National Institute for Environmental Studies, Japan

NIES Charter

The National Institute for Environmental Studies (NIES)
strives to contribute to society through research
that fosters and protects a healthy environment
for present and future generations.

Proud to work at NIES and keenly aware
of our individual responsibilities,
we will pursue high level research based
on a firm understanding of the interaction
between nature, society and life on our planet.

The National Institute for Environmental Studies (NIES) at the time of establishment

Ceremony to mark the inauguration of NIES as an Incorporated Administrative Agency

Visit of Their Majesties the Emperor and Empress of Japan

NIES Timeline

July 1971	Establishment of the Environment Agency
November 1971	Establishment of the National Institute for Environmental Studies (NIES) Founding Committee
March 1974	Establishment of NIES
April 1985	Visit of Emperor Showa to NIES
July 1990	Restructuring of NIES to include global environmental research
October 1990	Establishment of the Center for Global Environmental Research
January 2001	Environment Agency becomes Ministry of the Environment. Establishment of Waste Management Division at NIES
April 2001	Establishment of NIES as an Incorporated Administrative Agency. First five-year plan (2001-2005) commences
April 2006	Second five-year plan (2006-2010) commences
August 2010	Visit of the Japanese Emperor and Empress to NIES
April 2011	Third five-year plan (2011-2015) commences
March 2013	Amendment of the third five-year plan (2011-2015)

Strategic Promotion of Environmental Research

The National Institute for Environmental Studies (NIES) was established in 1974 as the sole research institute for integrated, interdisciplinary research in the broad fields of environmental research, to provide the scientific and technical basis for the environmental policy-making administration. We have advanced research in these fields, while maintaining a pride and awareness of our responsibility as a group of experts who contribute to both domestic and international policy, and disseminating appropriate information towards the solution of environmental issues.

The issues with which we are faced have transitioned from past issues of extreme pollution in particular regions to long-term global scale issues originating from human activities - such as global warming, material cycles society, and the deterioration of ecosystems. In addition, the Great East Japan Earthquake of March 2011 has given rise to new research topics relating to, for example, countermeasures for disaster waste and radioactive substances released into the environment, which are being implemented towards the goals of regional restoration and environmental creation for the disaster zone. In these particular circumstances, we must further strengthen our role as a leading environmental research institute and policy-making organization engaged in research which contributes to the environmental administration.

To facilitate the implementation of both long-term and issue-driven environmental research, we designated the eight fundamental research fields and corresponding research centers which will be responsible for research in these fields under designated research programs during our third five-year plan (2011-2015). Moreover, in order to respond to and recover from environmental contamination originating from the disaster, we have maintained strategic activities since the direct aftermath of the disaster as "Research on Disaster Environment".
The intermediate outcomes of this research have been summarized as "An Overview of Research on Disaster Environment and associated Outcomes following the Great East Japan Earthquake", and are now available on the NIES homepage.

Also, in March 2013, we revised our five-year plan following a directive by the Minister of the Environment to modify our mid-term objectives such that we might better strive to progress research relating to disasters and the environment in an integrated and holistic manner. We will continue to provide our scientific know-how as a basis for environmental policy, and to optimize our outcomes and improve our research capacities - including dealing with environmental issues caused by radioactive substances. As such, we ask for your continued and generous support in our endeavors to improve our activities towards these ends, so that we can effectively respond to societal needs as they arise.

SUMI, Akimasa
President

Environmental research on a global scale

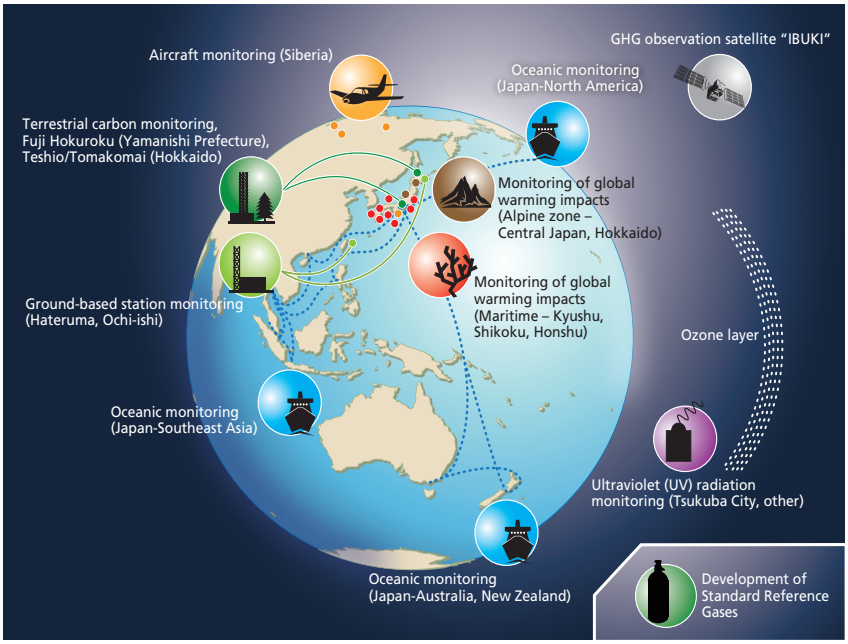
http://www.cger.nies.go.jp/en/

Center for Global Environmental Research

Contributing solutions to global environmental issues, with an emphasis on climate change

Along with establishing the current circumstances of the global environment, we clarify the causes of environmental change. On this basis, we perform climate risk assessments and future climate change projections as well as research on environmental preservation and conservation. In addition, based on the needs of the environmental administration and to cater to the interests of the public, we actively disseminate our research outcomes and provide scientific expertise.

- Observation and analysis of greenhouse gases which impact the global environment, and clarification of their movement in the global environment and long-term variation mechanisms
- Refinement of the accuracy of future projections through clarification of the actual circumstances of global environmental change
- Climate change and global risk assessment
- Integrated assessment of climate change mitigation and adaptation measures for greenhouse gas emissions /Provision of scientific expertise to contribute to environmental policy-making
- Strategic monitoring of the global environment; Development of global environmental databases; Support for global environmental research



Strategic monitoring of the global environment

Research towards the realization of a sustainable material cycles society

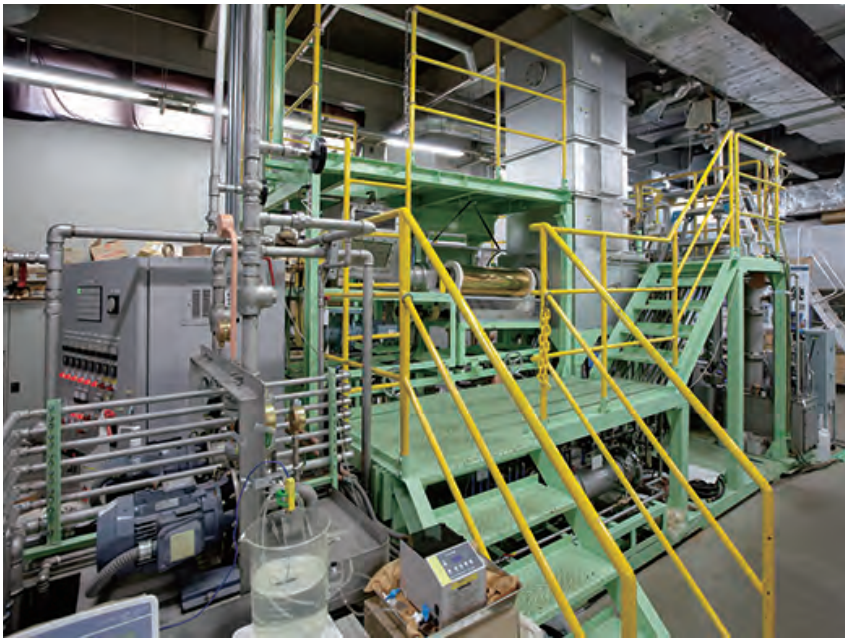
http://www-cycle.nies.go.jp/index-e.html

Center for Material Cycles and Waste Management Research

Contributing solutions for sustainable usage of resources and the reduction of the environmental burden which accompanies that use

We carry out surveys and research to clarify the realities surrounding – and to make long-term forecasts regarding – the materials used by societies. At the same time we study the environmental burden which accompanies that usage. In addition, we assess materials both as potential resources and for their toxic properties. Along with conducting research into resource cycles and the appropriate disposal of waste and sewage, we develop techniques, and implement research, relating to practical regional applications which will help to make regional environmental recovery and renewal a reality.

