

Message from the Director-General

TACHIMOTO Narifumi



The Research Institute for Humanity and Nature (RIHN) was established to conduct comprehensive, integrated research (global environmental studies) in order to create an academic discipline directed to solution of the earth's environmental problems. As one of the National Institutes for the Humanities of the Inter-University Research Institute Corporation, RIHN is unique in promoting the fusion of sciences and the humanities.

Environmental problems are said to have reached global proportions as modern civilization challenged and sought to control nature. Such global environmental problems are rooted in human culture in the broadest sense of the term. With this basic understanding, we at RIHN consider that the solution of global environmental problems lies in unraveling the chains of interaction between man and nature and seeking new paradigms of dynamic equilibrium.

Research into the essence of global environmental problems is organized at RIHN through a system of research projects and fixed-term appointments. Supported by cooperative research with universities and research institutes at home and abroad, this system of fixed-term projects gives rise to the features of integration, international networking, leadership and fluidity that characterize our inter-university research institute. In particular, the selection of projects involves rigorous evaluation by a committee comprised entirely of external members including overseas researchers.

In March 2007 the initial projects were completed, and more projects will reach completion in the near future. In response to this, a system of programs that bring together several projects has been introduced into the Research Department, and the former Research Promotion Center has been restructured as the Center for Cooperation, Promotion and Communication (CCPC). This CCPC will function not only to support research but also to establish the core identity of RIHN and organize the dissemination of results. From this year, the projects are grouped in this prospectus according to the domain of the program to which they belong.

In this way, based on an organizational system of research that is unique not only in Japan but also worldwide, RIHN is poised to take flight as a research institute of which Japan can be proud, where researchers, educators and staff from a diversity of fields gather to face new challenges. I invite your warm understanding and support, together with your criticisms, of not only this prospectus but all of RIHN's activities.

Founding Mission and Goals

The Research Institute for Humanity and Nature (RIHN) was established in April 2001 as an inter-university research institute of the Ministry of Education, Culture, Sports, Science, and Technology. It was to conduct comprehensive research in order to create an academic discipline directed to the solution of the earth's environmental problems.

Environmental research has hitherto been tackled in various separate fields of the natural sciences. RIHN's mission is to clarify the essence of environmental problems and identify ways that man should interact with nature. It is necessary to understand that environmental problems have three dimensions or aspects.

The first dimension is that of environmental problems in daily life, including various problems related to the human body and people's lifestyles. The second is that of socially constituted problems. These include global warming, loss of biodiversity, depletion of water resources, pollution by waste, and salt-water damage. An important task here is to clarify the social (political and economic) systems that cause these problems. The third dimension is that of "true" environmental problems. These are problems related to the mechanisms of and changes in global systems, such as the atmosphere, water, land, and climate, which are primarily the concern of the natural sciences and earth sciences.

Global environmental studies is not a finished, systematized discipline but something to be built for man's future survival through continuing trial and error. In this regard, the aim should be to build a constantly changing dynamic system.

At RIHN, we firmly believe that environmental problems concern humanity and all living organisms that presently inhabit the earth or will do so in the future. The "comprehensive" research that is RIHN's mission means not only the integration of academic domains but also the pursuit of understanding a phenomenon in its entirety.

If global environmental problems are rooted in human culture, then the global environmental studies to which RIHN aspires can be regarded as humanics, the inquiry into how humans live. For this reason, global environmental studies should stand at the starting point of environmental studies, dealing with the problems of humans and humanity in the midst of nature.



Features of RIHN

Integration

Research aimed at solving global environmental problems has progressed in many fields worldwide in recent years. At RIHN, we focus on problems such as warming, rising sea levels and loss of diversity at a regional level and, because regional problems have a complex bearing on the earth as a whole, we consider it necessary to conduct the basic research of field survey and data accumulation within an integrated framework that includes correlations with human existence. Research into questions of human lifestyles and culture is naturally based on the methods and viewpoints of the humanities and social sciences; but in carrying out such research, we consider it important to combine this approach with the methods and viewpoints of the natural sciences. An interactive approach between the natural sciences and the humanities and social sciences leads to the integration of global environmental studies as humanics.

