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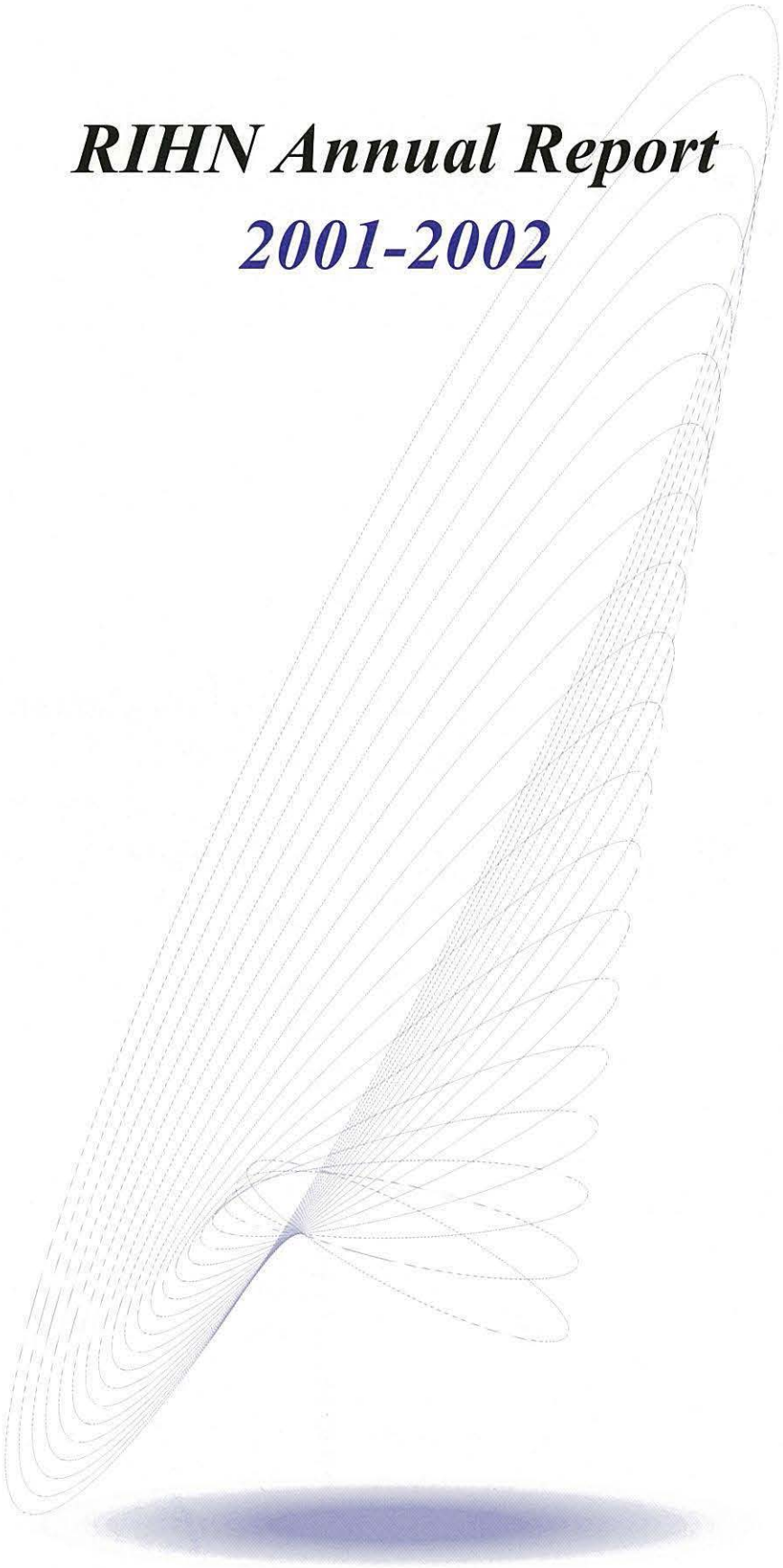
RIHN Annual Report
2001-2002



Inter-University Research Institute
Ministry of Education, Culture, Sports, Science and Technology

Research Institute for Humanity and Nature (RIHN)

RIHN Annual Report 2001-2002

Inter-University Research Institute
Ministry of Education, Culture, Sports, Science and Technology

Research Institute for Humanity and Nature (RIHN)

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Message from Director-General

To All it May Concern:

It is a great pleasure to issue the first volume of the RIHN Annual Report.

Three years have passed since the establishment of RIHN which was founded as an Inter-University Research Institute under the direct guidance of the Ministry of Education, Culture, Sports, Science and Technology. From April 1, 2004, all national Inter-University Institutes will be privatized at which time RIHN will then become one of the member institutes of a new organization "National Institutes for the Humanities" (NIHU). However our mission is steady.

Under our basic recognition that so-called global environmental problems are caused by the humans life style to control nature (the human culture in the broadest sense of the word), we endeavor that "Research Project System" will effectively integrate studies beyond the barriers of scientific, technological and humanistic approaches. Also we hope that the "Fluid association system and functions" will offer a chance for researchers of various fields to meet and collaborate sharing the common problem awareness. This innovative research institute has started to present its research results as was expected.

As you may well imagine, warm support of many people inside and outside of the institute are necessary to launch this initial stage. Here I would like to express my appreciation to everyone for their fine work. Now we are in orbit. The staff's line-up has been going smoothly as well as the new facilities, which will appear in 2006 in the northern part of Kyoto city, are under construction.

Nothing is more important than for us to succeed in our current activities and goals. I hope the RIHN Annual Report will meet your needs and interests. Our colleagues possess strong, inquisitive minds. I believe they will accomplish much in their research projects.

We hope that you follow our progress in RIHN with interest. Thank you.

Director-General
Professor Toshitaka Hidaka

History

Fiscal Year

1995 A proposal of Japan Science Council of Ministry of Education, Science, Sports and Culture: "On the promotion of the global environmental sciences" (April). "It is necessary to examine the founding of a central research organization that will promote integrated cooperative research toward the solution of global environmental problems".

1997 Investigation of the possible forms that the proposed research organization for the global environmental sciences may take. The Ministry of Education, Science, Sports and Culture established the Chosa-kyoryokusha-kaigi (Committee of Investigation Collaborators) for the establishment of a central research organization and made a budget for the concrete investigations.

The Ministerial Council for the global environmental conservation made an agreement on the "Provisional measure for global environmental conservation", in preparation for the UN General Assembly's Special Session on the Environment and Development (June). "The Council will investigate the means of possible adjustments necessary for the research organization to carry out integrated research in broad academic fields in addressing global environmental problems".

1998 Preparatory work for the establishment of the "Research Institute for the Global Environment Sciences" (tentative)

1999 The preparation Committee of the Institute compiled a report in March 2000 and proposed the foundation of the "Research Institute for the Global Environment Sciences" (tentative) for promoting integrated research projects, by amalgamating various broad disciplines from humanity and social sciences to natural sciences and using a network to be formed among workers in universities and research institutes within and outside the country.

2000 Investigation for the founding of the Research Institute for Humanity and Nature (tentative). Report "On the Fabric of the Research Institute for Humanity and Nature (tentative)" was completed in February.

2001 Foundation of the Research Institute for Humanity and Nature. Following the execution of the government ordinance (No.151 of the year 2001) amending part of the ordinance on the law concerning the establishment of national schools (Kokuritsu-gakko-setchi-ho-shikorei), the Research Institute for Humanity and Nature was founded (Director-General: Professor Toshitaka Hidaka). The Institute commenced its research activity on the campus of Kyoto University.

2002 The Institute moved to the site of the old Kasuga Primary School of Kyoto City.

Introduction

Toward a new approach to the global environmental problems

With civilization human beings expanded their activities and increased their population size. Such trends, gaining momentum in recent years, accompany increased consumption of resources and energy and the increased demand for food. This means that the human impact on the environment has been incredibly rapid and widespread.

The so-called global environmental problems, such as global warming, loss of biodiversity, and depletion of water resources, can be said to be the consequences of humanity-nature interactions being manifested today in various parts of the world. It is fundamentally a problem of human life style or culture in the broadcast sense of the word.

One of the difficulties of assessing the global environmental problems is that many of them have appeared in different regions of the earth in a most unpredictable manner. Not a small number of these problems that we see in front of us are caused by factors seemingly far removed from reality both in time and space. Moreover, recent studies show that not only "physical" and "chemical" factors in the broad sense are exerting strong influences.

It is easy to see that such multi-faceted problems could not be solved by studies with a conventional approach. In fact, the measures taken hitherto were based on the idea of controlling nature and it became clear that such measures would only lead to a vicious circle.

What we have to do now might be to ask first the fundamental question of what is meant by the global environmental problem and to re-examine the concepts developed through the 20th century in this regard.

Secondly, based on such perspectives we need to consider how we can sustain the globale environment that has all the future possibilities and what sorts of life style we must adopt in order to achieve it.

To build this foundation it is necessary to develop a new approach academically as well as in other fields.

What this understanding the Research Institute for Humanity and Nature (RIHN) was founded in April 2001 as an inter-university research institute under the Ministry of Education, Culture, Sports, Science, and Technology of Japan, to carry out integrated research for the innovation of a discipline that will give us the solution to the global environmental problems.

Social features of RIHN

In recent years many studies aiming at solving global environmental problem have been made in various ways in the world, but we now have reached a point where new directions must be sought. We are faced with questions such as, what sorts of life style could or should be the area of tropical forest to be retained?

To answer these naive but socially demanding questions, it is necessary to make a new integrated approach, bringing together different disciplines from the so-called natural sciences, social sciences, humanity studies, engineering, land and food sciences, medical sciences, and other fields.

RIHN will carry out cross-disciplinary, integrated studies according to the "project-based format" without dividing research activities into traditional disciplinary areas.

Fluidity

It is extremely important to maintain high fluidity to enable integrated research in cross-disciplinary areas. RIHN intends to realize a research organization with the highest possible fluidity that meets the requirement of the "project-based format".

Internationality

It is essential to build the research organization with international vision in order to realize a cross-disciplinary,

integrated approach toward the solution of global environmental problems. In its operation RIHN will develop strong links with international as well as national research organizations, actively promote research projects to be based overseas, and participate in the planning and operation of international research projects. It will also appoint many foreign professors and researchers as integral members of its research staff.

Leadership

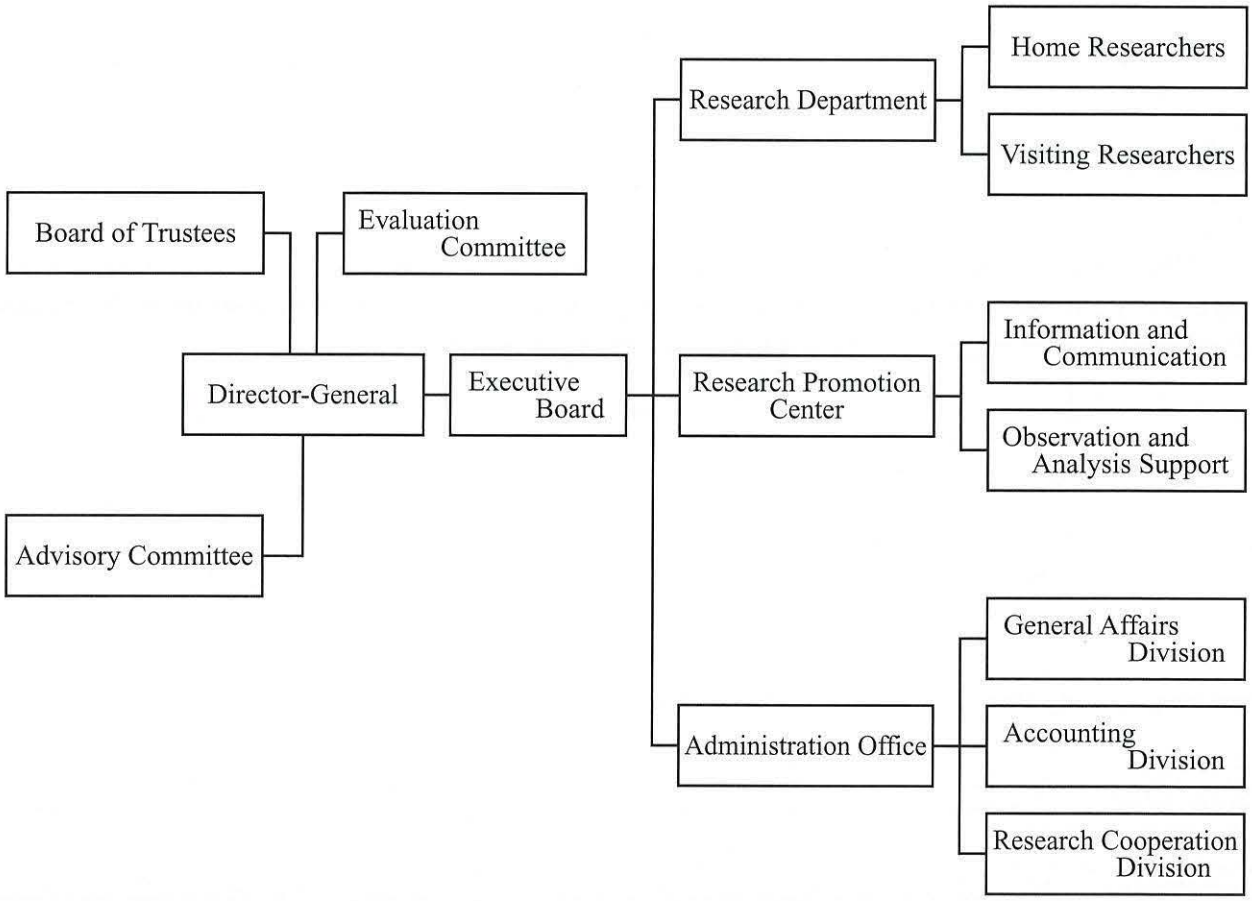
It is necessary to have strong leadership in order to carry out integrated research with such a fluid organization. RIHN will have its own professors to act as leaders in the planning and operation of multidisciplinary research projects to maintain the leading role of the Institute in this field.

Research Activities

Research project system

RIHN has no "Research Sections". It will carry out its research, not based on traditional research areas, but by establishing 5 research axes that represent integrated perspectives of the gloal environmental problems and identifying each research project along the direction of the appropriate axis.

Organization



Partner Organizations for Fluid Association

- Center for Ecological Research, Kyoto University (2001-)
- Hydrospheric-Atmospheric Research Center, Nagoya University (2001-)
- Arid Land Research Center, Tottori University (2001-)
- Institute of Industrial Sciences, University of Tokyo (2002-)
- National Museum of Ethnology (2002-)
- Graduate School of Science, Tohoku University (2002-)

2001

Boards and Committees (in alphabetical order)

Board of Trustees

Gives advice to the Director-General for important matters relative to planning, administration and operation of the institute.

FURUSAWA, Iwao	Professor Emeritus, Kyoto University
GOHSHI, Yohichi	President, National Institute for Environmental Studies
HARA, Hiroko	Professor, The University of the Air
HOTTA, Hiroshi	Director-General, Frontier Observational Research Syste for Global Change, Japan Marine Science and Technology Center
ISHIGE, Naomichi	Director-General, National Museum of Ethnology
KATO, Naotake	President, Tottori University of Environmantal Studies
KIKKAWA, Jiro	Professor Emeritus, The University of Queensland, Australia
MORISHIMA, Akio	Chair of the Board of Directors, Institute for Global Environmental Strategies
NAGAO, Makoto	President, Kyoto University
NAGATA, Toyoomi	Chancellor and President, Ritsumeikan University
NAKABO, Kohei	Lawyer
NAKAMURA, Mutsuo	President, Hokkaido University
NISHIKAWA, Koji	President, The University of Shiga Prefecture
NIWA, Masako	Professor Emeritus, Nara Women's University
SHIBATA, Minoru	Vice-Chairman, Kansai Economic Federation (Chairman, Board of Directors, Toyobo Co., Ltd.)
SUZUKI, Motoyuki	Vice-Rector, United Nations University
TANAKA, Masayuki	Professor, Tohoku Institute of Technology
TORII, Hiroyuki	Editorialist, Nihon Keizai Shinbun, Inc.
WATANABE, Okitsugu	Director-General, National Institute of Polar Research
YAMAORI, Tetsuo	Director-General, International Research Center for Japanese Studies

Advisory Committee

At the request of the Director-General, deliberates on important matters including personnel affairs, budgets, and research projects.

AKIMICHI, Tomoya	Head of Department, Department of Cultural Research, National Museum of Ethnology
AMANO, Akihiro	Professor, School of Policy Studies Kansei Gakuin University
FUJII, Yoshiyuki	Director, Arctic Environment Research Center, National Institute of Polar Research
KONO, Michikata	Dean, Graduate School of Frontier Sciences, University of Tokyo
MORITA, Tsuneyuki	Director, Social and Environmental Systems Division, National Institute for Environmental Studies
NAKAMURA, Kenji	Director, Hydrospheric-Atmospheric Research Center, Nagoya University
SHIRAHATA, Yozaburo	Senior Research Coordinator, Research Department, International Research Center for Japanese Studies
TSUCHIYA, Masaharu	Dean, School of Environmental Science, The University of Shiga Prefecture
WAKATSUCHI, Masaaki	Director, Institute of Low Temparature Science, Hokkaido University
YAMAMURA, Norio	Professor, Center for Ecological Research, Kyoto University
(ASANO)NAKASHIZUKA, Tohru	Professor, Research Institute for Humanity and Nature
FUKUSHIMA, Yoshihio	Professor, Research Institute for Humanity and Nature

HAYASAKA, Tadahiro	Professor, Research Institute for Humanity and Nature
HIDAKA, Toshitaka	Director-General, Research Institute for Humanity and Nature
NAKANISHI, Masami	Professor, Research Institute for Humanity and Nature
NAKAWO, Masayoshi	Professor, Research Institute for Humanity and Nature
WADA, Eitaro	Professor, Research Institute for Humanity and Nature

Evaluation Committee

Undertakes evaluations of the feasibility studies and selects research subjects to be forwarded to full-scale research; interim and post-evaluation of the research subjects under full-scale research.

ICHIKAWA, Atsunobu	Professor Emeritus, Tokyo Institute of Technology
IWASA, Yo	Professor, Graduate School of Sciences, Kyushu University
KIKKAWA, Jiro	Professor Emeritus, The University of Queensland, Australia
MORISHIMA, Akio	Chair of the Board of Directors, Institue for Global Environmental Strategies
MURAKAMI, Yoichiro	Professor, International Christian University
NAKANISHI, Junko	Professor, Graduate School of Environment and Information Science, Yokohama National University
SASAKI, Satohiko	Dean, College of Bioresource Sciences, Nihon University
SAWA, Takamitsu	Director, Institute of Economic Research, Kyoto University
SUN, Honglie	Professor, Institute of Geographical Science and Natural Resources Research, Chinese Academy of Sciences, P. R. China
TACHIMOTO, Narifumi	Dean, Center for Southeast Asian Studies, Kyoto University
WATANABE, Okitsugu	Director-General, National Institute of Polar Research
YASUNARI, Tetsuzo	Professor, Institute of Geoscience, University of Tsukuba

Executive Board

Discusses important matters in the Institute's activities

FUKUSHIMA, Yoshihiro	Program Director, Research Institute for Humanity and Nature
HIDAKA, Toshitaka	Director-General, Research Institute for Humanity and Nature
NAKANISHI, Masami	Program Director and Director of Research Promotion Center, Research Institute for Humanity and Nature
WADA, Eitaro	Program Director, Research Institute for Humanity and Nature
SAKAMOTO, Kunio	Director, Administration Office, Research Institute for Humanity and Nature

Staff Members

Director-General	HIDAKA, Toshitaka		
Research Department			
Program Directors	FUKUSHIMA, Yoshihiro	NAKANISHI, Masami	WADA, Eitaro
Professors	ASANO (NAKASHIZUKA), Tohru	FUKUSHIMA, Yoshihiro	HAYASAKA, Tadahiro
	NAKANISHI, Masami	WADA, Eitaro	
Visiting Professor	TAKASO, Tokushiro		
	(Professor, Tropical Biosphere research Center, University of Ryukyus)		
Associate Professors	OKI, Taikan	YACHI, Shigeo	
	YOSHIOKA, Takahito	WATANABE, Tsugihiro	
Assistant Professor	KATO, Yuzo		
Research Fellows	KIKUCHI, Nobuyuki	NAGANO, Takanori	SAKAI, Akiko
	TANAKA, Takuya	USHIMARU, Atsushi	
JSPS Research Fellow	MIYASAKA, Hitoshi		
Technical Assistants	NAITO, Nozomu	SUEZAWA, Reiko	
Research Promotion Center			
Director	NAKANISHI, Masami		
Professor	NAKAWO, Masayoshi		
Associate Professors	MOMOKI, Akiko	YOSHIMURA, Masanori	
Administration Office			
Director	SAKAMOTO, Kunio		
General Affairs Division			
Head	YAMAMOTO, Hideo		
General Affairs Section			
Head	TOMISAKA, Susumu		
Chief	HOSOKAWA, Akihiro		
Clerical Assistants	IZUMI, Aya	OTSUKA, Miki	TAKAHASHI, Akiko
	TSUJITA, Yukie		
Accounting Division			
Head	ABE, Eiichi		
Accounting Section			
Head	KAWAGUCHI, Yasushi		
Chief	OKABE, Mamoru		
Clerical Assistants	HISHIDA, Yoshie	NINOMIYA, Mayu	YAMAGUCHI, Maiko
Facilities Section			
Head	OOE, Nobuhiro		

Research Activities

Each project will be organized through the period of incubation (IS) and tested in the feasibility study (FS) of about one year. Then the result of the feasibility study will be evaluated and, if assessed as suitable, will proceed to the full-scale study of about 5 years. In this process the evaluation of the project is given by the Evaluation Committee and approved by the Advisory Committee.

Full-scale studies

(Scheduled since 2002)

Feasibility studies

Axis 1: Environmental change impact assessment

1-1 Research project (p.13)

Impact of climate changes on agricultural production system in the arid areas

Axis 2: Human activity assessment

2-1 Research project (p.13)

Emissions of greenhouse gases and aerosols, and human activities in Eastern Asia

Axis 3: Spatial scale

3-1 Research project (p.14)

Multi-disciplinary research for understanding interactions between humans and nature in the Lake Biwa-Yodo River watershed

Axis 4: Historical time

4-1 Research project (p.15)

Historical evolution of the adaptability in an oasis region to water resource changes

Axis 5: Integration

5-1 Research project (p.16)

Integrated management system for water issues by global environmental information library and world water model

Incubation studies

1 Recent rapid changes of water circulation in the Yellow River and its effects on the environment (p.17)
2 Evaluation of sustainable forest use options and their perspectives (p.17)
3 Interactions between the environmental quality of a watershed and the environmental consciousness: With reference to environmental changes caused by the human use of land and water resources (p.18)
4 Interplay between lake ecosystems and human activities: the past, present and future for water resources (p.18)
5 Constructing a regional eco-history model in tropical monsoon Asia (p.18)

Research Projects

Feasibility study

Research axis: Environmental change impact assessment
Project number: 1-1
Project name: Impacts of climate changes on agricultural production system in arid areas
Project leader: WATANABE, Tsugihiro (RIHN)
Core members: FUJINAWA, Katsuyuki (Fac. of Engineering, Shinshu Univ.)
KIMURA, Fujio (Terrestrial Environment Research Center, Univ. of Tsukuba)
KOJIRI, Toshiharu (Disaster Prevention Research Institute, Kyoto Univ.)
TSUJII, Hiroshi (Graduate School of Agricultural Science, Kyoto Univ.)
UMETSU, Chieko (RIHN)
YANO, Tomohisa (Arid Land Research Center, Tottori Univ.)

1. Research objectives and topics

As the world population grows and demand for food increases, agriculture in the arid and semi-arid areas is required to improve its productivity, while its development is severely restricted by limited water resources availability. In many arid regions of the world, development of agriculture has caused desertification and serious problems in the hydrological cycle and the environment. Especially the development of large-scale irrigation agriculture has remarkably improved the productivity and the consequent environmental changes are found to be threatening.

It seems that global climate changes in the future affect the agriculture in the arid and semi-arid areas, with changes in temperature, rainfall, evapotranspiration and other climatological and hydrological conditions. The agricultural production system, which depends on unstable conditions even now, may have difficulties to adapt to changes, and it would be affected seriously. What are the measures to sustain production in such and environment?

The study areas of this project are the Seyhan and Ceyhan basins in Turkey and the Nile Valley in Egypt, in the arid area on the east coast of the Mediterranean Sea, where carry out a comprehensive assessment and evaluation of the land and water management. Its relations to the regional climate, hydrological system in the basins and regional agricultural economy will be evaluated. First the project studies and diagnoses the structure of land and water management. Then it tries to predict the impacts of global warming or climate change and the adaptability of the production. In this process, factors such as reactions form farmers, the changes in the regional land management and the effect of the regional policy of food in relation to the global food supply will be taken into account. An integrated assessment of vulnerability of the system will be attempted to identify essential interrelations between various factors and critical values of the factors, which will determine the fate of the system.

Feasibility study

Research axis: Human activity assessment
Project number: 2-1
Project name: Emissions of greenhouse gases aerosols, and human activities in Eastern Asia
Project leader: HAYASAKA, Tadahiro (RIHN)

Background and Objectives

Most of the human activities have been based essentially on indigenous climate, culture, and socio-economic systems, but recently they are being changed drastically by the impacts of globalization of market economy and global-scale climate changes. Human activities affected by these global phenomena give rise to various

environmental issues and emissions of greenhouse gases and aerosols, which in turn bring about many problems in larger areas or over the world.

With these as the background, the present research project is to investigate (1) the impacts of globalization on the local economy, industry, and social system in each country, (2) the relationship between changes in anthropogenic emissions of greenhouse gases and aerosols, and (3) the influences of these emitted greenhouse gases and aerosols on the global atmospheric environment and climate changes.

In this study, the atmospheric constituents are studied, taking account of the global warming issues. This is not a local air pollution study, but a study on the relationship between human activities and climate changes induced by emission of greenhouse gases and aerosols.

Expected Results

It will be understood from this study how human activities in Asia under economic globalization affect local as well as global environmental changes. The results will contribute to drawing a general counterplan in Asian countries, and to finding a way of technical and financial supports from Japan. Meanwhile, the results of this study are quite important for improving the accuracy of prediction of climate changes through understanding of the global circulation mechanism of greenhouse gases and aerosols. Finally a synthesis of the results is expected to show how globalization affects local human activities in a region, and how regional scale human activities are related to global atmospheric changes.

Feasibility study

Research axis: Spatial scale
Program number: 3-1
Project name: Multi-disciplinary research for understanding interactions between humans and nature in the Lake Biwa-Yodo River watershed
Project leader: WADA, Eitaro
Core members: HARA, Yuuichi TANAKA, Takuya WAKITA, Ken-ichi YACHI, Shigeo

Research Objectives and Topics

A river basin is a spatial unit for water and material cyclings that is topologically easy to recognize. Since old times, humans have been developing an inherent regional culture depending upon the uniqueness of each river basin that is diverse in climate, culture and history. Today, human activities in each river basin cause not only its own regional environmental problem but also global environmental problems through the climatic and oceanic processes and global economy that cross river-basin spatial scale. Thus, revealing inherent environmental problems in each river basin is an important basis to understand global environmental problems.

On this background, this project aims to develop a methodology that reveals the interactions between human activities and nature in a river basin including urban areas. With this methodology, we focus our study on major issues on river-basin management; we provide useful information for the residents and administration to conduct river-basin management, elucidate possible future scenarios of a river basin with emphasis on its sustainable management.

Research site

For this purpose, we adopt *the Lake Biwa-Yodo River watershed* in Japan as a model river basin. This river basin contains the largest lake in Japan, the Lake Biwa whose catchment area roughly coincides with the Shiga prefecture. It includes active urban areas of Osaka and Kyoto. The Lake Biwa is an ancient lake famous for its 400 thousand-years history and rich in endemic species, while it is at the same time a typical "human-dominated ecosystem". It supplies water to 14 million people in the Kansai district and is influenced by land-use change of its coastline, eutrophication and invasion of exotic species. These characteristics of the Lake Biwa-Yodo River

watershed prove it as an appropriate field to carry out our multi-disciplinary research on river-basin management.

Methods

To develop total river-basin management, collaboration of researchers in diverse disciplines is indispensable. In our Feasibility Study, we developed and synthesized four methods as tools for a new *diagnosis methodology* for water environment. They are 1) *factor diagram* to find region-specific cultural factors and causal relationships that compel people to damage environment, 2) *indicators*, 3) *model* and 4) *Geographic Information System (GIS)* as a platform for the above three methods and for integrating diverse kinds of environmental information.

Using and extending this diagnosis methodology, we conduct researches on water and material cyclings, ecosystem, social and cultural system in the Lake Biwa-Yodo River watershed towards total river-basin management.

Expected results

Proposals for the management of the Lake Biwa-Yodo River watershed will be obtained. The concepts and methodology that would be obtained and tested in this project will be useful to understand river basins which include urban regions in general.

Feasibility study

Research axis: Historical time
Project number: 4-1
Project name: Historical evolution of the adaptability in an oasis region to water resource changes
Project leader: NAKAWO, Masayoshi (RIHN)
Core members: J. Kubota (RIHN), T. Watanabe (RIHN), Y. Kato (RIHN), N. Takeuchi (RIHN), K. Endo (Nihon U.), Y. Fujii (NIPR), K. Ohta (Nagoya U.), K. Fujita (Nagoya U.), H. Sohma (Nara W. U.), M. Sugiyama (Kyoto U.), Y. Konagaya (NME)

The present project aims at examining the historical evolution of the interaction between humans and natural systems in and around the Heihe region in central Eurasia, where outstanding human cultures have developed, for the last 2000 years, through analyzing historical documents, and varieties of proxies such as ice cores, tree-ring samples, lake sediment cores and wind brown deposit, in addition to the analyses of the present adaptability of the region for water resource changes. This would enable us to understand what are the "development" and the "sustainability", which are considered most crucial in facing the "global environmental problems".

Water resources in the region are considered mainly the precipitation in the mountains and the melt water of glaciers, which change in response with global climate change and possibly the change in lifestyle of the people in the region. The people have used the limited amount of water resources and developed their own culture adapting the changes of water resources. In the present project, the historical change of both the water resources and the water demand/utilization is investigated by analyzing the historical documents as well as varieties of proxies such as ice cores, lake sediments, tree ring samples and wind brown deposits. Varieties of historical documents and various proxies are available in and around the Heihe region, and it is one of the most suitable basins to examine. For interpreting the historical information, the present processes of water circulation system including the social utilization of water are investigated with field observations: precipitation process, accumulation and ablation process of glaciers, river and ground water discharge processes, irrigation and evapo-transpiration process, etc. Through these investigations, the adaptability of water resource changes of the region is assessed historically, and a model for evaluate the adaptability is developed for examining the mode of living in the region for future generations. The study, hence, will elucidate the historical developing process of the culture and the criteria for deciding the lifestyle of the people in the region, which should contribute to examining a desirable mode of living for future.

In the Heihe Basin, the river water has been used for irrigation quite intensively in these days, and the river discharge has decreased significantly downstream. As the results, the Juyanze Lake at the terminus of the river has dried up, and the ground water level has decreased drastically, which damaged the ecological situation near the river end, and caused a serious problem to, in particular, the nomadic people living there. The similar situation, however, took place intermittently in the history of last 2000 years, while farming activities and nomadic activities were in conflict with each other at sometime, and they are in harmony in the other days. In which era was with the "development" and in which era was with the "sustainability"?

The construction of the perspective of the history of the interaction between humanity and nature in the region, would contribute to have a clue for human beings at present, who face serious so called global environment problems, as for how to live with the surrounding nature, and to create potentially a new concept of the manner of living for future capability.

Feasibility study

Research axis: Integration
Project number: 5-1
Project name: Integrated management system for water issues of global environmental information library and world water model
Project leader: OKI, Taikan (RIHN)
Core members: ARAMAKI, Toshiya (Research Center for Advanced Science and Technology, The Univ. of Tokyo)
KANAE, Shinjiro (Institute of Industrial Science, The Univ. of Tokyo)
KAWASHIMA, Hiroyuki (Graduate Schoolof Agricultural and Life Sciences, The Univ. of Tokyo)
KITSUREGAWA, Masaru (Institute of Industrial Science, The Univ. of Tokyo)
KURAJI, Koichiro (Graduate School of Agricultural and Life Sciences, The Univ. of Tokyo)
MATSUMOTO, Jun (Graduate School of Science, The Univ. of Tokyo)
MORIYAMA, Toshiyuki (Fac. of Engineering, Sojo Univ.)
OHTE, Nobuhito (Graduate School of Agriculture, Kyoto Univ.)
SATOMURA, Takehiko (Graduate School of Science, Kyoto Univ.)
SHIBAZAKI, Ryosuke (Center for Spatial Information Science, The Univ. of Tokyo)
SHIRAKAWA, Naoki (Graduate School of Engineering, The Univ. of Tokyo)
SHIROYAMA, Hideaki (Graduate School of Law, The Univ. of Tokyo)
TACHIKAWA, Yasuto (Disaster Prevention Research Institute, Kyoto Univ.)
UMETSU, Chieko (RIHN)
YASUOKA, Yoshifumi (Institute of Industrial Science, The Univ. of Tokyo)

In this study, water is focused on as one of the most common factors in global environmental studies, and an integrated information infrastructure will be developed for answering the hot issues related to the global water crisis.

Interfaces between the global hydrological model, global material cycles and agricultural production model, and socio-economical and international trade model will be standardized and they will be combined into a world water model. The world water model should be able to represent the water cycles in nature interacting with anthropogenic activities, such as irrigation and reservoir operation, and the international trade of goods produced consuming water. From the world water model will be revealed the current situation of the indirect global consumption of water and examined the interactions between humans and nature with respect to the global water cycles.

An integrated information infrastructure for answering the global environmental issues related to water will be

developed, in which various pieces of information concerning hydrological cycles are integrated, from natural environmental to socio-economic aspects. It will be equipped with a comprehensible graphical user interface, and will support relevant researchers and other people in the world. An original dataset from literature review, collection of statistical information from each country and region, and observation of natural and anthropogenic hydrological cycles, will constitute the core of the integrated information infrastructure.

Field survey and continuous observation are planned both in Japan and in Thailand. The information obtained from such regional observations will contribute to validating the global dataset, and also to tackling the scale issues in global and regional environmental problems.

The outcome from this project will be a supporting tool for decision making, with input scenarios for climate changes as a consequence of global warming, population growth, and increase in water demand. Through these research activities, possible ways by which we can develop the sustainability of our society (namely, "development of sustainability" not "sustainable development") will be presented from the viewpoint of water.

Incubation study

Project name: Recent rapid changes of water circulation in the Yellow River and its effects on the environment

Leader: FUKUSHIMA, Yoshihiro (RIHN)

Since 1972, it has often been found that water of the Yellow River does not reach to the Bo-Hai Bay, due to water intake for irrigation. In the lower reaches of the Yellow River, inhabitants are faced with shortage of water for irrigation, and industrial and domestic uses. The reduced amount of river open water leads to a lowered groundwater level and an increased level of water pollution. The Chinese Academy of Science has been conducting a national project since 1999. As demand for food in the world increases, similar cases of water shortage will occur more and more in the near future. It is urgently needed that we find out a way of detecting and solving such a problem. The recent crisis observed in the Yellow River basin is complicated because different factors are interactively responsible: climate changes, global warming and changes in land use. Though this research project, carried out by researchers from different fields under international collaboration with the Chinese Academy of Science and IGBP/BAHC community, useful knowledge will be provided for taking countermeasures in the Yellow River drainage basin. We will also study through five year research how land use changes affect the water cycle over the Yellow River drainage basin what effects are observed in the lower reaches and in offshore waters following lowering of the ground water level.

Incubation study

Project name: Evaluation of sustainable forest-use options and their perspectives

Leader: NAKASHIZUKA, Tohru (RIHN)

Reduction and deterioration of the forest ecosystem are the major reasons for the drastic loss of terrestrial biodiversity. A sustainable management system should be developed to conserve biodiversity. This study is to: 1) reveal the effects of forest-use options on biodiversity loss, 2) ecologically and economically evaluate forest-use options including traditional, so-called sustainable systems, 3) elucidate the social, economic, and cultural factors that are responsible for the recent changes in forest-use patterns in regional as well as global scales, and 4) establish ecological and economic models for sustainable forest-use and spatial arrangement.

We study in four different sites in East Asia representing typical forest ecosystems with traditional, so-called sustainable forest ecosystems: 1) Lambir National Park, Malaysia (tropical rain forest area), 2) Kinabalu National Park, Malaysia (tropical montane forest area), 3) Yaku Island (temperate evergreen forest area), and 4) Abukuma

Mountains (temperate deciduous forest area).

Incubation study

Project name: Interactions between the environmental quality of a watershed and the environmental consciousness: with reference to environmental changes caused by the human use of land and water resources

Leader: YOSHIOKA, Takahito (RIHN)

Human activities have affected the global environment, while people's consciousness about the environment has been affected by the changing environment. In the project, a model to predict environmental changes in a watershed caused by the human use of land and water resources will be developed through analyses of the past changes and present status of the watershed environment. This project focuses on developing methodological framework for analyzing the relationship between the environmental consciousness and the environmental qualities.

Incubation study

Project name: Interplay between lake ecosystems and human activities: the past, present and future for water resources

Leader: NAKANISHI, Masami (RIHN)

This project is aiming at finding ideal patterns of human activities that permit optimum utilization of ecosystem services. For this, we will analyze how seasonality of the ecosystem has changed historically through its interplay with human activities and how seasonality of human activity links with nature in ecosystem functioning. With the help of study on historical changes in seasonality of the lake ecosystem and human activities, this project will provide a high resolution ecosystem forecast, that is essential for making guidelines for our optimal utilization of lake ecosystem services.

Incubation study

Project name: Constructing a regional eco-history model in tropical monsoon Asia

Leader: AKIMICHI, Tomoya (National Museum of Ethnology)

In tropical monsoon Asia, a number of ethnic groups have developed unique subsistence complexes making use of the surrounding diversified environments. Yet, these complexes are not stable, but have been drastically changed due to the modernization, introduction of cash crops, infiltration of global economy of the area. The project aims to study the transformation process of subsistence complex and underlying cultural configuration in areas where various ethnic groups co-exist. Particular attention is paid to the comparative analysis of indigenous knowledge and practices of each ethnic group, and historical dynamics manifested as conflicts and multiple relations between modern states and local communities. Through these studies, the project challenges to construct regional eco-history model in tropical monsoon Asia.

Research Promotion Center

Activities in the fiscal year 2001 (from December 2001 through March 2002)

Research staff members:

MOMOKI, Akiko, Associate Professor (Information dissemination)

YOSHIMURA, Mitsunori, Associate Professor (Observation analysis)

Information dissemination

Some preparations were made for starting the information dissemination activities that are to communicate the meaning of RIHN's research results to the public.

Study was made on the basic materials necessary for these activities.

Study was made on the means of collecting information on global environmental problems and trends of environmental research.

Observation and analysis

Installation and arrangement of GIS system in RIHN

Outreach Programs and Events

1. Research Seminars

Along with presenting the hot topics and updated trends in global environment studies, as well as to establish new guidelines in research, the RIHN will invite researchers both domestic and foreign to serve as lecturers at Research Seminars, in order to achieve the RIHN goal of realizing dynamic cooperation in research activity. The RIHN will annually sponsor approximately ten such Seminars dealing with diverse research themes introducing topics that are relatively near completion and inviting discussion thereof.

1-1 Meetings (Danwakai)

Premier meeting June 4, 2001
Topics: General
Speakers: future seminar coordinators

No.1 June 18, 2001
Topics: Introduction of research agenda
Speakers: Prof. NAKANISHI, Masami, Prof. NAKAWO, Masayoshi and Prof. WADA, Eitaro

No.2 June 25, 2001
Topics: Introduction of research agenda
Speakers: Assoc. Prof. WATANABE, Tsugihiro and Assist. Prof. YOSHIOKA, Takahito

No.3 July 2, 2001
Topics: Introduction of research agenda
Speakers: Prof. FUKUSHIMA, Yoshihiro, Assoc. Prof. OKI, Taikan, Prof. NAKASHIZUKA, Tohru and Prof. HAYASAKA, Tadahiro

No.4 July 16, 2001
Topics: Introduction of research agenda
Speaker: Director-General Prof. HIDAKA, Toshitaka

No.5 September 27, 2001
Topics: Mission and Projects of RIHN
Speakers: Seminar coordinators

No.6 October 9, 2001
Topics: Interactions between humanity and nature
Speakers: Seminar coordinator

No.7 October 22, 2001
Topics: Integration of natural and social sciences
Speaker: Prof. HAYASAKA, Tadahiro

No.8 October 29, 2001
Topics: Program and projects
Speaker: Prof. WADA, Eitaro

No.9 November 6, 2001
Topics: Introduction of research agenda
Speaker: Assoc. Prof. YACHI, Shigeo

No.10 November 19, 2001
Topics: Introduction of research agenda
Speakers: Dr. USHIMARU, Atsushi and Dr. NAGANO, Takanori (research fellow)

No.11 December 3, 2001

Topics: Introduction of research agenda
Speakers: Dr. TANAKA, Takuya and Dr. KIKUCHI, Nobuyuki (research fellow)

No.12 December 10, 2001
Topics: Introduction of research agenda
Speakers: Assist. Prof. KATO, Yuzo and Dr. SAKAI, Akiko (research fellow)

No.13 December 25, 2001
Topics: Introduction of research agenda
Speakers: Assoc. Prof. YOSHIMURA, Mitsunori and Assoc. Prof. MOMOKI, Akiko (RPC)

No.14 January 15, 2002
Topics: Introduction to Shirahama study seminar
Speakers: Seminar coordinators

No.15 February 7, 2002
Topics: Organizational meeting
Speakers: Seminar coordinators

No.16 February 18, 2002
Topics: Introduction of research agenda
Speaker: Assoc. Prof. UMETSU, Chieko

No.17 February 25, 2002
Topics: Introduction of research agenda
Prof. KONOVALOV, Vladimir (visiting professor, Russian Academy of Science)

No.18 March 4, 2002
Topics: Introduction of research agenda
Speakers: Assoc. Prof. SEKINO, Tatsuki and Assist. Prof. YATAGAI, Akiyo

No.19 March 11, 2002
Topics: Introduction of research agenda
Speaker: Assist. Prof. KAWAMOTO, Kazuaki

No.20 March 18, 2002
Topics: Introduction of research agenda
Speaker: Assist. Prof. TAYASU, Ichiro

No.21 March 25, 2002
Topics: Introduction of research agenda
Speaker: Assist. Prof. TAKEUCHI, Nozomu

1-2 Shirahama Workshop

Term: February 6-8, 2002
Coordinators: Assoc. Prof. OKI, Taikan, Prof. NAKASHIZUKA, Tohru
1. Coordination among RIHN research projects
Topics: 1.1 Sharing of data, ideas and technology with other projects
1.2 Expected data, ideas and technology from other projects
1.3 Expected contribution from Research Promotion Center
2. Discussion: On planning and operating various RIHN programs

2002

Boards and Committees (in alphabetical order)

Board of Trustees

Gives advice to the Director-General for important matters relative to planning, administration and operation of the institute.

FURUSAWA, Iwao	Emeritus Professor, Kyoto University
GOHSHI, Yohichi	President, National Institute for Environmental Studies
HARA, Hiroko	Professor, The University of the Air
ISHIGE, Naomichi	Director-General, National Museum of Ethnology
KATO, Naotake	President, Tottori University of Environmantal Studies
KIKKAWA, Jiro	Professor Emeritus, The University of Queensland, Australia
MORISHIMA, Akio	Chair of the Board of Directors, Institute for Global Environmental Strategies
NAGAO, Makoto	President, Kyoto University
NAGATA, Toyoomi	Chancellor and President, Ritsumeikan University
NAKABO, Kohei	Lawyer
NAKAMURA, Mutsuo	President, Hokkaido University
NISHIKAWA, Koji	President, The University of Shiga Prefecture
NIWA, Masako	Professor Emeritus, Nara Women's University
SHIBATA, Minoru	Vice-Chairman, Kansai Economic Federation (Chairman, Board of Directors, Toyobo Co., Ltd.)
SUZUKI, Motoyuki	Vice-Rector, The University of the Air
TANAKA, Masayuki	Professor, Tohoku Institute of Technology
TORII, Hiroyuki	Editorialist, Nihon Keizai Shinbun, Inc.
WATANABE, Okitsugu	Director-General, National Institute of Polar Research
YAMAORI, Tetsuo	Director-General, International Research Center for Japanese Studies

Advisory Committee

At the request of the Director-General, deliberates on important matters including personnel affairs, budgets, and research projects.

