International Collaboration

Memoranda of Understanding and Research Cooperation

Most human beings have benefited greatly from modern civilization. If we continue down the current civilization path, however, weather and water-related natural disasters will intensify, ecosystem degradation and the loss of biodiversity will increase, and human livelihood, health, and safety will be at serious risk. The scale of our production and consumption has exponentially increased, but at nature’s expense, leaving humans as both the perpetrators and victims. The Covid-19 pandemic is just one example of the result.

New technological fixes will not offer fundamental solutions to such complex problems unless human lifestyles also change. For the last 20 years RIHN has conducted research with the belief that the roots of global environmental problems are found in human culture.

Cultural diversity is based on the diversity of nature. However, nature forms ecosystems in which regions are connected through the circulation of materials and energy, while cultures instill on their uniqueness, leaving nature and culture sometimes in conflict. Solutions to global environmental problems therefore depend on connecting cultures through common environmental efforts. Great traditions based on environmental wisdom and experience occur throughout the world and offer valuable insights to break the deadlock in modern science and capitalism. It is for this reason that RIHN undertakes interdisciplinary research spanning the natural sciences, humanities, and social sciences, and in recent years has evolved towards transdisciplinary research seeking to expand the kinds of knowledge gained from scientific inquiry.

RIHN has recently established three Research Programs, one Strategic Program, and the RIHN Center to promote such research. We have enhanced collaboration within the institute, with diverse research communities, and with society in general. RIHN also collaborates with the international research platform Future Earth, which aims to integrate global environmental research and contribute to the United Nations Sustainable Development Goals. As part of this effort, RIHN hosts the Future Earth Asian Regional Centre to strengthen research collaboration and capacity building across the region.

We will strive to expand these activities in the coming years and implement new research initiatives in search for solutions to the many environmental challenges of our planet.
RIHN Research Formation: Project-based Approach

RIHN promotes research through a project-based approach, where research proposals submitted and selected through an international open-call are implemented as research projects lasting three to five years. 39 research projects have been completed thus far, and 8 research projects are currently underway.

Comprehensive Research Across Disciplines

A diverse group of researchers from all fields, including natural sciences, humanities and social sciences, work together to conduct research. The laboratory space is 150 meters long with no doors, and researchers from different academic fields and disciplines collaborate with each other constantly.

Solution-oriented Research in Collaboration with Society

RIHN research projects conduct research in many regions in Japan and abroad. Researchers collaborate with local communities in various ways, such as by concluding academic agreements (MoUs) with local governments.

Organizational Structure

Programs and Projects

Research programs are organized into programs and projects rather than pre-existing academic disciplines or domains. Research Programs and Strategic Program are each home to multiple programs that carry out research in line with the programs' broad direction.

Research Programs

Research programs conduct research on specific global environmental issues through collaborative practice in society by promoting multiple research projects.

Global Environmental Culture Program

Program Director: MATSUDA Motoji

Towards solving global environmental crises, this program strives to change our behaviors and values not only by advanced science and technology but by also combining science and culture.

Programs and Projects

2019-2023 (Global Environmental Culture Program)

Mapping the Environmental Impact Footprint of Cities, Companies, and Households

Project Leader: KANEMOTO Katsumi

Rapid economic growth in China and other developing countries due to expanding global supply chains is causing severe environmental burdens. These burdens, such as PM2.5 emissions, have a critical effect on health hazards and other environmental problems, but the full extent is unknown. This project is investigating the effects of global supply chains in cities, companies, and households on the environment.

2019-2023 (Global Environmental Culture Program)

Co-creation of Sustainable Regional Innovation to Reduce Risk of High-Impact Environmental Pollution

Project Leader: SAKAKIBARA Masayuki

This project is based on sustainable and local innovation for mercury pollution from small-scale gold mining (ASM) through the learning and practice of Transdisciplinary Communities of Practice (TCPs) with residents using Transformative Boundary Objects (TBOs) with high cohesion power for the residents). In addition, it is using the "Mercury Free Society Networks (MFSN) as an interconnecting top-down approach to build solutions.

2020-2024

An Interdisciplinary Study Toward Clean Air, Public Health and Sustainable Agriculture: The Case of Crop Residue Burning in North India

Project Leader: HAYASHIDA Sachiko

Asashik Project

In the Purbut region located in North India, a large amount of rice straw is burned after the rice harvest, releasing large amounts of pollutants into the atmosphere. It has been proven that the effects of this practice extend as far as Delhi. This project is exploring ways to shift people's behavior to sustainable agriculture in the Purbut region to clean the air and reduce health hazards.

Global Environmental Change Program

Program Director: UYAMA Naoko

Eco-DRR Project

Disasters, such as floods, landslides, and storm surges, are increasing due to climate change. In response, we are studying disaster risk reduction by focusing on eco-disasters, which utilize functions ecosystems and biodiversity provide. Population decline is bringing opportunities to improve our land use so that we can benefit from ecosystems and biodiversity while achieving disaster risk reduction.

2020-2023

Fair for Whom? Politics, Power and Precarity in Transformations of Tropical Forest-agriculture Frontiers

Project Leader: WONG, Grace

In the tropics of Central Africa and Southeast Asia, frontier deforestation is rapidly transforming landscapes, livelihoods, and the well-being of its local people. This is not only a global environmental problem, but also a crisis of local social and ecological systems. This project is conducting case studies on the development and transformation of the forest frontier to identify conditions that will enable more equitable and sustainable development.

Call for Proposals

5-year research projects

Completion (continued)

2022-2025

Adaptive Governance of Multiple Resources Based on Linkages of the Water Cycle: Application to Coral Reef Island Systems

Project Leader: SHINOJU Ryudchi

This project focuses on coral reef island systems located in the Ryukyu Arc as well as in the tropical and subtropical western Pacific, we are elucidating the connections between land and sea through the water cycle, the biocultural diversity and community capability, and the evolution and structure of organizations and institutions that govern the use and management of multiple resources. By integrating and visualizing the above interconnected components, we aim to shed light on adaptive governance of multiple resources based on the water cycle.