International Networking

Research projects at RIHN involve not only researchers from domestic universities and research institutes but also overseas researchers participating through agreements with research institutes overseas. RIHN also actively participates in the planning and operation of research projects at overseas institutes and invites overseas researchers to RIHN as visiting faculty or researchers. In 2006, 58 scholars from overseas took part in our first international symposium and four satellite symposia. In 2007, our second international symposium attracted 28 researchers from overseas. In 2008, overseas researchers will again be invited to our third international symposium.

Leadership

Research projects at RIHN are grouped under one of five programs according to the research domain, and each program has an overall leader. Through the program leaders and project leaders, research projects are implemented in an integrated fashion. The Director-General, Deputy Director-General, program leaders and head of the Center for Cooperation, Promotion and Communication play central roles at home and abroad in coordinating the building of global environmental studies, disseminating research results, organizing international symposia, and responding to internal and external evaluations.

Fluidity

At RIHN, all professors, associate professors and assistant professors participate in research projects on the basis of fixed-term appointments, and project researchers and others similarly finish their terms of appointment with the completion of the project. This project system ensures the fluidity of personnel. Projects, moreover, progress from incubation study (IS) through feasibility study (FS) and pre-research (PR) to full research (FR), and the project system allows a flexible response to the organizational and personnel requirements at each stage. Fluidity is also realized through the constant exchange of personnel with domestic partner institutes.

Winnowing after the harvest of teff. Teff, which can grow in the cold climate of the high plateau, is a basic ingredient of injera (the staple Ethiopian food). Teff contains a great abundance of iron, calcium, potassium, and protein for a poaceous cereal. Teff was cultivated only within Ethiopia in the past, but these days, is cultivated in other countries, including Australia, the Netherlands, and the United States.

Towards Consilience and Futurable Societies

Research at RIHN seeks to elucidate the chains of interaction between man and nature. Research programs are established in five domains, circulation, diversity, resources, environmental history, and global area studies (ecosophy); and each program comprises a number of projects with a variety of topics, concerned with a diversity of areas and time-scales. In this situation, it is necessary to establish a clear direction in which unify these projects as constituents of global environmental studies.

Research projects at RIHN have hitherto been grouped under a diversity of topics, including water circulation, atmosphere, climate, oceans, underground environments, islands, ecosystems, food production systems, disease, landscapes, and civilizations. These individual studies have been classified along particular axes of research.

We consider it a major mission of RIHN to build consilience among these research axes within a more readily comprehensible framework of global environmental studies. Building consilience will elucidate the essence of global environmental problems and allow us to grasp them through new paradigms. This in turn will allow us to plan for the formation of futurable societies.

The new framework for research comprises five so-called domains (Figure 1). The domains of circulation, diversity, and resources provide frameworks for the analysis of problems related to the dynamics of man's interactions with nature. These three together encompass environmental studies of the humanosphere. Studies along the axes of time and space are respectively classified in the domains of environmental history and global area studies (ecosophy). Environmental history looks at the change and continuity in civilizations from past to present and explores possibilities for the future. Ecosophy can be called the study of governance in the widest sense, seeking to understand regional environmental problems in conjunction with global environmental problems. In this way, we consider global environmental studies to rest on three pillars: the domains related to man's interaction with nature (circulation, diversity, and resources), environmental history, and ecosophy.

The five programs, RIHN's mission and direction are shown on the following page in Figure 2.