AMANO, Akihiro	Center Director, Kansai Research Center, Institute for Global Environmental Strategies
FUJII, Yoshiyuki	Director, Arctic Environment Research Center, National Institute of Polar Research
KONO, Michitaka	Dean, Graduate School of Frontier Sciences, The University of Tokyo
MORITA, Tsuneyuki	Director, Social and Environmental Systems Division, National Institute for Environmental Studies
NAKAMAKI, Hirochika	Professor, Department of Cultural Research, National Museum of Ethnology
NAKAMURA, Kenji	Director, Hydrospheric-Atmospheric Research Center, Nagoya University
SHIRAHATA, Yozaburo	Senior Research Coordinator, Research Department, International Research Center for Japanese Studies
TSUCHIYA, Masaharu	Dean, School of Environmental Science, The University of Shiga Prefecture
WAKATSUCHI, Masaaki	Professor, Institute of Low Temparature Science, Hokkaido University
YAMAMURA, Norio	Professor, Center for Ecological Research, Kyoto University
AKIMICHI, Tomoya	Professor, Research Institute for Humanity and Nature
FUKUSHIMA, Yoshihiro	Professor, Research Institute for Humanity and Nature
HAYASAKA, Tadahiro	Professor, Research Institute for Humanity and Nature
HIDAKA, Toshitaka	Director-General, Research Institute for Humanity and Nature

NAKASHIZUKA, Tohru	Professor, Research Institute for Humanity and Nature
NAKAWO, Masayoshi	Professor, Research Institute for Humanity and Nature
WADA, Eitaro	Professor, Research Institute for Humanity and Nature

Evaluation Committee

Undertakes evaluations of the feasibility studies and selects research subjects to be forwarded to full-scale research; interim and post-evaluation of the research subjects under full-scale research.

APPANAH, Simmathiri	Senior Programme Advisor, Forestry Research Support Programme for Asia and the Pacific (FAO), Thailand
EHLERS, Eckart	Chairman, German National Committee on Global Change Research, Germany
HEINTZENBERG, Jost	Director, Institute for Tropospheric Research, Germany
ICHIKAWA, Atsunobu	Professor Emeritus, Tokyo Institute of Technology
IWASA, Yo	Professor, Graduate School of Sciences, Kyushu University
KIKKAWA, Jiro	Professor Emeritus, The University of Queensland, Australia
LEGENDRE, Louis	CNRS Research Professor, Director, Villefranche Oceanography Laboratory, France
MORISHIMA, Akio	Chair of the Board of Directors, Institute for Global Environmental Strategies
MURAKAMI, Yoichiro	Professor, International Christian University
NAKANISHI, Junko	Professor, Graduate School of Environment and Information Science, Yokohama National University
SASAKI, Satohiko	Dean, College of Bioresource Sciences, Nihon University
SAWA, Takamitsu	Director, Institute of Economic Research, Kyoto University
SUN, Honglie	Professor, Institute of Geographical Science and Natural Resources Research, Chinese Academy of Sciences, P. R. China
TACHIMOTO, Narifumi	Dean, College of International Studies, Chubu University
WATANABE, Okitsugu	Director-General, National Institute of Polar Research
YASUNARI, Tetsuzo	Professor, Institute of Geoscience, University of Tsukuba

Executive Board

Discusses important matters in the Institute's activities

AKIMICHI, Tomoya	Program Director, Research Institute for Humanity and Nature
FUKUSHIMA, Yoshihiro	Program Director, Research Institute for Humanity and Nature
HIDAKA, Toshitaka	Director-General, Research Institute for Humanity and Nature
NAKANISHI, Masami	Program Director and Director of Research Promotion Center, Research Institute for Humanity and Nature
SAKAMOTO, Kunio	Director, Administration Office, Research Institute for Humanity and Nature
WADA, Eitaro	Program Director, Research Institute for Humanity and Nature

RIHN organizes other committees if necessary, for smooth operation.

Staff Members

Director-General	HIDAKA, Toshitaka		
Research Department			
Program Directors	AKIMICHI, Tomoya	FUKUSHIMA, Yoshihiro	NAKANISHI, Masami
	WADA, Eitaro		
Professors	AKIMICHI, Tomoya	FUKUSHIMA, Yoshihiro	HAYASAKA, Tadahiro
	NAKANISHI, Masami	NAKASHIZUKA,Tohru	NAKAWO Masayoshi
	WADA Eitaro		
Visiting Professors	BOROVIKOVA, Lyudmila (Principle Scientific Investigator, Central Asian Research Hydrometeorological Institute, Uzbekistan)		
	GONG, Wooi Khoon (Professor, Universiti Sains Malaysia, Malaysia)		
	HAN, Jiankang (Professor, Hunan Normal University, China)		
	HARA, Toshihiko (Professor, Institute of Low Temperature Science, Hokkaido University)		
	KIKKAWA, Jiro (Professor Emeritus, The Queensland, Australia)		
	KIYASHKO, Sergei (Senior Research Scientist, Laboratory of Invertebrate Ecology, Institute of Marine Biology, Far Eastern Branch, Russian Academy of Science, Russia)		
	KONOVALOV, Vladimir (Leading Scientific Researche, Professor, Department of Glaciology, Institute of Geography, Russian Academy of Sciences, Russia)		
	TAKASO, Tokushiro (Professor, Tropical Biosphere research Center, University of Ryukyus)		
Associate Professors	KUBOTA Jumpei	OKI, Taikan	UMETSU, Chieko
	WATANABE, Tsugihiro	YACHI, Shigeo	YOSHIOKA, Takahito
Assistant Professor	KATO, Yuzo	KAWAMOTO, Kazuaki	TAKEUCHI, Nozomu
	TAYASU, Ichiro	YATAGAI, Akiyo	
Research Fellows	INOUE, Mistuyuki	KIKUCHI, Nobuyuki	NAGANO, Takanori
	TANAKA, Takuya	USHIMARU, Atsushi	
JSPS Research Fellows	GENKAI KATO, Motomi	HARROLD, Timothy	Mailisha
	MATSUOKA, Kenichi	ŌNISHI, Hideyuki	
Research Fellow (RR)	CHEN, Jianyao		
Research Promotion Center			
Director	NAKANISHI, Masami		
Associate Professors	MOMOKI, Akiko	SEKINO, Tatsuki	YOSHIMURA, Mitsunori
Technical Assistants	KANEMATSU, Takako	SUEZAWA, Reiko	TAKI, Chiharu
	TANAHASHI, Toshiyuki		
Administration Office			
Director	SAKAMOTO, Kunio		
General Affairs Division			
Head	YAMAMOTO, Hideo		
General Affairs Section			
Head	TOMISAKA, Susumu	HOSOKAWA, Akihiro	UEMURA, Saeko
	OTSUKA, Miki	TAKAHASHI, Akiko	KIMURA, Setsuko
Research Cooperation Section			
Head	YOSHIDA, Ren		
Clerk	KAJI, Sachiko		

Clerical Assistant	TSUJITA, Yukie	HIROSE, Kumi
Accounting Division		
Head	ABE, Eiichi	HAMASAKI, Yasuhiro
Budgeting and Accounting Section		
Head	KAWAGUCHI, Yasufumi	
Clerk	ENOMOTO, Isao	
Clerical Assistants	NINOMIYA, Mayu	YUMEN, Yoshie
Supply Section		
Head	OKABE, Mamoru	YAMADA, Tetsuya
Clerical Assistant	YAMAGUCHI, Maiko	ONISHI, Kazuma
Facilities Section		
Head	OOE, Nobuhiro	

Research Activities

Each project will be organized through the period of incubation (IS) and tested in the feasibility study (FS) of about one year. Then the result of the feasibility study will be evaluated and, if assessed as suitable, will proceed to the full-scale study of about 5 years. In this process the evaluation of the project is given by the Evaluation Committee and approval by the Advisory Committee.

Axis 1: Environmental change impact assessment

Project 1-1 Impacts of climate changes on agricultural production system in the arid areas (p.30)
Project 1-2FS Recent rapid changes of water circulation in the Yellow River and its effects on the environment (p.33)

Axis 2: Human activity assessment

Project 2-1 Emissions of greenhouse gases and aerosols, and human activities in Eastern Asia (p.34)
Project 2-2FS Evaluation of sustainable forest-use options and their perspectives (p.35)
Project 2-3IS Human activities in Northeastern Asia and their impact to the biological productivity in North Pacific Ocean (p.35)

Axis 3: Spatial scale

Project 3-1 Multi-disciplinary research for understanding interactions between humans and nature in the Lake Biwa-Yodo River watershed (p.36)
Project 3-2FS Interactions between environmental quality of the watershed and the environmental consciousness – with reference to environmental changes caused by the use of land and water resources. (p.38)
Project 3-3IS Interactions between natural environment and human social system on subtropical islands. (p.40)

Axis 4: Historical time

Project 4-1 Historical evolution of the adaptability in an oasis region to water resource changes (p.43)
Project 4-2FS Interplay between lake ecosystems and human activities: the past, present and future for water resources (p.45)
Project 4-3FS Constructing a regional eco-history model in tropical monsoon Asia (p.45)

Axis 5-1: Integration

Project 5-1 Integrated management system for water issues by global environmental information library and world water model (p.48)

Research Projects

Full-scale research

Research axis: Natural changes impact assessment
Project number: 1-1
Project name: Impacts of climate changes on agricultural production system in arid areas
Project leader: WATANABE, Tsugihiro (RIHN)
Core members: (see table 1 attached at the end)

1. Research objectives and topics

Research Objectives

1) To examine and diagnose the structure of land and water management in agricultural production system in arid areas, especially to evaluate quantitatively the relationship among cropping system, hydrological cycle and water balance in farmland and region.
2) To develop the methodology or model for integrated assessment on impacts of climate change and adaptations for it, mainly on the aspect of the land and water management.
3) To assist the development and improvement of the Regional Climate Models (RCMs) for more certain prediction with higher resolution of future changes in regional climate.
4) To assess the vulnerability of agricultural production system and to suggest possible and effective measures for enhancing sustainability of agriculture, through integrated impact and adaptation assessment of climate changes.

Topics and Methodology

1) This project selects two case study areas, the Mediterranean region of Turkey and the Nile Valley and Delta in Egypt, in the east Mediterranean region, which is one of the most sensitive areas in agriculture to predicted future climate change.
2) Focusing land use and cropping pattern, and soil and water condition, its interrelationship with regional climate, basin hydrology, plant and crop production, irrigation system, agricultural economics, etc. is to be modeled with which the vulnerability of agricultural production system is assessed.
3) Based on some scenarios for future climate change generated by the improved RCM, mechanisms of the impact and adaptation processes in agricultural production system are identified.
4) With feedbacks and interactions clarified in analyzing the process of assessing climate change impacts and adaptations, the key factors and parameters for improvement of the sustainability of agriculture are to be identified.

2. Relation with research program

The on-going "Research Program" in the Research axis of natural changes impact assessment is aiming at identification and prediction of drastic changes of climate due to global warming and its impacts on eco-system and human society. The main objective of the program is defined as 'to clarify the actual situation and mechanism of impacts of various aspects of climate change on a regional eco-system and human society as well as consequential environmental problems, and to predict future of these relationship for establishment of effective measures and mitigations'. The subjects of this research project are directly and explicitly corresponding to the objectives of the program, focusing on vulnerable agro-ecosystem and agricultural production system in arid region.

3. Project leader and collaborators: see Table 1 attached at the end.

4. Modifications on the Original Research Plan

There has been no major modification in the project during implementation stages from February 2002. As described in the original research plan, the Seyhan River Basin in Turkey was selected as the main case study area, taking budget and research organization into account, while the Nile Delta is recognizes as a reference region, where review of the past relevant researches and preparation of the research organization are to be done and applicability of the method that will be developed in Turkey is to be discussed.

Modification with the suggestions of the Project Evaluation Committee

Based on the supplemental comments of the Project Evaluation Committee, the following responses were taken for implementing the project.

1) Sub-models to be developed in the project should be linked with each other and the common protocol for sub-models and exact method should be developed. However, the objective of the project is not just prediction of impacts and adaptations, and the processes of developing models and relationship of sub-models themselves are significant for the project.
2) Scope of the project is to be gradually expanded, especially in the socio-economic aspects, as much as possible with the limited budget and resources.

5. Progress of the Project (From April 2002 to March 2003)

Since at the end of the last fiscal year (2001-2002), the case study area was shifted to Turkey from Israel, much efforts and time have been allocated to establish the research organization in Turkey. With the exchange of the Memorandum of Understandings with TÜBİTAK, the Scientific and Technical Research Council of Turkey, in July 2002, the project is being implemented as a joint research project with TÜBİTAK, for authorization of the project in Turkey, which is essential for data collection and field studies. At the same time, processing and analyzing of data, model development, and laboratory works have been executed in Japan, and field measurements have been done in Turkey.

Main activities of the project can be summarized as below.

Research Meeting

1) Project Research Meeting (6 times; April, May, November, December 2002, and February and March 2003)
2) Arid Land Research Center Meeting (twice; June and October 2002)

Research meeting in Turkey

1) Date and Place: July 3-6, 2002, In Adana city and the Seyhan River Basin.
2) Reporter: Ten Japanese, then Turkish, three Israeli, and two Egyptians.
3) Objectives and Topics: Research subject and methodology, case study area

Field study in Turkey

1) Research method and organization (Project leader; twice, total 12 days)
2) Hydrology and irrigation (Four persons, total 40 days)
3) On-farm and vegetation (Five persons, total 60days)
4) Agro-economics (Four persons, total 40 days)

Field study in Egypt

1) Research method and organization (Four persons, total 30 days)
2) Hydrology and irrigation (Four persons, Total 40 days)

International workshop

1) Date and Place: January 22-23, 2003, Kyoto, Shiga and other universities and organizations.
2) Reporter: Ten Japanese, seven Turkish, one Israeli, and two Egyptians.
3) Objectives and Topics: Research subject and methodology, outcomes, and research plan

6. Outcome (2002)

Major outcomes of sub groups in the project until the end of the fiscal year 2002-2003 are summarizes as

follow.

Climate Change

1) Data processing on metrological data of Turkey.
2) Validation of the Regional Climate Model for simulating regional precipitation distribution.
3) Possibility analyze of changes of rainfall during longer period.

Hydrology and Water Resources

1) Development of the proto-type Basin Model and application to a domestic river in Japan.
2) Development of the Groundwater Model for prediction of the future changes in groundwater level and salinity.

Crop Productivity and Vegetation

1) Selection of the experimental field for measurements of on-farm crop and water, and measurement of evapotranspiration.
2) Collection of Soil Physical/chemical condition references in sol accumulated bare land.
3) Prediction of future changes of irrigation requirement due to climate changes, using FAO software.
4) Assessment of the present vegetation.

Irrigation and Drainage

1) Data collection regarding structure and problems of irrigation and drainage system in the region.
2) Preliminary study on participatory irrigation management.

Farmers and Agro-economics

1) Collection of basic data for analyzing the relation ship between regional agriculture and climate change.
2) Development of regional agricultural sector model and data collection for it.
3) Finalizing questionnaires for behavior of farmers on their land and water management and cropping patter, and execution of interviews with farmers.

Table 1 Project Member: Project Leader and Collaborators
(:Project Leader, *: Japanese Core-members)**

Sub-group and role	Name (family/given)		Organization
Project Leader	WATANABE**	Tsugihiro	Research Institute for Humanity and Nature
Climate Analysis of regional climate system and prediction of future climate	KIMURA*	Fujio	Terrestrial Environment Research Center, University of Tsukuba
	SUMI	Akimasa	Center for Climate System Research, The University of Tokyo
	ABE	Ayako	Center for Climate System Research, The University of Tokyo
	KITO	Akio	Climate Research Dept. Meteorological Research Institute
	ASANUMA	Jun	Terrestrial Environment Research Center, University of Tsukuba
	YATAGAI	Akiyo	Research Institute for Humanity and Nature
Basin Hydrology and Water Resources Impacts of climate change on basin hydrology and availability of water resources	KOJIRI*	Toshiharu	Disaster Prevention Research Institute, Kyoto University
	FUJINAWA*	Katsuyuki	Faculty of Engineering, Shinshu University
	TANIGUCHI	Mahito	Nara University of Education
	NAWAHDA	Amin	Disaster Prevention Research Institute, Kyoto University
Crop Production and Vegetation Impacts of climate change on on-farm soil-water-plant dynamics and vegetation in basin	YANO*	Tomohisa	Arid Land Research Center, Tottori University
	TAMAI	Shigenobu	Arid Land Research Center, Tottori University
	KOBATA	Tohru	Faculty of Life and Environmental Science, Shimane University
	ODANI	Hiromichi	School of Environmental Science, The University of Shiga Prefecture
	TANAKA	Akira	Coastal Bioenvironment Center, Saga University
	NAKAGAWA	Hiroshi	Graduate School of Agricultural Science, Kyoto University
	TAKEUCHI	Shinichi	School of Environmental Science, Kyushu Kyoritsu University
	SANO	Atsuyuki	Faculty of Agriculture, Tottori University
	INOSAKO	Kohji	Faculty of Life and Environmental Science, Shimane University
	ANDOH	Makoto	Graduate School of Agricultural Science, Kyoto University
Irrigation and Drainage Changes in irrigation and drainage management due to changes in on-farm and basin hydrological regime	WATANABE**	Tsugihiro	Research Institute for Humanity and Nature
	UMETSU*	Chieko	Research Institute for Humanity and Nature
	AOUDA	Tadao	Faculty of Agriculture, Niigata University
	NAGANO	Takanori	Research Institute for Humanity and Nature
Farm and Agro-Economics Changes of farmers' behavior, farm economy and regional agriculture	TSUJII*	Hiroshi	Graduate School of Agricultural Science, Kyoto University
	KAGATSUME	Akira	Graduate School of Agricultural Science, Kyoto University
	ASAMI	Asuyuki	Graduate School of Agricultural Science, Kyoto University
	KAMEYAMA	Hiroshi	Faculty of Agriculture, Kagawa University
Turkey/Adviser	SYADAM	Cemal	TÜBİTAK (The Scientific and Technical Research Council of Turkey)
Turkey/Coordinator	Kanber	Rıza	Faculty of Agriculture, Çukurova Universtiy

Turkey/Climate Change and Agriculture	HAKTANIR KAPUR	Koray Burçak	Faculty of Agriculture, Ankara University Faculty of Agriculture, Çukurova Universtiy
Turkey/ Hydrology and Water Resources	TÜLÜCÜ ÇETIN TOPALOĞLU	Kazım Mahmut Fatih	Faculty of Agriculture, Çukurova Universtiy Faculty of Agriculture, Çukurova Universtiy Faculty of Agriculture, Çukurova Universtiy
Turkey/Plant Productivity	AYDIN KOÇ ANAÇ KILIÇ EVRENDILEK AGCA	Mehmet Müjde Süer Şeref Fatih Necat	Faculty of Agriculture, Mustafa Kemal University Faculty of Agriculture, Çukurova Universtiy Faculty of Agriculture, Ege University Faculty of Agriculture, Mustafa Kemal University Faculty of Agriculture, Mustafa Kemal University Faculty of Agriculture, Mustafa Kemal University
Turkey/Vegetation	ALTAN YILMAZ AKTOKLU	Türker Tülhan Ekrem	Faculty of Agriculture, Çukurova Universtiy Faculty of Agriculture, Çukurova Universtiy Faculty of Agriculture, Mustafa Kemal University
Turkey/Irrigation and Drainage	ÖZEKİCİ KAPUR ÖNDER UNLU	Bülent Selim Sermet Mustafa	Faculty of Agriculture, Çukurova Universtiy Faculty of Agriculture, Çukurova Universtiy Faculty of Agriculture, Çukurova Universtiy Faculty of Agriculture, Çukurova Universtiy
Turkey/Farm Economics	ERKAN ÇAKMAK	Onur Erol	Faculty of Agriculture, Çukurova Universtiy Dept. of Economics, Middle East Technical University
Israel/Plant Productivity and Irrigation	BEN-ASHER	Jiftah	The Wyler Dept. of Dryland Agriculture, Ben-Gurion University of Negev
Israel/Climate Change	ALPERT	Pinhas	Dept. of Geophysics and Planetary Science, Tel-Aviv University
Israel/Agro-Economics	SHECHER	Mordechai	Dept. of Economics, Natural Resources & Environmental Research Center, University of Haifa
Egypt/Coordinator	ABED	Laila	Environment and Climat Research Institute, National Water Research Center
Egypt/Adviser	NOUR EL-DIN	Mohamed	Ain-Shams University
Canada/Hydrology	SIMONOVIC	Slobodan	Dept. of Civil and Environmental Engineering, University of Westerm Ontario

Feasibility study

Research axis: Human activity assessment

Project number: 1-2FS

Project name: Recent rapid changes of water circulation in the Yellow River and its effects on the environment

Project leader: FUKUSHIMA, Yoshihiro (RIHN)

Core members: TANIGUCHI, Makoto (Nara Univ. of Education)
HIYAMA, Tetsuya (Hydrospheric-Atmospheric Research Center, Nagoya Univ.)
IMURA, Hidefumi (Graduate School for Environment, Nagoya Univ.)
LIU, Changming (Institute of Geographical Sciences and Natural Resources, CAS, China)
SHINODA, Taro (Hydrospheric-Atmospheric Research Center, Nagoya Univ.)
YANAGI, Tetsuo (Research Institute for Applied Mechanics, Kyushu Univ.)
XIA, Jun (Institute of Geographical Sciences and Natural Resources, CAS, China)

Since 1972, it has often been found that water of the Yellow River does not reach to the Bo-Hai Bay, due to water intake for irrigation. In the lower reaches of the Yellow River, inhabitants are faced with shortage of water for irrigation, and industrial and domestic uses. The reduced amount of river open water leads to a lowered groundwater level and an increased level of water pollution. The Chinese Academy of Science has been conducting a national project since 1999. As demand for food in the world increases, similar cases of water shortage will occur more and more in the near future. It is urgently needed that we find out a way of detecting and solving such a problem. The recent crisis observed in the Yellow River basin is complicated because different factors are interactively responsible: climate changes, global warming and changes in land use. Though this research project, carried out by researchers from different fields under international collaboration with the Chinese Academy of Science and IGBP/BAHC community, useful knowledge will be provided for taking countermeasures in the Yellow River drainage basin. We will also study through five year research how land use changes affect the water cycle over the

Yellow River drainage basin what effects are observed in the lower reaches and in offshore waters following lowering of the ground water level.

Full-scale study

Research axis: Human activity assessment
Project number: 2-1
Project name: Emissions of greenhouse gases and aerosols, and human activities in Eastern Asia
Project leader: HAYASAKA, Tadahiro (RIHN)
Core members: IWAMI, Toru (Graduate School of Economics, The Univ. of Tokyo)
KAWAMOTO, Kazuaki (RIHN)
NAKAJIMA, Teruyuki (Center for Climate System Research, The Univ. of Tokyo)
NAKAZAWA, Takakiyo (Graduate School of Science, Tohoku Univ.)
SHI, Guangyu (Institute of Atmospheric Physics, CAS, China)
SHIROYAMA, Hideaki (Graduate School of Law and Politics, The Univ. of Tokyo)
SAEKI, Tazu (RIHN)

Background and Objectives

Most of the human activities have been based essentially on indigenous climate, culture, and socio-economic systems, but recently they are being changed drastically by the impacts of globalization of market economy and global-scale climate changes. Human activities affected by these global phenomena give rise to various environmental issues and emissions of greenhouse gases and aerosols, which in turn bring about many problems in larger areas or over the world.

With these as the background, the present research project is to investigate (1) the impacts of globalization on the local economy, industry, and social system in each country, (2) the relationship between changes in anthropogenic emissions of greenhouse gases and aerosols, and (3) the influences of these emitted greenhouse gases and aerosols on the global atmospheric environment and climate changes.

In this study, the atmospheric constituents are studied, taking account of the global warming issues. This is not a local air pollution study, but a study on the relationship between human activities and climate changes induced by emission of greenhouse gases and aerosols.

Methods

- This project puts emphasis on human activity related aspects unlike many other studies carried out by atmospheric scientists.
- Emissions from industrial activities –analyses of circulation, quality and consumption of coal
- Emissions from transportation –estimation of emission from automobiles
- Collection and analysis of data concerning people's perception
- Observations of greenhouse gases and aerosols
- Analyses using atmospheric transport model the relationship between human activities and emissions of greenhouse gases and aerosols.

Expected Results

It will be understood from this study how human activities in Asia under economic globalization affect local as well as global environmental changes. The results will contribute to drawing a general counterplan in Asian countries, and to finding a way of technical and financial supports from Japan. Meanwhile, the results of this study are quite important for improving the accuracy of prediction of climate changes through understanding of the global

circulation mechanism of greenhouse gases and aerosols. Finally a synthesis of the results is expected to show how globalization affects local human activities in a region, and how regional scale human activities are related to global atmospheric changes.

Feasibility study

Research axis: Human activity assessment
Project number: 2-2FS
Project name: Evaluation of sustainable forest-use options and their perspectives
Project leader: NAKASHIZUKA, Tohru (RIHN)
Core members: KITAYAMA, Kanehiro (Center for Ecological Research, Kyoto Univ.)
KOHYAMA, Takashi (Graduate School of Environmental Earth Science, Hokkaido Univ.)
NIIYAMA, Kaoru (Forestry and Forest Products Research Institute)
SATO, Jin (Graduate School of Frontier Science, The Univ. of Tokyo)

Reduction and deterioration of the forest ecosystem are the major reasons for the drastic loss of terrestrial biodiversity. A sustainable management system should be developed to conserve biodiversity. This study is to: 1) reveal the effects of forest-use options on biodiversity loss, 2) ecologically and economically evaluate forest-use options including traditional, so-called sustainable systems, 3) elucidate the social, economic, and cultural factors that are responsible for the recent changes in forest-use patterns in regional as well as global scales, and 4) establish ecological and economic models for sustainable forest-use and spatial arrangement.

We study in four different sites in East Asia representing typical forest ecosystems with traditional, so-called sustainable forest ecosystems: 1) Lambir National Park, Malaysia (tropical rain forest area), 2) Kinabalu National Park, Malaysia (tropical montane forest area), 3) Yaku Island (temperate evergreen forest area), and 4) Abukuma Mountains (temperate deciduous forest area).

Incubation study

Research axis: Human activity impact assessment
Project number: 2-3IS
Project name: Human activities in Northeastern Asia and their impact to the biological productivity in North Pacific Ocean
Project leader: HARA, Toshihiko (Institute of Low Temperature Science, Hokkaido Univ.)

Research Objectives and substance:

The Sea of Okhotsk and the northern North Pacific Ocean are known to be one of the most productive oceans in the world. The neighboring Sea of Okhotsk is also characterized by sufficient nutrients. The phytoplankton productivity is very high in the Sea of Okhotsk , probably due to the sufficient supply of iron from Amur River and this iron does not be utilized by phytoplankton until it changes to the dissolved iron. For the formation of dissolved iron, wetland and forest of Amur River drainage play an important part. Recently, the Amur River basin is being disturbed by various anthropogenic and natural impacts such as forest fire, deforestation, cultivation, urbanization and/or reduction of wetland. They possibly reduce the biological productivity in the Sea of Okhotsk and the northern North Pacific Ocean. In this study, a guideline of sustainable land-use in the Amur River basin to maintain the present ecosystem in the Sea of Okhotsk will be presented for goal by synthetic analyses of above. This will allow us to promote an ideal management of the land-uses in the Amur River basin.

Full-scale research
Research axis: Spatial Scale
Project number: 3-1
Project name: Multi-disciplinary research for understanding interactions between humans and nature in the Lake Biwa-Yodo River watershed
Project leader: WADA, Eitaro (RIHN)
Core members: (see attachment)

1. Research objectives and topics

A watershed is now widely recognized as an important spatial unit for the management of water cycling, material cycling and ecosystems, however, this enlargement of management scale to a watershed brings about difficulties in consensus-building arising from an increase in human diversity.

Focusing on the characteristic spatial scales of the watershed, we develop and test a methodology for watershed diagnosis and consensus-building. Based on an interdisciplinary partnership, this project aims to develop a methodology for revealing interactions between human activities and nature in a watershed.

Four working groups; "material cycling", "social and cultural system", "ecosystem", and "watershed information and modeling" share the same research field in the Lake Biwa-Yodo River watershed. At each spatial scale of the watershed, four groups develop a methodology for making total diagnosis of the watershed environment, compile, and update and share the basic ideas on the current issue of watershed management through holding seminars, workshops and field trips of watersheds in Japan. We propose "hierarchical watershed management system" as a model watershed management system which would promote the bi-directional communications within and between spatial scales, thus would overcome the difficulties in so-called "top-down" type management system. Through the filed research and practice in the Lake Biwa-Yodo River watershed in partnership with the residents and administrations there, we test the validity of our methodology.

2. Relation with research program

The Lake Biwa-Yodo River watershed is a spatially large watershed, with huge population of 14 million, containing characteristic social systems depending on each spatial unit in the watershed.

By developing a total diagnosis methodology of a watershed, we hope to reveal inherent environmental problems in each watershed by the residents themselves as a basis to manage global environmental problems from the bottom-up scale.

When we zoom up (or down) the spatial scales of a large watershed as the Lake Biwa-Yodo River watershed, e.g., from a prefecture scale to those of cities or villages, focal environmental issues may differ. This means that scaling up of a management scale towards a watershed, brings about the heterogeneity and diversity in nature and human life. The resolution of conflicts within and between scales, thus, becomes a critical issue in watershed management. This issue, however, is essentially the same subject in many global environmental issues concerning management of spatially spread resources by multiple stakeholders. Thus, by pursuing a consensus-building methodology, this project aims to contribute to global environmental issue from the spatial scale axis.

3. Modification on the original research plan

Accepting the comments of the evaluation committee;

(1) We clarify the status and the originality of the project compared to the other Lake Biwa researches.
(2) To manage and facilitate the collaboration of the four working groups, a "unifying working group" was organized and its meeting was held once a month (7 times).
(3) As to scale issue, an interdisciplinary watershed management tool & database, named "scale matrix" was proposed for the purpose. A new economist joined the project for the scaling issue.

4. Progress of the project (from April 2002 to March 2003)

The main objective of this fiscal year was to build an interdisciplinary research strategy for the project. The followings were carried out for this purpose:

(1) The "social and cultural system" working group promoted the compilation of basic information on the current issue of watershed management in Japan to place our study rightly on this topic.

(2) We organized meetings and seminars on watershed management issue towards the "sub-project" on watershed diagnosis and consensus building from the fiscal year 2003. We organized a social science seminar and invited guest speakers from social sciences to discuss important concepts and issues that are closely related to the project (5 times). The "ecosystem" working group co-organized "Human impact seminar" with the stuffs of the Center for Ecological Research, Kyoto University and invited guest speakers tackling on environmental issue to bridge the human activity and ecosystem issue (8 times). We established field sites in the Lake Biwa watershed and elucidated the central concept of the project, "hierarchical watershed management system".

(3) The "material cycling" working group developed "indicators" and "environmental capacity" concept as a tool of our diagnosis methodology and practiced diagnosis in the Lake Biwa watershed. The stable isotope indicators are being developed and new discoveries for the watershed diagnosis were found at the material cycling layer called "oxidation-reduction boundary"

(4) The "watershed information and modeling" group selected the "ArcGIS" system as common modeling tool and platform for data base of the project. A project home-page is being designed which stores our project resources such as meeting documents, maps, GIS files on the internet.

(5) We made arrangements with the residents and administration of the "sub-project" field sites, preliminary research.

5. Outcome (2002)

Selected references

Tanaka, T. ed. (2002) "Perspectives on Watershed Research: case studies of Lake Biwa and Yodo River Basin Area (in Japanese)" Center for Ecological Research, Kyoto University, Otsu, 217pp.

Yachi, S., Wakita, K., Hara, Y. and Tanaka, T. (2002) "Developing a comprehensive methodology for assessing the human and natural environment of a river basin (in Japanese)" Environmental Information Science, vol. 31, No. 4, 17-23.

Wada E. (2002) "Geo-Ecology (in Japanese)" Iwanamishoten Press, Tokyo, 171pp.

Wada, E., Tayasu, I. and Hyodo, F. (2002) "Material cycling and water resources with emphasis on a watershed (in Japanese)" Energy and Resource, vol. 24, No. 1, 27-33.

Wada et al. ed. (2002) "A comprehensive manual for assessing the human and natural environment of a river basin (in Japanese)" Center for Ecological Research, Kyoto University, Otsu, 384pp.

Staffs and the collaborative researchers

◎Project office

Dr. WADA, Eitaro (RIHN): project leader

Ms. KITAMURA, Ayako (RIHN): secretary

(1) Material cycling group

Dr. WADA, Eitaro (RIHN): chief of the material cycling group

Dr. TAYASU, Ichiro (RIHN): diagnosis indicators

Dr. HYODO, Fujio (RIHN): diagnosis indicators

Dr. MATSUI, Kiyoshi (Nara University of Education): diagnosis indicators

Dr. YAMADA, Yoshihiro (Faculty of Agriculture, Kagawa University): agricultural drainage diagnosis methodology

Dr. NAKAMOTO, Nobutada (Applied Biology, Faculty of Textile Science & Technology, Shinshu University): water quality adviser
Dr. NAKAMURA, Masahisa (Lake Biwa Research Institute, Shiga): non-point source adviser

(2) Ecosystem group
Dr. YACHI, Shigeo (RIHN): chief of the ecosystem group
Dr. FUJITA, Noboru (Center for Ecological Research, Kyoto University): human activity and biodiversity relationship
Mr. MITSUHASHI, Hiromune (Museum of Nature and Human Activities, Hyogo): GIS-based regional ecosystem conservation methodology
Dr. TAYASU, Ichiro (RIHN): facilitator of the material cycling group and ecosystem group

(3) Social & cultural system group
Mr. WAKITA, Ken'ichi (Iwate Prefectural University): chief of the social and cultural system group
Mr. TANAKA, Takuya (RIHN): watershed issue research
Dr. KAKIZAWA, Hiroaki (Lab. of Forest Policy, Faculty of Agriculture, Hokkaido University): adviser on watershed management issue
Ms. KAWAGUCHI, Hiromi (RIHN): watershed information searcher
Ms. TSUCHINAGA, Aya (RIHN): watershed information searcher

(4) Watershed information & modeling group
Mr. HARA, Yuichi (Watershed information division, Pacific Consultants Co.): chief of the watershed information and modeling group
Mr. UEDA, Atsushi (RIHN): GIS operator
Prof. NAITO, Masaaki (Department of Global Environment Engineering, Kyoto University): general adviser

Other collaborators will be added to the above list adequately in the progress of the project P3-1.

Feasibility study

Research axis: Spatial scale
Project number: 3-2FS
Project name: Interactions between the environmental quality of a watershed and the environmental consciousness: with reference to environmental changes caused by the human use of land and water resources
Project leader: YOSHIOKA, Takahito (RIHN)
Core members: (see item No.3)

1. Research objectives and topics

Environmental qualities of a watershed have been affected by the changes in the human use of land and water resources. Environmental consciousness of people also changes with such environmental changes. In this project, the relationship between the environmental consciousness and the environmental qualities will be elucidated. To achieve this goal, an Interactive Device between Environments and Artifacts (IDEA) will be developed. IDEA is composed of a response-prediction model of a watershed environment, the environmental and sociological databases, and a transformation module. Response-prediction model will be developed based on the biogeochemical and ecological surveys of the watershed, and on the estimation of the past environment using chronological environmental indicators such as annual tree-ring and sediment core samples. Database includes historical information from the forestry records, interviews and literatures on the watershed, as well as scientific information. The transformation

module is a tool of two-way data-conversion between people's environmental consciousness obtained from interviews or questionnaires and environmental properties. IDEA will be designed as a tool to analyze the relationship between the environmental consciousness and the environmental qualities.

2. Relation with research program

For constructing the human society, which has sustainability and assures the possibility for future generations, it is essential to preserve and utilize the global environment. Assuming that the global environmental issues are based on the interaction between humans and nature, understanding a view of environmental value is important for solving the environmental issues. It is important to understand how people's consciousness about a watershed environment is established and how it relates with the economic value of the watershed resources. These understandings contribute to the environmental evaluation for better use or better preservation of environments. To approach the goal of the research program, "Elucidation of interactions between humans and natural systems in basins, and building a society with possibilities for future generations", the human activities in the environment should be considered from the viewpoint of the relationship between the environmental quality and the environmental consciousness.

3. Project Members:

Name	Affiliation	Position	Role
Yoshioka T.	Research Institute for Humanity and Nature	Assoc. Prof.	Project leader
* Ohte N.	Grad. Sch. Agriculture, Kyoto Universty	Assoc. Prof.	Models for water and material cycling
* Tokuchi N.	Field Science Education and Research Center, Kyoto University	Assoc. Prof	Assessment of forest cutting
* Shibata H.	Field Science Center for Northern Biosphere, Hokkaido University	Assoc. Prof.	Dynamics of watershed ecosystems
* Hino S.	Faculty of Science, Yamagata University	Assoc. Prof.	Lacustrine material cycling
* Sekino T.	Research Institute for Humanity and Nature	Assoc. Prof	Development of IDEA
* Zheng Y.	Institute of Statistic Mathematics	Assoc. Prof.	Statistical survey of environmental consciousness
* Koba K.	Dep. Social Informatics, Kyoto University	Assist. Prof.	Development of analytical procedures for environmental valuation
* Fujihira K.	Institute of Environmentology	Head	View of value and mutual agreement
* Sugiman T.	Integrated Human Studies, Kyoto University	Prof.	Social psychology
Yasue K.	Faculty of Agriculture, Shinshu University	Assist. Prof.	Annual tree-ring analysis
Takahara H.	Fac. Agr. Kyoto Prefecture University	Prof.	Pollen analysis of forest vegetation
Okada N.	Grad. Sch. Agriculture, Kyoto University	Assoc. Prof.	Models for water and material cycling
Kitagawa H.	Grad. Sch. Environ. Stud. Nagoya Univ.	Assoc. Prof.	Palaeo-environment analysis
Konohira E.	Grad. Sch. Environ. Stud. Nagoya Univ.	Assist. Prof.	Modeling of material cycling
Yoshida T.	Field Science Center for Northern Biosphere, Hokkaido University	Assist. Prof.	Land plant population dynamics
Ishikawa Y.	Center for Environmental Science, Hokkaido	Res. Staff	Analysis of lake ecosystem
Mikami H.	Center for Environmental Science, Hokkaido	Res. Staff	Isotopic analysis of lake ecosystem
Igarashi M.	National Institute for Environmental Studies	Section Head	Nutrient dynamics
Takano K.	Hokkaido Institute of Public Health	Res. Staff	Plankton population dynamics
Tanaka T.	Research Institute for Humanity and Nature	PDF	Analysis using the factor diagram
Kakizawa H.	Grad. Sch. Agriculture, Hokkaido University	Assoc. Prof.	Ecosystem management
Shoji Y.	Forestry and Forest Products Res. Institute	PDF	Contingent valuation method
Yamane T.	University of Human Environments	Assoc. Prof.	Environmental economics
Maki D.	SRIC Corporation	Researcher	Ecological anthropology

* = Core Member

4. Modification on the original plan

Launching of this project in full-scale has been postponed till the fiscal year 2004. Therefore, the feasibility of the project has been considered mainly using the keyword map analysis during 2002-2003. Particularly, the

feasibility study (2002) and the pre-research (2003) were focused on the possibility of the development of the transformation module in the IDEA. Field surveys have been started to collect the basic information on the watershed environment. According to the comments from the evaluation committee, the experts of environmental sociology and social psychology have been included in the project members. In order to validate the relationship between the environmental quality and the environmental consciousness, the results of the analysis will be subjected to the sociological reviews (c.f., interviews and focus group session) to clarify the nature of the relationship.

5. Progress of the project (2002)

Research plan has been reconstructed in the meetings by the project members. The field surveys in the Lake Shumarinai watershed and the forests in Wakayama prefecture have been initiated to develop the response-prediction model for the watershed. It is expected that the paleoenvironmental changes in the Lake Shumarinai watershed over several thousands years may be recorded in the swamp sediment. The relationship between human activity and the invasion of bamboo grass into the forest will be clarified by the pollen analysis. Since the sediment has accumulated about 50 cm in Lake Shumarinai, the sediment core analysis may reconstruct the environmental change after the Shumarinai Dam construction in 1943. Questionnaires to collect the keywords on people's images of forests and lakes have been carried out. The relationship between keywords was analyzed using UML (Unified Modeling Language). Through these processes, the framework of the transformation module and IDEA is taking a concrete shape.

6. Relating Publications:

Saito, T., K. Koba, T. Sakai, K. Kameda and T. Yoshioka. 2002. Evaluation of model plans for a wildlife issue by conjoint analysis: the case study of wildlife issue of great cormorant in Lake Biwa. The Japanese Journal of Evaluation Studies, 2: 79-90 (in Japanese).

Yoshioka, T. 2002. Contribution of natural science to the valuation of the environment: consideration for uniting natural science, humanities and sociology on the environmental studies. Kagaku (Science), 72: 940-948 (in Japanese).

Yoh, M., T. Yoshioka and others. 2003. Biogeochemistry of the watershed: Its meaning and perspective. Japanese Journal of Limnology, 64: 49-79 (in Japanese).

Incubation study

Research axis: Spatial scale

Project number: 3-3IS

Project name: Interactions between natural environment and human social systems in subtropical islands

Project leader: TAKASO, Tokushiro (Tropical Biosphere Research Center, Univ. of the Ryukyus)

Core members: (see item No.3)

1. Research Objectives and Contents

A variety of environmental problems are becoming apparent on islands all over the world, including water shortage, soil washout, river and ocean pollution, and disappearance of biodiversity. An urgent response is required to cope, particularly since islands are closed systems in which the problems tend to worsen at staggering rates. Environmental problems are attributable to human activities. In order to resolve the problems, it is necessary to gain an accurate understanding of interactions between human activities and the natural environment. This project focuses on research that will contribute to the resolution of environmental problems on islands, using Iriomote Island, Okinawa, as a model. In terms of the natural environment, particular attention will be paid to the geography and water balance of the entire island, as well as to the functions and maintenance mechanisms of forests. Human

activities, against a background of regional history, culture and economy, also deserve special attention. In short, this project aims to clarify the interactions of human activities with the natural environment of subtropical islands, with a view to building a social system in which the environment and human activities coexist in harmony.

Various research projects have been conducted on the environmental conditions of islands, including Iriomote Island, but few of them have been carried out in a systematic manner. The data thus collected can only be categorized as fragmented. While taking research results of the past into due account, this project aims to undertake detailed studies and data collection, focusing on three aspects that can be taken as clear indicators of the characteristics of Iriomote Island: 1) geography and water balance; 2) forest functions and maintenance mechanisms; and 3) human activities, followed by an analysis of interactions among them. The results are used to identify and verify causes of environmental problems, with a view to proposing options to build a human social system with future possibilities on islands.

2. Relation to Research Axis

In the research axis of spatial scale, study is expected to have strong connection with "basin areas" in which land is strictly limited. Islands are closed systems in water and material cycles, in the natural environment and in the human social system. People in the islands live in areas where water is available. Therefore, islands can be defined as unique basin areas.

Iriomote Island, with rich biodiversity, is a globally rare typical humid subtropical island located at the southwestern tip of the Ryukyu island chain. The inflow of people and material into this island increased abruptly in the past 30 years, and this has brought drastic change in the natural environment and human social system. This project aims to clarify the interactions of human activities with the natural environment and to provide clues to building a sustainable social in the closed system.

