Compton Camera Technology
- 3K122106/Establishment of the Techniques of Separation, Volume-reduction, and Stabilization of Radioactively Contaminated Soil and Waste using Thermal Treatment
- 3K122107/Establishment of a Disaster Reduction Oriented Decentralized Johkasou System
- 3K123108/Study on Proper Management of Asbestos in Disaster Waste Treatment
- 3K122109/Development of Offshore Final Disposal Facility for Radiation-Contaminated Wastes
- 3K122110/Research on Prevention of Secondary Damage by Tracing Drifting Paths of Floating Debris originated from the Great East Japan Earthquake
- 3K113001/Environmental Sound Management of Hazardous Metals such as Mercury in Cyclical Use
- 3K113002/Planning System to Apply Japanese Circular Technologies and Policy System in Asian Cities
- 3K113004/Establishment of a Methodology for Environmentally Sound Quality Control of Wastes and By-products toward Standardization in East Asian Countries
- 3K113006/Development of System for Saccharification of Lignocellulosic Biomass Waste Using Solid Acidic Catalysts
- 3K113008/Research on the Proper Treatment of Waste Glass Materials
- 3K113009/Research on Inspection Methods and Recovery Techniques for Healthy Landfill Functions
- 3K113010/Development of Strategy on Transfer of Japanese Venous Industry to Asia
- 3K113011/Establishment of Safe and Effective Recycling System for Hazardous Products and Components
- 3K113012/Environmental Impact Analysis and Policy Comparison Study for Sound Management and Recycling of Battery
- 3K113015/Development of Technologies Achieving Early Stabilization of Waste in Landfills Mainly Accepting Intermediate Treatment Residues
- 3K113016/Development of Solar Fuel and Chemical Production System from Biomass and Carbon Dioxide
- 3K113017/Study on Ensuring Reliability and Effective Utilization of Described Information in Manifests for Industrial Waste Management
- 3K113018/Bioethanol Production by Magnetic Nanoparticles Immobilized Biocatalyst and Development of Biodegradable Composites Compatibilizing Processing
- 3K113019/The Study of Bioethanol Manufacturing System from Agricultural Wastes by Cascade Type Recycling Process
- 3K113021/Policy Effect Analyses of Municipality Policy and Behavior Modification Program on 3R
- 3K113022/Study on Appropriate Treatment of Bulky and Noncombustible Municipal Solid Waste
- 3K113023/Study on Household Hazardous Waste (HHW) Management with a Main Emphasis on Household Chemicals
- 3K113024/Establishment of Screening Methods of Asbestos-containing Construction Materials, and Safety Assessment of Recycled Crushed Stone
- 3K113025/Visualization and Optimization of Thermochemical Destruction of Organohalogen Compounds
- 3K113026/Quantitative and Structure Analysis of Psychological Factors which Cause Improper Manual Separation of Recyclable Wastes
- 3K113027/Appropriate Countermeasure and Technology Transfer on Waste Landfill Leachate as Development of Urban Waste Management in Asia
- 3K113029/Development of High Selective Separation Technology Using Sulfurized Waste Biomass Adsorbent
- 3K113030/3R Promotion through Waste Biomass Utilization in Japan and Asian Regions
- 3K113032/Formation Pathways and Health Risk Assessment of Halogenated Polycyclic Aromatic Hydrocarbons in Waste Incinerator

Society in harmony with nature

total 20 researches

(incl. three research projects under the Special Account for Reconstruction from the Great East Japan Earthquake)