Figure 1 Concept of Global Environmental Studies

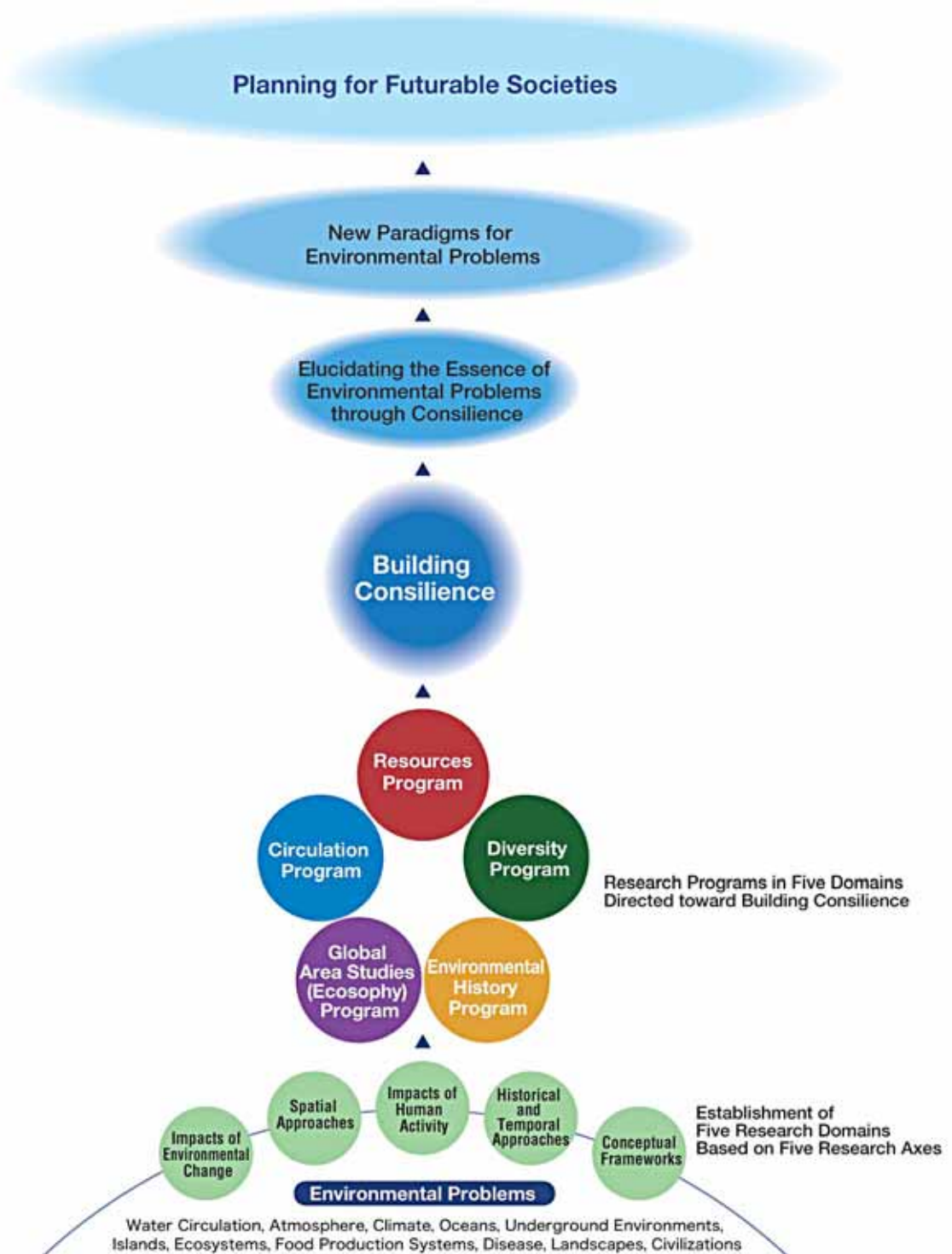


Figure 2 Building Consilience

- **Circulation Domain Program** Centered on the sphere of human survival, this program deals mainly with problems arising from excess and deficiency, imbalanced distribution and overuse in the circulations of water, atmosphere, carbon, nitrogen and other materials.
- **Diversity Domain Program** This program addresses global environmental problems of recent concern arising mainly from the loss of diversity, whether biological, including genetic diversity and diversity of niches, or cultural, including diversity of languages, social structures, religions and world-views.
- **Resources Domain Program** This program covers problems related to the food and energy that support human survival and their means of production through agriculture, forestry and fisheries; and problems related to the human body, including health and nutrition.
- **Environmental History Domain Program** This program takes an interdisciplinary approach to the history of global environmental problems as the “chains of interaction between man and nature.”
- **Global Area Studies (Ecosophy) Domain Program** This new domain of scholarship is expected to constitute a completely new framework for global area studies that lies beyond the bounds of existing academic fields.