- Sustainable Material Cycles Research Program Internationally appropriate management technologies for both potentially hazardous materials and those with resource potential; Appropriate on-site treatment and disposal technologies and management systems for waste in Asia; Provision of sustainable material-cycle systems making use of regional characteristics
- Policy-driven waste management research (incineration, thermal treatment systems, land-fill management, liquid waste treatment, asbestos waste, persistent organic pollutants, countermeasures for illegal dumping and treatment, assessment of environmental safety of recyclables)
- Emerging fundamental research (Fundamental research on systems and mechanisms, research on fundamental technologies)
- 3R(Reduce-Reuse-Recycle)-related research and development and establishment of research infrastructure in Asia
- Research on countermeasures for disaster waste and waste contaminated with radioactive substances



Thermal treatment plant (Laboratory)

Research towards a genuinely safe society

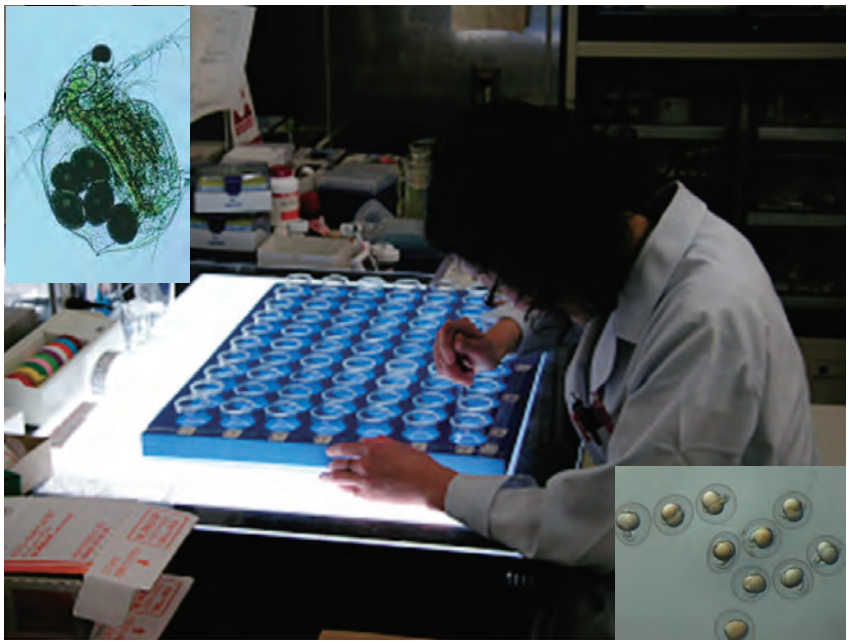
http://www.nies.go.jp/risk/index-e.html

Center for Environmental Risk Research

Contributing to the reduction of risk to human health and ecosystems through the assessment and management of environmental risk

We clarify the environmental risk for human health and ecosystems posed by chemicals. We then carry out surveys on exposure pathways and the environmental fate of chemicals in the environment towards the development of exposure assessment methodologies. In addition, in order to investigate the impacts of chemicals on human health and ecosystems, we attempt to clarify the mechanisms of action for toxic substances, in order to develop risk assessment methods. Through these activities we are progressing in our efforts to assess the environmental risk of chemicals.

- Development of techniques to predict the toxicity of chemicals
- Clarification of impacts and risk assessment for ecosystems of anthropogenic disturbance factors, including chemicals
- Development and standardization of methodologies for the assessment of biological impacts of chemicals
- Elucidation of the actual circumstances of exposure and impacts of various chemicals by means of comprehensive measurements
- Development of numerical techniques to analyze distribution and actual circumstances of release of, and exposure to, environmental chemicals
- Establishment of an infrastructure to forward environmental policy, including implementation of environmental risk assessment, and establishment of environmental standards



Development of toxicity test for effluents using aquatic organisms (water fleas, *Ceriodaphnia dubia*)

Environmental research on the atmosphere, water, and more on a regional scale

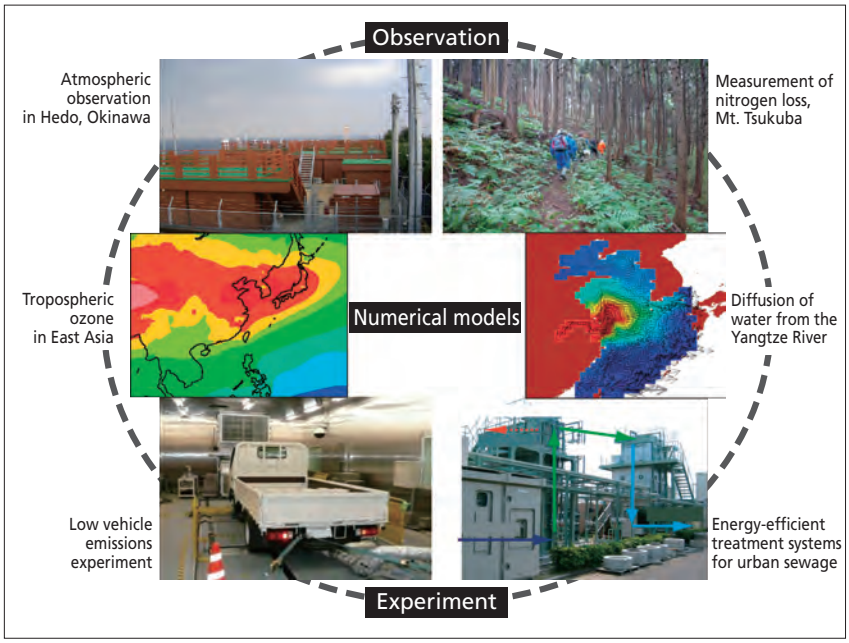
http://www.nies.go.jp/chiiki/home.html

Center for Regional Environmental Research

Contributing solutions for regional environmental issues in Japan and Asia

The environmental impacts of human activities are felt both by humans and ecosystems through the air, water and soil. We carry out research to clarify emerging mechanisms for regional environmental issues which occur over a variety of scales – from local and urban scales to trans-boundary scales, in Asia and Japan. Furthermore, we carry out surveys and research aimed at finding solutions to regional environmental issues and their applications in the real world.