- 4-1301/Development of Protection and Management Techniques for Coexisting Harbor Seal and Local Fisheries in the Coastal Water of Oyashio Region
- 4-1302/Studies on the Re-introduction Process of Endangered Birds to Improve Its Success from Captive Population
- 4-1303/Development of Integrated Assessment for Investigating Pesticide Effects on Biodiversity in Paddy Fields
- 4-1304/Contribution to the Ecosystem Restoration of Sekisei Lagoon based on Elucidation of the Integrated Islands-Reefs-Ocean Network System
- 4D-1201/Biodiversity Conservation Represented by *Ketupa blakistoni blakistoni* and *Grus japonensis*: Comparison of Hokkaido with the Russian Far East
- 4D-1202/Dam Development and Environmental Conservation in the International River, the Mekong - the Assessment of Ecological Services in Reservoirs
- 4D-1101/Development of Integrated Control Methods and Systems for Invasive Alien Animals
- 4D-1102/Stable Isotope Indicators for Evaluating Ecosystem Functions of Biodiversity
- 4D-1103/Developing and Evaluating Capture Methods of Sika Deer for Ecosystem Management in the Shikotsu-Toya National Park
- 4D-1104/Study on Tidal-flat Benthic Communities and Ecosystem Functions for the Conservation of Amakusa and Shimabara Shores, Western Kyushu, Japan
- 4D-1105/Studies on Grassland Biodiversity and Sustainability of Nomadic Production in Semiarid Regions of North-East Asia
- 4D-1106/Study on Ecosystem and its Appropriate Management on the Miyakejima Island Damaged by the Eruption in 2000
- 4E-1102/A Proposal of Coastal Zone Management Based on Quantification, Economic Evaluation and Analysis of Spatio-temporal Variability of the Provisioning Service of Seagrass Beds
- 4RF-1301/Comparison of Evapotranspiration from Forests and Grasslands in Mt. Aso Caldera: Consequence of Land Cover Change in Local Water Resources
- 4RF-1302/Environmental DNA Methods for Monitoring the Distribution of Aquatic Organisms
- 4RFd-1201/Genetic Introgression to a Native Endangered Bitterling by Introduction of an Endangered Congenic Fish in Ehime, Japan
- 4RFd-1202/A Study on the Establishment of an Environmental Harmony Tape Pollination Style in the Native Bumblebees
- 4ZD-1201/Diffusion Process of Radioactive Materials in Ecosystems of Coastal Sea Areas
- 4ZD-1202/Migration of Radionuclides and Biological Accumulation in Forest-Stream Ecosystems of Channel Networks
- 4ZD-1203/Robustness and Fragility of Spring Water Ecosystems: Restoration of Ecosystem Functions after the Tsunami

Safe and secure society

total 43 researches

(incl. 10 research projects under the Special Account for Reconstruction from the Great East Japan Earthquake)

- 5-1301/Investigation of Un-measured VOCs for Photochemical Oxidant Formation
- 5-1302/Development of Management Technology Based on the Risk Evaluation for Pesticide Residue in Succeeding Crops
- 5-1303/Development of Risk Reduction and Risk Control Techniques of Soil Fumigants under Japanese Agricultural Conditions
- 5-1304/Study on Quantitative Evaluation of Black-box-type Autochthonous Loading in Lake Environments: Benthic Fluxes from Sediments to the Water Column
- 5-1305/Estimation of Exposure Level to Persistent Organic Pollutants (POPs) of Mother and Child by Questionnaire Survey and Genetic Factors
- 5-1306/Study on Potential Threat Caused by Organic Pollutants in the Japan Sea, Surrounding Sea and Atmosphere
- 5-1307/Epidemiological Study on Long-Term Health Effect of Low-Frequency Noise Produced by Wind Power Stations in Japan
- 5B-1201/Development of Treatability Evaluation Tools and Clean-up Technologies for Bioremediation of 1,4-dioxane Contaminated Groundwater
- 5B-1202/Integrated Observational and Modeling Study on Kosa Impacts throughout Japan for the Japanese PM_{2.5} Regulations
- 5B-1101/Current Status Elucidation and Source Contribution Assessment of PM_{2.5} Pollution in Collaboration with Environmental Research Institutes across Japan