3. Members

Project Leader: TAKASO, Tokushiro (Tropical Biosphere Research Center, University of the Ryukyus)

Core Members: MAEKADO, Akira (Faculty of Law and Letters, University of the Ryukyus)
TOBE, Hiroshi (Graduate School of Science, Kyoto University)
NAKASHIZUKA, Tohru (RIHN)
HIDAKA, Toshitaka (RIHN)
KINJO, Masakatsu (Tropical Biosphere Research Center, University of the Ryukyus)
ARAMOTO, Mitsunori (Tropical Biosphere Research Center, University of the Ryukyus)
SATOI, Yoichi (Faculty of Education, University of the Ryukyus)

4. Comments form Evaluation Committee and Responses to them

Comment 1: How universally applicable are data from Iriomote Island? It will be necessary to bear universality, rather than individuality, in mind while proceeding with this research.

Response: We have revised our research plan by reducing original, rather extensive aspects into the following three: (1) analysis of water balance, (2) analysis of forest-sustaining mechanisms, and (3) analysis of human activities. We expect that data from these analyses will be relatively straightforward and thus used for generalization of the current and future problems in the insular environment. The case study of Iriomote Island is expected to provide useful clues for resolution of problems which many other islands have in common.

Comment 2: As well as clearly indicating how previous research is to be developed, an approach based on the natural sciences is necessary.

Response: It is exactly true that a considerable number of researches have been conducted from various points of view in Iriomote Island in the past. We are now collecting information from any previous researches, and we will incorporate all of them into our project after they were critically analyzed. The island has a suitable size for this purpose. Also we will properly incorporate approaches from viewpoint of natural sciences in pursuing

individual research subjects, in particular in the analysis of water balance as well as of forest-sustaining mechanisms.

Comment 3: Please indicate the theoretical prospects for positioning the island model within a wider framework. Precisely because this is small-scale research, it is necessary to make the fullest possible use of the advantage that this conveys in terms of ease of integration and fusion of the sciences and humanities.

Response: Our research subjects will be thoroughly checked in the light of advantages of Iriomote Island. The advantages include that: (1) researches with variously different subjects have already been carried out, although none of them was extensive compared to ours; (2) forests are relatively well-preserved; (3) environmental problems have been resulted from human activities during the past 30 years. We will start our project with understanding of current situation of the natural environment and human activities for the past 30 years. Thereafter, we will combine information from the natural environment and human activities, analyze their mutual interaction, and verify causes of the environmental problems. Also working hypotheses will be tested in most of individual researches in the latter half of the project.

Comment 4: It will be necessary to find some means of pulling everyone together so that this does not just become another ordinary piece of research.

Response: Another advantage of this project is that the researches are carried out on and around an island. This means everyone participating in the project does his or her research on the same place with a very limited size. We will share not only results of previous researches but also our own results during the period of the research project. In addition, forests and/or plants are expected as common tools to link all individual researches on the natural environment and/or human activities.

Comment 5: It would be good to indicate strongly the possibility of linking this research with an understanding of the mutual interaction of human beings and the natural environment in subtropical islands.

Response: As mentioned above, we have revised our research plan into the one concentrated on the understanding of the current state of the natural environment as well as of human activities for the past 30 years. This approach would bring better understanding of interactions between the two. We believe Iriomote Island is an ideal subtropical island for this kind of project because of its unique characteristics already mentioned.

Comment 6: Clarify the scope of the project, and narrow down the study theme (set out a definite hypothesis).

Response: The major research subjects are established to effectively understand the current and future environmental problems and to provide clues for the resolution of those problems. Minor individual researches were deleted from the original proposal, and the contents of most of the individual researches are now narrowed down (e.g., study areas and targeted organisms are selected).

Comment 7: Participation by researches from other universities, as well as RIHN, is necessary.

Response: While the number of researchers from the University of the Ryukyus was reduced, six researchers from the other universities and two researches from RIHN have been invited to join the project. The number of researchers from the institutes other than the University of the Ryukyus may increase when the researches of water balance and local language are reorganized.

5. Progress of the project

To respond the comments by the evaluation committee, a core-member meeting was held in August. The contents of discussion in this meeting were notified to all members with the request of modification in their individual research plans. A full-member meeting was held in December to gain mutual understanding of the revised individual research plans. The revised research plan submitted to the evaluation committee was formulated from the revised individual plans and the discussion in the full-member meeting. The evaluation was carried in March. Some

members were replaced in the research aspects of water-balance, forest ecosystem and coral ecosystem.

Results of past research conducted on Iriomote Island have been collected and put into a database. The study of the flora analysis has been commenced.

6. Outcome (2002)

Results of past research conducted on Iriomote Island have been collected, organized into 2,900 items according to the Japanese Dewey decimal system. With the beginning of a study of the flora, 2900 plant specimens of 665species of 150 families have been made.

Full-scale research

Research axis: Historical time
Project number: 4-1
Project name: Historical evolution of adaptability in an oasis region to water resource changes
Project leader: NAKAWO, Masayoshi (RIHN)
Core members: (see attachment)

1. Outline of Research Project

(1) Research Objectives

In oasis regions scattered over arid and semi-arid regions in central Eurasia, people's lifestyles have evolved in accordance with changes in water resources, which changes are primarily associated with global changes. Nomadic activities and agriculture have had a close and complex relation to each other in history. As agriculture has become predominant, stock farming has become less intense; but, lately agriculture itself has been subjected to severe problems owing to recent so-called desertification. The present research project aims at reconstructing a history of the interaction between people and nature, in particular by examining the adaptability of the ecosystem, the human lifestyle from social and cultural points of view, in response to changes in the water circulation system, for the last 2000 years in arid regions. In this way, disclosing the past evolution of the culture and the sense of value, we may learn something important for creating new manners of living that could assure future capability.

(2) Contents and Methodology

The major research field is in and around the Heihe region in western China, where present processes in water circulation, including those with human activities, is to be examined by scientific and socio-economic in situ investigations. At the same time, the history of the region is to be reconstructed by examining historical documents, and varieties of proxies such as ice cores from glaciers, tree-ring samples, lake sediment cores. The water circulation system in the basin, that is, water resources as well as demand or use, is to be studied also. The project is to reveal the temporal evolution of the water circulation system, owing to changes in the amount of precipitation, of used water, say for irrigation during river and groundwater discharge, and the subsequent changes in evapo-transpiration. It is thus intended to reveal the historical change of the interaction between people and nature by focusing on water.

(3) Project Members excluding members in foreign institutions (* core members)

Name	Affiliation/Position	Role
*ENDO, Kunihiko	Nihon University, Professor	Lake sediment analysis Geographical Information Analysis (Historical Reconstruction)
*SOUMA, Hidehiro	Nara Women's University, Professor	
MURATA, Taisuke	Nihon University, PhD student	
HORI, Kazuaki	National Institute of Advanced Industrial Science and Technology, Researcher	
*SUGIYAMA, Masaaki	Kyoto University, Professor	Historical Document Analysis
*KATO, Yuzo	Research Institute for Humanity and Nature, Assistant Professor	

ARAKAWA, Shintaro	Tokyo University of Foreign Studies, Assistant Professor	(Historical Reconstruction)
INOUE, Mitsuyuki	Research Institute for Humanity and Nature, Research Fellow	
KINOSHITA, Tetsuya	Research Institute for Humanity and Nature, Professor	
KICENGGE	Kyoto University, Research Fellow	
HAMADA, Masami	Kobe University, Professor	
FURUMATSU, Takashi	Kyoto University, Assistant Professor	
HORI, Sunao	Kohnan University, Professor	
YAMANAKA, Ichiro	Kyoto University, Professor	
*FUJII, Yoshiyuki	National Institute of Polar Research, Professor	Climate Analysis Ice Core and Tree-ring Analysis (Historical Reconstruction)
*TAKEUCHI, Nozomu	Research Institute for Humanity and Nature, Assistant Professor	
AZUMA, Kumiko	National Institute of Polar Research, Associate Professor	
UETAKE, Jun	Tokyo Institute of Technology, PhD student	
OHTA, Keiichi	The University of Shiga Prefecture, Professor	
KOHSHIMA, Shiro	Tokyo Institute of Technology, Associate Professor	
KOHNO, Mika	National Institute of Polar Research, Research Fellow	
KOBAYASHI, Osamu	Ehime University, Assistant Professor	
SHIRAIWA, Takayuki	Hokkaido University, Assistant Professor	
SEGAWA, Takahiro	Tokyo Institute of Technology, PhD student	
NAKAZAWA, Fumio	Nagoya University, PhD student	
NARITA, Hideki	Hokkaido University, Associate Professor	
MIYAKE, Takayuki	Research Institute for Humanity and Nature, Research Fellow	
*KONAGAYA, Yuki	National Museum of Ethnology, Professor	Socio-economic Analysis (Water Circulation System)
OZAKI, Takahiro	Kagoshima University, Associate Professor	
KODAMA, Kanako	Nagoya University, PhD student	
NAKAMURA, Tomoko	Tohoku University, PhD student	
HUHBATOR	Showa Women's University, Lecturer	
MAILISHA	Research Institute for Humanity and Nature, Research Fellow	
YANG, Haiying	Shizuoka University, Associate Professor	
YOSHIDA, Setsuko	Shikoku Gakuin University, Lecturer	
*KUBOTA, Jumpei	Research Institute for Humanity and Nature, Associate Professor	Hydrological, and Glaciological, Process Analysis, including Irrigation System Analysis (Water Circulation System)
*FUJITA, Koji	Nagoya University, Associate Professor	
*WATANABE, Tsugihiro	Research Institute for Humanity and Nature, Professor	
AKIYAMA, Tomohiro	Nagoya University, PhD student	
ITO, Tatsuya	Fukui University of Technology, PhD student	
UJIHASHI, Yasuyuki	Fukui University of Technology, Associate Professor	
SAKAI, Akiko	Nagoya University, Research Fellow	
TAMAGAWA, Ichiro	Gifu University, Associate Professor	
TSUJIMURA, Maki	Tsukuba University, Lecturer	
NAGANO, Takanori	Research Institute for Humanity and Nature, Research Fellow	
NAKAMURA, Kenji	Nagoya University, Professor	
NARAMA, Chiyuki	Tokyo Metropolitan University, Research Fellow	
YATAGAI, Akiyo	Research Institute for Humanity and Nature, Assistant Professor	
MATSUDA, Yoshihiro	Nagoya University, PhD student	
YAMAZAKI, Yusuke	Kyoto Iniversity, PhD student	

The output of the project includes Project Report on an Oasis-region Vol. 1 (Nos. 1 and 2), Vol. 2 (Nos. 1 and 2) in addition to individual papers and books, which are not listed here.

Full-scale research

Research axis: Historical time
Project number: 4-2FS
Project name: Interplay between lake ecosystems and human activities: the past, present and future for water resources
Project leader: NAKANISHI, Masami (RIHN)
Core members: KIMOTO, Takashi (The Research Inst. of Oceano-chemistry)
NOMA, Haruo (Fac. of Letters, Kansai Univ.)
OKUBO, Kenji (The Graduate School of Natural Science and Technology, Okayama Univ.)
URABE, Jotaro (Center for Ecological Research, Kyoto Univ.)
YAMAMURA, Norio (Center for Ecological Research, Kyoto Univ.)

Increases in human activities for the last 100 years have changed quantity and quality of ecosystem services in various ways. Urbanization and technological development have altered not only seasonality of human activities such as agriculture and fishery but also seasonality of nature. The disparity in seasonality between human activities and nature reflects some aspects of the cause and effect of the environmental changes with which modern human societies are faced.

This project is aiming at finding ideal patterns of human activities that permit optimum utilization of ecosystem services. For this, we will analyze how seasonality of the ecosystem has changed historically through its interplay with human activities and how seasonality of human activity links with nature in ecosystem functioning. We chose Lake Biwa, the largest lake in Japan, and its watershed, as the main research area, where information on the lake ecosystem and details of human actitities for the past 100 years have been accumulated and documented in detail.

With the help of study on historical changes in seasonality of the lake ecosystem and human activities, this project will provide a high resolution ecosystem forecast, that is essential for making guidelines for our optimal utilization of lake ecosystem services.

Feasibility study

Research axis: Historical time
Project number: 4-3FS
Project name: Constructing a regional eco-history model in tropical monsoon Asia
Project leader: AKIMICHI, Tomoya (RIHN)
Core members: (see item No.3)

1 Research objectives and topics

The project aims to construct a regional eco-history model from studies of human-nature interactions in tropical monsoon Asia.

In tropical and sub-tropical zones in Southeast Asia extending from southewestern Yunnan of China, Thailand, Laos, Cambodia, and Viet Nam, a great number of ethnic groups inhabit in various ecological habitats that range from 100m to 3,000m above sea level. Distribution of these ethnic groups does not only exhibit habitat segregation by altitude and simple ecological adaptation to environmental clines, but also represent a complex figure associated with past migration and ethno-history of the groups.

In clarifying regional eco-history of the area concerned as a whole, focus of the study is directed to three major themes; (1) subsistence complex of ethnic group and its transformation through time, (2) nutritional and epidemiological status of each group composing of various age-sex. The physical features are considered as a consequence of people's interaction with the surrounding environment, and (3) historical changes in the perception and use of communal land and common-pool resources in the subsistence regime.

Based on these three themes, and combining relevant aspects into an integrative figure, the study will challenge to construct the regional eco-history model in tropical monsoon Asia through intensive fieldworks and analyses of historical documents. Particularly, the past few decades between 1945 and 2005 will be the focus of the study.

For the intensive fieldwork, border areas where China, Laos and Thailand meet within an area of 90,000 km^2 (300km x 300km) are selected as a core for the study. Number of selected communities for intensive research are about twenty in China, five in north Thailand, and ten in Laos, and checklists are used for comparison. Furthermore, extensive research on specific topics on subsistence complex, nutrition and diseases, and the commons are undertaken in broad geographical areas in order to assess the regional eco-history for verification.

2. Relation with research program

Three research themes of subsistence complex, nutrition and diseases, and the commons are embedded in as a complex of historical and temporal process. These are also the reflection of irreversible human history, ethno-history of the groups, individual life history, subsistence cycle and seasonal cycle. Yet, these time series and cycles are not synchronizing nor in harmony with each other, but gaps and delays occur. External influences, climatic change and difference in decision-making of the people may also disturb the time consequences.

To clarify complex nature of these phenomenon may contribute to the study of global environmental study through historical and time approach. Furthermore, how historical change have affected to survival of the people, community,and area may lead to clarify naure of sustainability and development of the human.

3. Members of the project

Leader: AKIMICHI, Tomoya (RIHN)

Joint Researcher

* History Group: Eco-history in the south of Yuan Jiang of Yunnan Province, China
  CHRISTIAN, Daniels (Tokyo University of Foreign Studies)
  FUKAO, Yoko (Osaka University of Foreign Language)
  TSUKADA, Masayuki (National Museum of Ethnology)
* Medical Group: Health survival in the Mekong watershed
  MOJI, Kazuhiko (Institiute of Tropical Disease, Nagasaki University)
  INAOKA, Tsukasa (Saga University)
  KAWABE, Toshio (Takasaki City University of Economics)
  MAYSUBAYASHI, Kozo (Center for Southeast Asian Studies, Kyoto University)
  ATAKA, Yuji (Institute of Tropical Disease, Nagasaki University)
  MATSUMURA, Yasuhiro (National Institute of Health and Nutrition)
* Agro-forestry Group: Management and diversity of land resources in continental Southeast Asia
  KONO, Yasuyuki (Center for Southeast Asian Studies, Kyoto University)
  TANAKA, Koji (Center for Southeast Asian Studies, Kyoto University)
  SATO, Yoichiro (Shizuoka University)
  OCHAI, Yukino (The Kagoshima University Museum)
  KATO, Makoto (Kyoto University)
  TAKEDA, Shinya (Kyoto University)
  HOTTA, Mitsuru (Kagoshima Prefectural College)
  TAKAI, Yasuhiro (Otani University)
  FUJITA, Yuko (Kyoto University)
  HYAKUMURA, Kimihiko (Institute for Global Environmental Strategies)
  SAKURAI, Katsutoshi (Kochi University)
  TOMOOKA, Norihiko (Institute of Agriculture and Bio-Resources)
  MAFUJI, Tohru (Kyoto University)
  NAWATA, Eiji (Kyoto University)

NAKANISHI, Asami (Kyoto University)

* Ecology Group: Subsistecne complex and the commons in continental Southeast Asia
  ABE, Kenichi (Center for Area Studies, National Museum of Ethnology)
  NONAKA, Kenichi (Mie University)
  MORI, Seiichi (Gifu University of Economics)
  YAMAO, Masahiro (Hiroshima University)
  ONISHI, Hideyuki (Reseach Institute for Humanity and Nature)
  KAWANO, Kazuaki (Kagoshima Prefectural Musem of Culture, Reimeikan)
  IKEYA, Kazunobu (National Museum of Ethnology)
  KASHINAGA, Masao (National Museum of Ethnology)
  AJISAKA, Tetsuro (Kyoto University)
  FUJITA Yayoi (National University of Laos)
* Database Group: Database construction and analysis of documents and ethnological materials
  KUBO, Masatoshi (National Museum of Ethnology)
  KANESHIGE, Tsutomu (Shiga University)

4. Modifications on the original research plan

• Name of the title of the project

• Considering the evaluation committee's suggetion, the title of the project has been changed slightly. As the term "model" does not seem to be suitable for the content, and taking into account of the significance of integration in the study of eco-history, the revised title is changed as "A trans-disciplinary study on the regional eco-history in tropical monsoon Asia."

• Methodological improvement

In order to assess the ecological history through quantitative and metrical data analysis, several techniques for analyzing soil and water, human hair, blood and human nutrition, and staple isotope and DNA techniques will be employed.

• Focus of study area and historical time

In order to obtain substantially concrete data through interviews with community members, focus of the historical time period is delimited to the past sixty-years. As the core area of the study, so-called golden triangle area is chosen, and a checklist will be employed for collecting comparative data.

5. Progress of the project (from 2002. April to 2003 March)

As the initial step, mutual negotiation for academic agreements and preparatory research have been promoted during the year.

In China, we have chosen Yunnan University and Professor Yin Shaotin of the Anthropology Department, as a counterpart of the project.

With four Japanese members, we have conducted an interview meeting with Chinese researchers in October, 2002 in Kunming. Among 30 candidates, we have selected 23 groups, each of which correspond to particular field sites and 18 target ethnic groups. It has been agreed that international workshop will be organized in autumn in 2005 in Kunming, China. The formal agreement between Yunnan University and RIHN is under process.

In Laos, an informal meeting was held in Vientiane with vice rector of National University of Laos, director of NAFRI (National Agriculture and Forestry Research Institute) about the academic agreements. In near future, meeting and negotiation will be prepared with staffs of Institute of National Public Health and other institutions in Laos.

In Thailand, preliminary fieldwork was undertaken in northern province of Thailand where discussion was made with local community members of the future research possibility. In December 2002, fieldwork was conducted in the tributary of the Mekong river.

In southern Thailand, informal meetings were held with staffs of several academic institutes such as CORIN

(Coastal Resource Institute), Office of Environmental Planning and Programme, NICA (National Institute of Coastal Aquaculture) and Institute of Andaman Sea Marine Laboratory.

6. Outcome (2002)

Data collected thrugh the fieldwork are in process for the publication.

Feasibility study

Research axis: Integration
Project number: 5-1
Project name: Integrated management system for water issues of global environmental information library and world water model.
Project leader: OKI, Taikan (RIHN)
Core members: (see item No. 3)

1. Research objectives and topics

This research project focused on water as one of the most common factors in global environmental studies. An integrated information infrastructure will be developed for answering the hot issues related to the global water crisis, in which various pieces of information concerning hydrological cycles are integrated. It is called as the global environmental water information library. The global environmental water information library requires the interfaces between the global natural hydrological model, global material cycle model, water cycle model under anthropogenic activities, and water consumption/demand model. It is also necessary to incorporate an advanced database having a comprehensible graphic user interface. This library will support relevant researchers and people in the world.

Collecting the amounts and statistics concerning global water cycles/resources, sometimes focusing on some specified areas (Japan and South East Asia: Thailand), are indispensable to the global environmental water information library. Various knowledge on global water issues gained by other programs or projects of RIHN will be integrated into the global environmental water information library. In addition, informatic standards which enables to exchange information smoothly among various elements will be made. It includes the development of the interface between the global hydrological model, the global material cycle model, the agricultural production model, and the socio-economical and international trade model. They will be combined into a world water model as a part of the library. This enables us to investigate the water crisis worried in the 21st century, and to develop a decision support system. In the current situation in which "real" and "natural" are separated due to the growth of the anthropogenic activities, the whole human activities should be realized as a part of the global system. This project will be of use, from the view point of RIHN which seeks sustainability development and future possibility of the world.

2. Relation with research program

Among the projects belonging to the fifth program "Integration", this project focuses on water as the key factor to integrate/analyze environmental issues. Practical speaking, integration is roughly divided to two parts. One is the integration of knowledge and data. The other is integration of models such as conceptual model or numerical model. Interaction of them enables us to investigate the future possibility in global view. This study can be a core study which covers the researches on water.

3. Project members

(Researchers were so many that joint researchers' name were excluded except core members)

Project Leader: OKI, Taikan (RIHN)

Core Members: ARAMAKI, Toshiya (Research Center for Advanced Science and Technology, The Univ. of Tokyo): Demand analysis and modelization of urban water

KANAE, Shinjiro (Institute of Industrial Science, The Univ. of Tokyo): Evaluation of influence

which global warming has on the supply and demand of water resources in the world

KAWASHIMA, Hiroyuki (Graduate Schoolof Agricultural and Life Sciences, The Univ. of Tokyo): Agricultural water demand model considering an international grain price.

KITSUREGAWA, Masaru (Institute of Industrial Science, The Univ. of Tokyo): Development of global environmental water information library

KURAJI, Koichiro (Graduate School of Agricultural and Life Sciences, The Univ. of Tokyo): Water management in forest are and local community

MATSUMOTO, Jun (Graduate School of Science, The Univ. of Tokyo): Seasonal change of Asian monsoon

MORIYAMA, Toshiyuki (Fac. of Engineering, Sojo Univ.): Making structural hydrological meteorological database

OHTE, Nobuhito (Graduate School of Agriculture, Kyoto Univ.): Observation and modelization of water cycle process in forest area

SATOMURA, Takehiko (Graduate School of Science, Kyoto Univ.): Modelization of water cycle in mesoscale

SHIBAZAKI, Ryosuke (Center for Spatial Information Science, The Univ. of Tokyo): Land use change model considering water and provision demand

SHIRAKAWA, Naoki (Graduate School of Engineering, The Univ. of Tokyo): Demand analysis and modelization of environmental water

SHIROYAMA, Hideaki (Graduate School of Law, The Univ. of Tokyo): International political governance with respect to water

TACHIKAWA, Yasuto (Disaster Prevention Research Institute, Kyoto Univ.): River runoff model in continental scale

UMETSU, Chieko (RIHN): Evaluation of influence which water price has on local agricultural management.

YASUOKA, Yoshifumi (Institute of Industrial Science, The Univ. of Tokyo): Remote sensing for hydrology and vegetation

4. Modifications on the original research plan

At first, the development of the global environmental information library which gathers global water-related information concerned with global environmental issues and consists of numerical models of natural and human systems was supposed to be the only research target. However, owing to the comments by the evaluation committee that water issues usually appear as a local problem, the actual observations and regional study, in Japan and Thailand, were added. It includes the investigation into actual conditions of water use and management, and real data collection.

5. Progress of the project (from April in 2002 to March in 2003)

Project participants are making progress well, compared to what was assumed, in sharing the research objective, targets and major obstacles. Collection of basic data for model development has been launched favorably. Discussion on the interfaces among models has started and model-integration is in progress. A prototype of global environmental water information library has been successfully developed, showing, the database of hydrological and meteorological data for South East Asia.

6. Outcome (2002)

With respect to the present circumstance of global water demand and supply, a primary result was published as a part of the "Feasibility Study". This result led the project leader to be appointed as one of the lead-authors of the chapter "fresh water" in the Millennium Assessment Plan by the United Nations.

It has been known to that it is more efficient to transport the provisions rather than water itself. The converted

water to such provisions is called "virtual water". Then, a international research project of virtual water has been launched under the support of UNESCO and WWF (World Water Council). Our successful result, which was compared with the result of UNESCO-IHE at the first international conference of it, brings us to join the international research project.

Research Promotion Center

Activities in the fiscal year 2002

Objectives and scope

The Research Promotion Center, in accordance with the principles of the Institute, is engaged in building the basis for finding a new research perspective beyond the scope of the existing disciplinary framework. The basic activities of the Center are centered around "information" widely from various sources concerning scientific data and specimens, and history, culture, and social affairs in general. The Center will be the "information hub" of the global environmental studies.

Research staff members:

SEKINO, Tatsuki, Associate Professor (Information collection and processing)
MOMOKI, Akiko, Associate Professor (Information dissemination)
YOSHIMURA, Mitsunori, Associate Professor (Observation and analysis)
KOHMATSU, Yukihiro, Assistant Professor (Observation and analysis) as from February 1, 2003

Information collection and processing

The Center performs information database management necessary for the operation of RIHN and its research projects. Activities center around the collecting of information on global environmental studies through the research projects and the Center's own activities, and the building of database for the maintenance and dissemination of information collected.

In 2002, preliminary researches were started in technology development for the effective use of information collected, such as creating linkages between information collected from different fields and extracting data from the database for simulation analyses.

Information dissemination

For making a base of the information dissemination activities that are to communicate the meaning of RIHN's research results to the public, information was collected from various sources (journals, newspapers, on-line literature databases, etc.) on global environmental problems, trends of environmental research, social trends, and information dissemination activities by other Japanese and foreign research organizations.

"Proceedings of the RIHN Forum 2002 (No. 1)" was published.

Presentation was made at the "Kasuga Kankyo Kyoshitsu".

Observation and analysis

Research and development on the field investigations tools provide the fundamental technology for the information gathering and accumulation of earth surface to various researches. The laser profiler was equipped for measuring the three-dimensional ground surface structure and its measurement method has been developed as the powerful information gathering instrument in GIS. The obtained data can be incorporated into the RIHN GIS system and applied to multi-temporal/spatial analysis of the phenomena and will be used effectively for the construction of the virtual fields and other models.

Furthermore, the study group and discussion for linking field level phenomena and remote sensing had started. One of the main purposes of this research is to promote the advanced remote sensing. Furthermore, the present status of the remote sensing in Southeast Asian countries had been discussed.

The 1st Work shop on observation/analysis –Expecting physical parameters from Remote Sensing– (2002/11 in

RIHN)

Workshop List

Workshops

The 1st Workshop on observation/analysis-expecting physical parameters from remote sensing

Date: November 21-22, 2002/

Venue: RIHN

Coordinator: YOSHIMURA, Mitsunori

Topics: Calibration/validation for enhancement of field parameters

Speaker: TSUCHIDA, Satoshi (The National Institute of Advanced Industrial Science and Technology)

Topics: Remote sensing of protocol on COP3

Speaker: OGUMA, Hiroyuki (Center for Global Environmental Research National Institute for Environmental Studies)

The 2nd Workshop on observation/analysis-expecting physical parameters from remote sensing

Date: January 7-8, 2003

Venue: RIHN

Coordinator: YOSHIMURA, Mitsunori

Topics: Global vegetation remote sensing

Speaker: HONDA, Yoshiaki (Center for Environmental Remote Sensing (CEReS), Chiba University)

Topics: Remote sensing for evapo-transpiration and phenology

Speaker: NISHIDA, Kenro (Institute of Agricultural and Forest Engineering Research Fields Univ. of Tsukuba)

The 3rd Workshop on observation/analysis-expecting physical parameters from remote sensing

Date: March 27-28, 2003

Venue: RIHN

Coordinator: YOSHIMURA, Mitsunori

Topics: Atmospheric remote sensing and climate change analysis

Speaker: NAKAJIMA, Takashi (NASDA National Space Development Agency of Japan)

Topics: Present status of precipitation analysis by remote sensing

Speaker: TAKAHASHI, Nobuhiro (CRL Communication Research Laboratory)

Study group meeting on "Integration of research information between humanity and nature"

Date: February 3, 2003

Venue: RIHN

Coordinator: SEKINO, Tatsuki

Topics: Metadata system to link libraries, archives and museums:

Speaker: HARA, Shoichiro (National Institute of Japanese Literature)

Topics: Computer utilization and resource shearing in history and literature

Speaker: SHIBAYAMA, Mamoru (Media Center, Osaka City University)

Joint Studies – Nakanishi project and Research Promotion Center

Theme: Interplay between water and human activities in lake ecosystem:

Term: February 13-14, 2003

Venue: Omachi-City, Nagano Pref.

Coordinator: SEKINO, Tatsuki

Topics: 100 years succession in the Lake Biwa ecosystem analyzed by the lake sediment samples

Speaker: KUWAE, Narumi (Center for Ecological Research, Kyoto University)

Topics: Dissolved silicate in the Shinano River:

Speaker: HINOUE, Teruo (Dept. of Chemistry, Shinshu University)

Topics: Modeling of watershed ecosystem:

Speaker: OKUBO, Kenji (Environmental Science and Technology, Okayama University)

Topics: Fishery in the Lake Biwa from the viewpoint of environmental history: methodology and example of evidence:

Speaker: NOMA, Haruo (Faculty of Letters, Kansai University)

Topics: Changes in the landscape of farm villages and region around the lakes on the Red River delta: Tran Anh Tuan (The Hanoi University)

Study of "Science Communication"– Research Promotion Center

"Science Communication" mediated by the Research Promotion Center of "RIHN"

Topics: Mission and action program 2003/2/28

Speaker: MOMOKI, Akiko (Research Promotion Center)

Public Lectures

Coordinator: Assistant Professor MOMOKI, Akiko

Lecture on the environment to residents in Kasuga area community

Date: December 10, 2002

Theme: Lake Biwa, current topics

Speaker: NAKANISHI, Masami (Program Director)

Consulting meeting with residents in Kasuga area community

Date: February 18, 2003

Theme: History of Lake Biwa and the foods given from the lake

Speaker: KOHMATSU, Yukihiro (Assistant Prof.)

Outreach Programs and Events

1. RIHN Forum

In order to answer such questions as, "What is global environment study?" "What is comprehensive global environment study?" "What can we learn from it?" "What does the global environment problem imply for the future?" "Is it possible to solve the global environment problem?", the ideal of the RIHN is to address the global environment problem based on solid research, so as to arrive at concrete resolutions to the problem, and to provide us with insights into what the future holds, as well as to encourage discussion therefrom. The RIHN Forum especially seeks to promote the view that the source of the so-called global environment problem is the problem of human culture and civilization.

The 1st RIHN Forum
Theme: The global environmental problems: Toward an integrated approach
Venue: Annex Hall of Kyoto International Conference Hall
Date: Friday, 17 May 2002

Program
Part 1
Theme: The problems
Chair: NAKANISHI, Masami (Professor)
13:30-13:50 Key note speech
Title: What RIHN is aiming at?
Presenter: HIDAKA, Toshitaka (Director-General)
13:50-14:00 Congratulatory speech
Presenter: YOSHIKAWA, Akira (Ministry of Education, Culture, Sports, Science, and Technology)
14:00-15:00 Special lecture
Title: Environment and economy: Do policy measures preventing global warming really curb economic growth?
Presenter: SAWA, Takamitsu (Director, Institute of Economic Research, Kyoto University)
—— 15:00-15:20 Coffee break ——
Part 2
Theme: Toward an integrated approach to the global environmental problems
Chaired: FUKUSHIMA, Yoshihiro (Professor)
15:20-15:50 Presentation
Title: Contributions from forest canopy studies to the global environment science
Presenter: NAKASHIZUKA, Tohru (Professor)
15:50-16:20 Presentation
Title: Hydrological cycle of altered tropical forest: How water movement is affected by secondary succession and landscape fragmentation
Presenter: GIAMBELLUCA, Thomas W. (Professor of University of Hawaii)
16:20-16:50 Presentation
Title: Troubled watershed and the earth: Asian experiences and local culture
Presenter: AKIMICHI, Tomoya (Professor)
16:50-17:20 Presentation
Title: Water cycles on the earth and anthropogenic activity on water
Speaker: OKI, Taikan (Associate Professor)

17:20-17:40 Comments
Commentator: KIKKAWA, Jiro (Professor Emeritus of the University of Queensland)
17:40-18:10 Discussion

2. Research Seminars

Along with presenting the hot topics and updated trends in global environment studies, as well as to establish new guidelines in research, the RIHN will invite researchers both domestic and foreign to serve as lecturers at Research Seminars, in order to achieve the RIHN goal of realizing dynamic cooperation in research activity. The RIHN will annually sponsor approximately ten such Seminars dealing with diverse research themes introducing topics that are relatively near completion and inviting discussion thereof.

2-1 RIHN Seminars

April 2002 - March 2003

No.1 8 April, 2002
Speaker: Dr. PALANISAMI, Kuppannan (Director, Water Technology Centre, Tamilnadu Agricultural University, India)
Title: Tank irrigation in South India: problems and issues

No.2 24 April, 2002
Speaker: Dr. GLAZIRIN, Gleb E. (Institute of Low Temperature Science, Hokkaido University)
Title: Alteration of run-off from watersheds having large glaciarization under possible climate change

No.3 14 May, 2002
Theme: Soil-Water-Air-Plant
Speaker: Professor FEDDES, Reinder A. (Wageningen University)
Title: Modeling water flow and solute transport for agricultural and environmental management with SWAP
Speaker: Professor BERLINER, Pedro R. (Ben-Gurion University)
Title: Effect of inter-row mulching with polyethylene on the development of irrigated cotton
Speaker: Assistant Professor NAKAGAWA, Hiroshi (Kyoto University)
Title: Impacts of climate change on rice production in irrigated and rain-fed lowland

No.4 11 June, 2002
Speaker: Associate Professor HONDA, Yoshiaki (Center for Environmental Remote Sensing, Chiba University)
Title: Satellite remote sensing of the surface
Speaker: Research Scientist XU, Jianquing (Frontier Research System for Global Change)
Title: The surface heat and water budgets of China

No.5 11 June, 2002
Speaker: Professor OHMURA, Atsumu (Institute for Atmospheric and Climate Science, Swiss Federal Institute of Technology (ETH))
Title 1: New findings and problems in the global radiation balance
Title 2: Problems of interdisciplinary research and education in higher education

No.6 1 September, 2002
Speaker: Dr. TSURUTA, Haruo (National Institute for Agro-Environmental Sciences)
Title: Land use changes in Asia and its influence on the atmospheric environment

No.7 7 September, 2002
Speaker: Director AKASOFU, Shunichi (International Arctic Research Center, University of Alaska)
Title: Climate variation over the Arctic Region

No.8 21 January, 2003

Speaker: Dr. HIGUCHI, Kaz (Meteorological Service of Canada, Environment Canada)
Title: On the evolution of atmospheric CO2 concentration caused by biospheric CO2 fluxes

2-2 Meetings (Danwakai)

At the RIHN where institute members, as well as visiting professors, part-time researchers, foreign researchers and so on, converge to freely present their individual themes on global environmental study, these Luncheon meetings provide an unique opportunity for mutual inquiry and exchange of opinions. As diverse research fields and methods mingle at the RIHN Research Seminars, these regular Luncheon meetings serve as an important venue for promoting creative thinking and constructive debates and will be held virtually on a weekly basis.

April, 2002 - March, 2003 Danwakai

No.22 22 April, 2002
Speaker: Prof. TAKASO, Tokushiro (visiting professor, University of Ryukyus)
Title: Growth of female reproductive organs in conifers with reference to pollination and fertilization

No.23 7 May, 2002
Speaker: Assoc. Prof. KUBOTA, Jumpei
Title: The role of vegetation and permafrost on hydrological cycle in the Eastern Siberia

No.24 20 May, 2002
Speaker: Prof. AKIMICHI, Tomoya
Title: Prospect and delimitation of the study of the eco-commons

No.25 3 June, 2002
Speaker: Prof. HIDAKA, Toshitaka (Director-General)
Title: The genetic programme of culture

No.26 25 June, 2002
Speaker: Dr. OHNISHI, Hideyuki (JSPS Post-doctoral fellow)
Title: Ethnological analysis on technology as human behavior

No.27 19 June, 2002
Speaker: Prof. KONOVALOV, Vladimir (visiting professor, Institute of Geography, RAS, Moscow, Russia)
Title: Analogous simulation the annual runoff of Heihe River (China, Qilianshan)

No.28 1 July, 2002
Speaker: KIKKAWA, Jiro (visiting professor, Professor Emeritus of the University of Queensland, Australia)
Title: How to evaluate collaborative research projects

No.29 25 July, 2002
Speaker: BOROVIKOVA, Lyudmila N. (visiting professor, Principal Scientist, Central Asian Research Hydrometeorological Institute (SANIGMI), Uzbekistan)
Title: Aral Sea region: Its natural peculiarities and problems

No.30 24 September, 2002
Speakers: Mr. SAKAMOTO, Kunio (Director of Administration), Prof. Eitaro Wada and Prof. Yoshihiro Fukushima
Title: Strategy for applying scientific research funds

No.31 7 October, 2002
Speaker: Assist. Prof. SAEKI, Tazu
Title: Studies on global cycles of greenhouse gases using numerical models

No.32 5 November, 2002
Speaker: Prof. KHOON, Gong Wooi (visiting Professor, RIHN and Professor, Center for Marine &

Coastal Studies, Universiti Sains Malaysia, Penang, Malaysia)
Title: Carbon and nutrient fluxes in Malaysian mangrove ecosystems

No.33 9 December, 2002
Speaker: KIYASHKO, Serguei (visiting professor, Senior Scientist, Institute of Marine Biology, Vladivostok, Russia)
Title: Isotopic and molecular biomarkers of benthic food webs in aquatic ecosystems

No.34 24 December, 2002
Speaker: Prof. HAN, Jiankang (visiting professor, Professor, Research Institute of Resources and Environment, Hunan Normal University, China)
Title: My glacialogical studies both in Antarctica and High Asia

No.35 14 January, 2002
Speaker: Dr. INOUE, Mitsuyuki (research fellow)
Title: Society and culture in the late Ming and the early Qing period

No.36 27 January, 2003
Speaker: Dr. HARROLD, Timothy (JSPS post-doctoral fellow)
Title: Changes in the stochastic structure of rainfall under global warming scenarios

No.37 10 March, 2003
Speakers: colloquium coordinators (Danwakai), Research Promotion Center
Title: Discussion on colloquiums and RIHN seminar for the next fiscal year

2-3 Evening Seminars

Modeled on the format of the Study meetings, the evening seminars are intended to promote the free exchange of opinions and to stir up discussion. Although these seminars will of course be far more limited timewise than the aforementioned Luncheon meetings and RIHN Research Seminars, they are important as discussion-centered Study meetings. Ordinarily these Study meetings will be held on a monthly basis and beginning at five p.m. last approximately two hours. As research presenters nominate the next round of presenters, a special feature of these Evening seminars is the presentation of early buds of information on creative research being done by researchers in diverse academic fields.

April, 2001 - March, 2002, Evening Seminar (Shusen Saloon)

No.1 13 September, 2002
Speaker: Assist. Prof. USHIMARU, Atsushi
Title: Ecological ideas applicable to earth environmental studies

No.2 17 October, 2002
Speaker: Assist. Prof. KAWAMOTO, Kazuaki
Title: Relationship with earth environmental studies viewed from a non-mainstream meteorologist

No.3 6 December, 2002
Speaker: Dr. ŌHNISHI, Hideyuki (JSPS research fellow)
Title: How can anthropology contribute to global environmental issue?

No.4 7 February, 2003
Speaker: Dr. NAGANO, Takanori (research fellow)
Title: Don't miss out meaning of "life" in global environment

3. Presentation of Project Research

Date: 19 December, 2002 (Thu.) - 20 December, 2002 (Fri.)
Venue: Kyoto Chamber of Commerce & Industry

4. Study Meetings "The Whole and the Individual in Nature and Culture (WINC)"

Study meetings "The Whole and the Individual in Nature and Culture (WINC)" aim to evoke innovative discussions and thoughts as to how we approach from studies of the individual-focused and the proximal to the integrative understanding of the reality of nature and culture interactions as a whole. Taking diverse themes and topics on individual animal and plant species relationships with the human as an example, we explore philosophical and scientific bases of human knowledge and practices interacting with them. Study meetings will be held several times throughout the year and are to be coordinated by AKIMICHI, Tomoya (RIHN), KONAGAYA, Yuki (National Museum of Ethnology), and SHIRAHATA, Yozaburo (International Research Center for Japanese Studies).

4.1 Study Meetings

The 1st Study Meeting "From Individuals to the Whole"

Date: 26 December, 2002

Theme: Hawk

Presenter: HATANO, Ikuya (Traditional Falconer)

Title: General account of hawking: history, principle and practice

Presenter: SHIRAHATA, Yozaburo (Professor, International Research Center for Japanese Studies)

Title: Cherry blossom viewing and hawking

The 2nd Study Meeting "From Individuals to the Whole"

Date: 26 February, 2003

Theme: Wolf

Presenter: ISHIGURO, Naotaka (Associate Professor, Obihiro University of Agriculture and Vterrinary Medicine)

Title: DNA Analysis of Japanese wolf

Presenter: MOMOKI, Akiko (Associate Professor)

Title: Place of the wolf in Europe and in the Christian world-from antiquity up to the present age

Presenter: KONAGAYA, Yuki (Professor, National Museum of Ethnology)

Title: Mongolian pastralists and wolf

Discussants: HAYASHI, Yoshihiro (University of Tokyo)

His Highness Imperial Prince AKISHINO (President, Yamashina Research Institute of Ornithology)

The 3rd Study Meeting "From Individuals to the Whole"

Date: 27 May, 2003

Theme: Snow

Presenter: TAKEUCHI, Nozomu (Assistant Professor)

Title: What is a phenomenon of red snow?

Presenter: KISHIGAMI, Nobuhiro (Associate Professor, National Museum of Ethnology)

Title: Indigenous cognition and use of snow and ice among the Nunavik Inuit of Canada

Presenter: ISHIGAKI, Satoru (Research Associate, Niigata Prefectural Museum of History)

Title: Life in snow country

Discussants: KOBAYASHI, Tatsuo (Director, Niigata Prefectural Museum of History, Professor, Kokugakuin University)

AKIMICHI, Tomoya (Professor)

Individual Achievements

Individual Achievements

1. Director-General

HIDAKA, Toshitaka ——————————— Director-General
Born in 1930.

Curriculum Vitae
Academic Career
Research Student, Department of Zoology, Faculty of Science, The University of Tokyo (1959)
Department of Zoology, Faculty of Science, Graduate School (under the old system), The University of Tokyo (1957)
Department of Zoology, Faculty of Science, The University of Tokyo (1952)
Professional Career
Director-General, Research Institute for Humanity and Nature (2001)
The First President of the University of Shiga Prefecture (1999-2001)
The Corporate Adviser for the Opening of the University of Shiga Prefecture (1993-1999)
Professor, Department of Zoology, Faculty of Science and Graduate School of Science, Kyoto University (1975-1993)
Dean of the Faculty of Science and Graduate School of Science, Kyoto University (1989-1991)
Professor, Tokyo University of Agriculture and Technology (1965-1975)
Associate Professor, Tokyo University of Agriculture and Technology (1960-1965)
Lecturer, Tokyo University of Agriculture and Technology (1959-1960)
Higher Degrees
D. Sc. (The University of Tokyo, 1961)
M. Sc. (The University of Tokyo, 1974)
Fields of Specialization / Background
Ethology
Academic Society Memberships
Japan Ethological Society, The Entomological Society of Japan, Society of Evolutionary Studies, Japan, Ecological Society of Japan, Japanese Psychological Association, Japanese Society of Applied Entomology and Zoology, The Society of Population Ecology, Animal Behavior Society, The Japanese Society of Systematic Zoology, International Centre of Insect Physiology and Ecology, Japan, The Japanese Society for Comparative Physiology and Biochemistry, International Society for Neuro-Ethology, Societe Zoologique de France, Primate Society of Japan, Japan Association for African Studies, The Japanese Society for Wild Silkmoths, The Japan Society of Developmental Psychology, The Japan Society of Tropical Ecology, The Lepidopterological Society of Japan, The Japan Association for Social and Economic Systems Studies, etc.