- Clarification of trans-boundary atmospheric pollution for East Asia
- Assessment of impacts on marine environments in the East China Sea
- Assessment of basin ecosystem functions and matter cycles
- Clarification of the actual circumstances and environmental fate of radioactive substances in multimedia environments
- Development and social implementation of co-benefit environmental technologies and systems
- Fundamental research on urban atmospheric environments and basin environments
- Long-term monitoring of regional atmospheric environment and water environments



Overview of the Center for Regional Environmental Research

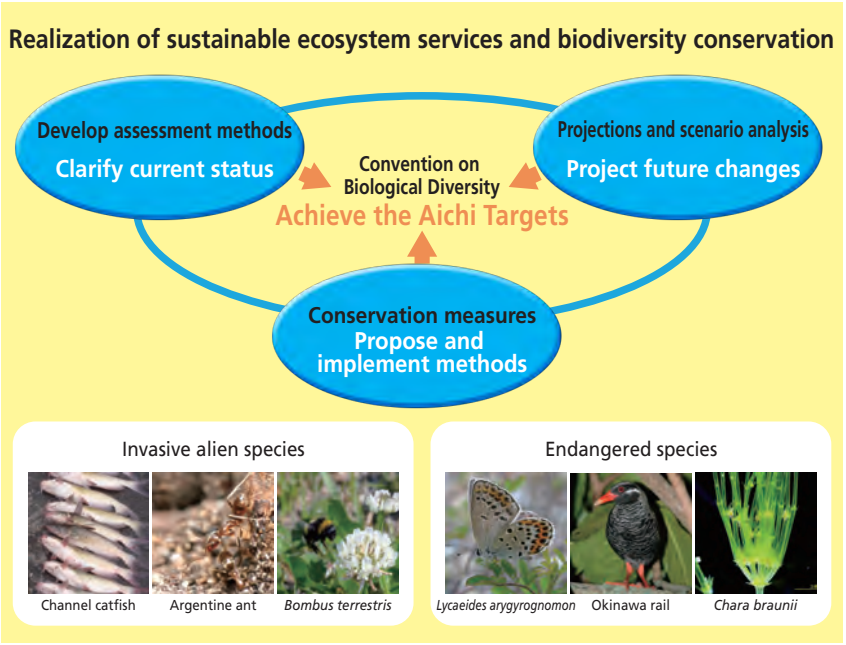
Research on the impacts of human activities on ecosystems and organisms http://www.nies.go.jp/biology/eng/index.html

Center for Environmental Biology and Ecosystem Studies

Contributing to the realization of biodiversity conservation and sustainable ecosystem services

We implement research to clarify the relationship between the structure and functions of diverse ecosystems and the impacts of human activities on ecosystems and biodiversity over a variety of spatial and temporal scales.

- Assessment of species extinction risk
- Initiatives to establish effective nature reserves
- Prevention and control of invasive alien species
- Projections on the response of organisms to climate change
- Assessment of impacts on organisms and ecosystems of habitat degradation and toxic substances
- Cryopreservation of genetic resources of endangered species
- Development of species discrimination techniques using DNA
- Long-term ecosystem monitoring (lakes, genetically modified plants, etc.)



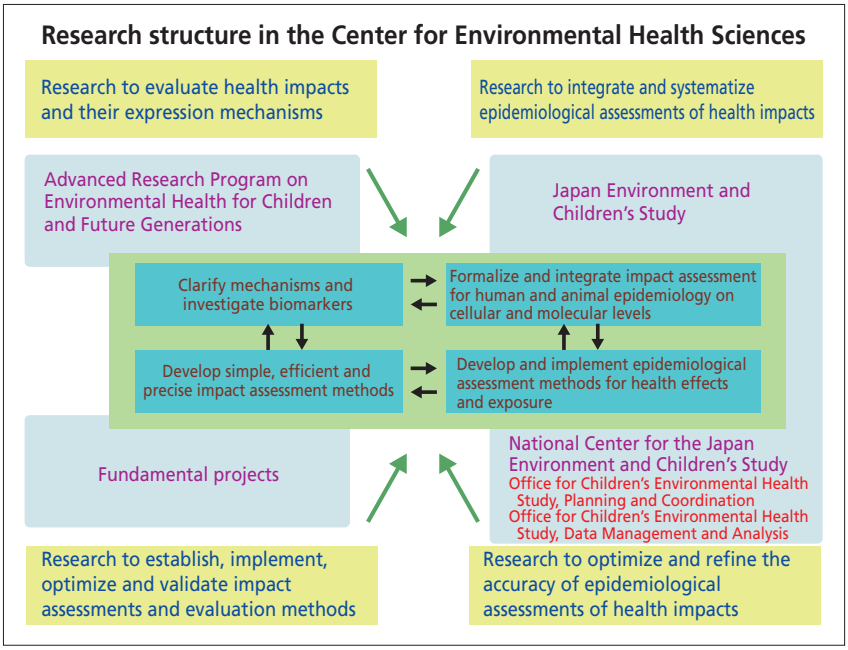
Research on the influence on human health of environmental changes caused by human activity http://www.nies.go.jp/health/index.html

Center for Environmental Health Sciences

Contributing to the reduction and prevention of impacts on human health caused by environmental factors including environmental pollutants

Along with clarifying and evaluating the mechanisms and impacts on human health of environmental pollutants, we develop convenient and speedy methods for the evaluation of exposure and of health effects. Having made clear the effects that the environment has on health, we carry out epidemiological studies and research in order to investigate the origins and causes of these effects. In addition, we are responsible as the National Center for the comprehensive management and operation of the Ministry of the Environment's "Japan Environment and Children's Study" (JECS).

- Investigation of biomarkers and their evaluation towards the clarification of immunological and allergic effects and their mechanisms
- Experimental research for impacts on physiological functions and vital reactions and their mechanisms
- Methodology studies to broadly systematize and integrate the full spectrum from experimental know-how to epidemiological research outcomes
- Development and optimization of epidemiological procedures in order to clarify the effect on health of environmental pollution and environmental factors
- Promotion of the Japan Environment and Children's Study (JECS) through recruitment of participants, collection and storage of data and biological samples, and twice-yearly follow-up questionnaires with regards to participant parent-child pairs



Research on the confluence of environmental problems and human social activity

http://www.nies.go.jp/social/index.html

Center for Social and Environmental Systems Research

Contributing to the transition to a sustainable society in harmony with the environment and economic activity

With a broad research vision of "Mankind and the Environment", we carry out research to clarify the relationship between mankind's activities and the environment on global, regional, urban and community scales. We implement research to create scenarios and roadmaps which point the way towards and help to secure a society in which the environment and economic activity are in harmony.

- Development of scenarios and roadmaps towards the realization of a society in which the environment and human economic activity are in harmony, and policy proposals towards their implementation
- Development and optimization of integrated models of the environment, society and economy, and subsequent dissemination of regional and urban policy analysis, both domestically and internationally
- Research on designated eco-city and model districts systems and research on means towards sustainable production and consumption, and its social implementation
- Fundamental research on analysis of environmental policies and systems, monitoring in relation to environmental awareness, and communication between science and human society

Image of a society in harmony with the environment

Importance of integrated planning for regionally-appropriate intensive land use and low-carbon commutation systems

Environmental measurement field – fundamental to environmental research

http://www.nies.go.jp/analysis/

Center for Environmental Measurement and Analysis

Contributing to the appropriate management of measurement data and the assurance of its reliability with revolutionary developments in environmental measurement technologies

We develop methodologies to better understand and monitor environmental conditions and changes, and to assess the biological impacts of environmental stress. We also forward measurement techniques and technologies which contribute to identifying the warning signs of new environmental deterioration by developing and optimizing our surveys and research. In addition, we implement research aimed at the development of techniques to preserve and use environmental samples and to further assure the reliability of measurement data and its appropriate management.