- 5B-1102/Evaluation of Function of Littoral Zone and its Dominant Factors in Formation of Lake Water Quality
- 5B-1104/Collection of Supporting Data to Amend Agricultural Chemicals Regulation Law in Registration of Agricultural Chemicals Causing Water Pollution
- 5B-1105/Evaluation of Effects of Ozone on Japanese Forest Trees Based on Leaf Ozone Uptake
- 5B-1106/Chemical Oceanography to Elucidate Global Kinetics of Persistent Perfluorinated Chemicals (PFCs)
- 5B-1107/Elucidation of Form Change of Heavy Metals in Environment Causing Naturally Occurring Soil Contamination
- 5C-1251/Generation Specific Health Impairment by Dioxins Exposure Its Association with Genome Diversity
- 5C-1252/Effect of Maternal Exposure to Endocrine-disrupting Chemicals on Sex Development and Gonadal Function
- 5C-1101/Development and Application of Specific Bioprobes for Rapid Asbestos Detection to Reduce Asbestos Risk at Demolition Sites
- 5C-1102/Development of Quantitative Risk Assessment Method of Pesticide to Enable Selection of Appropriate Risk-management Practice of Usage
- 5C-1151/Exposure Assessment to Plastics and Flame Retardants and their Risk on Children's Allergies
- 5C-1152/Quantitative Evaluation of Desert Dust (Asian Dust) on Respiratory/Allergy Risk, Taking into Consideration Times Spent Outside
- 5C-1153/A Risk and Benefit Assessment of Chemical Exposures and Fish Intake in Females and Infants
- 5C-1154/Research to Reveal Association of Human Health and Asian Dust by the Clinical and Basic Study
- 5C-1155/Studies on Biological Effects and Clarification of the Mechanisms of Asian Dust Aerosol, Attached Microorganisms and Chemical Substances
- 5S2-12/Studies on Mechanisms by which Environmental Chemicals Affect Developing Nervous System and Immunological System
- 5RF-1301/Development of Coastal Management Method to Realize the Sustainable Coastal Sea
- 5RF-1302/Study on Human Exposure to Organic Pollutants through Environmental Nanoparticles
- 5RF-1303/Development of Simple, Rapid, and Sensitive Determination Method for Measurement of Methylmercury in Mercury Contaminated Soil/Sediment
- 5RFb-1201/Development of Treatment Technique for Boron and Fluorine Using Magnesium Compounds as Adsorbents
- 5RFb-1202/Development for High Precision Analysis of Low Molecular Weight Polydimethylsiloxanes and their Distribution in Water Environment
- 5RFb-1203/Quantitative Evaluation of the Impact of Persistent Organic Pollutants on an Estuarine Ecosystem
- 5RFc-1201/Development of a Simple and Rapid Dioxin Bioassay System with Sample Preparation Method
- 5RFc-1202/Exposure Assessment for Nano-products using Chamber Method
- 5Z-1301/Construction of Decontamination Scenario Based on the Dynamic States of Cesium and Development of Decontamination Method by Magnetic Force Control
- 5ZB-1201/Study on the Environmental Behavior of Radioactive Cesium in Gunma-Prefecture Coming from Fukushima Nuclear Accident
- 5ZB-1202/Evaluation of Decontamination Radionuclides in the Ecological System Around the Crippled Fukushima Nuclear Plant and Exposure Assessment for Residents in Present and Near Future
- 5ZB-1203/Development of Small-scale and Distributed Process for Cesium Recovery from the Environment using Support-immobilized Adsorbent
- 5ZB-1204/Development of a Volume Reduction System Using an Air-lift Mixing Washer for Soil Contaminated with Radioactive Cesium
- 5ZB-1205/Development of Biological Treatment System Antiscattering, Removing, Immobilizing Radionuclides in Soil
- 5ZB-1206/Research Development of New Practical Technology on Removal of Radioactive Materials from Radiation-contaminated Soils
- 5ZC-1201/Effectiveness of Indicator Microorganisms for Water Pollution Caused by Waterborne Pathogens and Evaluation of Disinfection Technology
- 5ZRFb-1201/Prediction of Future Trend on Micro-pollutant Levels in Environment after the Great Eastern Japan Earthquake and Establishment of Environmental Sample Archive for Future Disaster
- 5ZRFc-1201/Investigation on Biomagnification and Toxicological Risk of Anthropogenic Chemicals Released to Marine Ecosystem of Off-Tohoku after Great East Japan Earthquake

Information on calls for proposals

Schedule

The schedule and arrangements are announced on the ERTDF website, as well as on environmental and scientific websites. A call for applications is announced from September to October. Applications are accepted with a deadline of mid-November.

Application Procedures

All necessary application forms for proposals can be downloaded from the ERTDF website. The proposals are accepted through the Cross-ministerial R&D Management System (e-Rad).

Selection of Research Projects

After the application forms have been checked, the Planning Committee for Environment Research and its subcommittees, composed of outside specialists, will evaluate the proposed research projects. First, the proposals will be narrowed down in an initial screening of the written description. The remaining proposals will then be evaluated for final selection on the basis of interviews. Notification of approved proposals will be made every March. The results of the evaluation will include comments on the proposals and will be sent to the applicants after the selections have been made.

Inquiries

Ministry of the Environment, Government of Japan

- General inquiries, Common to all fields / Cross-sectional through different fields, Safe and secure society
Environmental Policy Bureau
Office of Environmental Research and Technology
- Safe and secure society (Health risks)
Environmental Health Department
Environmental Risk Assessment Office
- Low-carbon society, Society in harmony with nature
Global Environment Bureau
Research and Information Office
- Sound material-cycle society
Waste Management and Recycling Department
Waste Management Division

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