Major Publications
Books
Year of Publication *Original Japanese title* (English Translation). Publisher.
Hidaka, Toshitaka
2001 *Haru no kazoe kata* (Ways of Reckoning Spring). Shinchosha. [in Japanese]
2001 *Neko wa dōshite wagamama ka* (Why are Cats Naughty)? Houken Corp. [in Japanese]
2001 *Dōbutsu no iibun ningen no iibun* (The Complaint of Animals and That of Human Being). Kadokawa Shoten. [in Japanese]

1999 *Boku ni totte no gakkō: Kyōiku to iu gensō* (School for Me: Illusion of "Education"). Kodansha. [in Japanese]

<Co-Authored Books>

Hidaka, Toshitaka et al.

2002 *Karasu no gakkō* (School of Crows). Mitsumura Tosho. [in Japanese]

2002 *Nō wo shiru/tsukuru/mamoru 4* (Learning, Creating and Maintaining our brain). Kuba Pro. [in Japanese]

2002 *Manyō kodaigaku* (Studying the Ancient Times, Manyō Area). Daiwashobo. [in Japanese]

<Supervised book>

2001 *Hyūman esorojī* (Human Ethology). Minerva Shobo. [in Japanese]

<Compiled Book>

2002 *Mizu to seimei no seitaigaku* (Ecology of Water and Biosis). Kodansha Blue Backs. [in Japanese]

Articles

Year of Publication Original Japanese Title of Article (English Translation). *Original Japanese title of Disseration/Journal* (English Translation). Publisher.

Hidaka, Toshitaka

2002 Classics as Viewed from Ethology. *A Report on the Sixth Synposium "Towards a Reconstitution of Classical Studies"*, pp.62-64.

Ohba, Nobuyoshi and Toshitaka Hidaka

2002 Reflex Bleeding of Fireflies and Prey-Predator Relationship. *Science Report of Yokosuka City Musium*, pp.1-12.

Kan, Eiko, Toshitaka Hidaka, Takashi Sato and Hiroshi Kitajima

2002 Copulation and Male Calling in the Swift Moth, *Endoclita excrescens* (Butler) (Lepidoptera: Hepialidae). *Applied Entomology and Zoology* 37: 163-169.

Kan, Eiko, Hiroshi Kitajima, Toshitaka Hidaka, Takakazu Nakashima and Takashi Sato

2002 Dusk Mating Flight in the Swift Moth, *Endoclita excrescens* (Butler) (lepidoptera: Hepialidae). *Applied Entomology and Zoology* 37: 147-153.

Morinaka, Sadaharu, Tomohiro Maekawa, Kiyondo Maekawa, Dra Erniwati, Siti Nuramaliati Prijon, Ida Ketut Ginarsa, Toru Nakazawa and Hidaka Toshitaka

1999 Molecular Phylogeny of Birdwing Butterflies Based on the Representatives in Most Genera of the Tribe Troidini (Lepidoptera: Papilionidae). *Entomological Science* 2(3): 347-358.

Essays

2003

March Hataoridori (Socius: Fresh Mama in Animals' World, Tamago-club)

March Chibishidemushi (Shilpha: Nekonome-gusa, "Nami" Shinchosya)

March Kyu-soren/ Mosukuwa no Ichiya (One Night in Moscow under The Soviet Years: Notes of My Travels All Over The World, Zen-jin Tamagawa University Press)

March Imanishi Kinji Fuirudo Noto (Field Notes of Dr. Kinji Imanishi: "Tengan" The Kyoto Shinbun)

March Nezumi-tachi no Jinsei (The Life of Mice: Each World for Animals The Chunichi Shinbun)

February Hyomon-cho to Semi (Butterfly and Cicada: fresh Mama in Animals' World, Tamago-club)

February Dobutsu-tachi no Jiishiki (Self-consciousness of Animals: Nekonome-gusa, "Nami" Shinchosya)

February Sandoicchi to Sandowicchi (Sandwich and Hero Sandwich: Notes of My Travels All Over The World, Zen-jin Tamagawa University Press)

February Eko-bayari (Trend of Eco.: "Tengan" The Kyoto Shinbun)

February Ningen wa Douiu Dobutsu ka? (What Sort of Animals is a Human Being?: Library of Learning Collage in Toyama Prefecture)

January Tanuki (Racoon Dog: Fresh Mama in Animals' World, Tamago-club)

January Seoul de Mukaeta Shin-seiki (The New Century in Seoul: Notes of My Travels All Over the World, Zen-jin Tamagawa University Press)

January 21-seiki no Dobutsu-en, Dobutsu-en no Yakuwari te Nani? (Zoo in 21 Century, What is the Role of

Zoo?: "Animals and Zoo")

January Aki no Ochiba to Kabutomushi (Fallen Leaves and Beetles in Autumn: Nekonome-gusa, "Nami" Shinchosya)

January Neko no Ikikata (Lifestyle of Cats: Each World for Animals The Chunichi Shinbun)

2002

December Kigo to shiteno Konchu (Insect as a Season Word: Haiku Magazine "Taka")

December Chikyu-ken ga Dekiru made (Until the Foundation of Research Institute for Humanity and Nature –for the Genuine Global Research– "Issatsu no Hon")

December Aru Hon ni Omou (Thinking about a Proposition in a Book: Nekonome-gusa, "Nami" Shinchosya)

December Kazan to Kaba to Hadaka no Mura Vanuatu (Vanuatu, The Village of Volcano, River Horse and Nakedness: Notes of My Travels All Over the World, Zen-jin Tamagawa University Press)

December "Puroguramu to site no gakushu: Jibun de Mitsukeru Koto no Omoshirosa (Learning as a Program: Pleasure to find out by oneseld, Record of the 25th Kyoto School Education Consultation Research Convention)

December Karasu no Kashikosa (Cleverness of Crow: Each World for Animals The Chunishi Shinbun)

December Purojekuto X (Project X: "Tengan" The Kyoto Shinbun)

November Shinkaron no Genzai (Tete-a tete: Evolution, Right Now: "Nami" Shinchosya)

November Chikyu Kankyo Mondai to Toshi no Midori (Global Environmental Grisis and Urban Green: "Urban Greenery" Organization for Landscape and Urban Greenery Technology Development)

November Yamane no Tōmin (Hibernation of Dormouse: Each World for Aminals The Chunichi Shinbun)

November Aki no Owari no Hana to Cho (Flowers and Butterflies in late fall: "Tengan" The Kyoto Shinbun)

October So many interesting things happen in a small space ("Teaching of English")

October Dento to Hasso (Tradition and Idea: News of the consortium of Universities, Kyoto)

October Kusa to Zasso (Grass and Weed: Nekonome-gusa, "Nami" Shinchosya)

October Sandakan to Oran-utan no Kodomo-tachi (Sandakan and Babies of Orangutan: Notes of My Travels All Over the World, Zen-jin Tamagawa University Press)

October "Seimei no Rekishi" naru Mono (Core of "The History of Life": Journal of International Research Center for Japanese Studies)

October Sangaku no chosho torikumi kyo de dokusosei hagukumu (Originality Was Fostered in Kyoto Incorporating the Strong Points of Businesses and Universities: Discussion in honor of Mr. Koichi Tanaka awarded Nobel Prize, The Kyoto Shinbun)

October Hebi-tachi no Sekai (The World of Snakes: Each World for Animals The Chunichi Shinbun)

October Kagaku no "Jyoshiki" ("Common Knowledge" of Science: "Tengan" The Kyoto Shinbun)

September Hito no Chisei wa Tokubetu ka? (Do you think that the Intelligence of Human Being is Special?: "Kagaku" Iwanami Shoten)

September Iriomotejima (Iriomote Island: "Tengan" The Kyoto Shinbun)

September Imajinēshon to Yūrei (Imagination and Ghost: Brochure of the 6th Meeting of Seiwa Scholar's Society)

September Hokkyoku no Spitsbergen (Spitsbergen in North Pole: Notes of My Travels All Over the World, Zen-jin Tamagawa University Press)

September Aki no Naku Mushi (Chirps in Autumn: Each World for Animals The Tokyo Shinbun)

August Semi wa Naze Naku no? (Why do cicadas buzz?: Nekonome-gusa, "Nami" Shinchosya)

August Seibutsu-gaku nashi no Jyosei-ron? (View of Woman without Biology?: Annual Report of the Research Society for Woman's History)

August Shichokaku Horu (Audio-visual Hall: "Tengan" The Kyoto Shinbun)

August Ga to Higurashi (Moth and Evening Cicada: Each World for Animals The Chunichi Shinbun)

July Sogo Chikyukankyogaku Kenkyusho (Research Institute for Humanity and Nature: Monthly Magazine "Chiri")

July Aru Chiisana Kawa no Hotaru (Glowflies in a little river: Nekonome-gusa, "Nami" Shinchosya)
July Saba no Basu Mini (Microbus in Sabah: Notes of My Travels All Over the World, Zen-jin Tamagawa University Press)
July Akari ni Kuru Mushi (Insects gathering toward the light: "Tengan" The Kyoto Shinbun)
July Byoki wa naze aru no ka? (Why is There Illness? Document of the 42nd All Japan Meeting for Community Health of Government-Run Health Insurance)
June Shida (Fern: Nekonome-gusa, "Nami" Shinchosya)
June Tori-tachi no Goui Keisei (Consensus Building among Birds: Journal of Japan Society of Waste Management Expert)
June Cota Kinabalu no Kopi (Kopi at Cota Kinabalu: Notes of My Travels All Over the World, Zen-jin Tamagawa University Press)
June "Nou" wa Naze Taikutu ka? (Why is "Noh" Deadly Boredom?: Monthly Magazine of National Nou Teatre)
June Kodomo no Jikan (The Space of Time for Children: "Tengan" The Kyoto Shinbun)
June Natsu no Yo no Yamori (Gecko Lizard at Summer Night: Each World for Animals The Chunichi Shinbun)
May Jyoho to Shingo no Kankei (The Delicate Shade of Difference in significance between Information and Signal: Nekonome-gusa, "Nami" Shinchosya)
May Furansu-shiki Furansu Ryori (Orthodox French Cuisine: Notes of My Travels All Over the World, Zen-jin Tamagawa University Press)
May Aburamushi no Kisetsu (Season of Antcow: Each World for Animals The Chunichi Shinbun)
May Kyozon to Jyunkan no Dento Fumae Sekai no Sento ni (For Leading the World Based on the Tradition of Coexistance and Circulation: Documents of the Symposium Organized by International Research Center for Japan Studies)
April Kafunsho (Pollen Allergen: Nekonome-gusa, "Nami" Shinchosya)
April Maruku to Furan to Suisufran (Mark, Fran and Swiss Fran: Notes of My Travels All Over the World, Zen-jin Tamagawa University Press)
April Hayai Sakura ni Omou Koto (Thinking about the early bloomed cherry blossoms: The Nikkei Shinbun)
April Cho-tachi no "Jijyo" ("States of Things" for Butterflies: Each World for Animals The Chunichi Shinbun)
April "Satoyama" no "Hitozato" ("Satoyama" and "Hitozato" –Four Seasons in Satoyama Feeling with Mr, Mitsuhiko Imamori– "Bessatsu Taiyo" Heibonsya)
April Taue no Kisetsu (Season for rice planting: "Tengan" The Kyoto Shinbun)
March Iwayuru "Kankyo Mondai" towa (About So-called "global environment problems": "RITE NOW" Journal of Research Institute of Innovative Technology for the Earth)
March Hae no Gunpi to Katsute no "Kagaku" (Swarming of flies and "Science" in the past: Nekonome-gusa, "Nami" Shinchosya)
March Kagaku towa Nanika? (What is Science?: News Magazine of Kyoto University)
March "Shizen to Bunka" no Atarashii Jikken: Tayo na Torikumi kara Mūbumento (New Experimental Trial of "Nature and Culture": Movement from the Multiple Approach)", Magazine, the 21st Century Commemoration Business of the Lake Country
March Haru wo Kazoeru (Reckoning Spring: Each World for Animals The Chunichi Shinbun)
March "Ondanka?" ("Global Warming?": "Tengan" The Kyoto Shinbun)
February Roka wo Meguru Futatsu no "Naze?" ("Why?" –Two questions around the process of aging: Journal of Veterinary Medicine)
February Ikimono no Tayosei (Diversity of Living Nature: Journal of "Aiken")
February Mushi to Samui Fuyu (Insects and Cold Winter: Each World for Animals The Chunichi Shinbun)
February Act of God (Act of God: "Tengan" The Kyoto Shinbun)

February Kankyo Mondai Kongen wa "Bunka" (The Root of Global Environmental Problems is "Culture"–: "The Winds Blowing in Our Hearts" The Yomiuri Shinbun)

February Otona demo "Hō" Dobutsu-en no Nazo (Mystery of Zoo Healing –Space for Even Mature Persons–: Sociology on a Street Corner)

January Wakatte Moraenai Hanashi (Stories that Nobody Trust: Nekonome-gusa, "Nami" Shinchosya)

January Yuruyakana Kizuna (Moderate Emotion Ties "The Book of Living Space" Magazine of Daiwa House Industry Co. Ltd.)

January Shiki to Tokonatsu (Four Seasons and Everlasting Summer: Each World for Animals The Chunichi Shinbun)

January Doubutukodogaku to 21seiki no Kyoiku (Ethology and Education in 21th Century: "Education", Newsletter of Modern Educational Research Association)

January Sogo Kenkyu wa Gomoku Cyahan no Yona Mono (Multidisciplinary Research is Like a Frit Cantonnais: Weekly Journal, Bunkyo News)

2001

December Karumina Burana (Carmina Burana: "Tengan" The Kyoto Shinbun)

December Mada Fuyu de Nai Mushi-tachi (Insects that are not yet ready to feel "winter": Each World for Animals The Chunichi Shinbun)

December Kankyo, Gomoku Chahan no Me de (Environment, With the Eyes of Frit Cantonnais: The Nikkei Shinbun)

December Ningen no Ikikata Tou (Asking the Way of Living for Human Being: The Chunichi Shinbun)

December Koyo to Gengo to (Autumn Color of Leaves and Language: Nekonome-gusa, "Nami" Shinchosya)

November Chikyu Kankyo Kenkyu to Watashi (Research for the Global Environment and I: Bulletin of Nikkei Forum)

November Byoki wa Naze Aru noka? (Why is There Illness?: "Tengan" The Kyoto Shinbun)

November Mushi-tachi no Ettō (Over Yearing for Insects: Each World for Animals The Chunichi Shinbun)

November Futatabi Epofirisu wo Motomete (2) (Looking for Aeppophilis, again: Nekonome-gusa, "Nami" Shinchosya)

November Chikyukannkyogaku towa nanika (What is "Research for Global Environment"?: Japanese Scientific Monthly)

October Kotengaku to Iryujyon (Classics and Illusion: "Tengan" The Kyoto Shinbun)

October Futatabi Epofirisu wo Motomete (1) (Looking for Aeppophilis, again: Nekonome-gusa, "Nami" Shinchosya)

October "Wagahai" ni Omou (Reckoning with "Wagahai": Soseki Kenkyu)

October Chikyukannkyogaku up-to-date intabyu (Interview on Research for Global Environment up-to-date: Newsletter of National Institute for Environmental Studies)

September Kisei tte Taihen (Parasitism, That's a Challenge: Each World for Animals The Chunichi Shinbun)

September Umi no Soko no Konchu-tachi (Insects at the bottom of the sea: "Tengan" The Kyoto Shinbun)

September Natsu no Owari (End of Summer: Nekonome-gusa, "Nami" Shinchosya)

September Dobutsugaku no Omoshirosa (Fascinating Aspects of Zoology: Ginza Hyakutenkai)

September Atarashii Chikyukankyogaku wo Mezashite (Aiming for New Research for Global Environment: "Kagaku" Iwanami)

September Kagaku to Gaku (Science and Learning: Science & Technology Journal)

September "Chikyukannkyogaku" no Kochiku wo Mezashite (Aiming for the Establishment of "Research for Global Environment": Brochure for Forum in Honor of the Publication of Books on Global Environment)

August Gakusaiteki (Interdisciplinary: Journal of Seiwa Scholar's Society)

August Himizu Esasagashi no Fushigi (Greater Japanese shrew-mole Mystery of Finding Foods: Each World for Animals The Chunichi Shinbun)

August Ningen towa Doiu Dobutsu ka? (What Sort of Animals is Human Being?: "Tengan" The Kyoto Shinbun)
August "Manabi" towa "Chiteki Asobi" nano desu ("Learning" is "Intellectual Game": "HARUKA")
August Cho no Shichigatu (July for me, July with Butterflies: Nekonome-gusa, "Nami" Shinchosya)
August Chikyukannkyogaku wa Jinrui no "Mirai-kanosei" ni Idomu (Research for Global Environment Challenges the Potential of its Future)
July Rinsho to Nachuraru Hisutori (Clinical and Natural History: Sogensya)
July "ESS" ("ESS": "Tengan" The Kyoto Shinbun)
July Ningen wa Dokomade Dobutsu ka? (Where is Human Being living as an animal?: Nekonome-gusa, "Nami" Shinchosya)
June Oka no Ue no Hotaru (Glowfly on Shore: Each World for Animals The Chunichi Shinbun)
June Iden to Gakushu to Kyoiku no Kankei (The relation between Inheritance, Studying and Education: Brochure of Center of Protection and Guidance of Youth)
June Sogo Chikyukankyogaku Kennkyusho (Research Institute for Humanity and Nature: Nekonome-gusa, "Nami" Shinchosya)
May Cho no Iru Jyokyo (Circumstance Butterflies fling: "Tengan" The Kyoto Shinbun)
May Tanbo no Kaeru (Frogs in the Rice Paddy: Each World for Animals The Chunichi Shinbun)
May Gakusaiteki na Seika Teikyo (Providing the Interdisciplinary Information: The Mainichi Shinbun)
May Kankyo Mondai ni Chie wo Shiboru (Finding the Best Way of Global Environmental Problems: The Chunichi Shinbun)
May Inugamigawa Futatabi (Inugami River, Again: Kekonome-gusa, "Nami" Shinchosya)
May "Naze" no Gimon ni Kotaete Inai (Not Answering to the questions "Why?": Bungei Shunjyu)
April Neko no Kodo ni Miru "Kari wo Suru Dobutsu" no Honrai no Ikikata (Natural Way of Living as Hunting Animals Finding out of Cat's Performance: The Mainichi Shinbun)
April Kaeru no Nakigoe (Croaking of Frogs: The Yomiuri Shinbun)
April Kotori no Kyuji (Feeding to Little Birds: Each World for Animals The Chunichi Shinbun)
April Atarashii Seika wo Kitai Zenkoku kara Kenkyu-sya wo Tsunoru (Looking forward to the Fruitful Achievement –Recruiting Researchers throughout Japan: The Kyoto Shinbun)
April New Life (Yomiuri Shinbun)
April Kankyo wo Mamoru nowa Bunka no Mondai (To Protect the Global Environment is the problem of Culture: The Yomiuri Shinbun)
April Jido Suisen (Automatic Water Faucet: The Yomiuri Shinbun)
April Daigaku tte Nani? (What is the "University"?: Nekonome-gusa, "Nami" Shinchosya)

Academic Lectures

Adjunct Instructor, The University of Shiga Prefecture (ongoing)
Adjunct Instructor, Study and Training Courses in Japanese Language and Culture, The Center of Student Exchange, Kyoto University (ongoing)
Adjunct Instructor, The University of the Air (ongoing)

Activities in Academic Societies

Director-General, Kyoto Municipal Science Center for Youth (2001-); Councilor, the Center for South Asian Studies (ongoing); Councilor, National Institute of Polar Research (ongoing); Councilor, Okazaki National Research Institute (ongoing); Councilor, National Institute for Basic Biology, Okazaki National Research Institute (ongoing); Councilor, International Research Center for Japanese Studies (-2001); Councilor, Institute of Low Temperature Science, Hokkaido University (-2002); Councilor, Japan Aerospace Exploration Agency, Institute of Space and Astronautical Science (ongoing); Councilor, Shimonaka Memorial Foundation (ongoing); Councilor, Biwako Hall (ongoing); Chairman, Biwako Hall (ongoing); Chairperson of The Steering Committee, Biwako Prize for Ecology,

Shiga Prefectural Government (ongoing); Adviser, Nature Film Network (ongoing); Senior Academic Counselor, International Institute for Advanced Studies (ongoing); Advisor and Chairman of Advisory Committee, Shiga University of Medical Science (ongoing); Advisor, The University of Shiga Prefecture (ongoing)
Councilor, The Inamori Foundation (ongoing); Selector, Foundation of The International Garden and Greenery Exposition, Osaka, Japan, 1990 (ongoing); Commissioner, Nakayama Science Foundation (ongoing); Commissioner, Suntory Chemical Biology Institute (ongoing); Commissioner, Heiwadō Foundation (ongoing); Committee Member, The 3rd Water Forum Shiga, Kyoto, Osaka Planning Coordination Committee (2003); Advisor, Tokyo University of Agriculture and Technology (-2000); Evaluation Committee Member, Nara Woman's University (-2001); Evaluation Committee Member, Faculty of Science, Shizuoka University (-2000); Councilor, Japan Monkey Centre (-2002) and so on.

Awards

Nihon Esseisuto Kurabu shō in 2002 (The 50th Japan Essayist Club Award in 2002)
Shiga Bunka shō in 2000 (Shiga Cultural Award in 2000)
Kyoto Shinbun Taisho Bunka Geijyutsu shō in 2000 (The Cultural and Artistic Award of Kyoto Shinbun Grand Prize in 2000)
Dai 10 kai Minakata Kumagusu shō in 2000 (The 10th Dr. Kumagusu Minakata Award in 2000)

Social Activities and Public Lectures

Public Lectures

March 2003 "Ikimono ni totte kenkō toha (What is Well-Being for Living Nature)?", lecture, Biwako Hachiman Rotary Club. [in Japanese]

March 2003 "Gakkō to iu basho (The Place of School)", lecture, the meeting to think about generation relations. [in Japanese]

February 2003 "Iwayuru seibutsutayōsei ni tsuite (Focusing on So-called Biodiversity)", lecture, Japan Forest Owners Association. [in Japanese]

February 2003 "21 seiki no ningen to mizu (Human being and Water in 21st Century)",

February 2003 "Kicho Koen, Dai 3 kai sekai mizu fōramu" Principal Lecture, The 3rd International Water Forum. [in Japanese]

February 2003 "Mizu mondai eno Kyoto kara no hasshin (Transmission for the problem of water from Kyoto)", panelist, the 3rd International Water Forum. [in Japanese]

February 2003 "Shizen tono kyōsei towa nani ka (What is "symbiosis with nature")?", principal lecture, Work Shop "Watershed Area in Symbiosis with Nature and Rebirth of Cities". [in Japanese]

January 2003 "Mongoru kara saguru chikyū no mirai (Future of the Earth from Mongol)", talker, round-table discussion of *Kagaku*. [in Japanese]

January 2003 "Ōmi no shizen to sanpō yoshi (Nature and Wise Saying "Sanpō Yoshi" in Omi Area)", lecture, Sansan Training. [in Japanese]

December 2002 "Ningen wa dōiu dōbutsu ka (What Kind of Animal is a Human Being)?", special lecture, Mie University. [in Japanese]

December 2002 "Chikyū kankyō gaku no mezasu tokoro (An Aim for the Study of Earth Environment)", panelist, panel discussion at the Commemoration Ceremony of the Graduate School of Global Environmental Studies, Kyoto International Conference Hall. [in Japanese]

December 2002 "Idenshi no sōdai na takurami (The Great Plot of Gene)", lecture, Kan-Kan Meeting, Osaka Century Club. [in Japanese]

November 2002 "Dōbutsu kōdō gaku kara mita gakushū (Learning Viewed from Ethology)", lecture, Tennoji Junior and Senior High Attached School of Osaka Kyoiku University. [in Japanese]

November 2002 "Chō to ga no shinwa (The Myth of Butterfly and Moth)", special lecture, Japan Society of Photogrammetry and Remote Sensing. [in Japanese]

November 2002 "Chō wa naze tobu ka (Why are Butterflies Flying)?", lecture, Rakuō Elementary School. [in Japanese]

November 2002 "Jizokuteki na shakai no sugata to eko-mura (Lasting Society in Japan and Eco-Mura)", panelist, panel discussion on "Prospecting for the Future from Eco-Mura", International Symposium. [in Japanese]

October 2002 "Dōbutsu-en no yakuwari te nani (What is the Role of Zoo)?", keynote speech, Ueno Zoo Garden 120th Anniversary Commemoration Symposium. [in Japanese]

October 2002 "21 seiki no dōbutu-en (The Zoo in the 21st Century)", panelist, panel discussion, Ueno Zoo Garden 120th Anniversary Commemoration Symposium. [in Japanese]

October 2002 "Idenshi to jinsei (Gene and Life)", lecture, the School for the Adults. [in Japanese]

October 2002 "Idenshi no takurami (The Plot of Gene)", lecture, Bachelor lunch meeting. [in Japanese]

October 2002 "Ikimono-tachi no jittai (Actual Condition of Animals)", lecture, Culture Course for the People in Tsugayama. [in Japanese]

October 2002 "Ningen wa doko made dōbutsu ka (How Far is a Human Being an Animal)?", lecture, Yōkaichi Citizen University. [in Japanese]

October 2002 "Jinsei ni totte idenshi towa nani ka (For the Life, What is "Gene")?", lecture, Public Welfare Business Conference for All Japan Prefectural Office Staff Member General Meeting. [in Japanese]

October 2002 "Chiiki no keizai kassei to 'hito kankyo' (Local Economic Revitalization and "Human Being and Environment")", speech, Shiga Prefecture Eating and Drinking Industry Life Sanitation Trade Association. [in Japanese]

October 2002 "Dōbutsu gaku kara mita ningen (Human Being Viewed from the Ethology)", lecture, the 130th Anniversary Meeting of Alumnae Association, Kyoto Prefectural University of Medicine. [in Japanese]

October 2002 "Byōki wa naze aru no ka (Why is There Illness)?", special lecture, the 42nd All Japan Meeting for Community Health of Government-Run Health Insurance. [in Japanese]

October 2002 "Sangaku no chōsho torikumi Kyō de dokusōsei hagukumu (Originality Was Fostered in Kyoto Incorporating the Strong Points of Businesses and Universities)", discussion in honor of Mr. Koichi Tanaka awarded Nobel Prize. [in Japanese]

September 2002 "Chikyū kankyō to ningen no bunka (Global Environment and Human Culture)", lecture, Zoological Society of Japan. [in Japanese]

September 2002 "Konchū no fushigi; Konchū wa nani wo tabeteru no (Wonder Land of Insects: What Foods Are Insects Eating)?", Kyoto Municipal Science Center for Youth. [in Japanese]

August 2002 "Boku ni totte no gakkō (School for Me)", lecture, the Joint Association of Private Elementary School in Kyoto. [in Japanese]

August 2002 "Puroguramu to site no gakushū: Jibun de mitsukeru koto no omoshirosa (Learning as a Program: Pleasure to Find out by Oneself)", lecture, the 25th Kyoto School Education Consultation Research Convention. [in Japanese]

July 2002 "Byōki wa naze aru no ka (Why is There Illness)?", special lecture, Noitoropin Commemoration Learning Lecture. [in Japanese]

July 2002 "Ningen wa dō iu dōbutsu ka (What Kind of Animal is a Human Being)?", the Life Learning Collage in Toyama Prefecture. [in Japanese]

July 2002 "Konchū no fushigi; Semi wa naze naku no (Wonder Land of Insects; Why do Cicadas Sing)?", lecture, Kyoto Municipal Science Center for Youth. [in Japanese]

June 2002 "Shizen to dō tsukiau ka (How Should We Treat Nature)?", the 37th Collège de Kameoka. [in Japanese]

June 2002 "Kankyō mondai towa nani ka (What is the environmental issue)?", lecture, Ishikawa Agricultural College. [in Japanese]

June 2002 "Konchū no fushigi; Konchū mo iki wo shite iru no (Wonder Land of Insects; Do Insects Breath, Too)?", lecture, Kyoto Municipal Science Center for Youth. [in Japanese]

June 2002 "Neko wa dō shite wagamama ka (Why are cats naughty)?", the 2nd Hills Citizen's College "Blessed Life with Pets". [in Japanese]

June 2002 "Dōbutsu to ningen: Gendai dōbutsu kōdōgaku (Animals and Human Beings: Current Ethology", lecture, High Energy Accelerator Research Organization. [in Japanese]

May 2002 "Dōbutsu kōdō gaku kara mita shikisai kankyō no sekai (Color Environmental World Viewed from Ethology)", special lecture, the Color Science Association of Japan. [in Japanese]

May 2002 "Konchū no fushigi: Konchū wa nani wo miteiru no (Wonder Land of Insects; What Are Insects Watching)?", lecture, Kyoto Municipal Science Center for Youth. [in Japanese]

May 2002 "Kankyō to bunmei: 21 seiki ni okeru Nihon no yakuwari (Environment and Civilization: The Role of Japan in 21st Century)", panelist, co-organized panel discussion, International Research Center for Japan Studies and the Yomiuri Shinbun. [in Japanese]

May 2002 "Tori to konchū no kyōshinka (Co-Evolution of Birds and Insects)", lecture, with the opening of permanent exhibition "Xanadu for Naturalist", Museum of Nature and Human Activities, Hyogo. [in Japanese]

April 2002 "Satoyama satoti no shizen: Shizen ni yasashiku towa dō iu koto ka (The Nature of Satoyama and Satochi: What is 'Treat Nature Kindly')"?, lecture, the Society of Landscape Architectural Works Execution Managing Engineer in Nagano Prefecture. [in Japanese]

April 2002 "Imaginēshon to yūrei (Imagination and Ghost)", lecture, the 6th Meeting of Seiwa Scholar's Society. [in Japanese]

March 2002 "Koen, Jisedai no Shiga wo Kataru Kai (Lecture, Meeting for talking about future generation of Shiga)". [in Japanese]

March 2002 "Byōki wa naze aruno ka (Why is there illness)?", lecture, extension lecture for people of the 100th Anniversary of the Japanese Society of Internal Medicine. [in Japanese]

March 2002 "'Shizen to bunka' no atarashii jikken: Tayō na torikumi kara mūbumento (New Experimental Trial of "Nature and Culture": Movement from the Multiple Approach)", panelist, the 21st Century Commemoration Business of the Lake Country. [in Japanese]

February 2002 "Seibutsu tayōsei kokka senryaku no fukyū keihatsu shuhō wo megutte (Discussion on the Diffusion Enlightenment Technique Examination Investigation for the National Biodiversity Strategy)", panelist, discussion on the Diffusion Enlightenment Technique Examination Investigation of the National Biodiversity Strategy, the Ministry of the Environment. [in Japanese]

February 2002 "Kyōiku towa nani nano ka (What is the Education)?", lecture, Tsurumi Kikusui Kindergarden. [in Japanese]

February 2002 "Dōbutsu kōdō gaku kara mita keiei senryaku (Management Strategy Viewed from Ethology)", lecture, Society of Gunma Chuo Sinkin Bank. [in Japanese]

December 2001 "Konchū no fushigi; Dōshite anna ni toberu no ka (Wonder Land of Insects: Why Are Insects Flying so Far)?", lecture, Kyoto Municipal Science Center for Youth. [in Japanese]

December 2001 "Hito to kankyō no kakawari ni tsuite (On the Relation between Environment and Human Being)", lecture, National Institute for Land and Infrastructure Management Annual Conference in 2001. [in Japanese]

December 2001 "Iwayuru 'chikyu kankyō' towa nani ka (What is So-Called Environmental Issues)?", principal lecture, the 33rd All Sekisui Technological Symposium. [in Japanese]

December 2001 "Boku ni totte no gakkō: Gakkō ha naze hitsuyō ka (School for Me: Why is School Necessary)?", lecture, "Person-Making" continuous open class lecture. [in Japanese]

Novemvber 2001 "Dōubutsu kōdō gaku to 21 seiki no kyōiku (Ethology and Education in the 21st Century)", lecture, the 5th Meeting of the Conference for the Education in the 21st Century. [in Japanese]

October 2001 "Bunka/kankyō/hito/mirai: Kore kara no chiiki ni tsuite (Culture, Environment, Human Being and

Future: Locality from Now)", School for the adults. [in Japanese]

October 2001 "Kankyō to jinsei: Shinsetsu sōgō chikyū kankyō gaku kenkyusho no shisō to watashi (Environment and My Life: The Idea of New-Constructed Research Institute for Humanity and Nature and Me)", Nikkei Forum Special Meeting. [in Japanese]

October 2001 "Seimei no rekishi naru mono", "Rekishi no hajime: Seimeiron-teki uchūron-teki tatiba kara (History of "Anima")", lecture, Symposium on "History: The Beginning of History: From the Theory of Life and Cosmism", presented by Japanisch-Deutsches Kulturinstitut. [in Japanese]

October 2001 "Dōbutsu kōdō gaku to ningen (Ethology and Human Being)", lecture, Academic Lecture of English Course, Aichi University of Education. [in Japanese]

October 2001 "Ikimono tachi no keiei senryaku (Management strategy of living nature)", Creating the Century: The 29th Educational Meeting for Yamaguchi People, "Aiming for the Amalgamation of Educational Function in Home, School and Locality". [in Japanese]

October 2001 "21 seiki no daigaku zō (Image of University in the 21st Century)", lecture, Symposium for the 100th Anniversary of Modernization in Otani University. [in Japanese]

October 2001 "Inu to neko (Dogs and Cats)", lecture, Youkaichi Citizen University. [in Japanese]

September 2001 "Idenshi to kyōiku no kankei wo megutte (Focusing on Gene and Education)", Open college for people in Aichi Prefecture. [in Japanese]

August 2001 "Idenshi to idenshi puroguramu (Gene and the Program of Gene)", Anjyu-an school. [in Japanese]

August 2001 "Dōbutsu no iroiro na imi (Various Meanings of Animals)", lecture, special program exhibition, Toyohashi Museum of Natural History. [in Japanese]

August 2001 "Ningen towa dōiu dōbutsu ka (What Animals Are Human Beings)?", lecture, Minosei Friend's Annual Meeting. [in Japanese]

July 2001 "Boku ni totte no gakko (School for Me)", lecture, Yokkaichi Citizen University. [in Japanese]

July 2001 "Kaiteki kankyō shin jidai: 21seiki no sugoshikata wo kangaeru (New Age of Pleasant Environment: Creating the Life Style in the 21st Century)", lecture, 17th General Meeting, Japan Primatology Society. [in Japanese]

June 2001 "Dōbutsu kōdō gaku kara mita kosodate" "(Parenting viewed from Ethology)", lecture, Movement Shiga. [in Japanese]

June 2001 "Dōbutsu tachi no keiei senryaku (Economy Strategy for Animals)", lecture, Gifu University of Economics. [in Japanese]

June 2001 "Arayuru inochi to tomo ni ikiru koto (To Live with Any Life on Earth)", three way conversation, River Basin Forum "Playing, Talking, and Looking". [in Japanese]

June 2001 "Chikyū kankyō gaku no kōchiku wo mezashite (Aiming for the Construction of Global Environmental Researches)", lecture, Global Environmental Forum Kansai 100 Persons Committee. [in Japanese]

June 2001 "Ningen ni totte kankyō towa (For the Human Being, What is the Environment)?", lecture, Tottori University of Environmental Studies. [in Japanese]

June 2001 "Nani wo kangaete iru no? Ima no oya, ima no kodomo: Esorojī no tachiba kara mita ningen (What Are You Thinking about, Present Parents and Children?: From Ethological Point of View)", lecture, Heian Jyogakuin St. Agnes' School. [in Japanese]

June 2001 "Iden to gakushū to kyōiku no kankei (The Relation between Inheritance, Learning and Education)", lecture, Research Convention, Guidance Center in Kinki Area. [in Japanese]

May 2001 "Dōbutsu ni okeru kūkan riyō (Space Use in Animals)", lecture, General Meeting of Japan Zoo and Aquarium Association. [in Japanese]

May 2001 "Dōbutsu tachi no chie ni manabu (It Learns in Animals' Wisdom)", lecture, User Symposium of IBM Japan. [in Japanese]

May 2001 "Shizen to ningen no kyōsei wa kanō ka (Is Harmonious Coexistence of Nature and Humans Possible)?", lecture, Energy Conversazione. [In Japanese]

April 2001 "Hito genomu jidai no hakubutsukan (The museum in Human Genome Ages)", lecture, the National Science Museum Seminar. [in Japanese]

AKIMICHI, Tomoya ——— Professor

Born in 1946.

Curriculum Vitae

Academic Career

Department of Anthropology, Faculty of Science, The University of Tokyo, D. Course (1977)
Department of Anthropology, Faculty of Science, The University of Tokyo, M. Course (1974)
Department of Zoology, Faculty of Science, Kyoto University (1968)

Professional Career

Professor, Research Institute for Humanity and Nature (2002)
Head of Department, Department of Cultural Research, National Museum of Ethnology (1999)
Adjunct Professor, School of Advanced Sciences, The Graduate University of Advanced Studies (1998)
Professor, Department of Cultural Research, National Museum of Ethnology (1995)
Professor, 1st Research Department, National Museum of Ethnology (1992)
Adjunct Associate Professor, School of Cultural Research, The Graduate University for Advanced Studies (1988)
Associate Professor, 1st Research Department, National Museum of Ethnology (1987)
Assistant Professor, 2nd Research Department, National Museum of Ethnology (1977)

Higher Degrees

D. Sc. (The University of Tokyo, 1986)
M. Sc. (The University of Tokyo, 1974)

Specialized Fields/Background

Ecological Anthropology, Ethno-Biology

Academic Society Memberships

The Society of Bio-Sophia Studies, The Society of Human and Animals Relations, The Society of Ecological Anthropology

Major Publications

Books

Akimichi, Tomoya
1999 *Nawabari no bunkashi* (Territoriality in Cultural History). Shogakukan. [in Japanese]
Akimichi, Tomoya (ed.)
2002 *Yasei seibutsu to chiiki shakai* (Wildlife and Local Societies). Shōwadō. [in Japanese]
1999 *Shizen wa dareno monoka* (Ownerships of Nature). Shōwadō. [in Japanese]
Akimichi, Tomoya and Nobuhiro Kishigami (eds.)
2002 *Funsō no Umi: Suisansigen kanri no Jinruigaku* (Troubled Seas: Anthropology of Marine Resource Management). Jinbun Shoin. [in Japanese]

Articles

Akimichi, Tomoya
2001 Sora-tobu Nettaigyo to Gurōbarizeishon (Flying Ornamental Fish in Globalization). *Ecosophia* 7: 34-41. [in Japanese]
2001 Kokkyō wo koeru Chō (Butterflies Crossing the Border). *Kikan-Minzokugaku* 97: 96-104. [in Japanese]
2001 Species-Oriented Community-Based Resource Management: A Case Study from Small-Scale Fisheries in the Yaeyama Islands, Southwestern Japan. In J. R. McGoodwin (ed.) *Understanding the Cultures of Fishing Communities: A Key to Fisheries Management and Food Security* (FAO Fisheries Technical Paper 401),

pp.109-131. FAO (Food and Agriculture Organization of the United Nations).

Activities in Academic Societies

October 2001 Umi wo mamoru: Chiiki karano messēji. (Kaiyō kankyō sinpojiumu-sanriku no umi wo kangaeru) (Conserving the Sea: Message from the Local Area. Symposium on Marine Environment: Thinking Sanriku Sea) (United Nations University, Institute of Oceanography, University of Tokyo, and Iwate Prefecture) [in Japanese]

July 2001 Sinrin, yaseidōbutsu, bunka wo kangaeru: Chiiki kara no repōto. Dai 279 kai Minpaku Zeminaru. (Forest, Wildlife and Culture: Report from Local Areas. The 279th Minpaku Seminar) [in Japanese]

Awards

Daidō-Seimei Chiiki-Kenkyu Shōrei-Shō in 1998 (Award for Promotion of Area Studies by Daidō Life Insurance Company in 1998).

Research Activities

Field Research in Japan

December 2001 Yaeyama Archipelago (Degradation of Coral Reefs and Its Changing Process)

Field Research in Foreign Countries

January 2002 Thailand (Research on the Eco-History of Environmental Use in Northern Thailand)

August 2001 Lao PDR and Thailand (Ethno-Biological Research of Chicken-Human Relationships in the Mekong Watershed)

April 2001 China (Biological Study on the Junglefowl in the Southwestern Part of Yunnan Province, China)

Supervision and Host (Number of DC Students and JSPS Research Fellows)

Special researcher from Japan Society for the Promotion of Science (1)

Social Activities and Public Lectures

Public Lectures

January 2002 Ajia monsūn chiiki no nagisa to hitobito no kurashi: Kaiyō-minzokugaku kara Awase no higata wo kangaeru (Coastal Zones in Asia Monsoon Region and People's Life: Thinking Awase Tidal Flat from Maritime Ethnology). Shinpojiumu: Nagisa no eko-tsūrizumu to chiiki sinkō: Awasehigata no sunōkeringu wo reito shite (Symposium: Eco-Tourism in the Littoral Zone and Local Development: A Case of Snorkeling in Awase Tidal Flat). Association for Protection of Awase Tidal Flat and Study Group of Southern Izu Marine Life. [in Japanese]

November 2001 Hito to kujira/jugon tono kakawari: Seitai to shōchō. (Relationships between Human and Cetaceans: Ecology and Symbol) Jugong Conservation Campaign Center [in Japanese]

FUKUSHIMA, Yoshihiro ——— Professor

Born in 1942.

Curriculum Vitae

Academic Career

Department of Forestry, Faculty of Agriculture, Kyoto University (1966)

Professional Career

Professor, Research Institute for Humanity and Nature (2001)

Professor, Institute for Hydrospheric-Atmospheric Sciences, Nagoya University (1994)

Associate Professor, Kyoto University (1989)
Instructor of Kyoto University (1966)

Higher Degree

D. Agri. (Kyoto University, 1981)

Fields of Specialization/ Background

Mountain Hydrology, Forest Hydrology, Eco-Hydrology

Academic Society Memberships

Japan Society of Hydrology and Water Resources, The Japanese Society of Snow and Ice, The Meteorological Society of Japan

Major Publications

Books

Ma, Xieyao and Y. Fukushima

2002 Numerical Model of River Flow Formation from Small to Large Scale River Basin. In V. P. Singh and D. K. Frever (eds.) *Mathematical Models of Large Watershed Hydrology*, pp.433-470. Water Resources Publications.

Fukushima, Y.

2000 Hydrological Processes in Headwater and the Evaluation of Reforestation. In Y. Fukushima (ed.) *Hydrology Related to Headwater Management* (The Textbook for the 10th IHP Training Course in 2000), pp.11-28. IHAS, Nagoya University.

Fukushima, Y.

1999 *Mizu, busshitsu fukugōtai toshite no seitaikei* (Eco-System as a Complexity Including Water and Materials) (Series of Global Environmental Sciences 4), pp.89-122. Iwanami Publication Ltd. [in Japanese]

Articles

Sirisampan, S., T. Hiyama, A. Takahashi, T. Hashimoto and Y. Fukushima

2003 Rakuyō, jōryoku kōyoju kara kōsei sareru nijirin no kikō kondakutansu no nichi henka to kisetsu henka (Diurnal and Seasonal Variations of Stomatal Conductance in a Secondary Temperate Forest). *Journal of Japan Society of Hydrology and Water Resources* (Suimon, mizu shigen gakkai shi) 16(2): 113-130. [in Japanese with English Abstract]

Ma, Xieyao and Y. Fukushima

2002 A Numerical Model of the River Freezing Process and Its Application to the Lena River. *Journal of Hydrological Processes* 16: 2131-2140.

Ohta, T., T. Hiyama, H. Tanaka, T. Kuwada, T. C. Maxmov, T. Ohata and Y. Fukushima

2001 Seasonal Variation in the Energy and Water Exchanges above and below a Larch Forest in Eastern Siberia. *Journal of Hydrological Processes*. 15. 1459-1476.

Ma, Xieyao, Y. Fukushima, T. Hiyama, T. Hashimoto and T, Ohata

2000 A Macro-Scale Hydrological Analysis of the Lena River Basin. *Journal of Hydrological Processes* 14: 639-651.

Fukushima,Y. and X. Ma

1999 Attained Results and Unresolved Issues Related Runoff Formation in a Cold Region through the Analysis of Lena River Basin. *Proceedings of GAME-MAGS International Workshop*, pp.130-133.