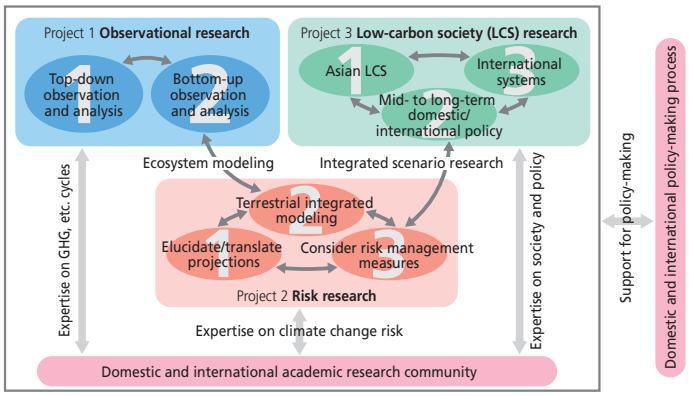
- Production and provision of environmental reference materials using actual environmental samples
- Development of universal and comprehensive analysis methods for organic compounds such as persistent organic pollutants
- Development of measurement technologies for inorganic isotopes with an emphasis on Carbon 14 and Mercury
- Development of tracers for elucidation of the dynamics of ocean circulation and atmospheric trace gases
- CNS sensitivity measurements for environmental stress
- Measurement of aerosols using satellites and terrestrial networks
- Development of a method for ecosystem monitoring making use of image instrumentation technologies

(left) Atmospheric measurement using lasers
(top right) Consolidating the quality of measurement data
(bottom right) Brain measurement in vivo

Climate Change Research Program

We contribute to reducing the uncertainty of future projections on climate change, based on integrated observations and model analyses which clarify, for example, the nature of changes in greenhouse gas concentrations, for East Asia and the rest of the world.

Along with conducting analyses into comprehensive risk management strategies for global warming, we carry out research into policies and measures towards the realization of low-carbon society – on a global scale.



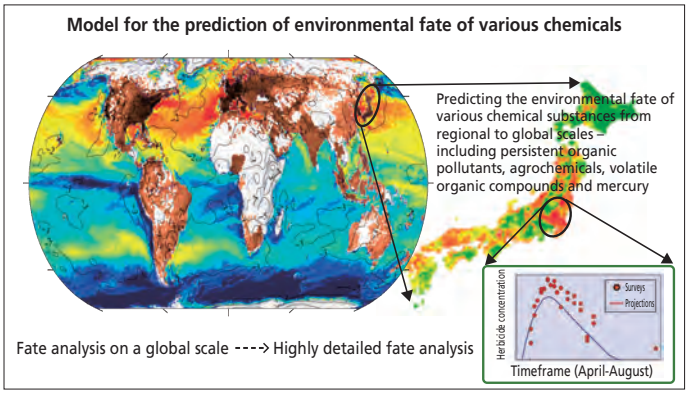
Sustainable Material Cycles Research Program

We engage with environmental issues on three fronts – international environmental issues which affect Japan and extend throughout Asia; issues focused on developing countries in Asia; and domestic issues. We engage in initiatives relating to scientific and technical aspects of the efficient use and appropriate management of resources and waste and countermeasures for climate change. On this basis, we will actively support the creation of sustainable material cycle societies – both in Japan and overseas – which reconcile climate change policy and implementation strategies.

Methane flux measurement, Final disposal site (Thailand)

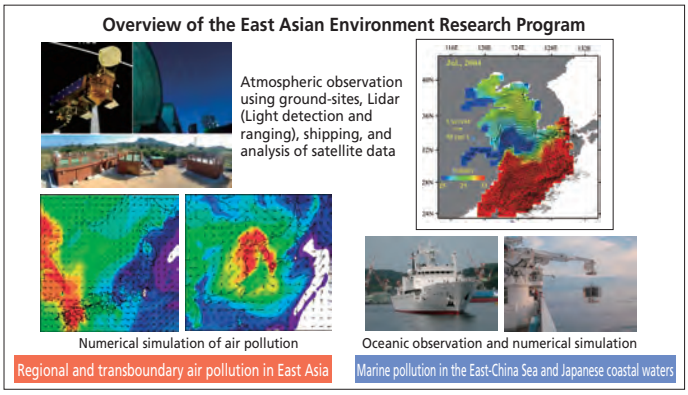
Research Program on Risk Assessment and Control of Environmental Chemicals

We implement research on methodologies for the ecological risk assessment of chemicals, and for the safety assessment of nanomaterials focusing on dispersion properties and surface electrical charge. In addition, we endeavor to find strategies for the control of environmental chemicals by optimizing chemical assessment procedures and finding strategies for their management in society.



East Asian Environment Research Program

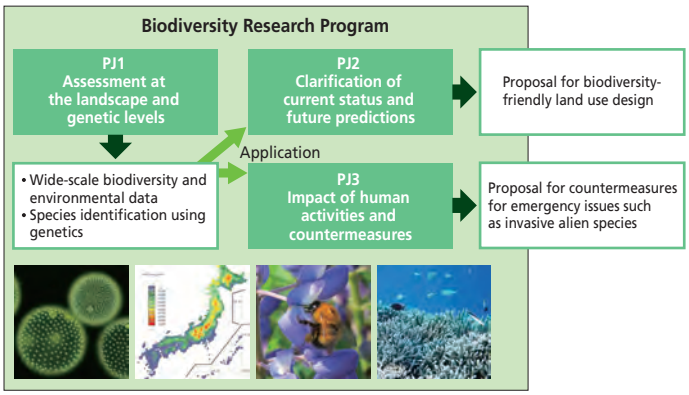
We implement research to clarify the current status and occurrence mechanisms for atmospheric and oceanic pollution occurring over a wide area of East Asia, by means of field observations and model simulations. We also aim to clarify the relationships between environmental burdens and impacts on regional scales, and then suggest solutions to these issues. Our research will contribute solutions to the wide-scale environmental issues of East Asia.



Biodiversity Research Program

We develop effective methods to assess the conditions of biodiversity over large scales. We also develop tools and indicators to evaluate and project the status of biodiversity, as well as measures for its conservation based on observational data.

Furthermore, we clarify the effects of the most serious threats to biodiversity, such as climate change and invasive alien species.

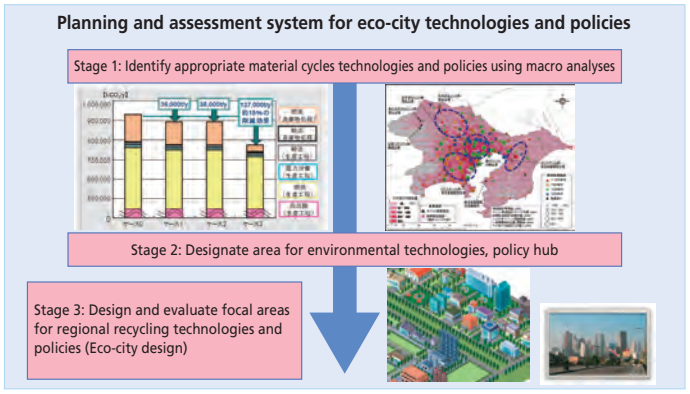


Basin Ecosystem Functions Research Program

We focus on matter and water cycles for basin ecosystems (national forests, lakes and rivers, coastal regions, the Mekong Basin, etc.) – developing methodologies for the quantitative assessment of ecosystem function. We further implement long-term strategic monitoring activities and assess the relationship between ecosystem function and various environmental factors.

On the basis of these assessments, we develop methodologies and techniques for evaluating the health of basin ecosystems, and implement research into optimal conditions for the conservation of ecosystems and for nature restoration.