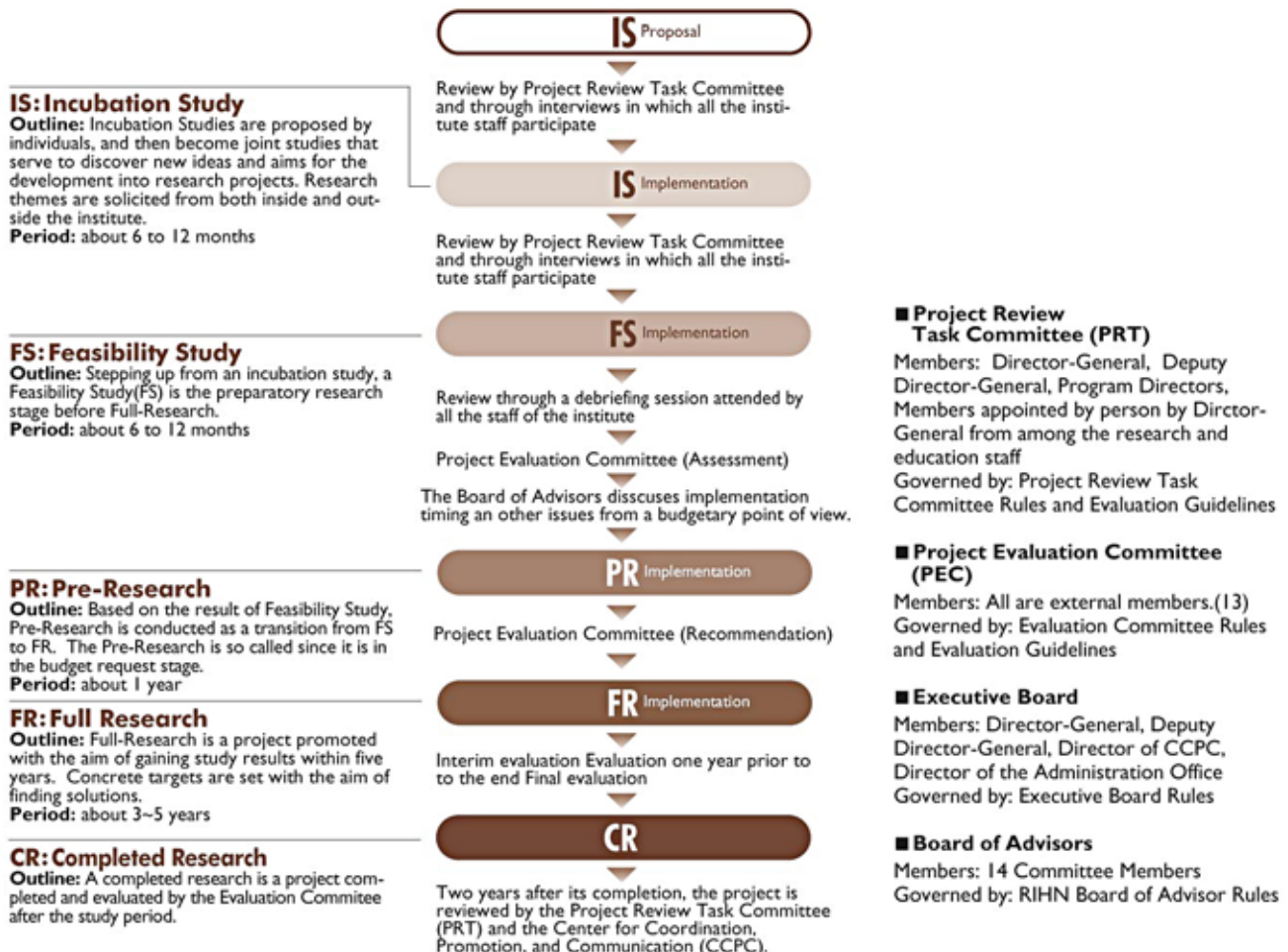
Research Projects

Research Project System

RIHN operates a system of five-year fixed-term research projects like those of the 21st Century Center of Excellence (COE) and Global COE programs, but which differs in that projects are evaluated at several stages in their progress. The first preliminary stage, taking from six months to one year, is the incubation study (IS), in which a research proposal is drawn up. If the proposal is approved, the research moves to the stage of feasibility study (FS), in which preparatory research is conducted for about one year. The FS then passes through the Project Evaluation Committee and, if approved, the Board of Advisors. With the board's approval, the project proceeds through a transitional period of about one year of pre-research (PR) to three to five years of full research (FR). After the second year of full research, a mid-term evaluation is carried out; and further evaluations follow one year before completion and at the time of completion. The validity and feasibility of research plans and the significance of results are thus subjected several times to evaluation and review, in a system designed to assure the quality as well as the independence of research.

■ The Process Leading to Full Research

The "Policy for Implementation of Research Projects" states: The research project system at RIHN is to produce results through the cooperative research of specialists in diverse fields for a fixed period on a designated topic that accords with the founding mission of RIHN. The launching of research projects as designated joint research is to be based on the collaboration and concerted action of the wider community of researchers and should undergo the following process.



Evaluation of Completed Research

■ System for evaluation of completed research

The three research projects completed in 2007, together with the five completed in 2006, bring to eight the number of research project results that RIHN has published. In 2008, full research is progressing in fourteen projects. This number is unlikely to change greatly in the future, meaning that the proportion of completed projects will continue to grow. The content of these completed projects and the value accorded them will be important in shaping the future of RIHN, being reflected in the further development of research and the launching of new projects.

With this idea in mind, the system for evaluation of completed research was revised during the 2007 academic year, as follows.