Ma, Xieyao, Y. Fukushima, T. Hiyama, T. Hashimoto and T. Nakashima

1999 Application of a Simple SVAT Model in a Mountain Catchment under Temperate Humid Climate. *Journal of Japan Society of Hydrology and Water Resources* 12(4): 285-294.

Liu, Jingshi, Y. Fukushima and T. Hiyama

1999 Hydrological Response of Meltwater from Glacier Covered Mountain Basins to Climate Change in Northwest China. IAHS Publication 256: 193-208.

Ma, X., T. Hiyama, Y. Fukushima and T. Hashimoto

1998 A Numerical Model of the Heat Transfer for Permafrost Regions. *Journal of Japan Society of Hydrology and Water Resources* 11(4): 346-359.

Tanaka, H., Y. Fukushima, C. Li, J. Kubota, T. Ohta, M. Suzuki and K. Kosugi

1998 Water Discharge Property of Evergreen Broad-leaved Forest Basin: Jiulianshan, Jangxi Province, China. *Journal of Japan Society of Hydrology and Water Resources* 11(3): 240-252.

Activities in Academic Societies

August 1998 - July 2000 Vice president of Japanese Society of Hydrology and Water Resources

August 1996 - July 1998 Chief editor of Journal of Japanese Society of Hydrology and Water Resources

Research Activities

Field Research in Foreign Countries

July - August 2003 Inspect to upstream of the Yellow River, China

Social Activities and Public Lectures

Social Activities

March 1995 - Sub-committee member of Natural Science, UNESCO Japan Domestic Committee

September 1999 - October 2003 Committee member of Global Environmental Sciences, Science Council of Japan

Janunary 1997 - December 2002 Science steering committee member of IGBP/BAHC

October 1997 - October 2000 Chair of Hydrological Committee and member of Geophysical Committee, Science Council of Japan

Public Lectures

February 2003 "Toward Material Cycle from Water Cycle", Workshop on regeneration of metropolis and its drainage area to live together symbiotically, Hatsumei Kaikan, Tokyo.

October 2002 "Forest Ecosystem and Hydrological Cycle", Fifth Seminar on Headwater, Diamond Hotel, Tokyo.

November 2002 "Climate Study of Asian Monsoon via Glaciological Field Survey in Nepal Himalaya", Second seminar on both field and experimental Sciences, Sanjyo Kaikan, University of Tokyo, Tokyo.

March 2002 "Interaction of Climate and Vegetation in Siberia", Special lecture, Ehime University, Matsuyama.

HAYASAKA, Tadahiro — Professor

Born in 1959.

Curriculum Vitae

Academic Career

Department of Geophysics, Graduate School of Science, Tohoku University, D. Course (1984)

Department of Geophysics, Graduate School of Science, Tohoku University, M. Course (1982)

Professional Career

Professor, Research Institute for Humanity and Nature (2001)

Professor, National Institute of Polar Research (1999)

Professor, Graduate School of Science, Tohoku University (1999)

Associate Professor, Faculty of Science, Tohoku University (1994)

Assistant Professor, Faculty of Science, Tohoku University (1990)

Research Fellow, Japan Society for the Promotion of Science (1988)

Higher Degrees

Dr. Sc. (Tohoku University, 1988)

M. Sc. (Tohoku University, 1984)

Fields of Specialization / Background

Meteorology, Atmospheric Physics

Academic Society Memberships

The Meteorological Society of Japan, Japan Association of Aerosol Science and Technology

Major Publications

Books

Sasano, Y., J. Wang and T. Hayasaka (ed.)

2001 *Optical Remote Sensing of the Atmosphere and Clouds II* (Proceedings of SPIE Volume 4150). 430pp.

Hayasaka, T., D. L. Wu, Y. -Q. Jin and J. -S. Jiang (ed.)

1998 *Microwave Remote Sensing of the Atmosphere and Environment* (Proceedings of SPIE Volume 3503). 454pp.

Articles

Iwabuchi, H. and T. Hayasaka

2002 Effects of Cloud Horizontal Inhomogeneity on the Optical Thickness Retrieved from Moderate-Resolution Satellite Data. *Journal of Atmospheric Sciences* 59: 2227-2242.

2001 Cloud Inhomogeneity Effect on the Retrieval of Cloud Optical Thickness from Satellite Measurement. In Y. Sasano, J. Wang and T. Hayasaka (eds.) *Optical Remote Sensing of the Atmosphere and Clouds II* (Proceedings of SPIE Volume 4150), pp.330-338.

Hayasaka, T. and H. Iwabuchi

2001 Combined Measurements of Cloud Using Satellites, Aircraft and Groundbased Instruments. In Y. Sasano, J. Wang and T. Hayasaka (eds.) *Optical Remote Sensing of the Atmosphere and Clouds II* (Proceedings of SPIE Volume 4150), pp.235-242.

Hayasaka, T.

2001 Relationship between Human Activities and Emissions of Aerosols and Greenhouse Gases in Asian Region. *Proceedings of the 4th APEX International Workshop* (26-28 September 2001, Kyoto, Japan), pp.6-9.

Asuma, Y., Y. Inoue, K. Kikuchi, M. Kajikawa, N. Sato and T. Hayasaka

2000 Wintertime Precipitation Behavior in the Western Canadian Arctic Region. *Journal of Geophysical Research* 105: 14927-14939.

Kuji, M., T. Hayasaka, N. Kikuchi, T. Nakajima and M. Tanaka

2000 The Retrieval of the Optical Thickness and Effective Particle Radius of Low-Level Marine Clouds by NOAA/AVHRR Data. Journal of Applied Meteorology 39: 999-1016.

Hayasaka T., H. Iwabuchi and N. Kikuchi

2000 Evaluation of Satellite Remote Sensing of Cloud. In H. Kumagai, H. Kuroiwa and H. Okamoto (eds.) *Proceedings of the First International Workshop on Spaceborne Cloud Profiling Radar* (24-26 January 2000, Tsukuba, Japan), pp.95-98.

Hayasaka, T., Y. Meguro, Y. Sasano and T. Takamura

1999 Optical Properties of Aerosols Derived from Simultaneous Measurements with Lidar, Sunphotometer and Aureolemeter. *Applied Optics* 38: 1630-1635.

Ishida, H., T. Hayasaka, and M. Tanaka

1998 Retrieval of Cloud Physical Parameters from Ground Based Observations of Microwave Atmospheric Radiation and Transmitted Solar Radiation. In T. Hayasaka, D. L. Wu, Y. -Q. Jin and J. -S. Jiang (eds.) *Microwave Remote Sensing of the Atmosphere and Environment* (Proceedings of SPIE Volume 3503), pp.414-422.

Hayasaka, T. H. Murata, B. Zhao, Y. Zhu and W. Li

1998 Rainfall Distribution over Asian Continent Retrieved from SSM/I Data. In T. Hayasaka, D. L. Wu, Y. -Q. Jin and J. -S. Jiang (eds.) *Microwave Remote Sensing of the Atmosphere and Environment* (Proceedings of SPIE Volume 3503), pp.108-114.

Ishida, H., T. Hayasaka, M. Kajikawa, K. Kikuchi, H. Uyeda, Y. Asuma and Y. Inoue
1998 The Observations of Liquid Water, Water Vapor, and Downward Flux of Infrared Radiation in the Arctic Region with a Microwave Radiometer and a Pyrgeometer. Proceedings of NIPR Symposium on Polar Meteorology and Glaciology 12, pp.10-18.
Hayasaka, T., Y. Meguro, Y. Sasano and T. Takamura
1998 Stratification and Size Distribution of Aerosols Retrieved from Simultaneous Measurements with Lidar, Sunphotometer and Aureolemeter. *Applied Optics* 37: 961-970.

Activities in Academic Societies

2001 to present IAMAS International Radiation Commission Member
2001 to present WCRP GEWEX Radiation Panel Member
1997-2001 WMO GAW Aerosol Scientific Advisory Group Member
1996 to present Editorial Board Member of "Kishou Kenkyu Note", the Meteorological Society of Japan
1996-2000 Editorial Board Member of Journal of the Meteorological Society of Japan, the Meteorological Society of Japan

Social Activities and Public Lectures

Public Lectures

July 2002 "Chikyū ondanka mondai ni tsuite (On Global Warming Issues)", presented at the meeting held by Kitakatsuragi County Office, "Mameyama no sato", Kaaicho, Nara.
October 2001 "Eisei de hakaru kumo (Satellite Measurements of Clouds)", presented at the16th "Daigaku to kagaku (University Science)" Symposium, Tokyo.

NAKANISHI, Masami — Professor

Born in 1937.

Curriculum Vitae

Academic Career

Graduate School of Science, The University of Tokyo, D. Course (1968)
Graduate School of Science, The University of Tokyo, M. Course (1964)
Faculty of Science, Tokyo University of Education (1962)

Professional Career

Professor, Research Institute for Humanity and Nature (2001)
Emeritus Professor, Kyoto University (2001)
Professor, Center for Ecological Research, Kyoto University (1995)
Associate Professor, Center for Ecological Research, Kyoto University (1991)
Assistant Professor, Ohtsu Hydrobiological Station, Faculty of Science, Kyoto University (1968)

Higher Degrees

D. Sc. (The University of Tokyo, 1973)
M. Sc. (The University of Tokyo, 1964)

Fields of Specialization / Background

Aquatic Ecology, Limnology

Academic Society Memberships

The Ecological Society of Japan, the Japanese Society of Limnology, the Botanical Society of Japan, the Plankton Society of Japan, Japan Isotope Association, American Society of Limnology and Oceanography

Major Publications

Books

Yamada, Y. and M. Nakanishi

1999 Chiiki-kaihatsu, toshika to mizu-busshitsu junkan no henka (Changes in Water and Matter Cycles Related to Local Development and Urbanization). In E. Wada and T. Yasunari (Eds.) *Iwanami-kōza chikyu kankyōgaku 4: Mizu-busshitsu junkankei no henka* (Changes in Water and Matter Cycles' System) pp.229-265. [In Japanese]

Articles

Genkai-Kato, M., T. Sekino, T. Yoshida, H. Miyasaka, T. V. Khodzher, O. A. Belykh, N. G. Melnik, Z. Kawabata, M. Higashi and M. Nakanishi

2002 Nutritional Diagnosis of Phytoplankton in Lake Baikal. *Ecological Research* 17: 135-142.

Nozaki, K., H. Morino, H. Munehara, V. G. Sidekeva, K. Nakai, M. Yamauchi, O. M. Kozhova and M. Nakanishi

2002 Composition, Biomass and Photosynthetic Activity of the Benthic Algal Communities in a Littoral Zone of Lake Baikal in Summer. *Limnology* 3: 175-180.

Gurung, T. B., J. Urabe, K. Nozaki, C. Yoshimizu and M. Nakanishi

2002 Bacterioplankton Production in a Water Column of Lake Biwa. *Lakes and Reservoirs: Research and Management* 7: 317-323.

Yoshimizu, C., T. Yoshida, M. Nakanishi and J. Urabe

2001 Effects of Zooplankton on the Sinking Flux of Organic Carbon in Lake Biwa. *Limnology* 2: 37-43.

Nakanishi, M., K. Nozaki, M. Kagami and H. Kohmatsu

2001 Biwako no kinkyō: Shokubutsu purankuton gunshū (Recent Status of Lake Biwa on the Basis of Phytoplankton Communities). *Oceano-Chemistry* 14: 104-111. [In Japanese]

Gurung, T. B., J. Urabe and M. Nakanishi

2000 Seasonal and Vertical Difference in Negative and Positive Effects of Grazers on Heterotrophic Bacteria in Lake Biwa. *Limonology and Oceanography* 45: 1689-1696.

Urabe, J., T. B. Gurung, T. Yoshida, T. Sekino , M. Nakanishi, M. Maruo and E. Nakayama

2000 Diel Changes in Phagotrophy by *Cryptomonas* in Lake Biwa. *Limonology and Oceanography* 45, 1558-1563.

Genkai-Kato, M., K. Nozaki, H. Mitsuhashi, Y. Kohmatsu, H. Miyasaki and M. Nakanishi

2000 Push-up Response of Stonefly Larvae in Low-Oxygen Conditions. *Ecological Research* 15: 175-179.

Urabe, J., T. Sekino, K. Nozaki, A. Tuji, C. Yoshimizu, M. Kagami, T. Koitabashi, T. Miyazaki and M. Nakanishi

1999 Light, Nutrients and Primary Productivity in Lake Biwa: An Evaluation of the Current Ecosystem Situation. *Ecological Research* 14: 233-242.

Gurung, T. B., J. Urabe and M. Nakanishi

1999 Regulation of the Relationship between Phytoplankton *Scenedesmus acutus* and Heterotrophic Bacteria by the Balance of Light and Nutrients. *Aquatic Microbial Ecology* 17: 27-35.

Nakanishi, M., T. Sekino, T. Kimoto, R. Tsuda and M. Kumagai

1999 A Hypothesis on Formation of the Subsurface Chlorophyll Maximum Observed in Lake Biwa in September of 1994. *Japanese Journal of Limnology* 60: 125-137.

Nakanishi, M.

1999 Biwako seibutsu-gunshu sanjū nen no hensen (Changes in Bio-Communities of Lake Biwa for the Past Thirty Years). *Oceano-Chemistry* 12: 82-86. [In Japanese]

Ishida, Y., H. Ohtani, S. Tsuge, T. Sekino, M. Nakanishi and T. Kimoto

1998 Analysis of Lipid Components in Zooplankter Individuals by Reactive Pyrolysis-Gas Chromatography in the Presence of Organic Alkali. *Biological Sciences in Space* 12: 131-135.

Ishida, Y., H. Yokoi, S. Isomura, H. Ohtani, S. Tsuge, T. Sekino, M. Nakanishi and T. Kimoto

1998 Correlation Analysis between Fatty Acid Compositions of Zooplankter Individuals, Fed on Different Phytoplankton Species by Means of Pyrolysis-Gas Chromatography Combined with On-line Methylation. *Journal Chromatography* 716B: 39-45.

Research Activities

Field Research in Foreign Countries

June and August 2001 Russia (Research on plankton community structures in Lake Baikal)

Supervision and Host (Number of DC Students and JSPS Research Fellows)

Number of DC students (1998-2001): 3 as host and 7 as sub-host

JSPS Research Fellows (2001-2002): 1

Social Activities and Public Lectures

Academic and Public Lectures

7 and 8 December 2002 "Sekai saidai no kodaiko: Baikaru-ko no seibutsu tayōsei to sono dainamizumu (Biodiversity and Its Dynamism in the Biggest Ancient Lake Baikal)", Dai 17 kai "daigaku to kagaku" kōkai shinpojiumu: Seibutsu tayōsei no sekai (17th Symposium of "University and Sciences": The World of Biodiversity), Imuzu Hall, Fukuoka City.

2-7 September 2002 "A Comparison of Plankton Community Structures between Lake Baikal and Lake Biwa", 3rd Conference on Speciation in Ancient Lakes at Irkutsk Limnological Institute, Russia.

NAKASHIZUKA, Tohru (ASANO, Toru) — Professor

Born in 1956.

Curriculum Vitae

Academic Career

Graduate School of Science, Osaka City University, D. Course (1983)

Graduate School of Science, Chiba University, M. Course (1980)

Department of Biology, Faculty of Science, Chiba University (1978)

Professional Career

Guest Professor, Kanazawa University (2002)

Professor, Research Institute for Humanity and Nature (2001)

Professor, Center for Ecological Research, Kyoto University (1995)

Senior Researcher, Forestry and Forest Products Research Institute (1994)

Senior Researcher, Japan International Research Center for Agricultural Sciences (1993)

Senior Researcher, Tropical Agricultural Research Center (1992)

Senior Researcher, Forestry and Forest Products Research Institute (1989)

Researcher, Forestry and Forest Products Research Institute (1985)

Higher Degrees

D. Sc. (Osaka City University, 1983)

M. Sc. (Chiba University, 1980)

Fields of Specialization / Background

Plant Ecology, Forest Ecology

Academic Society Memberships

Ecological Society of Japan, The Botanical Society of Japan, Japanese Forestry Society, International Association of Vegetation Science, International Association for Landscape Ecology, American Society of Ecology, Japanese Association of Historical Botany, Japan Society of Tropical Ecology, The Japanese Society of Forest Environment, Ecology and Civil Engineering Society

Major Publications

Books

Nakashizuka, T. and Y. Matsumoto (eds.)

2002 Diversity and Interaction in a Temperate Forest Community, Ogawa Forest Reserve of Japan. *Springer* (Ecological Studies 158), pp.201-213. Tokyo.

Box, E. O., T. Nakashizuka and A. Fischer (eds.)

2002 *Dynamics of Temperate Forests* (Special Features in Vegetation Science). Opulus Press.

Nakashizuka, T. and T. Kamitani

2001 Shokusei kaiseki ni yoru usagi no esagensonryō suitei no kokoromi (Estimation of Feed Biomass of Hare by Analyzing Vegetation Height). In Manabu Abe (ed.) *Kishō mōkinrui no Kenkyū no genjō to atarasii chosahō* (Study Situation and New Methodology for Rare Raptors), pp.148-155. [in Japanese]

Nakashizuka, T.

1998 Hogorin seido (Forest Reserves). *Shizen-hogo handobukku* (Handbook for Nature Conservation), pp.81-88. Asakura Shoten. [in Japanese]

1998 Monsūn azia no seibutsu tayōsei (Biodiversity in Monsoon Asia). In Tamiji Inoue and Eitaro Wada (eds.) *Chikyū kankyō gaku* (Global Environment Science), pp.133-159. Iwanami. [in Japanese]

Articles

Fukamachi, K., K. Oku and T. Nakashizuka

2002 The Change of Satoyama Landscape and Its Causality in Kamiseya District, Kyoto Prefecture, Japan, between 1970-1995. *Landscape Ecology* 16: 703-717.

Shibata, M., H. Tanaka, S. Iida, S. Abe, T. Masaki, K. Niiyama and T. Nakashizuka

2002 Synchronized Annual Seed Production by the 16 Principal Tree Species in a Temperate Deciduous Forest, Japan. *Ecology* 83: 1727-1742.

Kenta, T., K. K. Shimizu, M. Nakagawa, K. Okada, A. A. Hamid and T. Nakashizuka

2002 Multiple Factors Contribute to Outcrossing in a Tropical Emergent *Dipterocarpus tempehes*, Including a New Pollen-Tube Guidance Mechanism for Self-Incompatibility. *American Journal of Botany* 89: 60-66.

Isagi, Y., T. Kenta and T. Nakashizuka

2002 Microsatellite Loci for a Tropical Emergent Tree, *Dipterocarpus tempehes* V. SI. (Dipterocarpaceae). *Molecular Ecology Note* 2: 12-13.

Kurokawa, H., T. Yoshida, T. Nakamura, J. Lai, and T. Nakashizuka

2002 The Age of a Tropical Rain Forest Canopy Tree, Borneo Ironwood (Eusideroxylon zwagerii Teijim & Binnend), Determined by ^{14}C Dating. *Journal of Tropical Ecology* 19: 1-7.

Masaki, T. and T. Nakashizuka

2002 Seedling Demography of *Swida controversa*: Effect of Light and Distance to Conspecifics. *Ecology* 83: 3497-3507.

Abe, M., H. Miguchi and T. Nakashizuka

2001 An Interactive Effect of Simultaneous Death of Dwarf Bamboo, Canopy Gap, and Predatory Rodents on Beech Regeneration. *Oecologia* 127: 281-286.

Nakashizuka, T.

2001 Species Coexistence Research in Temperate, Mixed Deciduous Forests. *Trends in Ecology & Evolution* 16: 205-210.

Wall, D., H. Mooney, G. Adam, G. Boxshall, A. Dobson, T. Nakashizuka, J. Seyani, C. Samper and J. Sarukhan

2001 An International Biodiversity Observation Year. *Trends in Ecology and Evolution* 16: 52-54.

Nakagawa, M., K. Tanaka, T. Nakashizuka, T. Ohkubo, T. Kato, T. Maeda, M. Sato, H. Miguchi, H. Nagamasu, K. Ogino, S. Teo, A. A. Hamid and H. Lee

2000 Impact of Severe Drought Associated with the 1997-1998 El Nino in a Tropical Forest in Sarawak. *Journal of Tropical Ecology* 16(3): 355-367.

Nakashizuka, T., J. Izaki, K. Matsui and T. Nagaike

2000 'Agariko' buna rin no seiritsu ni tuite (Establishment of Pollard-Type Forest of Beech). *Journal of Japanese Forestry Society* 82: 171-178. [in Japanese with English summary]

Yamashita, M., T. Yoshida, M. Yoshimura and T. Nakashizuka

1999 Application of Topographic Animation for Solar Energy Amount. *International Archives of Photogrammetry and Remort Sensing* XXXII-Part 5-3W12: 203-206.

Akashi, N. and T. Nakashizuka

1999 Effect of Bark-Stripping by Sika Deer (*Cervus nippon*) on Population Dynamics of a Mixed Forest in Japan. *Forest Ecology and Management* 113: 75-82.

Sakai, T., H. Tanaka, M. Shibata, W. Suzuki, H. Nomiya, T. Kanazashi, S. Iida and T. Nakashizuka

1999 Riparian Disturbance and Community Structure of a Quercus-Ulmus Forest in Central Japan. *Plant Ecology* 140: 99-109.

Homma, K., N. Akashi, T. Abe, M. Hasegawa, K. Harada, Y. Hirabuki, K. Irie, M. Kaji, H. Miguchi, N. Mizoguchi, H. Mizunaga, T. Nakashizuka, S. Natsume, K. Niiyama, T. Ohkubo, S. Sawada, H. Sugita, S. Takatsuki and N. Yamanaka

1999 Geographical Variation in the Early Regeneration Process of Siebold's Beech (*Fagus crenata* Blume) in Japan. *Plant Ecology* 140: 129-138.

Nagaike, T., T. Kamitani and T. Nakashizuka

1999 The Effect of Shelterwood Logging on the Diversity of Plant Species in a Beech (*Fagus crenata*) Forest in Japan. *Forest Ecology and Management* 118: 161-171.

Marod, D., U. Kutintara, C. Yarwudhi, H. Tanaka and T. Nakashizuka

1999 Structural Dynamics of the Natural Mixed Deciduous Forest, Kanchanaburi, Western Thailand. *Journal of Vegetation Science* 10: 777-786.

Sakai, S., K. Momose, T. Yumoto, T. Nagamitsu, H. Nagamasu, A. A. Hamid, T. Nakashizuka and T. Inoue

1999 Plant Reproductive Phenology over Four Years Including an Episode of General Flowering in a Lowland Dipterocarp Forest, Sarawak, Malaysia. *American Journal of Botany* 86: 1414-1436.

Hoshizaki, K., W. Suzuki and T. Nakashizuka

1999 Evaluation of Secondary Dispersal in a Large Seeded Tree *Aesculus turbinata*: A Test of Directed Dispersal. *Plant Ecology* 144: 167-176.

Masaki, T., H. Tanaka, H. Tanouchi, T. Sakai and T. Nakashizuka

1999 Structure, Dynamics and Disturbance Regime of Temperate Broad-Leaved Forests in Japan. *Journal of Vegetation Science* 10: 805-814.

Abe, S., H. Tanaka and T. Nakashizuka

1998 Effect of Canopy Gaps on the Demography of the Sub-canopy Tree Species, *Styrax obassia*. *Journal of Vegetation Science* 9: 787-796.

Tanaka, H., M. Shibata and T. Nakashizuka

1998 Evaluation of the Role of Wind Dispersal in Tree Population Dynamics by Using a Mechanistic Approach. *Journal of Sustainable Forestry* 6: 155-174.

Masaki, T., H. Tanaka, M. Shibata and T. Nakashizuka

1998 The Seed Bank Dynamics of *Cornus controversa* and Their Role in Regeneration. *Seed Science Research* 8: 53-63.

Nakashizuka, T., C. D. Oliver, A. Osawa and P. S. White

1998 Special Issue: Forestry and Forest Products Research Institute International Workshop, Tsukuba, Japan September 7-9, 1993. *Journal of Sustainable Forestry* 6 (1/2 & 3/4).

Iida, S. and T. Nakashizuka

1998 Spatial and Temporal Dispersal of *Kalopanax pictus* Seeds in a Temperate Deciduous Forest, Central Japan. *Plant Ecology* 135: 243-248.

Activities in Academic Societies

Associate Editor of EcoScience (Canada, 2003-), Science Committee of DIVERSITAS (2002-), Executive Committee of Ecological Society of Japan (2002-), Steering Committee of Japanese Branch of International Society of Landscape Ecology (2001-), Japanese Technical Committee of GBIF (2000-), Steering Committee of Global Canopy Program (1999-), Editorial Board of the Journal of Plant Science (1999-), Secretary General of DIVERSITAS Western Pacific Asia (1998-2001), Steering Committee of Ecological Society of Japan (1998-2001), Editorial Board of the Journal of Japan Forestry Society (1998), Editorial Board of Ecological Research (1998-1999), Steering Committee of Japan Society of Tropical Ecology (1998-),

Oral Presentations

2002 "Ohdai-ga-hara buna-urajiromomi rin ni okeru 20 nenkan no sinrin dōtai ni miru sika no eikyō (Effect of Deer on Twenty Years of Forest Dynamics)", T. Nakashizuka, N. Fujimori, M. Nakagawa, H. Kurokawa and A. Ushimaru, Annual Meeting of Japan Forestry Society No.113. [in Japanese]

2002 "Tropical Forest Canopy Biology and Biodiversity in Lambir Hills National Park", T. Nakashizuka, 4th Asian Science Technology Congress 2002, Kuala Lumpur, Malaysia.

2002 "Long-Term Researches on Tropical Forest Canopy in Lambir Hills National Park, Sarawak", T. Nakashizuka and L. Chong, Regional Conference on Long-Term Ecological Research (LTER) in East Asia.

2002 "Studies on Canopy Biodiversity of a Tropical Rain Forest in Lambir Hills National Park", T. Nakashizuka and L. Chong, 11th International Workshop of BIO-REFOR, Seoul, Korea.

Nakashizuka, T. and T. Kamitani

2001 "Kūchū shashin wo motiita nousagi no esa gensonryō oyobi sono kūkan bunpu no suitei (Feed Amount of Hare and Its Spatial Distiribution Estimated by Aerial Photographs)", T. Nakashizuka and T. Kamitani, Annual Meeting of Ecological Society of Japan, Kumamoto. [in Japanese]

Awards

Award of Japan Forestry Society (2003)

Research Activities

Field Research in Japan

Kitaibaraki, Ibaraki: Researches on dynamics of trees and forests (3 times a year)

Togakushi, Nagano: Research on beech regeneration (one or twice a year)

Towada, Aomori: Research on beech forest dynamics (one or twice a year)

Nishimeya, Aomori: Monitoring of beech forest dynamics (one or twice a year)

Ohdai, Nara: Effect of deer on forest regeneration (8 times a year)

Field Research in Foreign Countries

Kanchanaburi, Thailand: Study on the dynamics of seasonal tropical forest (once a year)

Sarawak, Malaysia: Canopy processes of tropical rain forest (4 times a year)

Supervision and Host (Number of DC Students and JSPS Research Fellows)

Special Collaborative Researcher of RIHN (6 in 2001, 5 in 2002)

Social Activities and Public Lectures

Social Activities

Consulting Committee, Nature Conservation Society Japan (2002), Working Group for GMO, Forest Agency Japan (2001-2002), Investigation Committee for Monitoring of Shirakami World Natural Heritage (2001-2002), Working Group for Biodiversity, Kansai Forum for Environment (2001-), Committee for Re-vegetation for the San-nai Maruyama Ruin (2001-2002)

Public Lectures

March 2003 "Nettairin no seibutu tayōsei: Rinkan to iu shirarezaru sekai (Biodiversity in Tropical Rainforest:

Forest Canopy as a Frontier)", Japan Society of Science Promotion, Fukuoka.

November 2002 "Nettairin no rinkan ni okeru seitaiken-kiken sōgōsayō no mekanizumu no kaimei (Interactive Mechanisms between Eco- and Atmospheres at the Canopy of Tropical Rainforest)", Japan Science and Technology Cooporation, Tokyo.

NAKAWO, Masayoshi ——— Professor

Born in 1945.

Curriculum Vitae

Academic Career

Department of Geophysics, Faculty of Science, Hokkaido University, D. Course (1977)
Department of Geophysics, Faculty of Science, Hokkaido University, M. Course (1974)
Department of Physics, Faculty of Science, Kyoto University (1969)

Professional Career

Professor, Research Institute for Humanity and Nature (2001)
Associate Professor, Research Institute for Humanity and Nature (2001)
Adjunct Professor, Hunan Normal University (1996)
Associate Professor, Institute for Hydrospheric-atmospheric Sciences, Nagoya University (1993)
Head of Department, Second Department, Nagaoka Institute of Snow and Ice Studies, National Institute for Disaster Prevention and Earth Sciences (1987)
Associate Professor, Department of Applied Physics, Faculty of Engineering, Hokkaido University (1987)
Assistant Professor, Department of Applied Physics, Faculty of Engineering, Hokkaido University (1981)
Research Associate, Division of Building Research, National Research Council of Canada (1977)
Assistant Professor, Institute of Low Temperature Science, Hokkaido University (1970)

Higher Degrees

D. Sc. (Hokkaido University, 1977)
M. Sc. (Hokkaido University, 1974)

Fields of Specialization / Background

Glacio-Climatology, Snow Hydrology

Academic Society Memberships

Japanese Society of Snow and Ice, Japan Society of Hydrology and Water Resources, Meteorological Society of Japan, International Glaciological Society, International Association of Hydrological Sciences, American Geophysical Union

Major Publications

Books

Nakawo, M.
2000 *Water in Arid Terrain Research*. Nagoya University.
Nakawo, M., C. F. Raymond and A. Fountain
2000 *Debris-Covered Glaciers*. International Association of Hydrological Sciences.
Nakawo, M and N. Hayakawa
1998 *Snow and Ice Science in Hydrology*. UNESCO & Nagoya University.
1998 *Guide to Observations on Snow Hydrology*. UNESCO & Nagoya University.

Articles

Nakawo, Masayoshi
2002 Isotopes in Snow and Ice. In N. Yoshida (ed.) *Hydrogen and Oxygen Isotopes in Hydrology*, pp.57-75, UNESCO & Nagoya University.

2000 Isotope Studies of a Snow Layer in a Temperate Region: Isotope Balance and Temporal Change. In T. Hondoh (ed.) *Physics of Ice Core Record*, pp.141-151, Hokkaido University Press.

Activities in Academic Societies

2002 Organizing Committee member, International Symposium on Disaster Mitigation and Basin-Wide Water Management.

October 2002 "Solid Particle and Environmental Records at a Mountain Glacier in Western China", General Assembly, Japanese Society of Snow and Ice.

February 2002 "Roles of Glaciers in Central Eurasia", Asia CliC Meeting.

September 2000 "Numerical Simulation of Recent Shrinkage of Khumbu Glacier, Nepal Himalayas", International Workshop on Debris-Covered Glaciers (ICSI/IAHS).

Research Activities

Field Research in Japan

February 2001 Nagaoka, Niigata Prefecture (Isotopic fractionation during snowmelt)

March 1998 Moshiri, Hokkaido Prefecture (Snow metamorphism)

Field Research in Foreign Countries

August - September 2002 China (Field investigations on the Oasis Project)

August - September 2001 China (Reconnaissance studies on the Oasis Project)

November 2000 Great Britain, Switzerland, Austria, Germany (Investigations on the research systems and the effort in European countries against the global environmental problems)

May - June 1998 Nepal (Cryosphere research in the Himalayas)

Supervision and Host (Number of DC Students and JSPS Research Fellows)

Supervisor (4), Vice supervisor (2)

Special researcher associated for Center of Excellence (1)

Special researcher from Japan Society for the Promotion of Science (2)

Social Activities and Public Lectures

Social Activities

2002 - present Member, Japan National Committee for Polar Science, Science Council of Japan.

Public Lectures

August 2002 Glaciers, water resources, and people. International Workshop on Tibetan Plateau Institute.

February 2002 Jinruino Katsudoto Mizuno Junkan (Human activities and water circulation) Nagoyadaigaku Tikyumizujunkann Kenkyu Senta Setsuritsu Kinen Koukai Kouenkai (Open Lectures for celebrating the establishment of the Hydrospehic-Atmospheric Research Center, Nagoya University). [in Japanese]

February 2001 New Academic Approach for Global Environmental Problems, Special Lecture in Hunan Normal University.

March 2000 Water in Arid Terrain Research, International IHAS Symposium.

WADA, Eitaro ——————————— Professor

Born in 1939.

Curriculum Vitae

Academic Career

Department of Chemistry, Faculty of Science, Tokyo University of Education, D. Course (1967)

Department of Chemistry, Faculty of Science, Tokyo University of Education, M. Course (1964)
Department of Chemistry, Faculty of Science, Tokyo University of Education (1962)

Professional Career

Professor Emeritus of Kyoto University (2002)
Honorary Professor of the Siberian Branch of Russian Academy of Science (2002)
Professor, Research Institute for Humanity and Nature (2001-)
Director of Center for Ecological Research, Kyoto University (1996-1999)
Professor, Center for Ecological Research, Kyoto University (1991-2001)
Director of Department of Social and Natural Environmental Research, Mitsubishi Kasei Institute of Life Sciences (1989-1991)
Senior Scientist and Chief, Mitsubishi Kasei Institute of Life Sciences (1976-1989)
Research Associate, Department of Marine Biochemistry, Ocean Research Institute, the University of Tokyo (1967-1976)

Higher Degrees

D. Sc. (Tokyo University of Education, 1967)
M. Sc. (Tokyo University of Education, 1964)

Fields of Specialization / Background

Biogeochemistry, Isotope Ecology

Academic Society Memberships

Oceanographic Society of Japan, Japanese Society of Limnology, Geochemical Society of Japan, Ecological Society of Japan, Japanese Society of Soil Sciences and Plant Nutrition

Major Publications

Books

Wada, Eitaro
2002 *Kankyōgaku nyūmon: Chikyu seitaigaku* (Introduction to Geoecology). Iwanami Shoten. [in Japanese]

Wada, Eitaro and Tetsuzo Yasunari (eds.)
1999 *Iwanami kōza chikyu kankyōgaku dai 4 kan: Mizu, bussitsu junkankei no henkan* (Global Environmental Studies Volume 4: Water and Material Cyclings). Iwanami Shoten. [in Japanese]

Inoue, Tamiji and Eitaro Wada (eds.)
1998 *Iwanami kōza chikyu kankyōgaku dai 5 kan: Seibutsu tayōsei to sono hozen* (Global Environmental Studies Volume 5: Biodiversity and Its preservation). Iwanami Shoten. [in Japanese]

Articles

Wada, Eitaro
2003 Mongoru no yūboku to sono jizokusei no jittai: Bussitsu junkan kara mita Mongoru kōgen (Nomadism in Mongolia with Emphasis on Material Cyclings). *Kagaku* (Science) 73(5): 545-548. [in Japanese]
2003 Bussitsu junkan to mizu sigen: Suikei wo chūsin toshite (Material Cyclings and Water Resource with Emphasis on a Watershed). *Enerugī-shigen* (Energy Resource) 24(1): 27-33. [in Japanese]
2001 Antei dōitaihi no riyō (1) Kankyōkagaku: Toku ni suikei ni tsuite (Use of Stable Isotopes in Environmental Sciences with Emphasis on a Watershed). *Radioisotopes* 50: 158S-165S. [in Japanese]

Activities in Academic Societies

November 2003 "Nomadism in Mongolia with Emphasis on Nitrogen Cyclings in the Selenga River Watershed", Mongol Workshop, Otsu, Japan.
November 2002 "New Perspectives in an Integrated Watershed Management", DIVER/DIPWA Joint Symposium "New Frontiers in Biodiversity Science: From Microbes to Landscape", Kyodai Kaikan, Kyoto.
November 2002 Organizer of the International Symposium on "Response of Terrestrial Watershed Ecosystems in Monsoon Asia to Global Change", Kyoto International Conference Hall.

September 2002 "Stable Isotope Ratios in Lake Baikal", third International Symposium on "Speciation in Ancient Lakes", Irkutsuk, Rossia.

April 2002 "Isotope Ecology of Lake Baikal", the General Assembly Meeting of the SB RAS, Nobosibirsk, Russia.

November 2001 "Stable Isotopic Structure of the Pelagic Food Web in Lake Baikal: Its Ecological Implications", Food Web Dynamics and Biogeochemistry in Marine Environments: New Approaches for Exploring Biocomplex Systems, Piazza Omi, Otsu, Japan.

October 2001 "Stable Isotope Ratios in Ecosystems. Analytical Chemistry and Related Fields Session", 27th STT Conference, Lee Garden Plaza Hotel, Narathiwat, Thailand.

July 2001 Poster Presentations of "Intramolecular Stable Isotope Ratios of Dissolved N_2O in Lake Biwa", presented by Narin Boontanon (Japan), Shingo Ueda and Eitaro Wada, and "Natural 13C and 15N Abundance of Field-Collected Fungi and Their Ecological Implications", presented by Ayato Kouzu (Japan), Takahiro Tateishi, Munezo Takahashi and Eitaro Wada, 1st International Symposium on Isotopomers, Yokohama.

Awards

The Miyake Prize from the Association of Geochemistry, Japan. (2002)

Research Activities

Field Research in Japan

May 2002 Shiga Prefecture (Joint meeting and sightseeing in the eastern plane of Lake Biwa)

May 2002 Shiga Prefecture (The eastern plane of Lake Biwa)

July 2002 Shiga Prefecture (Research on water quality in the western plane of Lake Biwa)

August 2002 Kyoto Prefecture (Research on water quality in the Katsura River watershed)

Field Research in Foreign Countries

August 2001 Malaysia (International workshop)

September 2001 Russia (Research on Lake Baikal)

October 2001 Thailand (The 27th National Science and Technology Conference)

February 2002 Russia (Research on Lake Baikal)

April 2002 Russia (Research on Lake Baikal)

July 2002 Mongolia (Research on Selenga River watershed)

September 2002 Russia (SIAL-3 workshop and research on Lake Baikal)

Supervision and Host (Number of DC Students and JSPS Research Fellows)

Special researcher from Japan Society for the Promotion of Science (2)

Other (1)

Social Activities and Public Lectures

Social Activities

April 2002 Meeting member of Council for Science and Technology Policy (CSTP).

April 2002 Member of Advisory Committee, Frontier Research System for Global Change.

April 2002 Member of Advisory Committee, Frontier Observational Research System for Global Change.

April 2001 Member of Advisory Committee, Center for Ecological Research, Kyoto University.

April 2002 Member of Advisory Committee, National Institute of Science and Technology Policy, Ministry of Education, Culture, Sports, Science and Technology.

May 2002 Member of Advisory Committee, Center for Environmental Remote Sensing, Chiba University.

February 2003 Member of Advisory Committee, Global Observation System, Research and Development, Science and Technology, Ministry of Education, Culture, Sports, Science and Technology.

Member of Evaluation Committee for 21 Century COE Program, JSPS (Japan Society for the Promotion of Science).
Member of Advisory Committee, Foundation for Riverfront Improvement and Restoration.

Public Lectures

December 2002 Geo-Ecological Perspective on Life Environment, University Science Open Symposium, Fukuoka Izum Hall.

Editorial Board

A member of Editorial Board for *Isotoper Practice and Environmental Health*, Germany.
A member of Editorial Board for *Science in Hand*, Russian Academy of Sciences, SB, Russia.

BOROVIKOVA, Lyudmila — Visiting Professor

Born in 1940, Uzbekistan.

Curriculum Vitae

Academic Career

Department of Mathematics, Faculty of Mathematics and Mechanics, Tashkent State University, M. Sc. – Full course of Tashkent State University (1969);
Department of Hydrology, Faculty of Geography, Tashkent State University, M. Sc. – Full course of Tashkent State University (1962);

Professional Career

Visiting Professor, Research Institute for Humanity and Nature (2002, April 15 - July 31);
Leading Scientific Investigator – consultant, Central Asian Research Hydrometeorological Institute (2001 - present);
Deputy Director, Central Asian Research Hydrometeorological Institute (1988-2001);
Scientific Secretary, Central Asian Research Hydrometeorological Institute (1983-1988);
Senior Scientific Investigator, Central Asian Research Hydrometeorological Institute (1969-1983);
Scientific Investigator, Central Asian Research Hydrometeorological Institute (1962-1969).

Higher Degrees

Ph. D. (Hydrology, Tashkent State University, 1970)
M. Sc. (Mathematics, Full course of Tashkent State University, 1969)
M. Sc. (Hydrology, Full course of Tashkent State University, 1962)

Specialized Fields / Background

Mathematical Modeling in Hydrology, Snow Cover in Mountains, Ecology

Academic Society Membership

The Geographical Society of Uzbekistan, International Association of Hydrological Sciences

Major Publication

Books

Year of publication Original Russian title (English Translation). Publisher.

1972 Математическое моделирование процесса стока горных рек (Mathematical modeling of runoff formation for mountain rivers). Leningrad, Gidrometeoizdat. (in Russian, with co-authors)

1977 Статистические методы прогноза стока горных рек (Statistical methods of mountain rivers runoff forecasting). Leningrad, Gidrometeoizdat. (in Russian, with co-authors)

Articles

2001 Современные методы мониторинга и прогнозирования засухи (Modern methods of drought monitoring and forecasting). В книге: *Проблемы опустынивания в Узбекистане* (In the book: "*The problems of desertification in Uzbekistan*"). (in Russian)

2001 The evaluation and forecasting of runoff of the Central Asian rivers in the conditions of the information deficit. (*Proceedings of the International Conference on Hydrological Challenges in Transboundary Water*

Resources Management, Koblenz, Germany, September 25-27, 2001)

1999 Оценка уязвимости стока рек бассейна Аральского моря от возможных воздействий изменения климата (Estimation of the Aral Sea basin river runoff vulnerability due to possible climate change). *Бюллетень № 3, Оченка уязвимости водных ресурсов от изменений климата, Ташкент* (*Bulletin No 3, Estimation of water resources vulnerability due to climate change*, Tashkent). (in Russian)

1997 Natural and man-made reasons of floods in river basins of Central Asia. (*Proceedings of Workshop on River Flood Disaster*, Koblenz, Germany, November 26-28, 1996)

International Project Activities

Consultant on hydrology of Central Asia, Regional Center in Hydrology/Swiss Aral Sea Mission (2001 - present)

Team leader of the project "Uzbekistan – country study of climate change". Climate change research, assessment of agriculture and water resources exposure to climate change, investigation of key ecosystems the most exposed to climate change (1997-1999).

Consultant (member of Steering Group) in the project 2.1 of the World Bank "Hydrometeorological Service", phase of pilot projects implementing (Swiss Aral Sea Mission) (1997-2000).

Deputy Leader of Creative Group of the project 2.1 of the World Bank "Hydrometeorological Service". Creator of the Concept of the National Hydrometeorological Services Development (1995-1997).

GONG, Wooi Khoon — Visiting Professor

Born in 1949, Malaysia.

Curriculum Vitae

Academic Career

Department of Botany, University of Aberdeen U. K. (1976)

School of Biological Sciences, University of Malaya (1972)

Professional Career

Visiting Professor at the Research Institute of Humanity and Nature, Kyoto, Japan (October 1, 2002 - February 28, 2003)

Professor, Universiti Sains Malaysia (2001)

Associate Professor, Universiti Sains Malaysia (1993)

Lecturer, Universiti Sains Malaysia (1976)

Special Appointments:

United Nations Environment Programme (UNEP) Scientific and Technical Advisory Panel Secretariat (STAP) roster expert (2003)

Regional Expert on Mangroves for the GEF/UNEP South China Sea Project (2002)

Research Associate of the Research School of Biological Sciences, Australian National University (2000 onwards).