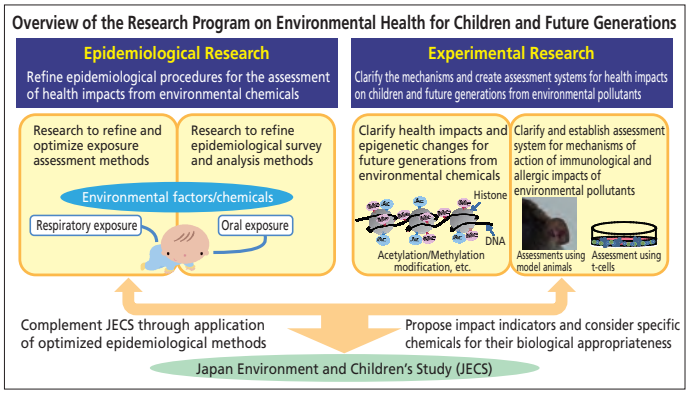
Mt. Tsukuba man-made Japanese Cedar forest litterfall, rainfall collection



Eco-city Systems Research Program

Focused on cities, the hubs of social and economic activity, we develop planning and assessment procedures which acknowledge environmental technologies and the policy process. By applying these, we construct future scenarios for cities which are in harmony with nature and up to the challenge of increased environmental impacts and the deterioration of the natural environment.

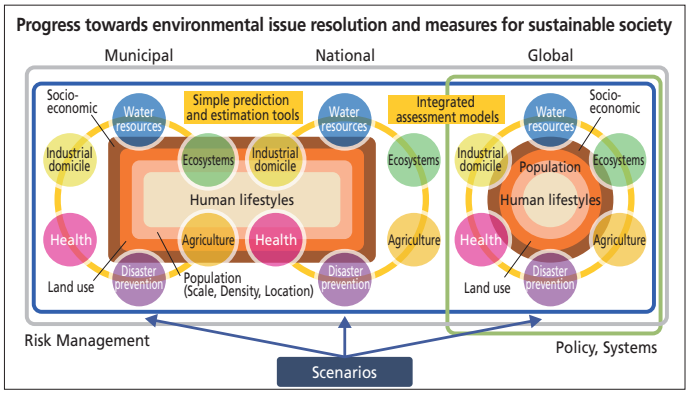
We are laying out a realistic road-map for the realization of these scenarios.



Research Program on Environmental Health for Children and Future Generations

We strive for the integrated study, assessment and clarification of the impact of environmental pollutants on children and future generations, on the dual fronts of epidemiological and experimental studies.

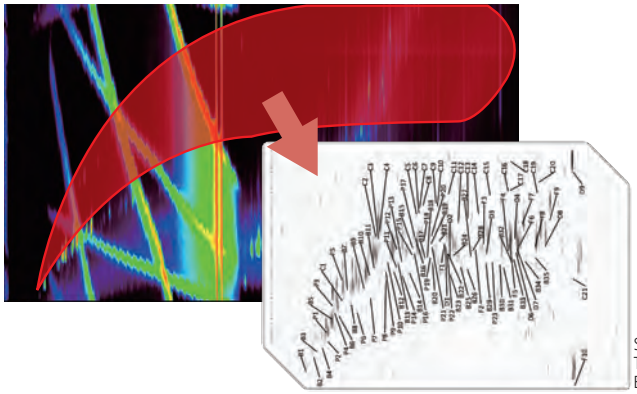
Through these means, we will contribute to the reduction and prevention of impacts on children and future generations from environmental causes with an emphasis on pollutants of environmental origin.



Sustainable Social Systems and Policy Research Program

Focused on the social and economic activities at the origin of environmental problems, we analyze – from industrial and consumerist perspectives – the measures needed to create sustainable societies in Japan and overseas.

Also, by creating models, as well as testing future environmental, social and economic scenarios, we highlight those measures which should be taken by all organizations, societies, households and individuals for the realization of a sustainable society.



Advanced Environmental Measurement and Analysis Research Program

We actively provide solutions and preventative measures for environmental issues by developing measurement procedures to contribute towards an understanding of the environment and changes in that environment.

Our main priorities are pollution prevention measures for chemicals and heavy metals, and clarification of the actual circumstances of ecosystems and the global environment. We also develop the necessary observation and analysis methods in next-generation remote sensors, as well as comprehensive chemical assessment methods to clarify environmental trends and current circumstances.

Selective detection of organochloride compounds from environmental specimens of GCxGC-MS/MS (low quality)
Top left: 2D total ion chromatogram from regular scan measurement
Bottom right: 2D total ion chromatogram from neutral loss scan of m/z=53

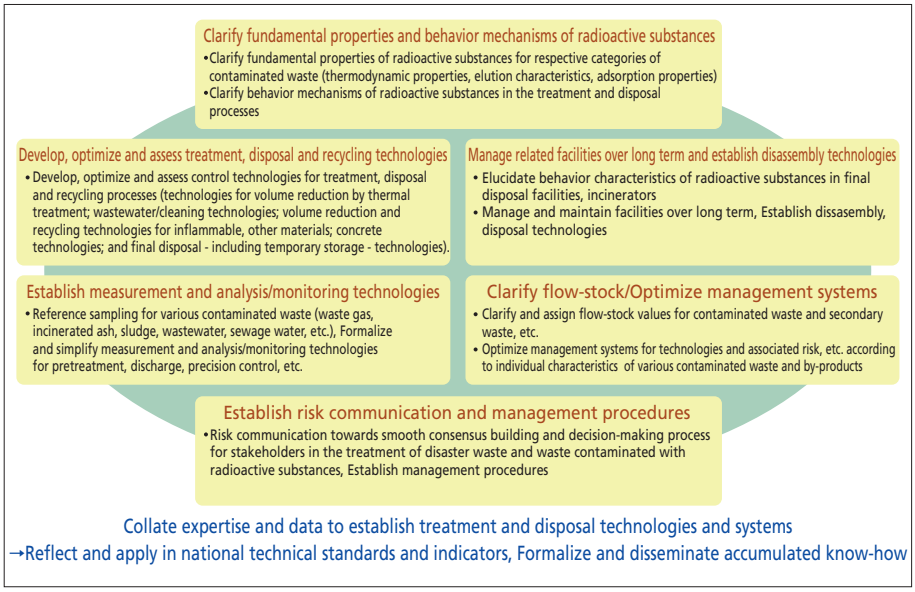
Integrated advancement of comprehensive surveys and research related to disasters and the environment

It has become increasingly important to tackle the environmental damage which occurred as a result of the Great East Japan Earthquake of March 2011. This is being undertaken across the array of environmental research fields at our institute which relate to disasters, and associated issues include: the environmental contamination from radioactive substances released into the environment and their impact on human health and other organisms; the establishment of technologies to remove contamination and to treat contaminated waste; and environmental creation by means of restoration initiatives.

In order to achieve this in the research which is detailed below, we have engaged with these issues on integrated fronts while maintaining ties with local authorities including those in the disaster zone of Fukushima Prefecture and other research institutions, so that we may contribute to recovery and environmental creation for the disaster zone from the perspective of environmental research. Also, by applying the outcomes of this research, we endeavor to further contribute to countermeasures for environmental pollution to expedite the recovery of people and the environment when large scale disasters such as earthquakes occur.