- 1) While previously the Project Evaluation Committee evaluated projects retrospectively at the time of completion (FR5), since 2007 progress has also been evaluated in the year before completion (FR4). The results of the evaluation are reflected in the research activities and collation of results in the final year, which are reported to the committee for the final evaluation upon completion of the project (FR5).
- 2) Two years after completion (CR2), a report is submitted to the Project Review Task Committee on the publication and ramifications of the research results and their contribution to society; and the committee makes a retrospective summary evaluation from the standpoint of RIHN.

With these changes, the February 2008 meeting of the Project Evaluation Committee examined the three projects completed in the 2007 academic year (retrospective evaluation under the old rules) and the two projects due to be completed in the 2008 academic year (evaluation one year prior to completion, under the new rules).

■ Projects Completed in 2007

The three projects completed in academic year 2007 differed in the global environmental problems they addressed, their fields and methods of research, but all were carried out as "integrated research" involving specialists from a range of disciplines. At the end of each project, the results are disseminated in various forms, not only academic papers but also books, films, and educational materials. Detailed evaluations of each project are also published on RIHN's home page.

All three projects concerned the utilization and management of forests and green spaces in Asia; and based on their results, in October 2007 RIHN held its second international symposium, entitled Asian Green Belt: Its Past, Present and the Future, where opinions were exchanged with scholars from around the world. The results are due to be published in a collection of papers, and summaries can be viewed on RIHN's home page.



2nd International Symposium "Asian Green Belt: Its Past, Present and the Future"

■ Projects due to be completed in 2008

E-03(FR5) Interactions between Natural Environment and Human Social Systems in Subtropical Islands. (Project leader: TAKASO Tokushiro)

E-02(FR5) Interactions between Environmental Quality of a Watershed and Environmental Consciousness: With Reference to Environmental Changes Caused by the Use of Land and Water Resources. (Project leader: SEKINO Tatsuki)