Charles Bullard Fellow, Harvard University (1994)

Research Associate of the Australian Institute of Marine Science (1989-1990)

Senior Visiting Fellow, Linacre College, University of Oxford (1982)

Higher Degrees

Ph. D. (University of Aberdeen, 1976)

B. Sc. Hons. (University of Malaya, 1972) - First Class.

Fields of Specializing / Background

Mangrove ecosystem – ecology, plant productivity, nutrient fluxes, carbon sequestration

Academic Society Memberships

The Association of Tropical Biology (Council member from1993-95)

The British Ecological Society

The Malaysian Nature Society (Council member and assistant editor from 1978-1981)

Major Publications

Books

2001 Ong, J. E. & Gong, W. K. (eds).
The Encyclopedia of Malaysia, Volume 6. The Seas. Editions Didier Millet. 144pp.

Articles

Gong, W. K., Ong, J. E., Foong, S. Y., Khairun, Y. & Nor Haida, H.

2002 Carbon, nitrogen and phosphorus fluxes of a mangrove estuary using a stoichiometrically linked water-salt-nutrient budgets approach. pp.285-302 *in*: Chen, A. C. T. (ed). *Marine Environment*: The Past, Present and Future. Fuwen Press, Kaohsiung, Taiwan.

Gong, W. K. & Ong, J. E.

2002 Human impact on the carbon, nitrogen and phosphorus fluxes in a mangrove estuary. *Journal of Bioscience* 13: 1-10

Ong, J. E. & Gong, W. K.

2002 The Vegetated Littoral: Mangroves & Saltmarshes. Article in the UNESCO Encyclopaedia of Life Support Systems (EOLSS). In digital format http://www.eolss.net

Ong, J. E. & Gong, W. K.

2002 Mangroves and Aquaculture: Malaysia Case Study. pp.54-55 in: J. G. Field, G. Hempel & C. P. Summerhayes (eds) Oceans 2020: Science trends, and the challenge of sustainability. Intergovernmental Oceanographic Commission, Island Press, Washington.

Gong, W. K.

2001 Marine biological diversity. pp.88-89 *in*: Ong, J. E. & Gong, W. K. (eds). *The Encyclopaedia of Malaysia*, Volume 6. The Seas. Editions Didier Millet.

Gong, W. K. & Wazir, J. K.

2001 Mangroves. pp.42-43 *in*: Ong, J. E. & Gong, W. K. (eds). *The Encyclopedia of Malaysia*, Volume 6. The Seas. Editions Didier Millet.

Japar, S. B., Ong, J. E. & Gong, W. K.

2001 Microbial succession of mangrove Rhizophora apiculata Bl. leaf litter. MicroSoM (Microscopy Society of Malaysia) 4: 6-10.

Activities in Academic Societies (2001-2002)

The Malaysian Nature Society - resource person

Awards (and Fellowships)

Visiting Professor at the Research Institute for Humanity and Nature, Kyoto, Japan (2002/2003).
START Visiting Scientist Award, Australian National University (2002).
Japanese Society for the Promotion of Science Visiting Scientist Award (1999).
The Charles Bullard Fellowship of Harvard University (1994).
The Royal Society Nuffield Foundation Fellowship, U. K. (1997/1998)
UNESCO Fellowship (Mangroves) (1978/1979).
Commonwealth Academic Staff Scholarship, U. K (1973-1976)
University Book Prize (First Class Honours), University of Malaya (1972).
Professor Balasingam Gold Medal (Top Student in Biology), University of Malaya (1972).

Research Activities

Field Research in Japan

February 2003 Research visit to the sub-tropical mangroves of Iriomote and Okinawa islands.

Field Research in Foreign Countries

April 2002 Research visit to the mulga vegetation of New South Wales, Australia to set up eddy covariance systems jointly with colleagues from the Australian National University

Supervision and Host

In home university (Universiti Sains Malaysia), supervised 4 post-graduate (2 Ph. D and 2 M. Sc. students) and taught undergraduate courses.

Host to numerous scientists/colleagues from all over the world, including Japan.

Social Activities and Public Lectures

January 2003 Carbon Sequestration in the Mangrove Ecosystem. Guest Lecture at the Forest and Forest Product Research Institute, Tsukuba.

May 2002 Carbon Fluxes in the Mangrove Ecosystem. Public Lecture at the Australian National University.

HARA, Toshihiko — Visiting Professor

Born in 1955.

Curriculum Vitae

Academic Career

Department of Botany, Faculty of Science, Kyoto University, D. Course (1983)

Department of Botany, Faculty of Science, Kyoto University, M. Course (1980)

Department of Botany, Faculty of Science, Kyoto University (1978)

Professional Career

Professor, Institute of Low Temperature Science, Hokkaido University (1996)

Associate Professor, Graduate School of Multidisciplinary Sciences, University of Tokyo (1995)

Assistant, Department of Biology, Tokyo Metropolitan University (1988)

Higher Degrees

D. Sc. (Kyoto University, 1983)

M. Sc. (Kyoto University, 1980)

Fields of Specialization / Background

Plant Ecology

Academic Society Memberships

Japanese Society of Ecology, Japanese Society of Botany, Japanese Society ofPlant Physiology, Society for the Study of Species Biology

Major Publications

Articles

Stoll, P., J. Weiner, H. Muller-Landau, E. Mueller and T. Hara

2002 Size Symmetry of Competition Alters Biomass-Density Relationships. *Proceedings of the Royal Society of London Series B* (Biological Sciences) 269: 2191-2195.

Research Activities

Field Research in Japan

June 2002 Moshiri, Hokkaido (Growth dynamics of boreal forests)

June 2001 Moshiri, Hokkaido (Growth dynamics of boreal forests)

Field Research in Foreign Countries

August 2002 Kamchatka, Russia (Growth dynamics of boreal forests)

August 2001 Kamchatka, Russia (Growth dynamics of boreal forests)

Supervision and Host (Number of DC Students and JSPS Research Fellows)
Special researcher from Japan Society for the Promotion of Science (1)

HAN, Jiankang ——— Visiting Professor

Born in 1947, P. R.China.

Curriculum Vitae
Academic Career
Lanzhou Institute of Glaciology and Geocryology, M. Course (1984)
Lanzhou Institute of Glaciology and Geocryology, B. Course (1981)
Professional Career
Visiting Professor, Research Institute for Humanity and Nature (2002.10.1-2003.4.30)
Professor (glaciology), Vice director of Research Institute of Environment and Resources, Human Normal University (1997-)
Assistant Professor, Associate Professor, Research Institute of Environment and Resources, Human Normal University (1985-1997)
Higher Degrees
M. Sci. (1984)
B. Sci. (1981)
Fields of Specialization / Background
Glaciology

Major Publications
Thesis
HAN, Jiankang

2001 Methansulphonate in the Snow/ice of King George island, Antarctica. Journal of Glaciology.
2001 Ice Core Evidence of Anthropogenic Influence on the Local Environment of King George Island, Antarctica. In The Proceedings of Symposium on the Ecology and Environment Conservation.
2000 Extension and Theoretical Improvement of a Hypothesis for MSA Migration in Ice Cores. Chinese Journal of Polar Research. 12(1): 1-9.
2000 Essential Features of Flood Disasters in Xinjiang, an Arid Region in Northwest China. In Water in Arid Terrain Research edited by M. Nakawo. Institute for Hydrospheric-Atomospheric Sciences, Nagoya University. 29-34.
2000 Primary Study on the Glaciers of Mountain Malan, Hoh Xil Region, Qinghai-Xizang Plateau. Acta Scierntiarum Natuialium Universitatis Normalis Hunanesis. 23(1): 81-88.
2000 Volcanic Record from Collins Ice Cap, King George Island, Antarctica. Chinese Journal of Polar Research. 11(4): 255-263.
1999 Volcanic Eruption Recorded in an Ice Core from Collins Ice Cap, King George Island, Antarctica. Annals of Glaciology. 29: 121-125.
1999 Study of the MSA, nssSO42-. Concentration and MSA to nssSO42- Ratio in the Snow/ice and Atomospheric Aerosols of the Regions Surrounding the Weddell Sea. Chinese Journal of Polar Science. 10(1): 9-18.
1999 Study of Biogenic Sulphur Recorded in Snow and Ice of Antarctic Peninsula and It's Neighboring Regions. Journal of Glaciology and Geocryology. 21(2): 129-135.
1999 Measurement and Estimative Models of Glacier Mass Balance in China. Geografiska Annaler. 81A: 791-796.
1999 Mass Balance Study on Collins Ice Cap, King George Island, Antarctica: Spatial and Temporal Variations. In

Interaction Between the Cryosphere, Climate and Greenhouse Gases (Proceedings of IUGG Symposium HS2, Birmingham, July 1999). IAHS Publ. no 256, 209-215.

1998 Seasonal Distribution of MSA in the Snou/ice of a Subantarctic Glacier. Journal of Glaciology and Geocryology. 20(4): 343-347.

1998 Study of the MSA, nssSO42-. Concentration and MSA to nssSO42- Ratio in the Snow/ice and Atmospheric Aerosols of the Regions Surrounding the Weddell Sea (Chinese). Chinese Journal of Polar Science. 10(4): 242-251.

1998 Microparticle Content Changes of Ice Core with Time at Melted State. Journal of Glaciology and Geocryoloy. 20(4): 376-380.

1998 Physical Features of Collins Ice Cap, West Antarctica. Journal of Glaciology and Geocryology. 20(4): 446-472.

1996 Stratigraphy and Ice Texture Analysis in an Ice Core from No.1 Glacier, Headwater of Urumqi river. Journal of Glaciology and Geocrylogy. 18(4): 339-345.

1996 Particle of Ice Core in King George Island, Antarctica. IN The Interaction and Influence of Climate and Environment Between Antarctica and Globe edited by Zhou Xiuji and Lu Longhua. Meteorology Press. 196-200.

1996 Characteristic of Temperature and Precipitation around Collins Ice Cap and Their Influence to Glacier Change. IN The Interaction and Influence of Climate and Environment Between Antarctica and Globe edited by Zhou Xiuji and lu Longhua. Meteorology Press. 201-209.

1996 Primary Study of Ice Texture and Mass Balance of Collins ice Cap. IN The Interaction and Influence of Climate and Envionment Between Antarctica and Globe edited by Zhou Xiuji and Lu Longhua. Meteorology Press. 210-215.

1996 Chemical Characteristics of Ice/snow of King George Island, Antarctic. IN The Interaction and Influence of Climate and Environment Between Antarctica and Globe edited by Zhou Xiuji and Lu Longhua. Meteorology Press. 234-239.

1996 Geo-chemical Characteristics of Soluble Impurities in Snow-ice of King George Island Ice Cap, Antarctic. In Proceeding of the Fifth Chinese Conference on Glaciology and Geocryology. Gansu Culture Press. 247-254.

1996 Glaciological Characteristics of the Collins Ice Cap, King George Island, Antarctica. In Proceeding of the Fifth Chinese Conference on Glaciology and Geocryology. Gansu Culture Press. 255-262.

1996 Studies on the Mechanism and Effect of Eluviation of Snow-pack. In Proceeding of the Fifth Chinese Conference on Glaciology and Geocryology.Gansu Culture Press. 987-996.

1996 Development and Application of BZXJ Super Light Ice Drill. In Procedding of the Fifth Chinese Conference on Glociology and Geocryology. Gansu Cluture Press. 275-280.

1996 The Recent Change of Glacial Runoff in the High-Asia. In The Proceedings of the International Workshop on the Climate System of Monsoon Asia. 247-250.

1996 Climate, Mass Balance and Glacial Change on Small Dome of Collins Ice Cap, King George Island, Antarctic. Antarctic Research. 5(1): 52-61.

1995 Temperature distribution of Collins Ice Cap, King George Island, Antarctica. Antarctic Research (Chinese). 6(2): 57-65.

1995 Temperature Distribution in Collins Ice Cap, King George Island, Antarctica. Antarctic Research (English). 7(1): 59-66.

1995 The Trend Analysis of Temperature in the South Shetland Region Over Last One Hundred Years. Journal of Glaciology and Geocryology. 17(3): 268-273.

Research Activities (major)

2000 Sino-Japan joint glacio-hydrological expedition to Cele Basin, Xinjiang, China (Leader)

1999 Sino-Japan joint glaciological expendition to Kekexili Region (Leader)

1997 Glaciological expedition to Muztag Ata (Leader)

1995 Sino-Japan joint glacio-hydrological study in the Souhern Xinjiang (Leader)
1994 Sino-Japan joint glaciological survey around Taklimaka Desert (Leader)
1992-1994 Sino-Japan joint hydrological study of climatic and environmental evolution around the southern margn of the Taklimakan Desert (Leader)
1991-1995 Sino-Japan joint ice core study of Chongce Ice Cap. West Kunlun Mts. China (Leader)
1990-1995 Sino-America-Urguay joint glaciological study of the Colins Ice cap, Antarcica (Leader)
1990-1995 Extraction and study of an ice core to the bedrock of No.1 Glacier, Tianshan (Organizer and Leader)
1989 Design and test of BZXJ super light mechanical core drill (Organizer)

KIKKAWA, Jiro — Visiting Professor

Born in 1929.
Nationality: Australian

Curriculum Vitae

Graduate Studies

Jesus College and Bureau of Animal Population, Oxford (1955-57)

Professional Career

Visiting Professor (October 2001 - March 2002), Kyoto University Center for Ecological Research
Conjoint Professor (1993-95), James Cook University of North Queensland
Senior Lecturer (1965-1969), Reader (1970-1979), Professor and Personal Chair (1980-1994), Professor Emeritus (1995-) in Zoology, The University of Queensland.
Demonstrator/Temporary Lecturer in Zoology (1961-64), University of New England (Australia).
Teaching Fellow in Zoology (1958-61), Otago University (New Zealand).
Technical Official (1951-53), Fisheries Agency (Japanese Government).
Founding Director (1993-95), Honorary Fellow (1996-), Cooperative Research Centre for Tropical Ecology and Management (Australia).

Higher Degrees

D. Sc. (Kyoto University, 1961)

Fields of Specialization

Animal Ecology, Conservation Biology

Academic Society Memberships (those with offices held)

Ecological Society of Japan (Editorial Board), Ornithological Society of Japan (Editorial Board), Ecological Society of America (Emeritus Member), American Ornithologists Union (Honorary Fellow), Ecological Society of Australia (former President, Gold Medalist), Australasian Ornithologists Union (Birds Australia) (former Editorial Board, etc.), Ornithological Society of Queensland (Birds Queensland) (former President), ANZAAS Zoology Section (former President), Australian Coral Reef Society (Honorary Life Member), International Ornithological Committee (Honorary President), International Union of Forestry Research Organizations (former Board Member), Japan Ecology & Civil Engineering Society (Past Vice-President, Honorary Member).

Recent Publications

Books

Kikkawa, J., P. Dart, D. Doley, K. Ishii, D. Lamb and K. Suzuki (eds.)
1998 *Overcoming Impediments to Reforestation: Tropical Forest Rehabilitation in the Asia-Pacific Region.* Proceedings of the 6th International Workshop of BIO-REFOR, Brisbane, December 1997. BIO-REFOR.

Kikkawa, Jiro
1995 *Naze takusanno seibutsuga irunoka* (Why are there so many organisms)? Iwanami Shoten. [in Japanese]

Moritz, C. and J. Kikkawa (eds.)

1994 *Conservation Biology in Australia and Oceania*. Surrey Beatty & Sons.

Articles (2002-2003)

Scott, S. N., S. M. Clegg, S. P. Blomberg, J. Kikkawa and I. P. F.Owens

2003 Morphological Shifts in Island-Dwelling Birds: The Roles of Generalist Foraging and Niche Expansion. *Evolution* 57: 2147-2156.

Kikkawa, J.

2003 White-Eyes (Zosteropidae). *Birds IV* (Grzimek's Animal Life Encyclopedia. 2nd ed. Vol.11) pp.227-234. Gale Group.

2003 The Capricorn White-Eye *Zosterops chlorocephalus*. *Sunbird* 33: 64-76.

2003 Guretobariarifu: Umino oashisu ni himerareta seibutsuno tayosei (Great Barrier Reef: Biodiversity Hidden in the Oasis of the Ocean). *Kasen Bunka* (River Culture) 13: 53-110. [in Japanese]

Clegg, S. M., S. M. Degnan, J. Kikkawa, C. Moritz, A. Estoup and I. P. F. Owens

2002 Genetic Consequences of Sequential Founder Events by an Island-Colonizing Bird. *Proceedings of National Academy of Sciences of the United States of America* 99: 8127-8132.

Clegg, S. M., S. M. Degnan, C. Moritz, A. Estoup, J. Kikkawa and I. P. F. Owens

2002 Microevolution in Island Forms: The Roles of Drift and Directional Selection in Morphological Divergence of a Passerine Bird. *Evolution* 56: 2090-2099.

Kikkawa, J.

2002 Birds of Cubberla-Witton Creeks Catchments. In R. Trotter (ed.) *Cubberla and Witton Creeks: Their Physical Characteristics and Land Use over Time* (Proceedings of Symposia held in 2000 and 2001 on the Cubberla and Witton Creek Catchments), pp.61-70. Cubberla-Witton Catchments Network.

2002 (book review) "The Flight of the Emu: A Hundred Years of Australian Ornithology 1901-2001" by Libby Robin. *Historical Records of Australian Science* 14: 241-243.

Kikkawa, J. and J. M. Wilson

2002 Fighting Strategies of Silvereyes, *Zosterops lateralis*. *Journal of Yamashina Institute for Ornithology* 34: 60-65.

Activities in Academic Societies

May 2002 Ecology & Civil Engineering Society, Future Planning Committee meeting

August 2002 23rd International Ornithological Congress in Beijing, Convener and Chair, Symposium on "Specialization in Island Land Birds"

Awards

Order of Australia (1999)

Serventy Medal, Royal Australasian Ornithologists Union (Birds Australia) (1999)

Distinguished Service Award, International Union of Forestry Research Organizations (2000)

The Order of the Rising Sun (Gold Rays with Rosette) (2001)

Research Activities

Field Research in Japan

June 2002 The Tonegawa basin (Study of the breeding ground of the Japanese Marsh Warbler *Megalurus pryeri*, an endangered species)

August 2002 Rishiri and Reibun Islands and Sarobetsu wetlands (Water management in the National Park)

Field Research in Foreign Countries

August 2002 People's Republic of China (Inspection of breeding programs of the Crested Ibis *Nipponia nippon* in Shaanxi Province)

Committee Meetings and Public Lectures

Meetings

May 2002 Committee Chairmen's meeting of the Watershed Ecology Research Conference (as Special Adviser)

June 2002 Council meeting of the Japan Wildlife Research Center

Public Lectures

July 2002 Special lecture on "Biodiversity of Coral Reefs" at Ehime University

July 2002 Public lecture on "Great Barrier Reef" at the Japan River Association

KIYASHKO, Serguei I. ——— Visiting Professor

Born in 1952, Russia.

Curriculum Vitae

Academic Career

Department of Paleontology, Faculty of Geology, Moscow State University, Ph. D. Course (1984)

Department of Paleontology, Faculty of Geology, Moscow State University (1979)

Professional Career

Visiting Professor, Research Institute for Humanity and Nature (Oct. 10, 2002 - March 31, 2003)

Visiting Professor, Center for Ecological Research, Kyoto University (1998)

Senior Research Scientist, Laboratory of Invertebrate Ecology, Institute of Marine Biology Far Eastern Branch, Russian Academy of Sciences (1989)

Research Scientist, Laboratory of Invertebrate Ecology, Institute of Marine Biology Far Eastern Branch, Russian Academy of Sciences (1984)

Research Fellow, Laboratory of Physiological Ecology, Institute of Marine Biology Far Eastern Branch, Russian Academy of Sciences (1979)

Higher Degrees

Ph. D. (Paleontological Institute of Russian Academy of Sciences, 1984)

Field of Specializing / Background

Aquatic Ecology, Biogeochemistry

Academic Society Memberships

The Russian Hydrobiological Society

Major Publications

Articles

Kiyashko, Serguei

2001 Contribution of methanotrophs to freshwater macroinvertebrates: evidence from stable isotope ratios. *Aquatic Microbial Ecology* 24: 203-207.

2001 Identification of food sources of invertebrates from the seagrass *Zostera marina* community using carbon and sulfur stable isotope ratio and fatty acid analyses. *Marine Ecology -Progress Series* 220: 103-117.

2001 Fatty acids as markers of food sources of sea stars. *DokladyAkademii Nauk* 380: 711-713. [in Russian]

2001 Petroleum hydrocarbons as a source of organic carbon for the benthic macrofauna of polluted marine habitats determined by $^{13}C/^{12}C$ analysis. *Doklady Akademii Nauk* 381: 283-285. [in Russian]

2000 Terrigenic organic matter in the shelf sediment of the seas of Eastern Arctic. *Doklady Akademii Nauk* 371: 220-222. [in Russian]

1998 Stable carbon isotope ratios differentiate autotrophs supporting animal diversity in Lake Baikal. *Comptes Rendus de l'Academie des Sciences Serie III-Sciences de la Vie-Life Sciences* 321: 509-516.

1998 Stable isotope ratios and fatty acids as food source markers of deposit-feeding invertebrates. *Russian Journal*

of Marine Biology 24: 170-174. [in Russian]

Activities in Academic Societies

June 2002 Lipid and isotopic markers of trophic association of fresh-water invertebrates and metanotrophic bacteria. Symposium of Russian Biochemical Society, Saint-Petersburg. [in Russian]

Research Activities

Field Research in Japan

December 2002 Lake Biwa (Incorporation of Methane into Fresh-Water Food Webs)

Social Activities and Public Lectures

Public Lectures

December 2002 Stable isotopes of carbon, nitrogen, and sulfur in the food webs of large lakes: ecological implications. Research Institute for Humanity and Nature.

KONOVALOV, Vladimir — Visiting Professor

Born in 1937, Russia.

Curriculum Vitae

Academic Career

Department of Physical Geography, Geography Faculty, Leningrad University. Postgraduate Course (1964). Ph. D.

Department of Physical Geography, Geography Faculty, Tashkent University. Full Course (1959). M. S.

Professional Career

Visiting Professor, Research Institute for Humanity and Nature, Japan (April 1, 2002 - June 30, 2002)

Leading Scientific Researcher, Professor, Department of Glaciology, Institute of Geography, Russian Academy of Sciences, Moscow, Russia (2001)

Head, Department of Regional Projects, Central Asian Regional Research Hydrometeorological Institute, Tashkent, Uzbekistan (1996)

Deputy Director on Science and International Collaboration, Central Asian Regional Research Hydrometeorological Institute, Tashkent, Uzbekistan (1994)

General Scientific Researcher, Professor, Department of Glaciology, Central Asian Regional Research Hydrometeorological Institute, Tashkent, Uzbekistan (1988)

Chief, Laboratory of Glaciers. Central Asian Research Hydrometeorological Institute, Tashkent, Uzbekistan (1987)

Senior Scientific Researcher, Department of Glaciology. Central Asian Research Hydrometeorological Institute. Tashkent (1971)

Senior Scientific Researcher, Hydrographic Section. Hydrometeorological Service of Uzbekistan. Tashkent (1969)

Senior Scientific Researcher, Department of Hydrology. Central Asian Research Institute of Irrigation. Tashkent (1966)

Senior Engineer-glaciologist, Hydrographic Section, Hydrometeorological Survey of Uzbekistan, Tashkent (1965)

Postgraduate at Geographical Faculty of Leningrad State University. Leningrad, USSR (1961)

Higher Degrees

Doctor of Sciences - Professor. Qualified in Terrestrial Hydrology and Water Resources. Institute of Geography, Russian Academy of Sciences. Irkutsk, Russia, November 1983

Candidate of Sciences - Ph. D. Qualified in Terrestrial Hydrology and Water Resources. Leningrad (Saint-Petersburg) University. Leningrad, Russia, May 1965

Master of Sciences. Qualified in Physical Geography. Tashkent University. Tashkent, Uzbekistan, September 1959

Fields of Specialization / Background

Terrestrial Hydrology and Water Resources, Glaciology

Academic Society Memberships

American Geophysical Union, International Glaciological Association, Association of Hydrological Sciences, World Meteorological Organization

Major Publications

Books

1985 *Melting and Glacial Runoff Processes in the Central Asian River Basins.* Hydrometeorology Publishing House, Leningrad.

1979 *Computations and forecasts of melting and runoff of the Central Asian glaciers.* Hydrometeorology Publishing House, Leningrad.

1972 *Ablation of Central Asian Glaciers.* Hydrometeorology Publishing House, Leningrad.

Selected Articles for 1990-2003

2003 Spatial Extrapolation and Variability of Climate Characteristics over the Central Asia Territory. *Proceedings of the Academy of Sciences* (Geography Series No.4). Academy of Sciences, Moscow, Russia.

2002 Formation and Utilization of the Pamirs Rivers Flow. *Data of Glaciological Studies* 92: 158-193. Academy of Sciences, Moscow, Russia.

2001 Regionally Extrapolation of the Meteorological Data in the Distributed Hydrological Model. *Soil-Vegetation-Atmosphere Transfer Schemes and Large-Scale Hydrological Models* (Proceedings of a symposium held during the Sixth IAHS Scientific Assembly at Maastricht, The Netherlands, July 2001) (IAHS Publication No.270), pp.291-295.

2000 Computations of Melting under Moraine as a Part of Regional Modeling of Glacier Runoff. *Debris-Covered Glaciers* (Proceedings of a workshop held at Seattle, Washington, USA, September 2000) (IAHS Publication No.264), pp.109-118.

2000 A Regional Method and Results of the Over Long-Term Hydrological Forecasts. *XXth Conference of the Danube Countries on Hydrological Forecasting and the Hydrological Basis of Water Management* (Bratislava, 4-8 September 2000). UNESCO, Bratislava.

1998 Long-Term Fluctuation of Glaciers Runoff in the Basins of Central Asia. In Howard Wheater and Celia Kirby (eds.) *Hydrology in a Changing Environment Vol.1*, pp.141-146. British Hydrological Society, UK.

1998 Methods and Experience of Forecasting of an Annual Runoff on the Basic Rivers of Central Asia until Year 2000. *Water: A Looming Crisis?* (Procéedings of UNESCO Conference, Paris, France, June 1998) (Technical Documents in Hydrology No.18), pp.127-132. UNESCO IHP-V, Paris, France.

1997 Snow Line and Formation of Glacier-Derived Runoff in Glacial Basins. In V. M. Kotlyakov (initiated, compiled and edited) *34 Selected Papers on Main Ideas of the Soviet Glaciology, 1940s-1980s*, pp.402-410. Academy of Sciences, Moscow, Russia.

1997 Regional Model of Runoff for High Mountain Basins: Main Components and Results of Realization in the Pamirs and Hidukush River Basins. *Data of Glaciological Studies* 81: 21-29. Academy of Sciences, Moscow, Russia.

1997 The Hydrological Regime of Pamir-Alay Glaciers. *Zeitschrift fur Gletscherkunde und Glazialgeologie* 33(2): 125-131. ICSI (IAHS), UNESCO. Symposium on Glacier Mass Balance, 14-16 September 1994, Innsbruck, Austria.

1994 Evolution of Glaciation in the Pamiro-Alai Mountains and Its Effect on River Runoff. *Journal of Glaciology* 40(134): 149-157. Cambridge, Great Britain.

1994 Computations of Regional Characteristics of Glacial Regime Using the Model with Distributed Parameters. *FRIEND: Flow Regime from International Experimental and Network Data* (Proceedings of the Braunschweig Conference, October 1993) (IAHS Publication No.221), pp.511-518.

1993 Multidimensional Description of the Fields of Meteorological Elements for Mathematical Modeling of

Natural Processes. In B. Sevruk and M. Lapin (eds.) *Precipitation Variability and Climate Change* (Proceedings of Symposium on Precipitation and Evaporation Vol.2, Bratislava, Slovakia, 20-24 September), pp.167-175. UNESCO, Bratislava.

1992 Statistical Structure of Snow Cover Fields (Experiences from the USSR). *Snow Cover Measurements and Areal Assessment of Precipitation and Soil Moisture* (Operational Hydrology Report No.35), pp.184-193. WMO-No.749, Geneva.

1992 Physical and Statistical Method of Runoff Forecasting in Central Asia River Basins. *XVI Konferenz der Donau lander uber hydrologishe wasserwirtshaftliche* (Grundlagen, Kelheim, 18-22 May 1992), pp.255-259. UNESCO, Koblenz.

1991 Methods of Numerical Estimations of the Fields of Numerical Elements in Mountains for Glaciation Regime Computation. *International Symposium "Glaciers, Atmosphere, Ocean"* (Leningrad, 24-29 September 1990) (IAHS Publication No.208), pp.529-541.

1990 Methods for Computations of Onset Date and Daily Hydrograph of the Outburst from Mertzbacher Lake, Inylchek Glacier Tien-Shan. *International Conference "Hydrology in Mountain. Regions"* (Lausanne, Switzerland, 27 August - 1 September, 1990) (IAHS Publication No.193), pp.181-188.

Awards

Fulbright Scholar at the INSTAAR, University of Colorado at Boulder: September 1998 - August

1999 Scientific Project: "Variability of Glaciers Runoff and Mass Balance in the Closed Drainage Basins of Central Asia (Amudarya and Tarim Rivers)".

1997 Honorable Diploma of Uzbekistan Main Administration on Hydrometeorology. Order N 131/k from August 26, 1997. Tashkent.

1996 Title "Honors Worker of the Uzbekistan Hydrometeorology Survey". Order N 47/k from 26 April 1996. Tashkent.

Medal "Veteran of Labor". Awarded from the name of Presidium, Supreme Soviet of the USSR. 1987 Decree from 26 October 1987. Moscow.

Honorable Diploma of the USSR State Committee on Hydrometeorology. Order N 405/k from 10 August 1987. Moscow.

Research Activities

Field Research in Japan

Principal Investigator of Scientific Projects on the following topics:

1. Methods of computation and forecasts of river flow in Central Asia,
2. Mathematical, physical and statistical modeling of the process of formation of ice and snowmelt river runoff,
3. Multidimensional description of climate characteristics variability (solar radiation, cloudiness, air temperature and humidity, precipitation, etc.) within the territory of Central Asia,
4. Long-term variability of parameters the hydrological regime of Central Asian rivers and study of climate change influence on hydrological processes,
5. Development and improvement the measurement methodology in hydrological and glaciological practice,
6. Processing of initial glaciological measurements and compilation of databases,
7. Modeling glacier runoff in Central Asia at different spatial scales based on application of GIS technology.

Field Research

Field works in Pamirs and Tien-Shan mountain areas to study the followings:

1. Characteristics and large-scale distribution of snow cover in mountains,
2. Water-ice and heat balance, and hydrometeorological regime of Central Asian glaciers,
3. Snow line remote sensing observations and glaciers mass balance measurements from the aircraft board.

Supervision and Host

Scientific leader of more than ten successful postgraduate projects and two Ph. D. theses.

Social and Public Activities

1. Member of Editorial Board: *Data of Glaciological Research*, Institute of Geography, Russian Academy of Sciences, Moscow.
2. Member of Scientific Councils on Awarding Scientific Degrees at the following institutions:
   - Tashkent University, Uzbekistan
   - Institute of Water Problems, Uzbekistan Academy of Sciences
   - Central Asian Research Hydrometeorological Institute, Uzbekistan Main Administration on Hydrometeorology
   - Institute of Geography, Russian Academy of Sciences, Moscow
3. Main contribution on organization International Conferences and Meetings in Tashkent: International Glaciological Symposium (UNESCO, IAHS) "Seasonal and Long-Term Variation of Nival and Glacial Processes in Mountains" (1993), NATO Advanced Research Workshop "Critical Scientific Issues of the Aral Sea Basin: State of Knowledge and Future Research Needs" (1994), Workshop of US Agency on International Development (USAID) "Regional Cooperation for Management in Water Resources Information Management" (1994), etc.
4. Leadership (1994-96) of the International Creative Group for implementation, Aral Sea Basin Program, Subproject 2.1 "A unified information system of water availability, and consumption measurement for the countries of the Aral Sea Basin, as well as a regional system of monitoring the environmental situation. To create data bases and to provide the relevant hydrometeorological services with equipment and special devices". The World Bank and donors from Switzerland and UK support this subproject.

   Title «Honors Worker of the Uzbekistan Hydrometeorology Survey». Order N 47/k from April 26, 1996. Tashkent.

   Medal "Veteran of Labor". Awarded from the name of Presidium, Supreme Soviet of the USSR. Decree from October 26, 1987. Moscow.

   Honorable Diploma of the USSR State Committee on Hydrometeorology. Order N 405/k from August 10, 1987. Moscow.

Research Activities

Principal Investigator of Scientific Projects on the following topics:

1. Methods of computation and forecasts of river flow in Central Asia,
2. Mathematical, physical and statistical modeling of the process of formation of ice and snowmelt river runoff,
3. Multidimensional description of climate characteristics variability (solar radiation, cloudiness, air temperature and humidity, precipitation, etc.) within the territory of Central Asia,
4. Long-term variability of parameters the hydrological regime of Central Asian rivers and study of climate change influence on hydrological processes,
5. Development and improvement the measurement methodology in hydrological and glaciological practice.
6. Processing of initial glaciological measurements and compilation of databases.
7. Modeling glacier runoff in Central Asia at different spatial scales based on application of GIS technology.

Field Research

Field works in Pamirs and Tien-Shan mountain areas to study the followings:

(1) Characteristics and large-scale distribution of snow cover in mountains,

(2) Water-ice and heat balance, and hydrometeorological regime of Central Asian glaciers,

(3) Snow line remote sensing observations and glaciers mass balance measurements from the aircraft board.

Supervision and Host

Scientific leader of more than ten successful postgraduate projects and two PhD theses.

Social and Public Activities

Member of Editorial Board: «Data of Glaciological Research», Institute of Geography, Moscow, Russian Academy of Sciences

Member of Scientific Councils on Awarding Scientific Degrees at the following institutions:

- Tashkent University, Uzbekistan;
- Institute of Water Problems, Uzbekistan Academy of Sciences;
- Central Asian Research Hydrometeorological Institute, Uzbekistan Main Administration on Hydrometeorology;
- Institute of Geography, Moscow. Russian Academy of Sciences.

Main contribution on organization International Conferences and Meetings in Tashkent: International Glaciological Symposium (UNESCO, IAHS) "Seasonal and Long-Term Variation of Nival and Glacial Processes in Mountains" (1993), NATO Advanced Research Workshop "Critical Scientific Issues of the Aral Sea Basin: State of Knowledge and Future Research Needs" (1994), Workshop of US Agency on International Development (USAID) "Regional cooperation for management in water resources Information Management" (1994), etc.

Leadership (1994-96) of the International Creative Group for implementation, Aral Sea Basin Program, Subproject 2.1 "A unified information system of water availability, and consumption measurement for the countries of the Aral Sea Basin, as well as a regional system of monitoring the environmental situation. To create data bases and to provide the relevant hydrometeorological services with equipment and special devices". The World Bank and donors from Switzerland and UK support this subproject.

TAKASO, Tokushiro ——————————— Visiting Professor

Born in 1954.

Curriculum Vitae

Academic Career

Department of Biology, Graduate School of Science, Tokyo Metropolitan University, D. Course (1981)
Department of Biology, Graduate School of Science, Chiba University, M. Course (1978)
Department of Horticulture, Faculty of Agriculture, Shizuoka University (1976)

Professional Career

Visiting Professor, Research Institute for Humanity and Nature (2001)
Professor, Tropical Biosphere Research Center, University of the Ryukyus (1997)
Postdoctoral Fellow, Department of Biology, University of Victoria (1990)
Postdoctoral Fellow, Harvard Forest, Harvard University (1988)
Postdoctoral Fellow, Harvard Forest, Harvard University (1986)
Research Fellow, Japan Society for the Promotion of Science (1985)
Research Fellow, Japan Society for the Promotion of Science (1981)

Higher Degrees

Ph. D. (Tokyo Metropolitan University, 1982)
M. Sc. (Chiba University, 1978)

Fields of Specialization / Background

Plant Morphology

Academic Society Memberships

The Botanical Society of Japan, The Japanese Society for Plant Systematics, The Japanese Society of Plant Physiologists, The Botanical Society of America

Major Publications

Articles

Takaso, Tokushiro

2002 Pollination Mechanisms of Mangrove Plants in Iriomote Island. *Reports on Mangrove Research* pp.193-197. Research Institute for Subtropics. [In Japanese]

2002 Seed Cone Structure in Conifers in Relation to Development and Pollination: A Biological Approach. *Canadian Journal of Botany* 80: 1250-1273.

2002 Floral Scent Chemistry of Mangrove Plants. *Journal of Plant Research* 115: 47-53.

1999 Genetic Diversity of the Natural Monument *Nypa fruticans* (Palmae) at Funaura, Iriomote Island. *Acta Phytotaxonomica et Geobotanica* 50: 201-205.

1999 Hydrodynamics of Pollen Capture in Conifers. In S. J. Owens and P. J. Rudall (eds.) *Reproductive Biology in Systematics, Conservation and Economic Botany, Royal Botanical Gardens, Kew*, pp.265-275.

1999 Pollination of *Picea orientalis* (Pinaceae): Saccus Morphology Governs Pollen Buoyancy. *American Journal of Botany* 86: 190-197.

1998 Pollination in Conifers. *Trends in Plant Science* 3: 479-485.

Activities in Academic Societies

October 2001 Organizer, International Symposium: Noble Mechanisms of Pollen Capture in Tropical and Subtropical Plants.

Supervision and Host (Number of DC students and JSPS Research Fellow)

RONPAKU (Dissertation Ph. D.) Fellow from Japan Society for the Promotion of Science (1)

Social Activities and Public Lectures

Public Lectures

August 2002 Pollination Mechanisms in a Seagrass, *Enhalus*, University of the Ryukyus.

July 2002 Pollination Mechanisms in Mangrove Plants, University of the Ryukyus.

July 2000 Field Study in the Tropics, University of the Ryukyus.

July 1999 Field Study in the Tropics, University of the Ryukyus.

August 1998 Termite and Mangrove Plants in the Subtropics, University of the Ryukyus.

Grants

October 1998 Preservation of Endangered Nypa, Nippon Life Insurance Foundation.

KUBOTA, Jumpei ——— Associate Professor

Born in 1957.

Curriculum Vitae

Academic Career

Department of Forestry, Faculty of Agriculture, Kyoto University, D. Course (1987)

Department of Forestry, Faculty of Agriculture, Kyoto University, M. Course (1983)

Department of Forestry, Faculty of Agriculture, Kyoto University (1981)

Professional Career

Associate Professor, Research Institute for Humanity and Nature (2002)

Associate Professor, Faculty of Agriculture, Tokyo University of Agriculture and Technology (1996)

Assistant Professor, Faculty of Agriculture, Tokyo University of Agriculture and Technology (1987)

Higher Degrees

D. Agr. (Kyoto University, 1987)

M. Agr. (Kyoto University, 1983)

Fields of Specializations / Background

Forest Hydrology, Erosion Control Engineering

Academic Society Memberships

The Japanese Forestry Society, the Japan Society of Hydrology and Water Resources, the Japan Society of Erosion Control Engineering

Major Publications

Books

Jumpei Kubota (co-author)

1998 *Chiiki seitai shisutemu gaku* (Ecoregion Science). Asakura Syoten. [in Japanese]

Articles

Konohira, E., M. Yoh, J. Kubota, K. Yagi and H. Akiyama

2001 Effects of Riparian Denitrification on Stream Nitrate: Evidence from Isotope Analysis and Extreme Nitrate Leaching during Rainfall. *Water, Air, and Soil Pollution* 130, 667-672

Shinomiya, Yoshiki, Kazunobu Takahashi, Masato Kobiyama and Jumpei Kubota

2001 Evaluation of the Tortuosity Parameter for Forest Soils to Predict Unsaturated Hydraulic Conductivity. *Journal of Forest Research* 6(3): 221-225.

Nakayama, S., T. Kobayashi and J. Kubota

2000 Tasōkonkei moderu niyoru potto naegi no kyūsuiryō no sokutei to kaiseki (The Measurement and Analysis of Water Uptake by Sapling Root with Multi-Layered Root-System Model). *Nihon ringakukai shi* (Journal of Japanese Forest Research) 82: 1-6. [in Japanese]

Ohta, Takeshi, Kazuyoshi Suzuki, Yuji Kodama, Jumpei Kubota, Yuji Kominami and Yuichiro Nakai

1999 Characteristics of the Heat Balance above a Coniferous Forest during the Snowy Season. *Hydrological Processes* 13: 2383-2394.

Kume, Tomonobu and Jumpei Kubota

1998 Shinrin ryūiki ni okeru damu chosuichi no ryūkyō heijyunka kōka no hyōka (Evaluation of Effects of Dam Reservoir on Discharge-Duration Curve in Forested Catchment). *Suimon mizusigen gakka shi* (The Journal of the Japan Society of Hydrology and Water Resources) 11, 317-323. [in Japanese]

Tanaka, Hiroki, Yoshihiro Fukushima, Changhua Li, Jumpei Kubota, Takeshi Ohta, Masakazu Suzuki and Ken'ichiro Kosugi

1998 Water Discharge Property of Evergreen Broad-Leaved Forest River Basin - Jiulianshan, Jiangxi Province, China. *Journal of Japan Society of Hydrology and Water Resources* 11: 210-220.

Activities in Academic Societies

May 2002 "River Runoff of Permafrost Region in Siberia: The Role of Permafrost on Water Budget and Run off Characteristics of Rivers in Cold Regions", Asian CLIC Meeting, Yokohama, Japan.

November 1999 "Large-Scale Hydrological Characteristics of Siberian Basins", GAME-MAGS International Workshop, Edmonton, Canada.

Research Activities

Field Research in Foreign Countries

June 2002 Russia (Research on the water and energy cycle in southern mountainous region of eastern Siberia)

August 2002 China (Research on the hydrological cycle in the Heihe River basin)

Supervision and Host (Number of DC Students and JSPS Research Fellows)

DC student (1)

Other Research Activities

Research Scientist, Frontier Observation Research System for Global Change

Social Activities and Public Lectures

Committee Member

Committee on Disaster Prevention in the Miyakezima Island, Tokyo Prefecture.

Committee on the Five-Year Disaster Prevention Plan of Japanese Rivers, the Ministry of Land, Infrastructure and Transport.

MOMOKI, Akiko — Associate Professor

Born in 1950.

Curriculum Vitae

Academic Career

Department of Zoology, Faculty of Science, Kyoto University, Research Student (1987-94)

Department of Biology, Faculty of Science, Tohoku University, B. Sc. (1973)

Professional Career

Adjunct Lecturer, Faculty for the Study of Contemporary Society, Kyoto Women's University (2002)

Associate Professor, Research Institute for Humanity and Nature (2001-)

Part-time Lecturer, Osaka Bunka Fashion College (1992-2001)

Assistant Professor, Okayama University Dental School (1997-98)

Part-time Lecturer, Faculty of Science and Technology, Ryukoku University (1995-96)

Part-time Lecturer, The Center for Student Exchange, Kyoto University (1989-95)

Assistant, Technical Development Section/Senior Staff, Business Planning Section/Senior Staff, R&D Section, Rhône-Poulenc Japan, Ltd. (1977-89)

Technical Assistant, Gynecology Laboratory, Keio University Hospital (1973-74)

Fields of Specialization / Background

Biology, Ethology, Human Ethology

Academic Society Memberships

Japan Ethological Society, Societe Franco-Japonaise de la Pharmacie

Major Publications

Books

Momoki, Akiko et al. (translation into Japanese)

2001 Aiburu-Aibesuferuto, *Hyūman esorojī: Ningen-kōdō no seibutsugaku*. 963pp. Minerva Shobo. [*Die Biologie des menschlichen Verhaltens - Grundriß der Humanethologie*, originally written in German by Irenäus Eibl-Eibesfeldt, Piper Verlag, 1984]

Momoki, Akiko (translation into Japanese)

1998 Robēru Dorōru, *Dōbutsu no rekishi*. 443pp. Misuzu Shobo. [*Les Animaux ont une Histoire*, originally written in French by Robert Delort, Editions du Seuil, 1984]

Articles

Momoki, Akiko

2000 Dōbutsuen no hakubutsushi (A Natural History of Zoological Gardens). *MORS* Spring 2000: 46-49. [in Japanese]

Research Activities

Field Research in Foreign Countries

January 2003 France and U. K. (Research on science museums and exhibits)

OKI, Taikan — Associate Professor

Born in 1964.