Establishment of treatment and disposal technologies and systems for waste contaminated with radioactive substances

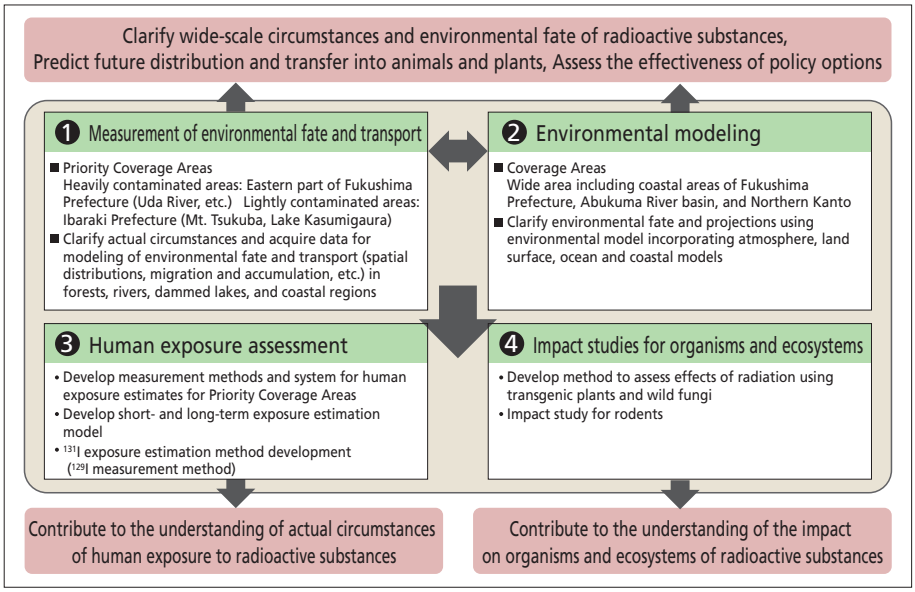
We are implementing surveys and research on the treatment and disposal processes for disaster waste, soil, and other environmental media contaminated with radioactive substances. These include those on fundamental properties and behavior mechanisms of radioactive substances; treatment disposal and recycling technologies; measurement, analysis and monitoring technologies; long-term management and dismantling technologies for related treatment facilities; a comprehensive management policy for flow-stock for the material cycle systems of waste and radioactive substances; and management and risk communication protocols which will contribute to the efficient and effective treatment and disposal of waste.



Elucidation of the environmental fate and transport of radioactive substances, assessment of exposure levels, impact assessment for organisms and ecosystems

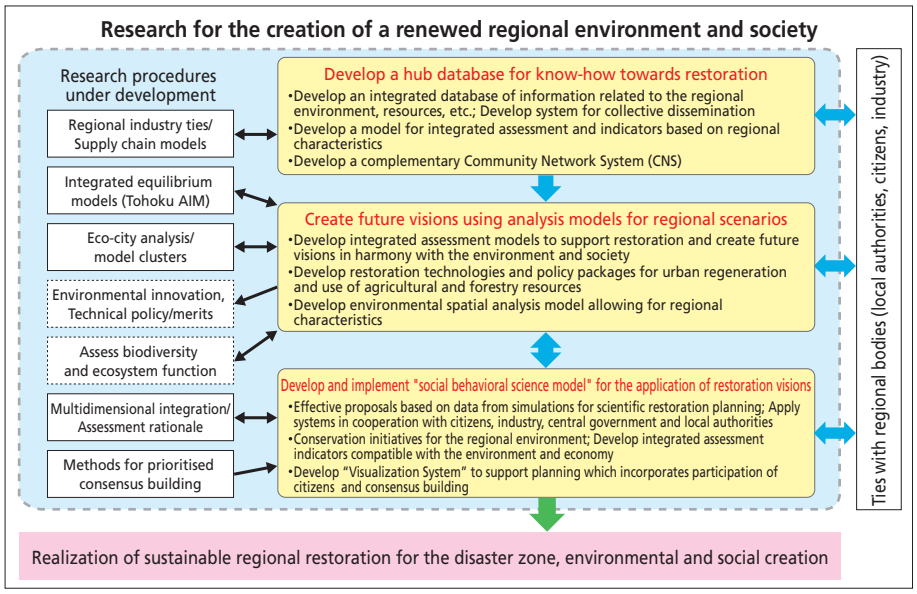
We establish environmental measurement techniques for radioactive substances and conduct measurements to clarify the environmental fate and transport of radioactive substances in various environmental media (atmosphere, soil, rivers, ocean, etc.). On the basis of these measurements, we develop multimedia environment models to analyze the migration of radioactive substances in various environmental media. With these measurements and models, we clarify the environmental fate and transport of contaminants in multimedia environments and make projections on future trends.

Moreover, we formulate human exposure models to better understand the current exposure situation and to estimate wide-area radiation exposure. We also develop assessment methodologies for impacts and genetic effects for organisms and ecosystems.



Surveys and research towards restoration and environmental creation for the post-disaster regional environment

We aim to develop models and tools to support planning for each aspect of the processes involved in restoration - from rescue and reconstruction to environmental creation - for the disaster zone and its cities. We will also develop a scientific blueprint for indicators of regional restoration incorporating low-carbon society, material cycles and the harmonization of the environment and economic life, as well as systems to clarify priorities for policy-makers along with initiative packages.



Surveys and projections on environmental change arising from earthquake and tsunami disasters and associated impacts

The tsunami which accompanied the Great East Japan Earthquake dispersed sludge from the seabed to the disaster zone which contained hazardous chemicals, and also resulted in the deposition and accumulation in seabed sediment of petroleum and chemicals, washed out to sea following the destruction of facilities on land. Earthquake tremors were also responsible for topographical changes affecting the habitations and habitats of people and organisms. While assessing the impact of these various environmental changes originating from disasters on people, organisms and ecosystems, we are undertaking surveys and research to anticipate the future course of these impacts.

We will forward multifaceted and complementary research in the wide array of research fields as detailed above in an integrated, efficient, and effective manner and to a standard of excellence while cooperating with the Fukushima Prefecture Center for Environmental Creation (provisional name).

(Reference)

Basic concept for the Fukushima Prefecture Center for Environmental Creation (provisional name), Fukushima Prefecture, October 2012

The four functions outlined below will be divided between Facility A (Miharu Town, Tamura-gun) and Facility B (Minamisouma City).

❶ Monitoring of environmental radiation
- Precision management and analyses of raw monitoring data for environmental radioactivity

❷ Surveys and research
- Research to clarify status and environmental fate and transport of radioactive substances in the environment
- Development of treatment and disposal technologies for contaminated waste, soil, etc.

❸ Data collation and dissemination
- Collation and dissemination of monitoring data on environmental radiation
- Collation and dissemination of data on radiation, contamination and safety of agricultural, forestry and fisheries products

❹ Education, training and exchange
- Implementation, support, cultivation of human resources, and provision of technical training relating to environmental radiation
- Cooperation and ties with researchers and research institutions in Japan and overseas

Cooperation with Other Research Institutions

NIES, making use of the internal and external networks which it has historically cultivated, has acted as an office for a network of internationally-active environmental bodies – connecting regional environmental research institutes, public research organs, universities, and so on. Through collaborative research and joint use of facilities, it continues to play a vital role in environmental research both domestically and overseas.

AsiaFlux

We established an international observation network for the Asian region in 1999, in order to systematically observe the exchange of greenhouse gases between terrestrial ecosystems (forests and arable land, etc.) and the atmosphere (carbon flux).

Many research bodies both in Japan and overseas are members of this network. NIES contributes to this network not only with its observational activities but also by acting as the main administrative office for the operations of the network.

Liaison for Environmental Research Facilities

In order to effectively promote the regular exchange of information on environmental research, and with the aim of expanding further research collaboration, we have established ties with 13 research institutes in the surrounding area. Since its establishment, NIES has played a central role as a hub environmental research facility for the Tsukuba area, in the "Liaison for Environmental Research Facilities"

Domestic Cooperation with Environmental Research Institutes

We are actively engaged in various collaborative research with environmental research institutes with an intimate knowledge of regional circumstances and the environmental issues which are closely tied to particular environments throughout Japan.

Moreover, NIES hosts the "All-Japan Environmental Research Institutions Symposium" every year, which gathers environmental research institutes from throughout Japan to report on their research outcomes. NIES acts as the administrative office for the symposium and assists in summarizing the various opinions exchanged.

Asian and International Ties

Along with conducting international collaborative research such as field surveys and joint observation in every region of the globe, NIES hosts and participates in international conferences and workshops.

Moreover, we actively promote international research agreements – with a particular emphasis on ties in Asia – and host foreign researchers from across the globe at our institution.

Contribution to the Intergovernmental Panel on Climate Change (IPCC)

The IPCC has had great success in assembling scientific knowledge in relation to climate change, and is foundational in the intergovernmental study and assessment of its impacts and related policy. Many of our researchers collaborate as authors of the report which the IPCC produce. The IPCC Report, as a means to summarize scientific knowledge in relation to global warming, is currently the most globally influential report and contributes to the policy formation of governments in every country throughout the globe.

Participation in UNFCCC-COP

In 2004 NIES was admitted as an NGO observer organization, for participation in the United Nations Framework Convention on Climate Change, Conference of the Parties (UNFCCC-COP) of that year. In December of the same year it participated as an observing NGO and hosted a booth as part of the side-event of COP, by which means it was able to positively convey its research outcomes in the environmental research field.

Tripartite Presidents Meeting (TPM)

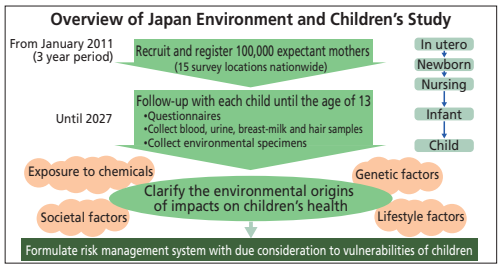
In order to further promote research collaboration in the Asian region, NIES, the Chinese Research Academy of Environmental Sciences (CRAES), and the National Institute of Environmental Research (NIER – South Korea) have regularly met since 2004. The three Presidents and representatives of these institutions, which all play a leading role in environmental research in their respective countries, have exchanged views on priority research fields for collaboration at the annual meeting.

Contributions to Environmental Policy

As a research institution NIES contributes to environmental policy formation, actively providing and disseminating research outcomes in various fields, including climate change, environmental risk, and biodiversity towards the formation of environmental policy. We also participate in the formulation of the necessary scientific considerations for environmental policy making – contributing on diverse fronts through our participation in all manner of policy-related documentation meetings. In addition we collate, manage and provide information on environmental circumstances, and environmental research and technologies.

Research on Disaster Environment

In order to respond to emergency issues relating to the Great East Japan Earthquake such as disaster waste and the disposal of waste contaminated with radioactive substances, the environmental fate of such substances and an understanding of their effects, we implement timely field surveys in conjunction with relevant institutions. Through the provision of the outcomes and know-how obtained from this we are contributing to the establishment of a diverse array of standards and guidelines.



Japan Environment and Children's Study

Japan Environment and Children's Study (JECS) is a nationwide birth-cohort study which will see the participation of 100,000 parent-child pairs. It is a large-scale survey aimed at clarifying the influence on children's health of substances found in their everyday environments. NIES is responsible for the implementation and administration of the survey as the National Center for the promotion of JECS. This survey can be expected to make a significant contribution to the development of forthcoming environmental policy.

Collation, Management and Dissemination of Environmental Information

The NIES Environmental Information Department collates and manages information relating to the environment and disseminates this information widely and in an easily-understandable manner via such media as "Kankyo Tenbodai" (Environmental Observatory). Thanks to these efforts we believe that not only is public awareness of environmental issues increased but that this information also informs and serves as a reference for initiatives by public and private bodies having the purpose of environmental conservation.

"Kankyo Tenbodai" http://tenbou.nies.go.jp

Dissemination of Research Outcomes

In order to make as many people as possible aware of NIES research outcomes and activities, on the foundation of information provided via publications and our homepage, we also actively implement activities aimed at the diffusion of such outcomes via our Open Houses and Public Symposium.

NIES Public Symposium

To facilitate the dissemination of our research outcomes and promote awareness of our activities, we hold a public symposium to coincide with June Environment Month every year, in Tokyo and Kyoto chapters. Here, visitors can learn about NIES through a number of lectures. They also have the opportunity to speak directly with NIES researchers during the poster session, which has around 20 displays on research activities. Every year people from all walks of life take advantage of this opportunity.

NIES Open House

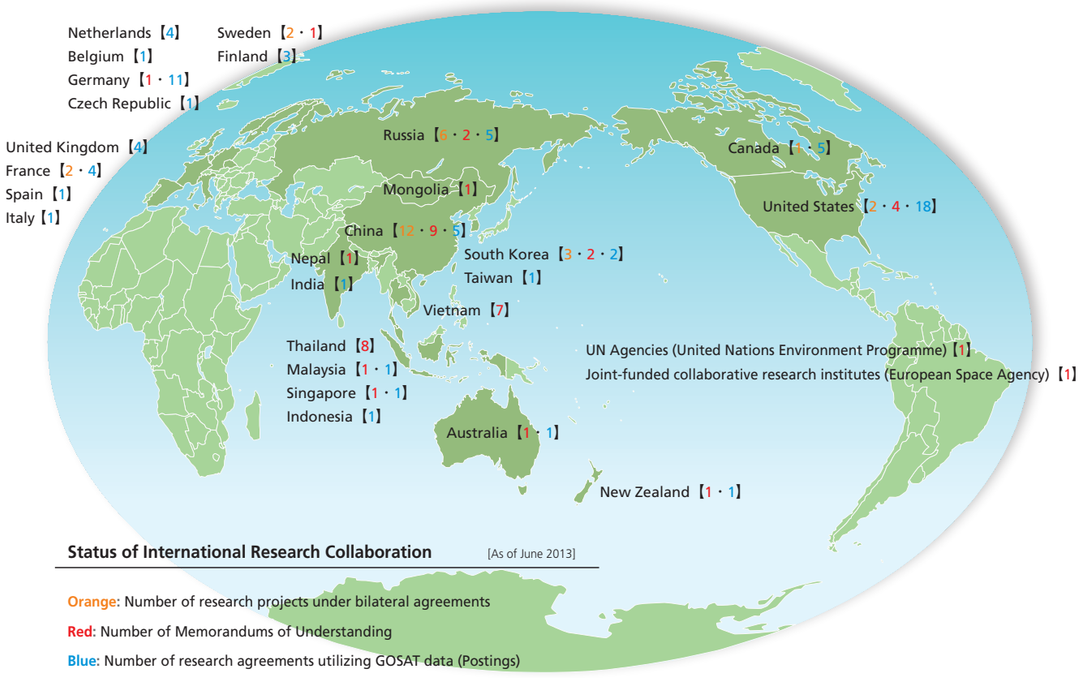
Along with giving the general public the chance to satisfy their curiosity about environmental issues, and gain an understanding of environmental research, science and technology, twice a year during Science and Technology Week (April) and the summer holidays (July) we open our doors to the public and introduce the activities of NIES. At the Open Houses we hold mini-lectures on the environment, displays and interactive activities, with many different attractions each year.