Curriculum Vitae

Academic Career

The University of Tokyo, D. Course (1993)

Department of Civil Engineering, The University of Tokyo, M. Course (1989)

Department of Civil Engineering, University of Tokyo (1987)

Professional Career

Associate Professor, Research Institute for Humanity and Nature (2002)

Associate Professor, Institute of Industrial Science, University of Tokyo. (1997)

Assistant Professor, Institute of Industrial Science, University of Tokyo. (1995)

Research Associate, Institute of Industrial Science, University of Tokyo. (1989)

Higher Degrees

Ph. D. (University of Tokyo, 1993)

M. Eng. (University of Tokyo, 1989)

Specialized Fields / Background

Hydrology, Water resources engineering

Academic Society Memberships

American Geophysical Union, American Meteorological Society, International Association of Hydrological Sciences, Japanese Association of Hydrological Sciences, Japan Society of Civil Engineers, Japan Society of Hydrology & Water Resources, Meteorological Society of Japan

Major Publications

Books

Taikan Oki, Supervising editor Hitoshi Takeuchi

2003 Jhohatsu to Jhosan (Evaporation and transpiration), *Chikyukankyo chosa keisoku jiten* 2, Rikuiki hen, Fuji tekunoshisutemu, 25-27, ISBN 4-938555-90-5 [in Japanese]

Taikan Oki

2003 Jobun Sennen jizoku shakai to sennen jizoku gaku (Millennialsustanable society and millennial sastanability), 2-2 Mizushigen no genjo to syorai (the present situation and future of water resources), *Sennen jizoku shakai*, (Corp.) Shigen kyokai hen, Nihon chiiki shakai kenkyusyo, 12-20, 58-68, ISBN 4-89022-814-4, [in Japanese]

2002 *Bosai Jiten* (Disaster prevention dictionary), Nihon shizensaigai gakkai, Kenzo Toki ed. Tukiji shokan, ISBN 4-8067-1233-7 [in Japanese]

2002 GAME-T no keii to kongo no kadai (Background and challenges for the future of GAME-T), Tonan-ajia no monsun kikogaku, *kisho kenkyu noto*, No.202, Nihon kisho gakkai, 271-301, [in Japanese]

2001 Modeling surface hydrology for global water cycle simulations, Present and Future of Modeling Global Environmental Change: Toward Integrated Modeling, Eds., T. Matsuno and H. Kida, *TERRAPUB*, 391-403

1999 Chikyu kankyo mondai to kasen (Global environmental issue and rivers), '*Kasen bunka*' Kasen bunka wo kataru kai koen syu 2, (Corp.) Nihon kasen kyokai, 5-69 [in Japanese]

1999 Gurobaru na mizu junkan to kasen (Global water cycle and rivers), Rikumenkatei no kenkyu no genjo to shorai, *Kisyo kenkyu noto*, 195, Nihon kisho gakkai, 53-71, [in Japanese]

1999 "*Global Water Cycle*," Chapter 1.2 in Global Energy and Water Cycles, K. Browning and R. Gurney Eds, Cambridge University Press, 10-27

Articles

Sinta Seto, Taikan Oki, Katumi Musiake

2003 Shokuseiso no hosha dentatsu wo koryo shita maikuroha hoshakei ni yoru dojou suibun suitei (Soil moisture estimation by passive microwave imager focusing on radiation transfer in vegetation layer), *Suikogaku*

ronbunsyu, 47, 49-54 [in Japanese]

Koji Dairaku, Seita Emori, Taikan Oki, Katumi Musiake

2003 Ryoiki kiko moderu wo mochiita tonan-ajia nettai sangaku chiiki ni okeru kosui tokusei no kaiseki (An investigation of monsoon rainfall over a tropical mountain in southeast Asia using regional climate model), *Suikogaku ronbunsyu*, 47, 79-84 [in Japanese]

Tomohito Yamada, Shinjiro Kanae, Taikan Oki, Kasumi Musiake

2003 Chikyu ondanka ni tomonau ajia ni okeru kosuiryo no nennen hendo no henka (Changes in interannual variability of precipitation over Asia in global warming condition), *Suikogaku ronbunsyu*, 47, 97-102 [in Japanese]

Kei Yoshimura, Taikan Oki, Shinjiro Kanae, Nobuhito Ohte

2003 Mizu no antei doitai (^{18}O) no enchoku sekibun gata suihei nijigen moderu no kochiku to kensho, (Development and verification of a vertical integrated two-dimensional water isotope circulation model) *Suikogaku ronbunsyu*, 47, 109-114 [in Japanese]

Yukiko Hirabayashi, Shinjiro Kanae, Taikan Oki, Katumi Musiake

2003 Rikumen suimon moderu ni taisuru kosui jikan sukeru no gurobaru eikyo hyoka (Analysis of global dependence of simulated land surface hydrological budget on temporal scale of precipitation), *Suikogaku ronbunsyu*, 47, 169-174 [in Japanese]

Naota Hanasaki, Shinjiro Kanae, Taikan Oki, Katumi Musiake

2003 Gurobaru ni tekiokano na chosuichi sosa moderu no kaihatsu (Development of globally applicable reservoir operation model), *Suikogaku ronbunsyu*, 47, 181-186 [in Japanese]

S. Kanae , T. Oki, and K. Musiake

2002 Principal condition for the earliest Asian summer monsoon onset, *Geophys. Res. Let.*, 29(15), 1746, 10.1029/2002GL015346

N. Chapelon, H. Douville, P. Kosuth, and T. Oki

2002 Off-line simulation of the Amazon water balance: a sensitivity study with implications for GSWP, *Clim. Dynamics*, 19, 141-154

Tosiyuki Nakaegawa, Taikan Oki, and Katumi Musiake

2001 Aggregation criteria for surface heat balances in a heterogeneous area based on a linear model, *Advances in Water Resources*, 24, 1159-1171

Taikan Oki, Yasushi Agata, Shinjiro Kanae, Takao Saruhashi, Dawen Yang, and Katumi Musiake

2001 Global Assessment of Current Water Resources using Total Runoff Integrating Pathways, *Hydrol. Sci. J.*, 46, 983-996

Kooiti Masuda, Yukie Hashimoto, Hiroshi Matsuyama, and Taikan Oki

2001 Seasonal cycle of water storage in major river basins of the world, *Geophys. Res. Lett.*, 28, 3215-3218

Dawen Yang, Shinjiro Kanae, Taikan Oki, and Katumi Musiake

2001 Expanding distributed hydrological modeling to the continental scale, Soil-Vegetation-Atmosphere Transfer Schemes and Large-Scale hydrological Models (Proceedings of a symposium held during the Sixth IAHS Scientific Assembly at Maastrich, The Netherlands), *IAHS Publ.* no.270, 125-134

Wonsik Kim, Yasushi Agata, Shinjiro Kanae, Taikan Oki, and Katumi Musiake

2001 Hydrological simulation by SiB2-Paddy in the Chao Phraya River basin, Thailand, Soil-Vegetation-Atmosphere Transfer Schemes and Large-Scale hydrological Models (Proceedings of a symposium held during the Sixth IAHS Scientific Assembly at Maastrich, The Netherlands), *IAHS Publ.* no.270, 19-26

Wonsik Kim, Takashi Arai, Shinjiro Kanae, Taikan Oki, and Katumi Musiake

2001 Application of the Simple Biosphere Model (SiB2) to a Paddy Field for a Period of Growing Season in GAME-Tropics, *J. Meteor. Soc. Japan*, 79, 387-400

Dawen Yang, Srikantha Herath, Taikan Oki, and Katumi Musiake

2001 Application of Distributed Hydrological Model in the Asian Monsoon Tropic Region with a Perspective of Coupling with Atmospheric Models, *J. Meteor. Soc. Japan*, 79, 373-385

Thai Nam Pham, Dawen Yang, Shinjiro Kanae, Taikan Oki, and Katumi Musiake

2001 Application of RUSLE Model on Global Soil Erosion Estimate, *Annual Journal of Hydraulic Engineering, JSCE*, 45, 811-816

S. Kanae, T. Oki, and K. Musiake

2001 Impact of Deforestation on Regional Precipitation over the Indochina Peninsula, *J. Hydrometeor.*, 2, 51-70

Eiji Ikoma, Taikan Oki, Masaru Kitsuregawa

2001 Dojo chihyomen kiko deta wo chushin to suru chikyu kankyo dejitaru raiburari no shisaku, (Trial production of global environmental digital library which include mainly soil and surface climate data) *Joho syori gakkai ronbunsi; deta besu*, 42, No.SIG1(TOD8), 43-55 [in Japanese]

Eiji Ikoma, Takashi Arai, Wonsik Kim, Taikan Oki, Masaru Kitsuregawa

2000 Rikumen-syokusei-moderuwakubenchi no kaihatsu to nettai-suiden-kansoku-deta no tekio, (Development of aworkbench for a land surface model and its application to the observed data in tropical paddy field) *Suimon-mizusigen gakkaishi*, 13, No.4, 291-303 [in Japanese]

Toshiyuki nakaegawa, Sinta Seto, S. A. Romshoo, Masahiro Koike, Sadayuki Hironaka, Taikan Oki, Katumi Musiake

2000 Nodogata maikuroha rimoto senshingu ni yoru dojo suibun keisoku no tame no dojo suibun wo kichi to sita chihyo men sodo koka no gyaku suitei arugorizumu, (Inversion algorithm of surface roughness effect for the soil moisture measurement using active microwave remote sensing) *Nihon rimotosenshingu gakkaisi*, 20, No.2, 39-52 [in Japanese]

K. Miyaoka, H. Matsuyama, and T. Oki

2000 Validation of the output from JMA-SiB using the combined water balance method and a river routing scheme – A case study in the Mackenzie river basin, *J. Geophys. Res.*, 104, No.D24, 31, 199-31, 206

Shinjiro Kanae, Taikan Oki, Katumi Musiake

2000 Indoshina hanto wo taisho to shita zenkyu kiko moderu ni yoru chihyo men parameta henka ga kosui ni ataeru eikyo ni kansuru suchi jikken – tanjunka shita shinrin bassai ga kosui ni ataeru eikyo – (Impact of changes in land surface parameters on precipitation over Indochina a GCM -- simplified deforestation effects –), *Suikogaku ronbunshu*, 44, 37-42 [in Japanese]

Takashi Arai, Wonsik Kim, Taikan Oki, Katumi Musiake

2000 Nettai suiden he no SiB2 no tekio to suiden sukimu no donyu (Application of SiB2 to a tropical paddy field and inclusion of water body), *Suikogaku ronbunshu*, 44, 175-180

Yukiko Hirabayashi, Sinta Seto, Shinjiro Kanae, Taikan Oki, Katumi Musiake

2000 TRMM-PR niyoru koho sanran keisu wo riyo shita gurobaru na tochi joho no bunseki (Analyses of global land cover information using backscattering coefficients by TRMM-PR), *Suikogaku ronbunshu*, 44, 259-264 [in Japanese]

T. Nakaegawa, Taikan Oki, and Katumi Musiake

2000 The effects of heterogeneity within an area on a really averaged evaporation, *Hydrological Processes*, 14, 465-479

Toshiyuki Nakaegawa, Taikan Oki, Katumi Musiake

2000 Philip shiki ni motozuku shin toryo syuyaku ka kihan no dosyutu to Shinto parameta bunpu no shuyakuka, (Aggregation of distribution of infiltration parameters using its aggregation criteria derivede from Philip's equation) *Dobokugakkai ronbunsyu*, No.642/II-50, 1-18 [in Japanese]

T. Oki, T. Nishimura, and P. Dirmeyer

1999 Assessment of annual runoff from land surface models using Total Runoff Integrating Pathways (TRIP), *J. Meteor. Soc. Japan*, 77, 235-255

R. D. Koster, T. Oki, and M. J. Suarez

1999 Assessing success in the offline validation of land surface models, *J. Meteor. Soc. Japan*, 257-263

Tetsuhira Watanabe, Taikan Oki, Katumi Musiake

1999 Tai ni okeru taiki mizu shushi to koiki josanryo, (Atmospheric water balance in Thailand and the

evapotranspiration in large area) *Suimon-mizushigen gakkaishi*, 12, 221-230 [in Japanese]

Taikan Oki, Katumi Musiake

1999 Gurobaru na kasenryuryodetasetto no kochiku to nenka senruyshutu ryo no hendo tokusei no kaiseki (Development of a global river discharge data set and analyses on the temporal variations of annual runoff), *Suikogaku ronbunshu*, 43, 151-156 [in Japanese]

Toshiyuki Nakaegawa, Taikan Oki, A. S. Herath, Katumi Musiake

1999 Shuyakuka kihan wo mochiita howa tosui keisu no sanpuru sukeru ga shintoryo santei ni ataeru eikyo (Evaluation of effect of the scale-dependent hydraulic conductivity on infiltration by the aggregation criteria), *Suikogaku ronbunsyu*, 43, 109-114 [in Japanese]

Sinta Seto, Toshiyuki Nakaegawa, Taikan Oki, Katumi Musiake

1999 TRMM-PR wo mochiita tochi hihuku goto no koho sanran keisu tokusei (Characteristics of backscattering coefficients at different land covers observed by TRMM-PR), *Suikogaku ronbunsyu*, 43, 223-226 [in Japanese]

Toshiyuki Nakaegawa, Taikan Oki, Katumi Musiake

1998 Dojo suibunryo wo kichi to shita koho sanran kesu kara no chihyomen sodo no gyaku suitei ni tuite – sodo inshi no teian –, (The essence of inversion algorithm of a surface roughness under a given soil moisture content based on theoretical models) *Suimon-mizushigen gakkaishi*, 11, 603-606 [in Japanese]

Shinjiro Kanae, Taikan Oki, Katumi Musiake

1998 Ryoiki kikou moderu wo mochiita dojosuibun ga kosui ni ataeru eikyo no bunseki, (The impact of soil moisture on precipitation in a regional climate model) *Suimon-mizushigen gakkaishi*, 11, 482-491 [in Japanese]

Shinjiro Kanae, Taikan Oki, Katumi Musiake

1998 Kiko shisutemu ni okeru dojo suibun (Soil moisture on climate system), *Suimon-mizushigen gakkaishi*, 11, 508-514 [in Japanese]

Shuhei Harada, Taikan Oki, Katumi Musiake

1998 GMS-IRdeta wo mochiita indoshinahantoiki ni okeru tairyu katsudo no nissyu henka no kaiseki, (Diurnal variation and its seasonal variation of convective activity over the Indochina peninsula region by GMS-IR data) *Suimon-mizushigen gakkaishi*, 11, 371-381 [in Japanese]

Toshiyuki Nakaegawa, Taikan Oki, Katumi Musiake

1998 Senkeika moderu ni yoru chihyo men netsu furakkusu no syuyakuka I: Ryoiki heikin chihyo men furakkusu santei siki to shuyakuka kihan no dosyutu, (Aggregation of surface heat balance by means of the linear model I: Derivation of equation of spatially – averaged surface heat fluxes and their aggregation criteria) *Suimon-mizushigen gakkaishi*, 11, 201-209 [in Japanese]

Toshiyuki Nakaegawa, Taikan Oki, Katumi Musiake

1998 Senkeikamoderu niyoru chihyo men furakkusu no syuyakuka II: Fukinituna ryoiki ni okeru chihyo men netsu furakkusu no syuyakuka, (Aggregation of surface heat balance by means of the linear model II: aggregation of surface heat fluxes over an heterogeneous region) *Suimon-mizushigen gakkaishi*, 11, 210-220 [in Japanese]

T. Oki and Y. C. Sud

1998 Design of Total Runoff Integrating Pathways (TRIP) A global river channel network, *Earth Interactions*, 2

Activities in Academic Societies

2002 - International association of hydrological sciences, a chair of the Hydrology 2020 Working Group

2001 Apr. - Japan society of civil engineers, a chief secretary of global environmental commission

2000 Sep. - 2002 Dec. American geophysical union, an associate editor of TGR-Atmospheres

2000 Aug. - Japan society of Hydrology water resources, a member of international board

2000 - Meteorological society of Japan, a member of working group for global environmental issues

2000 - Japan society of civil engineers, an organizer of preliminary review board for award committee's environmental award

1999 June - Japan society of civil engineers, an organizer of global environmental executive meeting
1999 June - Japan society of civil engineers, a council member and organizer of hydraulic commission
1999 June - 2001 May Japan society of civil engineers, a peer review member of Japan society of civil engineers collected papers
1998 Oct. - 2000 Aug., 2000 Oct. - 2008 Aug. Japan society of Hydrology water resources, a council member of edit and publication commission, a council special member of Information Basic system, a council member of international journal board
1998 - Meteorological society of Japan, a council member of Electric information commission

Awards

Award for the Paper on the Annual Journal of Hydraulic Engineering, Japan Society of Civil Engineer (2000)
Scientific Award from Japan Society of Hydrology and Water Resources. (1998)

Research Activities

Field Research in Japan

March 2003, Tokyo (AGS meeting)
Kyoto (Global Water System Project meeting)
Iriomote island (Hydrology 2020 domestic meeting)
January 2003, University of Tokyo (monsoon phenology kick off meeting)
August 2002, Kushiro (JST workshop)
May 2002, Echigo yuzawa (GAME-T monsoon workshop)

Field Research in Foreign Countries

February 2003, Taiwan (visit to the facility for water resource)
Paris (IPCC general assembly meeting)
Thailand (visit to the observation site)
January 2003, U. S. (Japan and U. S. global change workshop on climate change and water cycle)
Thailand (research of water resources)
December 2002, the Netherlands (Virtual Water Expert Meeting)
November 2002, South Korea (research of floods)
France (research of European floods)
U. S. (ACS meeting)
Brazil (PUB kick off workshop)
October 2002, Thailand (GAME-T Workshop)
September 2002, U. S. (GSWP2 kick off meeting)
August 2002, Thailand (GAME-T observation)
Stockholm (Water symposium)
June 2002, Paris (IAHS 2020 hydrology working group and sixth Kovacs Colloquium)

Supervision and Host (Number of DC Students and JSPS Research Fellows)

Superviser (14)
Vice superviser (12)
Special foreign researcher from Japan Society for the Promotion of Science (1)

Social Activities and Public Lectures

Appointed commission member

- Associate Professor at University of Tokyo Institute of Industrial Science 2002/4/1-
- researcher at Frontier Research System for Global Change/ Hydrological Cycle Research Program. 1998/9-
- Advanced Earth Science and Technology Organization commission member of Earth Science & Technology new

forum 2002/8-

- Senior Specialist for Scientific Research, at Science and International Affairs Bureau, Ministry of Education, Science, Sports and Culture. 2000-

SEKINO, Tatsuki ——— Associate Professor

Born in 1969.

Curriculum Vitae

Academic Career

Department of Zoology, Faculty of Science, Kyoto University, D. Course (1998)

Department of Biology, Faculty of Science, Shinshu University, M. Course (1993)

Department of Biology, Faculty of Science, Shinshu University (1991)

Professional Career

Associate Professor, Research Promotion Center, Research Institute for Humanity and Nature (2002)

Researcher, Research Division, International Lake Environmental Committee Foundation (2001)

COE Scientist, Center for Ecological Research, Kyoto University (1999)

Higher Degrees

D. Sc. (University of Kyoto, 1998)

M. Sc. (University of Shishu, 1993)

Fields of Specialization / Background

Limnology, Ecology, Information Science

Academic Society Memberships

Japanese Society of Limnology, Ecological Society of Japan, Information Processing Society of Japan

Major Publications

Articles

Genkai-Kato, M., T. Sekino, T. Yoshida, H. Miyasaka, T. V. Khodzher, O. A. Belykh, N. G. Melnik, Z. Kawabata, M. Higashi and M. Nakanishi

2002 Nutritional Diagnosis of Phytoplankton in Lake Baikal. *Ecological Research* 17: 135-142.

Urabe, Jotara, Takehito Yoshida, Tek Bahadur Gung, Maiko Kagami, Tatsuki Sekino and Masami Nakanishi

2002 Purankuton no seisanryōhi kara mita Biwako seitaikei no genjō (The State of Ecosystem in Lake Biwa from the View Point of Plankton Biomass Ratio. *Cikyu-kankyo* 7(1): 37-45. [in Japanese]

Sekino, Tatsuki and Hanazato, Takayuki

2001 Zooplankton. In Y. Saijo and H. Hayashi (eds.) *Lake Kizaki*, pp.301-312. Backhuys, Leiden, Netherlands.

Sekino, Tatsuki and Norio Yamamura

1999 Diel Vertical Migration of Zooplankton: Optimum Migrating Schedule Based on Energy Accumulation. *Evolutionary Ecology* 13: 267-282.

Sekino, Tatsuki

1999 Lipids in Plankton. In S. Nagano (ed.) Recent Trends in Organic Matter Studies in Freshwater Environments. *Japanese Journal of Limnology* 60: 107-118.

Activities in Academic Societies

September 2001 "Fatty Acid Composition of Zooplankton in Lake Baikal", the 65th annual meeting of the Japanese Society of Limnology, Fukuoka University. [in Japanese]

September 2001 "Plankton Community Structure of Lake Baikal", the 65th annual meeting of the Japanese Society of Limnology, Fukuoka University. [in Japanese]

September 1999 "Lipids in Zooplankton: Composition and Their Role", the 63rd annual meeting of the Japanese

Society of Limnology, Shinshu University. [in Japanese]

September 1999 "Vertical Distribution of *Daphnia galeata*; Why It Changed Seasonally?", the 63rd annual meeting of the Japanese Society of Limnology, Shinshu University. [in Japanese]

September 1999 "Preliminary Investigation of Lake Hovsgol for LTER: II. Water Quality and Organisms", the 63rd annual meeting of the Japanese Society of Limnology, Shinshu University. [in Japanese]

Research Activities

Field Research in Japan

February 2003 Iriomote Island (Research on constructing a database of literature about Iriomote Island)

Social Activities and Public Lectures

Public Lectures

March 2003 "Planning for Lake Monitoring", 13th Group Training Course in Lake Water Quality Management, Osaka International Centre. Japan International Corporation Agency (OSIC JICA) and International Lake Environmental Committee Foundation (ILEC).

March 2003 "Appling of the Information Technology to RIHN's Activity", the 6th study group of Kyoto Project, International Research Center for Japanese Studies.

UMETSU, Chieko ——— Associate Professor

Curriculum Vitae

Academic Career

Department of Agricultural and Resource Economics, University of Hawaii at Manoa, D. Course (1995)

School of International Relations, International University of Japan, M. Course (1989)

Professional Career

Associate Professor, Research Institute for Humanity and Nature (2002)

Visiting Scholar, Environmental Studies, Research Program, East-West Center, Honolulu, Hawaii, U. S. A. (2001)

Assistant Professor, The Graduate School of Science and Technology, Kobe University (1997)

Visiting Fellow, Program on Environment, East-West Center, Honolulu, Hawaii. U. S. A. (1995)

Training Co-ordinator, Tohoku Branch Office, Japan International Cooperation Agency (JICA), Sendai, Japan (1982)

Science & Math Teacher (O level), Kiriani High School, Meru, Kenya, Japan Overseas Cooperation Volunteers (JOCV), JICA (1979)

Higher Degrees

Ph. D. (University of Hawaii, 1995)

M. A. (International University of Japan, 1989)

Fields of Specialization / Background

Resource and Environmental Economics, Development Economics / International Relations, Biology

Academic Society Memberships

International Association of Agricultural Economists (IAAE), American Agricultural Economics Association (AAEA), International Society for Ecological Economics (ISEE), East Asian Economic Association, Agricultural Economics Society of Japan, Society for Environmental Economics and Policy Studies (SEEPS), Japan Society for International Development (JASID).

Major Publications

Articles

Chakravorty, Ujjayant and Chieko Umetsu

2003 Basinwide Water Management: A Spatial Model. *Journal of Environmental Economics and Management* 45(1) 1-23.

Umetsu, Chieko

2002 The Optimal Dynamic Model of Conjunctive Water Use. *Japanese Journal of Rural Economics* 4: 1-10.

2001 A Note on the Measurement of Total Factor Productivity, Efficiency and Technological Change Using Data Envelopment Analysis. *The Science Reports of Faculty of Agriculture, Kobe University* 25: 9-28.

2001 Induced Innovation Theories and Technological Change: A Theoretical Review. *Agricultural Economic Papers of Kobe University* 34: 1-12.

2001 Basinwide Water Management: The Case of Downstream Water Pollution. *Agricultural Economic Papers of Kobe University* 34: 13-20.

2001 The Optimal Dynamic Model of Conjunctive Water Use. *Proceedings of Annual Conference of the Agricultural Economics Society of Japan*, pp.104-106.

Umetsu, Chieko, Thamana Lekprichakul and Ujjayant Chakravorty

2000 Efficiency and Technical Change in the Philippine Rice Sector: A Regional Total Factor Productivity Analysis. *Agricultural Economic Papers of Kobe University* 33: 19-27.

Umetsu, Chieko and Ujjayant Chakravorty

2000 Water Conveyance Costs and Conjunctive Use. *International Journal of Social Economics* 27(7/8/9/10): 1020-1036.

1998 Water Conveyance, Spatial Technology Choice and Rents. *Agricultural Economic Papers of Kobe University* 31: 23-39.

1998 Water Conveyance, Return Flows and Technology Choice. *Agricultural Economics* 19(1-2): 181-192.

Translation

Umetsu, Chieko, Masaya Nakatsuka, Akiko Shinozawa, Bang-wook Sung and Akiko Usui (trans.)

2000 Bōeki to kankyō - WTO tokubetsu kenkyu (Trade and Environment, Executive Summary, WTO Special Studies 4, World Trade Organization). (Originally written by Håkan Nordström and Scott Vaughan). *Agricultural Economic Papers of Kobe University* 33: 119-128. [in Japanese]

Project Reports

2000 "A Study on the Spatial Water Allocation Under Conjunctive Use". A report for the Grant-in-Aid for Scientific Research (C) of the Ministry of Education, Science, Sports and Culture, Japanese Government, pp.1-105. Program No.10660209.

1998 "The Role of Women in Resource Conservation in Sub-Saharan Africa: Rural Energy Use in Ethiopia", with Ujjayant Chakravorty. A Report Submitted to the Ministry of Foreign Affairs, Japanese Government. Foundation for Advanced Studies on International Development (FASID), pp.1-127.

Activities in Academic Societies

October 2002 "Spatial Allocation of Water Resources: An Economic Approach" presented at the Research Seminar, Arid Land Research Center, Tottori University.

June 2002 "The Optimal Dynamic Model of Conjunctive Water Use." presented at the 2002 World Congress of Environmental and Resource Economists, Monterey, California, U. S. A.

September 2001 "Basinwide Water Management: A Spatial Model", presented at the 2001 Meeting of the Society of Environmental Economics and Policy Studies, Kyoto International Conference Center.

July 2001 "Spatial Water Management Under Alternative Institutional Arrangements", with Ujjayant Chakravorty and David Zilberman, presented at the Far Eastern Meeting of the Econometric Society, Kobe, Japan.

June 2001 "Spatial Water Management Under Alternative Institutional Arrangements," with Ujjayant Chakravorty and David Zilberman, presented at the plenary session of the International Water and Resource Economics Consortium 7th Biennial Meeting, Girona, Spain.

March - April 2001 "The Optimal Dynamic Model of Conjunctive Water Use", presented at the Agricultural

Economics Society of Japan Annual Meeting, Ehime University.

November 2000 "Efficiency and Technical Change in the Philippine Rice Sector: A Malmquist Total Factor Productivity Analysis", paper presented at the "OR in evaluation" Working Group, the Operations Research Society of Japan, National Graduate Institute for Policy Studies, Tokyo.

August 2000 "Efficiency and Technical Change in the Philippine Rice Sector: A Malmquist Total Factor Productivity Analysis", contributed paper at the XXIV International Conference of Agricultural Economists, Berlin, Germany.

March - April 2000 "Basinwide Water Management and Private Technology Choice", presented at the Agricultural Economics Society of Japan Annual Meeting, Tokyo University.

August 1999 "The Environmental Impacts of Agro-Industrialization in Developing Countries", presented at the American Agricultural Economics Association Annual Meeting Conference Workshop "Industrialization, Globalization, and International Development", Nashville, Tennessee.

July 1999 "Efficiency and Technical Change in the Philippine Rice Sector: A Malmquist Total Factor Productivity Analysis", presented at the Taipei International Conference on Efficiency and Productivity Growth, Academia Sinica, Taipei, Taiwan.

June - July 1999 "Basinwide Water Management: A Spatial Model", presented at the International Water and Resource Economics Consortium 6th Biennial Meeting, Kona, Hawaii.

Awards

IAAE-JB Research Award from the Japan Branch of the International Association of Agricultural Economists (2001)

Research Activities

Field Research in Foreign Countries

February 2003 India ("The Role of Farmers' Collective Action for Mitigating Water Scarcity: The Case of Tank Irrigation in Tamil Nadu, India". Co-researcher of subgroup "Spatial Ownership: Territoriality and Commons", subgroup leader: Tomoya Akimichi. "Distribution and Sharing of Resources in Symbolic and Ecological Systems: Integrative Model-Building in Anthropology", project leader: Motomitsu Uchibori. Grant-in-Aid for Scientific Research of Priority Areas, Ministry of Education, Culture, Sports, Science and Technology, Japanese Government.)

November 2002 India (Research on Water Users' Association of Tank Irrigation Systems in the State of Tamil Nadu)

WATANABE, Tsugihiro — Associate Professor

Born in 1953.

Curriculum Vitae

Academic Career

Department of Agricultural Engineering, Graduate School of Agriculture, Kyoto University, D. Course (1983)

Department of Agricultural Engineering, Graduate School of Agriculture, Kyoto University, M. Course (1979)

Department of Agricultural Engineering, Faculty of Agriculture, Kyoto University (1977)

Professional Career

Associate Professor, Research Institute for Humanity and Nature (2001)

Associate Professor, Arid Land Research Center, Tottori University (2001)

Associate Professor, College of Agriculture and Bioscience, Osaka Prefecture University (1995)

Associate Professor, Faculty of Agriculture, Kyoto University (1989)

Research Assistant, Faculty of Agriculture, Kyoto University (1984)

Research Fellow, Japan Society for Promotion of Science (1983)

Higher Degrees

D. Agri. (Kyoto University, 1989)

M. Sc. (Kyoto University, 1979)

Fields of Specialization / Background

Irrigation and Drainage Engineering

Academic Society Members

Japanese Society of Irrigation, Drainage and Reclamation Engineering, Japan Society of Hydrology and Water Resources, Japanese Association for Water Resources and Environment, Japan Society of Civil Engineers, the Japanese Society for Arid Land Studies, International Water Resources Association

Major Publications

Books

Watanabe, Tsugihiro

2003 '*Chiiki mizukankyo to nogyo-noson* (Regional hydrological environment and agriculture-Farm village)'. Yamazaki Nogyo Kenkyuu Sho ed. *21 seiki mizu kiki: No karano hasso* (Water Crisis in 21st Century – Approach from Agriculture). Nobunkyo. pp.82-93 [in Japanese]

Watanabe, Tsugihiro

2003 '*Echigawa ryuiki no nogyoyousui riyou* (Agricultural water use in Echi River Basin)', Biwako Ryuiki Kenkyu Kai ed. *Biwako ryuiki wo yomu (I)* (Perusing the Catchment of Lake Biwa I). San Raizu Shuppan. pp.232-237. [in Japanese]

Watanabe, Tsugihiro

2003 '*Yasugawa ryuiki no nogyosuiri* (Agricultural water use in Yasu River Basin)', Biwako Ryuiki Kenkyu Kai ed. *Biwako ryuiki wo yomu (II)* (Perusing the Catchment of Lake Biwa II). San Raizu Shuppan. pp.81-87. [in Japanese]

Watanabe, Tsugihiro

2002 '*Bansui* (Rotational water supply)', '*Nousakumotsu no kangai* (Drought damage of crop)'. Nihon Shizen Saigai Gakkai ed. *Bousai jiten* (Disaster Prevention Dictionary). Tukiji Shokan. p.304, p.315. [in Japanese]

Watanabe, Tsugihiro and Hajime Tanji

2000 '*Kanagaihaisui no kihonkeikaku* (Basic plan of irrigation and drainage)' Nougyou-Doboku Gakkai ed. *Kaitei 6 han nogyo doboku hando bukku* (Handbook of Irrigation and Drainage Engineering). Nougyou-Doboku Gakkai. Volume I, pp.83-84. [in Japanese]

Watanabe, Tsugihiro

2000 '*Suiri sisutemu no sohsa-hozen* (Operation and maintenance of irrigation system)', '*Yousuiro-kei ni okeru souhaisui kanri* (Water delivery management in irrigation networks)', '*Yousuiro-kei ni okeru ryuryou-suii-atsuryoku no kanri* (Control of flow-level- pressure in irrigation canal)'. Masaharu Koroda ed. *Suiri sisutemu no kanri* (Operation and Maintenance of Irrigation Systems). Nogyo-Doboku Kikaika Kyokai. pp.105-139, pp.143-146, pp.147-155. [in Japanese]

Watanabe, Tsugihiro

2000 '*Biwako-shusuiiki no nogyo-noson* (Agriculture and rural village in the catchment of Lake Biwa)', 'Nogyosuiri sisutem no seibi to mizuriyou (Improvement of irrigation system and agricultural water use)', '*Biwako-shusuiiki no chikei to chikasui* (Topography of the catchment of Lake Biwa and groundwater)', '*Biwako karano chokusetsu shusui to Biwako eno cyokusetu haisui* (Diversion and return flow directly from/to Lake Biwa). Isao Somiya ed. *Biwako: Sono kankyo to suishitu Keisi* (Lake Biwa – Its Environment and Water Qualy Formation). Gihodo. pp.33-35, pp.36-39, pp.66-69, pp.90-95. [in Japanese]

Watanabe, Tsugihiro and Toru Mitsuno

1999 '*Chiiki ni okeru mizujunnkan no kanri* (Management of regional hydrological cycle)'. Toshisuke Maruyama and Toru Mitsuno ed. *Chiiki kankyo suimongaku* (Rural Environmental Hydrology). Asakura. pp.145-164. [in Japanese]

Watanabe, Tsugihiro

1999 Irrigation Water Requirement, Editorial Committee of Advanced Paddy Field Engineering, The Japanese Society of Irrigation, Drainage and Reclamation Engineering. '*Advanced Paddy Field Engineering*'. Shinzansha-Scitech. pp.31-50.

Watanabe, Tsugihiro

1998 *Suiden kangai* (Paddy Irrigation), In Maruyama et al. ed. '*Suiri kankyo kogaku* (Water Use Environmental Engineering)'. Asakura. pp.58-74. [in Japanese]

Articles

Watanabe, Tsugihiro

2003 Implication of Changes in Paddy Field Water Management in Japan. *Proceedings of the 1st International Conference on Hydrology and Water Resources in Asia Pacific Region* 1: 519-524.

Kotb, Tarek H. S., Tsugihiro Watanabe, Yoshihiko Ogino and Takao Nakagiri

2000 Performance Assessment Framework for Irrigation System Characterization and Comparative Evaluation among Regional Units - Case Study: Egypt's Irrigated Agricultures. *Journal of Arid Land Studies* 10(1): 59-74.

Kotb, Tarek H. S., Tsugihiro Watanabe, Yoshihiko Ogino and Kenneth K. Tanji

2000 Soil Salinization in the Nile Delta and Related Policy Issues in Egypt. *Agricultural Water Management* 43: 239-261.

Kotb, Tarek H. S., Yoshihiko Ogino and Tsugihiro Watanabe

1999 Input-Output Relationship for Assessing Irrigated Agriculture Performance - Case Study: Egypt. *Applied Biological Science* 5: 51-68.

Kotb, Tarek H. S., Tsugihiro Watanabe, Yoshihiko Ogino and Takao Nakagiri

1998 Possibility of Agricultural Expansion in Egypt in View of the Available Water Resources. *Journal of Arid Land Studies* 8(2): 113-128.

General Reports

Watanabe, Tsugihiro and Yoshihiko Ogino

2003 Role of District-Level Organization in Decentralized Arrangement of Irrigation Management: Lessons from Land Improvement District in Japan. *Proceedings of the Fourth Water Demand Management Forum*, pp.1-6.

Nagano, Tananori, Tsugihiro Watanabe and Toru Mitsuno

2002 Efficient Use of Flora and Fauna for Conservation of Millet Fields in the Southwestern Niger, West Africa. *The Ecological Environment Construction, and the Sustainable Development in Arid Zone* (Proceedings of the International Conference on the Optimum Allocation of Water Resource, Scientific-Technology Association of Inner Mongolia) pp.278-286.

Watanabe, Tsugihiro, Takashi Kume and Toru Mitsuno

2002 Soil Salinity Assessment in Hetao Irrigation District Using Electromagnetic Induction Technique. *The Ecological Environment Construction, and the Sustainable Development in Arid Zone* (Proceedings of the International Conference on the Optimum Allocation of Water Resource, Scientific-Technology Association of Inner Mongolia) pp.132-137.

Watanabe, Tsugihiro

2002 Water Management and Operation and Maintenance System of Paddy Irrigation in Japan. *Proceedings of International Seminar on the Water Management in Basins and the Role of Reservoirs, JCOLD/JSHWR*, pp.69-79

Tanji, Kenneth and Tsugihiro Watanabe

2001 Environmental and Ecological Constraints on Rice Irrigation in Colusa Basin, California, USA. *Proceedings of First Asian Regional Conferece of ICID.*

Watanabe, Tsugihiro and Yoshihiko Ogino

2001 Changes in Paddy Plot Water Management in Japan. *Proceedings of First Asian Regional Conference of ICID.*

Watanabe, Tsugihiro and Tarek H. S. Kotb

2000 Agricultural Expansion in Egypt. *Green Age* 19: 10-12.

Tarek H. S. Kotb, Tugihiro Watanabe, Yoshihiko Ogino and Takao Nakagiri

2000 Assessment of Actual and Estimated Water Diversions in the Nile Delta. *Science Report of College of Agriculture, Osaka Prefecture University* 52: 19-28.

Kotb, Tarek H. S., Tsugihiro Watanabe and Yosihiko Ogino

2000 Participatory Irrigation Management in Egypt: Proposal for Institutionalization. *XI International Congress of IWRA.*

Watanabe, Tsugihiro and Kenneth K. Tanji

2000 Eco-Environmental Constraints to Rice Irrigation in the Sacramento Valley of California. *XI International Congress of IWRA.*

Kotb, Tarek H. S., Yosihiko Ogino, Tsugihiro Watanabe and Takao Nakagiri

1999 Performance of Assessment of the Irrigated Agriculture in Egypt. *Proceedings of 17th ICID Congress: Poster Session* Q.48-P.9: 01-115.

Watanabe, Tsugihiro and Kenneth Tanji

1998 Eco-Environmental Constraints to Rice Irrigation. *Water Resources Engineering 98. American Society of Civil Engineers*, pp.1583-1588.

Activities in Academic Societies

Administrative Works

2002- Member of Committee for Selection and Award Candidates, JSHWR (Japan Society of Hydrology and Water Resources).

2001-2002 Special Task Member of the Award Candidate Selection, JSIDRE (Japanese Society of Irrigation, Drainage and Reclamation Engineering).

2000-2002 Chairman of the Committee on General Affairs, JSHWR.

2000- Board Member, JSHWR.

1999-2003 Member of Editorial Committee for Revision of the Glossary for Irrigation Engineering, JSIDRE.

1999-2001 Chairman of the Students Committee, JSIDRE.

1999-2001 Member of Transaction Editorial Committee, JSIDRE.

1999- Member of Committee for Accreditation of Engineering Education, JSIDRE.

1999- International Committee on Irrigation and Drainage. Member of Working Group on Irrigation and Drainage Performance.

1999-2000 Member of Committee for Engineering Carrier Development, JSIDRE.

1998-2000 Member of Committee for Publishing of Manual on Operation and Maintenance of Irrigation and Drainage, JSIDRE.

1998-2000 Member of International Committee, JSHWR.

1998-1999 Member of Committee on Design Criteria on Paddy Irrigation, JSIDRE.

1998- Member of the Committee on General Affairs, JSHWR.

1998- Board Member, JAWRE (Japanese Association for Water Resources and Environment).

1998- Member of Committee of Assessment of Multi-purpose Use of Irrigation Water in the Kohoku Region, JSIDRE.

1998- International Water Resources Association. *Water International* Editorial Board Member.

1994-2000 Member of the Committee for Publishing and Editing, JSHWR.

Chairperson

March 2003 APHW 1st International Conference on Hydrology and Water Resources in Asia Pacific Region, Kyoto.

August 2002 JSHWR 6th Symposium on Water Resources, Tokyo. Session 2-4 "On Basin Water Management".

July 2001 JSIDRE Annual Meeting 2001, Morioka. Session of Rural Planning.
March 2001 JSHWR Research Workshop "Hydrology and Water Resources in the 21st Century", Tokyo.
August 2000 JSIDRE Annual Meeting 2000, Tottori. Session of Irrigation and Drainage.
August 1998 JSHWR 1998 Annual Meeting, Tokyo, 1999. Session Basin Management.
August 1999 JSIDRE Annual Meeting 1999, Tokyo. Session of Irrigation and Drainage.
July 1998 JSIDRE Annual Meeting 1998, Kyoto. Session of Irrigation, Drainage and Environment.

Lectures

February 2001 Lecture "Farmland Management and Ecological Conservation", JSIDRE Regional Training Short Course of the Kantoh Branch, Urawa.
August 2000 Lecture "ABET-accreditation and Engineering Education Program: Lessons from American Cases", SIDRE 2000 Annual Meeting, Special Symposium on Engineering Education, Tottori.
October 1999 Lecture "Irrigation, Drainage and Water Management on the World", JSIDRE National Meeting of Short Course, Tokyo.

Oral Presentations

2003 "Implication of Changes in Paddy Field Water Management in Japan", the 1st International Conference on Hydrology and Water Resources in Asia Pacific Region, Kyoto, Japan.
2001 "Changes in Paddy Plot Water Management in Japan", 1st Asian Regional Conference of International Committee on Irrigation and Drainage (ICID), Seoul, Korea.
2000 "Eco-Environmental Constraints to Rice Irrigation in the Sacramento Valley of California", XI International Congress, International Water Resources Association (IWRA), Melbourne, Australia.
1999 "Performance Assessment of the Irrigated Agriculture in Egypt", 17th ICID Congress, Granada, Spain.
1999 JSIDRE 1999 Annual Meeting, "Water Management Practices in Paddy Plots for Ecological Conservation", Tokyo.
1999 JSHWR 1999 Annual Meeting, "Regulations on Diversion of Water for Irrigation for Ecological Conservation in California: Case Study on protection of endangered species of Salmon, in the Colusa Region in the Sacramento River Valley", Sendai.
1998 JSIDRE 1998 Annual Meeting, "Eco-Environmental Constraints to Rice Irrigation in the Sacramento Valley, California", Kyoto.

Field Studies

Domestic

October 2002 - March 2003 Kohoku Region, Shiga Prefecture (Studies on conditions of paddy plots as habitat of migratory bird)
July 2002 Kohoku Region, Shiga Prefecture (Studies on multi-purpose regional water use)
October 2001 - May 2002 Kohoku Region, Shiga Prefecture (Studies on conditions of paddy plots as habitat of migratory bird)
July 2001 Kohoku Region, Shiga Prefecture (Studies on multi-purpose regional water use)

Abroad

December 2001 Egypt (Studies on Impact of climate change on irrigated agriculture)
January 2001 California, USA. (Studies on removal of dams in USA)
January 2002 Turkey (Studies on Impact of climate change on agricultural production)
May 2002 China (Studies on water balance structure of large-scale irrigation scheme)
May 2002 Turkey (Studies on Impact of climate change on agricultural production)
July 2002 Turkey (Studies on Impact of climate change on agricultural production)
September 2002 China (Studies on water balance structure of large-scale irrigation scheme)
December 2002 Turkey (Studies on Impact of climate change on agricultural production)
February 2003 Egypt (Studies on Impact of climate change on irrigated agriculture)

Other Academic Activities

2001 to date Head of Agriculture and Irrigation Sub-Group of the Research Project on "Improving the Sustainability in Utilizing and Controlling Water in the Yellow River Basin", the Core Research for Evolutional Science and Technology Japan Science and Technology.

2001-2003 Joint Researcher, Water Resources Research Center of Disaster Prevention Research Institute, Kyoto University.