NIES Homepage

We provide information on our current research activities and outcomes via the NIES homepage. Besides information on the respective research centers and programs, the homepage also contains a database populated with research results. It is also possible to download a large spectrum of publications form the homepage including the NIES Annual Report and the research newsletter "Kankyougi"

NIES Homepage http://www.nies.go.jp/index-e.html

NIES in the Field: Active in Japan and throughout the Globe



Status of International Research Collaboration [As of June 2013]

Orange: Number of research projects under bilateral agreements

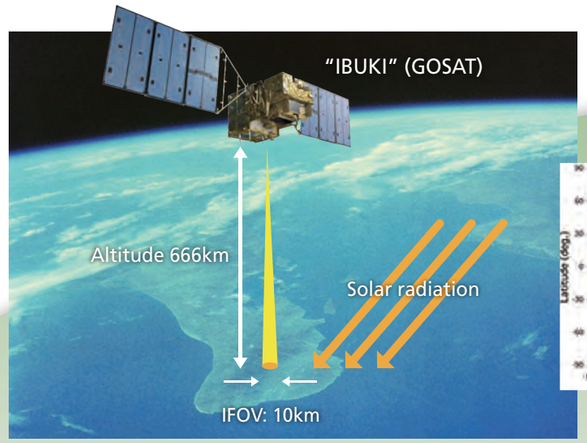
Red: Number of Memorandums of Understanding

Blue: Number of research agreements utilizing GOSAT data (Postings)

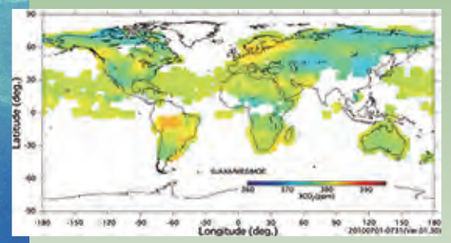
(In addition to the above we conduct surveys and research in every region of the globe)

Global Environmental Monitoring

Greenhouse Gas Observation



Greenhouse gases Observing SATelite "IBUKI" (GOSAT)



A global distribution map of XCO_2 as of July 2010 (Level 3 data product)

GHG observation in Siberia using tower network and aircraft

GHG observation using commercial airlines

GHG observation using regular cargo vessels

1 Teshio biomass survey

3 Lake Mashu long-term environmental monitoring

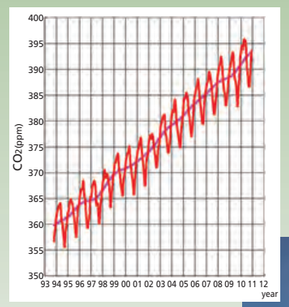
5 Lake Kasumigaura long-term environmental monitoring

8 Cape Hedo Atmosphere and Aerosol Monitoring Station (CHAAMS)

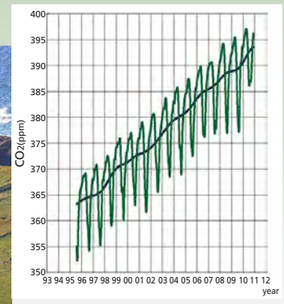
6 Biological and environmental surveys in Tokyo Bay

2 Teshio Carbon Cycle and Larch Growth (CCLaG) Experiment Site

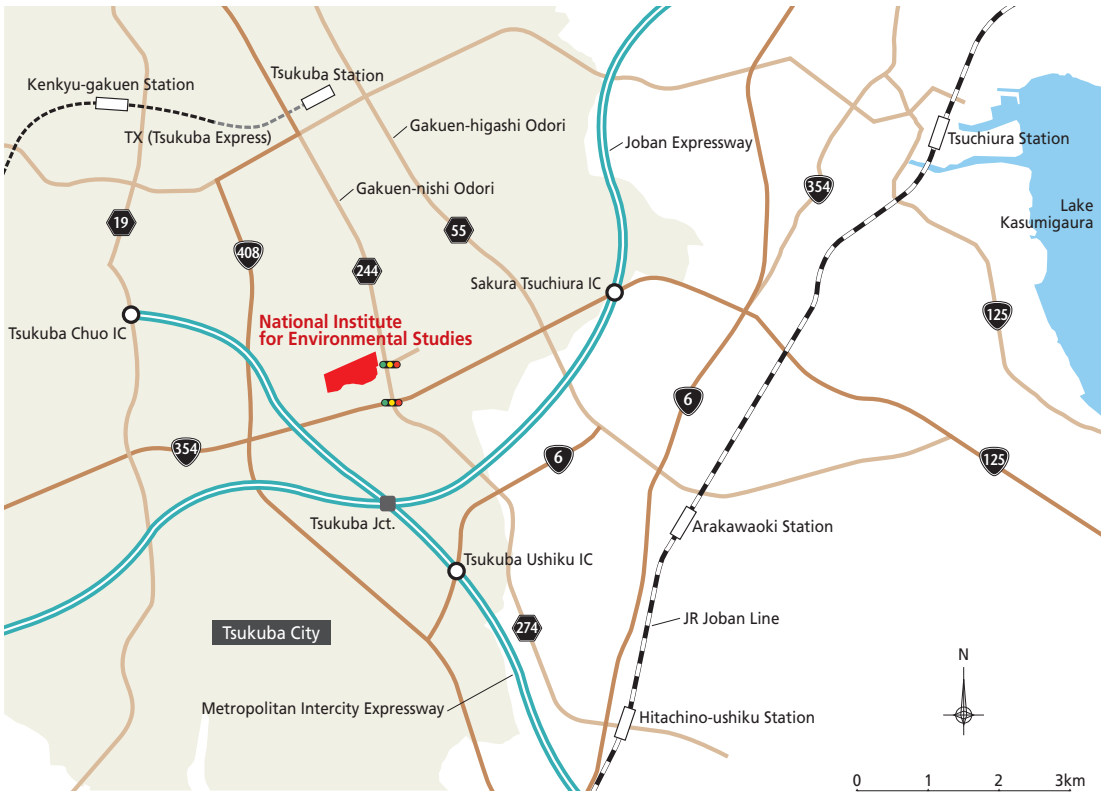
7 Fuji Hokuroku Flux Observation Site, Monitoring for carbon dioxide absorption levels



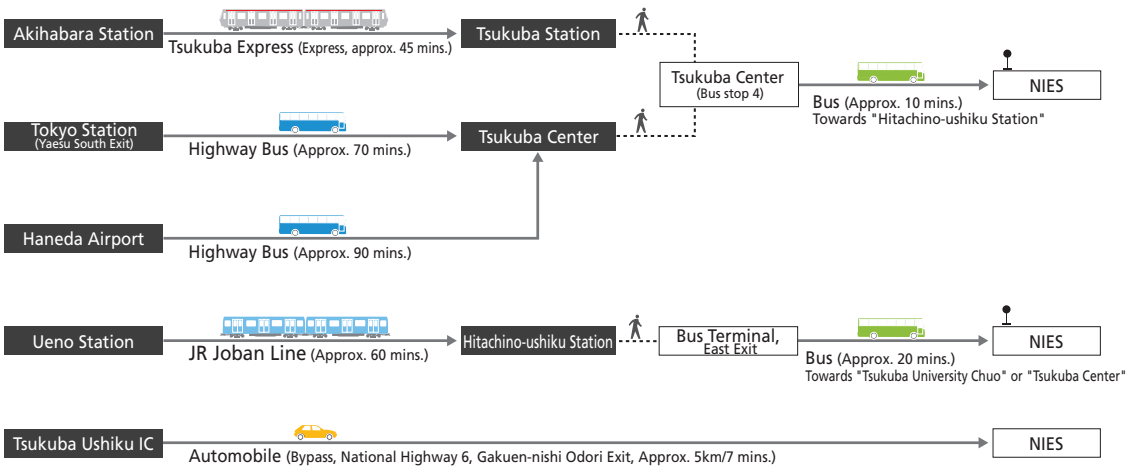
9 Hateruma Global Environmental Monitoring Station



4 Cape Ochi-ishi Global Environmental Monitoring Station



Access Routes



National Institute for Environmental Studies, Japan

Address: 16-2 Onogawa, Tsukuba, Ibaraki 305-8506, JAPAN

Web: http://www.nies.go.jp/index-e.html

E-mail to: www@nies.go.jp