2000 to date Research Collaborator, JSPS-CAS Core-University Program Researches on Combating Desertification and Developmental Utilization in Inland China, Arid Land Research center of Tottori University.

2000 to date Joint Researcher, Arid Land Research Center of Tottori University.

Social Activities and Other Activities

Lectures

March 2003 Coordinator, Symposium for Enhancement of Multi-function of Farmland and Irrigation System, Advice Center for Rural Environment Support.

March 2003 Summing-up Report, "Water Issues in Asian and Pacific Region", WWF3-Asia & Pacific Day.

February 2003 Lecture Lecture "Overview of Decentralization in Asian Countries and Links with Middle East-Mediterranean Experiences and Future Strategies", WWF3-Mediteranean Day.

February 2003 Keynote "Role of District-Level Organization in Decentralized Arrangement of Irrigation Management: Lessons from Land Improvement District in Japan", Fourth Water Demand Management Forum, IDRC-CIID, Japan-ODA, etc.

August 2002 Lecture "Water Management and Operation and Maintenance System of Paddy Irrigation in Japan", International Seminar on the Water Management in Basins and the Role of Reservoirs, JCOLD/JSHWR.

July 2002 Lecture "Water Management Practices in Paddy Fields for Conservation of Habitats for Birds: Case Studies in USA and Japan", Association for Nature Restoration and Conservation, Japan.

March 2002 Lecture "Water Management Practices and Ecology on Paddy Fields: Paddy Fields and Migratory Birds", Symposium for Enhancement of Multi-function of Farmland and Irrigation System, Advice Center for Rural Environment Support.

Committee Work for Other Organizations

2002 to date Member of the Committee for Promotion of Groundwork in Shiga Prefecture, Federation of Land Improvement Organizations of Shiga Prefecture.

2002 to date Member of the Committee on Actual Situation and Evaluation of Dam Removal Problems in USA. Reduction of Negative Impacts of Farmland Consolidation on Environment, Japan Institute of Irrigation and Drainage.

2002 to date Member of the Committee on Reduction of Negative Impacts of Farmland Consolidation on Environment, Japan Institute of Irrigation and Drainage.

2001-2003 Member of the Committee for Enhancement of Mutli-functions of Agriculture in the Kinki Region, Advice Center for Rural Environment Support.

2001-2003 Chairman of the Committee on Fundamental Strategy for Acceleration of LID Activities, Ysaugawa-Karyu Land Improvement District.

2001 to date Member of the Committee on Ecological Engineering in Paddy Fields, Advice Center for Rural Environment Support.

2000-2002 Technical committee member of the Committee for Efficient Implementation of Land Improvement Project, Ministry of Agriculture, Forestry and Fisheries.

2000-2002 Member of the Committee on Water Users Association in Irrigation Management in the World, Japan Institute of Irrigation and Drainage.

1999 to date Member of the Committee on Measures for Farmland and Soil Conservation, Japan Green Cooperation.

1999 to date Member of the Committee for Promotion of ICID Activities, Japan Institute of Irrigation and Drainage.

1999 to date Member of the Committee on Improvement of Rural Area, Osaka Prefecture.

YACHI, Shigeo — Associate Professor

Born in 1962.

Curriculum Vitae

Academic Career

Department of Biophysics, Faculty of Science, Kyoto University, D. Course (1995)

Department of Biophysics, Faculty of Science, University, M. Course (1988)

Faculty of Science, Kyoto University (1985)

Professional Career

Associate Professor, Research Institute for Humanity and Nature (2001-)

Associate Professor, Center for Ecological Research, Kyoto University (2001)

Research Associate, Kyoto University (1999-2001)

Postdoctoral Fellow, Laboratoire d'Ecologie, Ecole Normale Superieure and Universite Pierre et Marie Curie, CNRS-URA 258, Paris, France (1997-1999)

Lecturer (part time), Doshisha University, Kyoto, Japan (1993-1997)

Lecturer (part time), Osaka Institute of Technology, Osaka, Japan (1992-1997)

Higher Degrees

D. Sc. (Kyoto University, 1995)

M. Sc. (Kyoto University, 1988)

Fields of Specialization / Background

Mathematical Ecology

Academic Society Memberships

The Ecological Society of Japan, the Japanese Society for Mathematical Biology, Society of Evolutionary Studies, Japan

Major Publications

Books

Wada Project (eds.)

2002 *Ryūiki kanri no tameno sōgōchōsa manyuaru* (A Comprehensive Manual for Assessing the Human and Natural Environment of a River Basin). Center for Ecological Research, Kyoto University. [in Japanese]

Articles

Yachi, S., K. Wakita, Y. Hara and T. Tanaka

2002 *Mizujyunkan to ryūikiken: Ryūiki no mizu kankyō no sōgōtekina shindanhō* (Developing a Comprehensive Diagnosis Methodology for Assessing the Human and Natural Environment of a River Basin. *Kankyō Jōhō Kagaku* (Environmental Information Science) 31: 17-23. [in Japanese]

Yachi, S.

2002 A Co-Dynamic Model of Sense of Values, Society and Environment. In N. Fujita, O. A. Timoshkin, J. Urabe and E. Wada (ed.) *New Scope on Sustainable Watersheds in East Asia*, pp.121. Nauka-Center, Novosibirsk.

Yamamura, N., S. Yachi and M. Higashi

2001 An Ecosystem Organization Model Explaining Diversity at an Ecosystem Level: Coevolution of Primary Producer and Decomposer. *Ecological Research* 16: 975-982.

Yachi, S.
2000 What Determines the Attack Distance of a Stalking Predator? *Evolutionary Ecology Research* 2: 957-964.
Hector, A., B. Schmidt, C. Beierkuhnlein, M. C. Caldeira, M. Diemer, P. G. Dimitrakopoulos, J. A. Finn, H. Freitas, P. S. Giller, J. Good, R. Harris, P. Högberg, K. Hass-Danell, J. Joshi, A. Jumpponen, C. Körner, P. W. Leadley, M. Loreau, A. Minns, C. P. H. Mulder, G. O'Donovan, S. J. Otway, J. S. Pereira, A. Prinz, D. J. Read, S. M. cherer-Lorenzen, E. -D. Schulze, A. -S. D. Siamantziouras, E. M. Spehn, A. C. Terry, Troumbis, A. Y. Woodward, F. I.
Yachi, S. and J. H. Lawton
2000 Response to "No Consistent Effect of Diversity on Productivity" by Huston, M. A. et al. *Science* 289: 1255a.
1999 Plant Diversity and Productivity Experiments in European Grasslands. *Science* 286: 1123-1127.
Yachi, S. and M. Higashi
1999 Modeling Associative Learning with Generalization for a Case of Warning Signals. *Ecological Research* 14: 243-248.
Yachi, S. and M. Loreau
1999 Biodiversity and Ecosystem Productivity in a Fluctuating Environment: The Insurance Hypothesis. *Proceedings of the National Academy of Science.* 96: 1463-1468.
Yachi, S. and M. Higashi
1998 The Evolution of Warning Signals. *Nature* 394: 882-884.

Activities in Academic Societies

November 2002 "Basic Concepts of a Comprehensive Manual for Assessing the Human and Natural Environment of a River Basin", Response of Terrestrial Watershed Ecosystems in Monsoon Asia to Global Change, Kyoto, Japan.

August 2001 "Developing the Standards for Global Watch through a Multi-Disciplinary Catchment Study", Asian Wetland Symposium 2001, Penang, Malaysia.

December 2000 "Understanding Human Impact on Lake Ecosystems through Eutrophication Syndrome Perspective", International Food Web Conference, Kyoto, Japan.

November 1999 "A Co-Dynamics Model of Sense of Values, Society and Environment", International Workshop on Sustainable Watershed, Otsu, Japan.

October 1998 "How Can Complementality among Different Species Affect Productivity: A Model for Light-Limited Grassland Ecosystem", C. N. R. S. France-Japan Workshop on "Biodiversity and Ecosystem Functioning", Paris, France.

July 1998 "Biodiversity and Ecosystem Productivity in a Fluctuating Environment: The Insurance Hypothesis", 7th International Congress of Ecology (INTECOL), Florence, Italy.

Awards

Miyaji Award in 1999 (Award for Promotion of Ecological Studies by the Ecological Society of Japan in 1999)

Research Activities

Field Research in Japan

October 2002 Shiga Prefecture (Field trip in the eastern areas of the Lake Biwa)

Field Research in Foreign Countries

January 2003 France (DIVERSITAS meeting)

February 2003 France (Theoretical study on biodiversity and ecosystem functioning relationship)

August - September 2002 United Kingdom and France (Theoretical study on biodiversity and ecosystem functioning relationship)

Social Activities and Public Lectures

Public Lectures

December 2002 Commentator, University Science Open Symposium, Fukuoka Izum Hall.

Editorial Board

Collaborative Researcher at Center for Ecological Research, Kyoto University.

YOSHIMURA, Mitsunori ——— Associate Professor

Born in 1962.

Curriculum Vitae

Academic Career

Department of Construction, Faculty of Engineering, Hosei University, M. Course (1987)

Department of Civil Engineering, Faculty of engineering, Hosei University (1985)

Professional Career

Associate Professor, Research Institute for Humanity and Nature (2001)

Assistant Professor, Center for Southeast Asian Studies, Kyoto University (1996)

Senior Research Scientist, Remote Sensing Technology Center of Japan (1996)

Research Scientist, Remote Sensing Technology Center of Japan (1987)

Higher Degrees

M. Eng. (Hosei University, 1987)

Specialized Fields / Background

Geoinfomatics, Remote Sensing, GIS

Academic Society Memberships

The Japan Society of Civil Engineering, The Japan Society of Photogrammetry and Remote Sensing, The Japan Society of Remote Sensing, The Japan Society of GIS, The American Society of Photogrammetry and Remote Sensing

Major Publications

Articles

C. M. P. Ozanne, D. Anhuf, S. L. Boulter, M. Keller, R. L. Kitching, C. Korner, F. C. Meinzer, A. W. Mitchell, T. Nakashizuka, P. L. Silva Dias, N. E. Stork, S. J. Wright, M. Yoshimura.

2003 Biodiversity Meets the Atmosphere: A Global View of Forest Canopies. SCIENCE VOL301, pp.183-186.

Yoshimura, Mitsunori

2001 Rinkan Process to Kuukan Scale – Crane Kansoku kara Eisei Remote Sensing Made –. *Kagaku* 71: 1210-1216. [in Japanese]

Activities in Academic Societies

March 2003 "Spatial Understanding for Ecological Functions in Tropical Rainforest – Canopy Access System and Its Capability –" (NASDA CEOS Awaji symposium) Hyogo, Japan.

November 2002 "RS•GIS wo riyo shita nettairin•kankyodotaikeisoku" (Osaka Area Seminar of Japan Association on Remote Sensing) Japan Association on Remote Sensing [in Japanese]

June 2002 "Three Dimensional Canopy Structure Identification by Laser Scanning System" (The 3rd International Canopy Conference) Cairns, Australia.

October 2001 "Introduction of GIS and Remote Sensing Activities in Lambir Hills National Park" (Borneo Workshop – Linking vegetation processes with remotely sensed data on Borneo –).

Research Activities

Field Research in Foreign Countries

February 2003 Malaysia (Research on Three Dimensional Canopy Structure and Solar Environment on Tropical Rain Forest in Malaysia)

September 2002 Malaysia (Research on Solar Environment on Tropical Rain Forest in Malaysia)

February 2002 Malaysia (Research on the Temporal Changes of Spectral Radiances onto Tropical Rain Forest in Malaysia)

***Social Activities and Public Lectures**

Academic Members

2002- Vice-Chair of Kansai Branch on Japan Society of Photogrammetry and Remote Sensing

1999- Member of Conference Organization on Japan Society of Photogrammetry and Remote Sensing

YOSHIOKA, Takahito ——— Associate Professor

Born in 1955.

Curriculum Vitae

Academic Career

Department of Hydrospheric-Atmospheric Sciences, Graduate School of Science, Nagoya University, D. Course (1983)

Department of Hydrospheric-Atmospheric Sciences, Graduate School of Science, Nagoya University, M. Course (1980)

Department of Biology, Faculty of Science, Osaka University (1978)

Professional Career

Associate Professor, Research Institute for Humanity and Nature (2001)

Assistant Professor, Research Institute for Humanity and Nature (2001)

Assistant Professor, Institute for Hydrospheric-Atmospheric Sciences, Nagoya University (1993)

Assistant Professor, Faculty of Science, Shinshu University (1988)

Higher Degrees

D. Sc. (Nagoya University, 1985)

M. Sc. (Nagoya University, 1980)

Fields of Specialization / Background

Biogeochemistry

Academic Society Memberships

The Japanese Society of Limnology, The Ecological Society of Japan, The Japanese Society of Microbial Ecology, The American Society of Limnology and Oceanography

Major Publications

Books

Yoshioka, T.

2001 Stable Isotope Studies. In Y. Saijo and H. Hayashi (eds.) *Lake Kizaki*, pp.173-181. Backhyus Publisher.

2001 Influence of Radiation on Nitrification. In Y. Saijo and H. Hayashi (eds.) *Lake Kizaki*, pp.199-206. Backhyus Publisher.

Hayashi, H. and T. Yoshioka

2001 Chlorophyll *a* and Primary Production. In Y. Saijo and H. Hayashi (eds.) *Lake Kizaki*, pp.248-253. Backhyus Publisher.

Articles

Saito, T., K. Koba, T. Sakai, K. Kameda and T. Yoshioka

2002 Konjointo bunseki wo mochiita yasei dōbutsu mondai ni taisuru kasōteki taisaku jizen hyōka: Sigaken Biwa-ko niokeru kawau mondai wo jirei tosite (Evaluation of Model Plans for a Wildlife Issue by Conjoint Analysis: The Case Study of Wildlife Issue of Great Cormorant in Lake Biwa). *Nihon hyōka gakkai shi* (The Japanese Journal of Evaluation Studies) 2: 79-90. [in Japanese]

Yoshioka, T.

2002 Kankyō no hyōka nitaisuru sizenkagaku no yakuwari: Kankyō kenkyū niokeru sizenkagaku to jinbun-syakaigaku no yūgō eno teigen (Contribution of Natural Science to the Valuation of the Environment: Consideration for Uniting Natural Science, Humanities and Sociology on the Environmental Studies. *Kagaku* (Science) 72: 940-948. [in Japanese]

Yoshioka, T., S. Ueda, T. Miyajima, E. Wada, N. Yoshida, A. Sugimoto, P. Vijarnsorn and S. Boonprakub

2002 Biogeochemical Properties of a Tropical Swamp Forest Ecosystem of Southern Thailand. *Limnology* 3: 51-59.

Lee, J. -Y., T. Yoshioka and T. Hanazato

2002 Faunal Trophic Interaction in an Oligotrophic-Dystrophic Lake (Shirakoma-ike, Japan). *Limnology* 3: 151-158.

Yoshioka, T., S. Ueda, T. Khodzher, N. Bashenkhaeva, I. Korovyakava, L. Sorokovikova and L. Gorbunova

2002 Distribution of Dissolved Organic Carbon in Lake Baikal and Its Watershed. *Limnology* 3: 159-168.

T. Yoshioka, J. -Y. Lee, H. A. Takahashi and S. -J. Kang

2001 Palaeoenvironment in Dae-Am San High Moor in the Korean Peninsula. *Radiocarbon* 43: 555-559.

Ueda, S., C. -S. Go, T. Yoshioka, N. Yoshida, E. Wada, T. Miyajima, A. Sugimoto, N. Boontanon, P. Vijarnsorn and S. Boonprakub

2000 Dynamics of Dissolved O_2, CO_2, CH_4, and N_2O in a Tropical Coastal Swamp in Southern Thailand. *Biogeochemistry* 49: 191-215.

Yoshioka, T.

2000 Chikyū kankyō ni taisuru rikusui no ōtō: Syūsuiiki kenkyū no jūyōsei (Response of Land-Water System to Global Environmental Change: Importance of Watershed Study). *Rikusuigaku zasshi* (Japanese Journal of Limnology) 61: 95-100. [in Japanese]

2000 Antei dōitaihi niyoru syokumotsu rensa no kaiseki (Stable Isotopic Analysis of the Food Chain). *Mizu* (Water) 42: 22-28. [in Japanese]

Yamada, Y. and T. Yoshioka

1999 Suiiki seitaikei niokeru antei dōitai kaiseki (Stable Isotopic Analysis in Aquatic Ecosystems). *Nihon seitai gakkaishi* (Japanese Journal of Ecology) 49: 39-45. [in Japanese]

Activities in Academic Societies

January 2003 "Shūsuiiki to koshō wo tsunagu yūkibutsu (Organic Matters Linking the Watershed and Lake)". Dai 21 kai biwako kenkyūjo sinpojiumu (21th Symposium of the Lake Biwa Research Institute). Lake Biwa Research Institute, Otsu, Shiga Prefecture. [in Japanese]

September 2002 "Chikyū kankyō henka no motodeno ryūiki kenkyū (Watershed Studies under the Global Environmental Change)". Ryūiki to kaiyō wo kataru: Ryūiki karano teigen, kaiyō karano teigen (Discussion on the Watershed and Ocean: Proposals from the Watershed and Ocean). Tokyo University of Agriculture and Technology, Fuchū, Tokyo. [in Japanese]

April 2002 - March 2003 Councilor of the Japanese Society of Limnology

March 2002 "Sogō chikyū kankyōgaku kenkyūjo no purojekuto 'ryuiki kenkyu' (Watershed Research Projects in Research Institute for Humanity and Nature)". Chikyū kankyō fōramu 21 (Global Environment Forum 21). Nagoya University, Nagoya, Aichi. [in Japanese]

October 2001 "Shūsuiiki no seibutsu chikyū kagaku: Rikuiki seitaikei bussitsu junkan kasukēdo eno ichizuke

(Biogeochemistry in the Watershed: Cascade of Material Cyclings in the Terrestrial Ecosystem)". Dai 66 kai nihon rikusui gakkai (The 66th annual meeting of the Japanese Society of Limnology). Tohoku University, Sendai, Miyagi. [in Japanese]

October 2001 "Interaction between Environmental Quality of the Watershed and Environmental Consciousness". International Symposium on Field Science, Managing Technique for the Fields and International Study Network. Hokkaido University, Sapporo, Hokkaido.

April 2001 - March 2003 Associate editor of Limnology

Awards

The 9th Biwako Prize for Ecology (1999)

Research Activities

Field Research in Foreign Countries

September 2001 Mongolia and Russia (Surveys on the material cycling in the pasture in Mongolia and in the Lake Baikal watershed)

Social Activities and Public Lectures

Public Lectures

February 2003 "Mijikana kankyō tōku no kankyō (Familiar Environments and Alienated Environments)", Kamisato-cho kankyo sinpojiumu (Symposium on the Environments in Kamisato-chō). Kamisato-cho, Saitama. [in Japanese]

November 2002 "Mijikana kankyō tōku no kankyō (Familiar Environments and Alienated Environments)", Seiro-cho kankyō sinpojiumu (Symposium on the Environments in Seiro-chō). Seiro-cho, Niigata. [in Japanese]

July 2002 "Kankyō ishiki: Seikatsu no naka deno kachihandan (Environmental Consciousness: Value Judgment in the Day-to-day Life)", Introduction to the residents in Kasuga school district. RIHN. [in Japanese]

KATO, Yuzo ——— Assistant Professor

Born in 1971.

Curriculum Vitae

Academic Career

Graduate School of Law, Kyoto University, Doctor of Laws Program (2000)

Graduate School of Law, Kyoto University, Master's Program (1996)

Faculty of Law, Kyoto University (1994)

Professional Career

Assistant Professor, Research Institute for Humanity and Nature (2001)

Junior Research Fellow, Institute for Research in Humanities, Kyoto University (2001)

Research Associate, Graduate School of Law, Kyoto University (2000)

Higher Degrees

Master of Laws (LL. M.) (Kyoto University, 1996)

Fields of Specialization / Background

Chinese Legal History

Academic Society Memberships

Japan Legal History Association, Comparative Law History Association

Major Publications

Articles

Kato, Yuzo

2003 Tōa kenkyūjo dairoku chōsa iinkai shina toshi fudōsan kankō chōsa gaikan (On the Research of Real Estate's Customs in Chinese City Done by Research Committee No.6 of the East Asia Institute). *Historia Juris* 11: 316-337. [in Japanese]

2002 Chūgoku no nōsho ni tsuite (On Chinese Agricultural Books). *Oasisu Chiiki Kenkyūkaihō* (Project Report on Oases-Region) 2(2): 157-162. [in Japanese]

2001 Gazō shiryō ni miru chūgoku seihoku chihō no seikatsushi (1): 3-4 seiki (Anthropography Painted on Tomb Unbricks of Northwest Parts in China). *Oasisu Chiiki Kenkyūkaihō* (Project Report on Oases-Region) 1(1): 28-35. [in Japanese]

2001 Shindai no shoriketsu torihiki ni tsuite (2) (Transaction of Clerical Posts in the Qing Dynasty (2)), *Hōgaku Ronsō* (Kyoto Law Review) 149(1): 35-58. [in Japanese]

Nakawo, Masayoshi, Nozomu Naito and Yuzo Kato

2001 Mizushigen hendō fuka ni taisuru oasisu chiiki no tekiōryoku to sono rekishiteki hensen (Historical Evolution of the Adaptability in an Oasis Region to Water Resource Changes). *Oasisu Chiiki Kenkyūkaihō* (Project Report on Oases-Region) 1(1): 1-10. [in Japanese]

Nakawo, Masayoshi, Yuzo Kato, Jumpei Kubota and Yuki Konagaya

2001 Chūgoku Seikai-Kanshuku-Naimouko ni matagaru Kokuga ryūiki no yobi chōsa: 2001nen chōsa hōkoku (A Report of a Reconnaissance on Heihe River Running through Qinghai-Gansu-Inner Mongolia, China). *Oasisu Chiiki Kenkyūkaihō* (Project Report on Oases-region) 1(2): 105-114. [in Japanese]

Nakawo, Masayoshi, Nozomu Naito and Yuzo Kato

2001 Historical Evolution of the Adaptability in an Oasis Region to Water Resource Changes (The Scheme and the Introduction of the Project). *Oasisu Chiiki Kenkyūkaihō* (Project Report on Oases-region) 2(1): 1-13.

Kato, Yuzo

2000 Shindai no shoriketsu torihiki ni tsuite (1) (Transaction of Clerical Posts in the Qing Dynasty (1)). *Hōgaku Ronsō* (Kyoto Law Review) 147(2): 34-50. [in Japanese]

1998 Mindai seika-kōchi no ritsu to rei: I Ritsu shō rei hatsuraku kō (2) (Lü (律) and Li (例) in Chenghua-Hongzhi Period of Ming Dynasty). *Hōgaku Ronsō* (Kyoto Law Review) 143(6): 91-111. [in Japanese]

Review

2003 Masato Nakamura, Shinritsu "Hanzai sonryū yōshin" jō kō (On the Article "Fanzui Cunliu Yangqin" of Qinglü). *Hōseishi Kenkyū* (Legal History Review) 52: 281-283. [in Japanese]

Translation

2002 Kokuga ryūiki no rekishi jiki ni okeru sabakuka chiiki no shohoteki chōsa kenkyū (A Basic Study for Desertification of Heihe River Region on Historical Period, originally written in Chinese by Li Bingcheng). *Oasisu Chiiki Kenkyūkaihō* (Project Report on Oases-Region) 2(2): 101-127. [in Japanese]

2001 Gendai chokuyaku kōbunsho no buntai (A Guide to the Stylistic Characteristics of the Official Documents from the Yuan Period Translated Word-for-Word from Mongolian, originally written in Chinese by Irinčin). *Nairiku Ajia Gengo no Kenkyū* (Studies on the Inner Asian Languages) XVI 155-172. [in Japanese]

2001 1276 nen Ryūmon Uōbyō Pasupa-ji reishihi wo yomu: Nikorasu Poppe yakuchū no shohyō wo kanete (New Readings of the Mongolian Lingzhi Inscription in 'Phags-pa Script Engraved in 1276 A. D. at Yu-Wang-Miao, Longmen: Critical Comments on N. Poppe's Edition, originally written in Chinese by Irinčin). *Nairiku Ajia Gengo no Kenkyū* (Studies on the Inner Asian Languages) XVI 133-154. [in Japanese]

2001 Han Mongoru tōitsu undō: Betsukakudo kara mita Haruha dokuritsu (Pan Mongolian Unification Movement: A Different Perspective on the Khalkha's Independence, originally written in Chinese by Zhang Qixiong). *Zinbun Gakuhō* (Journal of Humanities) 85: 27-61. [in Japanese]

Annotation

Kin, Bunkyo, Takashi Furumatsu, Satomi Sakurai, Yoko Tanii and Yuzo Kato

2002 "Jirin kōki" keihōrui-kōrirui yakuchū (Annotated Translation of Articles Pertaining to Criminal Law and Petitions in the "Shilin Guangji"). *Tōhō Gakuhō* (Journal of Oriental Studies) 74: 257-309. [in Japanese]

Activities in Academic Societies

November 2002 "Tōa kenkyūjo dairoku chōsa iinkai ni tsuite (On Research Committee No.6 of the East Asia Institute)", Kyōto Daigaku Zinbun Kagaku Kenkyūjo "Chūgoku kinsei shakai no chitsujo keisei" han (Research Group for Constructing Social Order of Modern China, Institute for Research in Humanities, Kyoto University), Institute for Research in Humanities, Kyoto University. [in Japanese]

October 2002 "Tōa kenkyūjo dairoku chōsa iinkai ni tsuite: Toshi Fudōsan Kankō Chōsa wo Chūshin toshite (On the Research of Real Estate's Customs in Chinese City Done by Research Committee No.6 of the East Asia Institute)", Hōseishi gakkai dai 50 kai kenkyū taikai (Japan Legal History Association 51st Meeting), Ryūkoku University. [in Japanese]

September 2000 "Tōa kenkyūjo dairoku chōsa iinkai ni tsuite (On Research Committee No.6 of the East Asia Institute)", Kyōto Daigaku Zinbun Kagaku Kenkyūjo "Bunka sōshō katsudō no shosō" han (Research Group for Miscellaneous Aspects of Cultural Relation, Institute for Research in Humanities, Kyoto University), Institute for Research in Humanities, Kyoto University. [in Japanese]

August 2000 "Shindai no shoriketsu torihiki ni tsuite: Kōshu keiyaku monjo wo chūshin toshite (Transaction of Clerical Posts in the Qing Dynasty: Study on Hangzhou Documents)", Tōyō Hōseishi Kenkyūkai (Society for Chinese Law History), Hakone Sengokubara Seminar House, Faculty of Law, Nihon University. [in Japanese]

Research Activities

Field Research in Foreign Countries

July - August 2002 China (Research on old cities of Heihe Downstream Region)

August - September 2001 China (Reconnaissance studies on Heihe River Region)

KAWAMOTO, Kazuaki ——— Assistant Professor

Born in 1970.

Curriculum Vitae

Academic Career

Department of Earth and Planetary Physics, Graduate School of Science, The University of Tokyo, Doctor of Philosophy (1999)

Department of Earth and Planetary Physics, Graduate School of Science, The University of Tokyo, Master of Science (1996)

Department of Physics, Faculty of Science, Rikkyo University (1993)

Professional Career

Assistant Professor, Research Institute for Humanity and Nature (2002)

Research Scientist, Mechanical Engineering, Virginia Polytechnic Institute and State University (postdoc researcher, Atmosphreric Sciences, NASA Langley Research Center) (1999)

Higher Degrees

D. Sc. (The University of Tokyo, 1999)

M. Sc. (The University of Tokyo, 1996)

Fields of Specialization / Background

Atmospheric Physics, Satellite Climatology

Academic Society Memberships

Meteorological Society of Japan

Major Publications

Articles

Kawamoto, K., T. Nakajima and T. Y. Nakajima

2001 A Global Determination of Cloud Microphysics with AVHRR Remote Sensing. *Journal of Climate* 14: 2054-2068.

Kawamoto, K. and T. Nakajima

2001 Global Cloud Property Analysis Using Satellite Remote Sensing, In Y. Sasano, J. Wang and T. Hayasaka (eds.) *Optical Remote Sensing of the Atmosphere and Clouds II* (Proceedings of SPIE Vol.4150), pp.200-207.

2000 A Global Distribution of the Water Cloud Microphysics Derived from AVHRR Remote Sensing. In W. L. Smith and Y. M. Timofeyev (eds.) *Current Problems in Atmospheric Radiation* (Proceedings of International Radiation Symposium), pp.13-16.

1999 Seasonal Variability of Cloud Microphysics Retrieved from NOAA/AVHRR. *Advances in Space Research* 24: 945-948.

Activities in Academic Societies

Oral Presentations

July 2001 "Detection of Multiple Cloud Layers Using GOES Solar and IR Channels", K. Kawamoto, P. Minnis and W. Smith Jr., IAMAS, International Association of Meteorology and Atmospheric Sciences, Innsbruck, Austria.

KOHMATSU, Yukihiro — Assistant Professor

Born in 1973.

Curriculum Vitae

Academic Career

Department of Zoology, Faculty of Science, Kyoto University, D. Course (2001)

Department of Zoology, Faculty of Science, Kyoto University, M. Sc. (1998)

Department of Geography, Faculty of Literature, Ritsumeikan University (1996)

Professional Career

Technical Assistant, Research Institute for Humanity and Nature (2002)

Postdoctoral Scientist, Center for Ecological Research, Kyoto University (2001)

Higher Degrees

D. Sc. (Kyoto University, 2001)

M. Sc. (Kyoto University, 1998)

Fields of Specialization / Background

Animal Ecology, Geography

Academic Society Memberships

The Ecological Society of Japan, The Herpetological Society of Japan

Major Publications

Articles

Takahara, Teruhiko, Yukihiro Kohmatsu, Atsushi Maruyama and Ryohei Yamaoka

2003 Effects of Fish Chemical Cues on Tadpole Survival. *Ecological Research* 18(6). [in press]

Kohmatsu, Yukihiro

2003 Kaeru no sumu mizube (The Watershed in which Frog lives). *Rio* 60: 3. [in Japanese]

Nozaki, Kentaro, Yukihiro Kohmatsu, Toshiya Yamamoto, Naoya Goto and Osamu Mitamura

2003 Yahagigawa chūryūiki ni okeru sijōryokusō *Cladophora glomerata* no kōgōsei kassei (Photosynthetic activity of a Filamentous green alga Cladophora glomerata in the Middle Region of the Yahagi River). *Yahagigawa kenkyu* (Report of Yahagi River Institute) 7: 169-176. [in Japanese]

Wakano, Joe Yuichiro, Yukihiro Kohmatsu and Norio Yamamura

2003 Evolutionary Dynamics of Frequency-Dependent Growth Strategy in Cannibalistic Amphibians. *Evolutionary Ecology Research* 4: 719-736.

Kohmatsu, Yukihiro

2001 Wider Head Shape in Larval Salamanders (*Hynobius retardatus*) Induced by Conspecific Visual and Chemical Cues. *Current Herpetology* 20(1): 27-31.

2001 Effects of Head Shape Variation on Diet Selection in Larval Salamander, *Hynobius retardatus. Current Herpetology* 20(2): 63-67.

Kohmatsu, Yukihiro, Shigeru Nakano and Norio Yamamura

2001 Effects of Head Shape Variation on Growth, Metamorphosis and Survivorship in Larval Salamanders (*Hynobius retardatus*). *Ecological Research* 16(1): 73-83.

Nakanishi, Masami, Kentaro Nozaki, Maiko Kagami and Yukihiro Kohmatsu

2001 Biwa-ko no kinkyo: Syokubutsu purankuton gunsyū (Todays Lake Biwa: Planktonic Alagal Community). *Kaiyokagakukenkyu* (Transactions of the Research Institute of Oceanochemistry) 14: 104-111. [in Japanese]

Genkai-Kato, Motomi, Kentaro Nozaki, Hiromune Mitsuhashi, Yukihiro Kohmatsu, Hitoshi Miyasaka and Masami Nakanishi

2000 Stonefly Larvae Do Push-Ups in Response to the Oxygen Supply. *Ecological Research* 15(1): 175-179.

Kohmatsu, Yukihiro, Akihiro Tsuji and Kentaro, Nozaki

2000 Fukuiken Tsurugashi Nakaikemi shicchi no ryōseihacyūruisō (Amphibian and Reptilian Fauna in Naka-ikemi Marsh, Tsuruga, Fukui, Japan). *Hachūryōseirui gakkaihou* (The Japanese Journal of Herpetology) 2: 85-88. [in Japanese]

Sato, Takanori, Shigehiro Nakabayashi, Nobuyuki Narumi and Yukihiro Kohmatsu

1999 Kushiro shitsugen ni okeru kitasansyōuo no hansyoku jyōkyō (Breeding Conditions of the Siberian Salamander *Salamandrella Keyserlingii* in Kushiro Mire). *Kushiro hakubutsukan kiyo* (Memoirs of the Kushiro City Museum) 23: 25-31. [in Japanese]

Tsuji, Akihiro, Chiharu Karasaki, Yukihiro Kohmatsu, Toshiya Yamamoto, Keiko Murayama and Kentaro Nozaki

1999 Nakaikemi sicchi (Fukuiken Tsurugashi) ni okeru suisitsu kankyō to seibutsu gunsyū (Water Quality and Vegetation of Naka-ikemi Marsh, Tsuruga, Fukui, Japan: Importance of Water Quality on the Conservation of Marsh Vegetation). *Rikusuigaku zasshi* (The Japanese Journal of Limnology) 60: 201-213. [in Japanese]

Nozaki, Kentaro, Akihiro Tsuji, Yukihiro Kohmatsu, Toshiyuki Ishikawa and Toshiya Yamamoto

1998 Nakaikemi sicchi (Fukuiken Tsurugashi) ni okeru fuyūsū gunraku no kisetsu seni to sono tokucyo (Seasonal Succession of a Planktonic Algal Community and Its Characteristics in a Small Pond of Naka-ikemi Marsh, Tsuruga, Fukui, Japan). *Rikusuigaku zasshi* (The Japanese Journal of Limnology) 59: 329-339. [in Japanese]

Nozaki, Kentaro, Akihiro Tsuji, Yukihiro Kohmatsu, Toshiya Yamamoto, Riyo Hirasawa and Toshiyuki Ishikawa

1998 Nakaikemi sicchi no suisei seibutsusō to mizukankyō no kankei (Relationship between Freshwater Biota and Water Environment in Naka-ikemi Marsh). *Nihonseitaigakkaishi* (Japanese Journal of Ecology) 48: 187-192. [in Japanese]

Kohmatsu, Yukihiro

1998 Nakaikemi sicchi no ryōseirui (Amphibian Fauna in Naka-ikemi Marsh, Tsuruga, Fukui, Japan). *Naka-ikemi (Fukuiken Tsurugashi) Gakujyutu Chosa Hōkokusyo* (Academic Research Reports, Naka-ikemi, Tsuruga, Fukui, Japan), pp.87-97. [in Japanese]

Activities in Academic Societies

September 2003 Kisetsusei kara mita Biwakono gyorui to gyogyō no hensen (Changes Seasonality of Fish and Fisheries in Lake Biwa, Japan), Dai 68 kai nihon rikusuigakkai taikai (The 68th Annual Meeting of the Limnological Society of Japan), Okayama Rika Daigaku (Okayama University of Science). [in Japanese]

Marchi 2003 Tansui seitaikei niokeru kemikaru komyunikeishon wo kaisita kansetsukōka: hisesshokusigeki wa daisansha karano hoshokuatsu wo henka saseru (Effects of Fish Chemical Cues on Tadpole Survival), Dai 50 kai nihon seitaigakkai taikai (The 50th Annual Meeting of the Ecological Society of Japan), Tsukuba Kokusai Kaigijyo (Tsukuba International Congress Center). [in Japanese]

Social Activities and Public Lectures

Social Activities

February, 2003 Kokoku no aji to Biwako no konjaku (Changes of Fisheries and Lake Biwa). Kasuga Iki Iki Sōdan (Kasuga Region Seminar). [in Japanese]

SAEKI, Tazu — Assistant Professor

Born in 1970.

Curriculum Vitae

Academic Career

Department of Geophysics, Faculty of Science, Tohoku University, D. Course (1998)

Department of Geophysics, Faculty of Science, Tohoku University, M. Course (1995)

Division of Natural Science, The College of Liberal Arts, International Christian University (1993)

Professional Career

Assistant Professor, Research Institute for Humanity and Nature (2002)

Assistant Professor, Information Synergy Center, Tohoku University (2001)

Assistant Professor, Computer Center, Tohoku University (1998)

Higher Degrees

M. Sc. (Tohoku University, 1995)

Fields of Specialization / Background

Meteorology, Atmospheric Physics

Academic Society Memberships

Meteorological Society of Japan

Major Publications

Articles

Saeki, Tazu, Takakiyo Nakazawa, Masayuki Tanaka and Kaz Higuchi

1998 Methane Emissions Deduced from a Two-Dimensional Atmospheric Transport Model and Surface Measurements. *Journal of Meteorological Society of Japan* 76: 307-324.

Activities in Academic Societies

2001 Member of Local Organizing Committee, Sixth International Carbon Dioxide Conference, Sendai, Japan.

August 2000 Chair of "Globalization in Universities Using Advanced Computer Network", ISRE2000, Sendai, Japan.

Social Activities and Public Lectures

Social Activities

April 1999 - September 2002 Member of Technical Secretaries, Tohoku Open Internet Community.

Jannuary - June 2002 Member of Technical Section, Information-Technology Promotion Committee of Sendai City.

Founding

1999-2001 Grants-in-Aid for Scientific Research by JSPS (KAKENHI), Shōrei (A), "Investigation of the Global Methane Cycle Using a Three Dimensional Atmospheric Transport Model", research representative.

2001-2003 Grants-in-Aid for Scientific Research by JSPS (KAKENHI), Shōrei (A), "Investigation of the Global Carbon Cycle Using a Three Dimensional Atmospheric Transport Model", research representative.

TAKEUCHI, Nozomu ——— Assistant Professor

Born in 1972.

Curriculum Vitae

Academic Career

Department of Bioscience, Faculty of Bioscience and Biotechnology, Tokyo Institute of Technology, D. Course (1999)

Department of Bioscience, Faculty of of Bioscience and Biotechnology, Tokyo Institute of Technology, M. Course (1996)

Department of Bioscience, Faculty of of Bioscience and Biotechnology, Tokyo Institute of Technology (1994)

Professional Career

Assistant Professor, Research Institute for Humanity and Nature (2002)

Research Scientist (Post-doc) of Frontier Observational Research System for Global Change (FORSGC) in IARC, University of Alaska Fairbanks, U. S. A. (2000)

Research Fellow of the Japan Society for the Promotion Science. Tokyo Institute of Technology, Japan (1996)

Higher Degrees

D. Sc. (Science) (Tokyo Institute of Technology, 1999)

M. (Science) (Tokyo Institute of Technology, 1999)

Fields of Specialization / Background

Glacial Biology

Academic Society Memberships

The Japanese Society of Snow and Ice, International Glaciological Society, American Geophysical Union

Major Publications

Articles

Takeuchi, N., S. Koshima and T. Segawa

2003 Effect of Cryoconite and Snow Algal Communities on Surface Albedo on Maritime Glaciers in South Alaska. *Bulletin of Glaciological Research* 20: 21-27.

Takeuchi, N.

2002 Optical Characteristics of Cryoconite (Surface Dust) on Glaciers: The Relationship between Light Absorbency and the Property of Organic Matter Contained in the Cryoconite. *Annals of Glaciology* 34: 409-414.

2002 The Surface Albedo and Characteristics of Cryoconite (Biogenic Surface Dust) on the Gulkana Glacier in Alaska. *Bulletin of Glaciological Research* 19: 63-70.

2001 The Altitudinal Distribution of Snow Algae on an Alaska Glacier (Gulkana Glacier in the Alaska Range). *Hydrological Processes* 15(18): 3447-3459.

Takeuchi, N., S. Kohshima and K. Seko

2001 Structure, Formation, Darkening Process of Albedo Reducing Material (Cryoconite) on a Himalayan Glacier: A Granular Algal Mat Growing on the Glacier. *Arctic, Antarctic, and Alpine Research* 33: 115-122.

Takeuchi, N., S. Kohshima, T. Shiraiwa and K. Kubota

2001 Characteristics of Cryoconite (Surface Dust on Glaciers) and Surface Albedo of a Patagonian Glacier, Tyndall Glacier, Southern Patagonia Icefield. *Bulletin of Glaciological Research*, 18: 65-69.

Takeuchi, N., S. Kohshima, K. Goto-Azuma and R. M. Korner

2001 Biological Characteristics of Dark Colored Material (Cryoconite) on Canadian Arctic Glaciers (Devon and Penny Ice Cap). *Proceedings of the Memoirs of National Institute of Polar Research, Special Issue* 54: 495-505.

Takeuchi, N.

2001 Himaraya no hyōga no seppyō seibutsu (Glacial Biology on Himalayan Glaciers). *Seppyo* 63(2): 181-189. [in Japanese]

Activities in Academic Societies

Council in Academic Societies

Member of a steering committee of the Data Center for Glaciological Research of the Japanese Society of Snow and Ice (2002)

Oral Presentation

May 2002 "Eisei kara miru hyōgajyō no seppyō biseibutsu (Cryo-Microbes on Glaciers Observed from Satellites)", special session of Japanese Society of Snow and Ice, Tokyo, Japan.

Poster Presentation

December 2002 "Distribution of Cryoconite on the Surface of a Glacier Derived from a Landsat TM Image", Geophysical Union Fall Meeting, San Francisco, U. S. A.

October 2002 "Arasuka no hyōga niokeru seppyō seibutsu to hyōmen arubedo teika kōka (Glacial Organisms and Its Effect on Surface Albedo on Alaska Glaciers)", annual meeting of Japanese Society of Snow and Ice, Yamagata. [in Japanese]

Research Activities

Field Research in Foreign Countries

September 2002 Gansu Province, China (Glaciological research on a glacier in the Qilian Mountains)

July 2002 Altai, Russia (Glaciological research on a glacier in the Altai Mountains)

May - September 2001 Gulkana, Worthington, Matanuska Glaciers, Juneau Icefield and Harding Icefield, United States of America (Biological investigation on Alaska Glaciers)

TAYASU, Ichiro ——— Assistant Professor

Born in 1969.

Curriculum Vitae

Academic Career

Department of Zoology, Graduate School of Science, Kyoto University, D. Course (1997)

Department of Zoology, Graduate School of Science, Kyoto University, M. Cource (1994)

Faculty of Science, Kyoto University (1992)

Professional Career

Assistant Professor, Research Institute for Humanity and Nature (2002)

JSPS Postdoctoral Research Fellow; Institut de Recherche pour le Développement [IRD] Centre de Recherche d'Ile de France, Bondy, France (2000)

JSPS Postdoctoral Research Fellow (PD); Laboratory of Forest Ecology, Graduate School of Agriculture, Kyoto University, Japan (1997)

Higher Degrees

D. Sc. (Kyoto University, 1997)

M. Sc. (Kyoto University, 1994)

Fields of Specialization / Background

Animal Ecology, Soil Ecology, Isotope Ecology

Academic Society Memberships

The Ecological Society of Japan, the Japanese Society of Soil Zoology, the International Union for the Study of Social Insects

Major Publications

Book Chapters

Brauman, A., D. E. Bignell and I. Tayasu

2000 Soil-Feeding Termites: Biology, Microbial Associations and Digestive Mechanisms. In T. Abe, D. E. Bignell and M. Higashi (eds.) *Termites: Evolution, Sociality, Symboises, Ecology*, pp.233-260. Kluwer Academic Publishers, Dordrecht, Netherlands.

Ichiro Tayasu

2000 Nettai no seitaikei to shiroari no yakuwari (Tropical ecosystems and the role of termites). In Yuji Imamura, Kunio Tsunoda and Tsuyoshi Toshimura (eds.) *Sumai to shiroari* (House and termites), pp.101-111. Kaisei-sha. [in Japanese]

Wada, E., I. Tayasu, K. Koba, T. Matsubara, N. O. Ogawa, Y. Yamada, K. Yoshii and A. Sugimoto

1998 The Use of Stable Isotopes for Ecological Studies. In B. Gopal, P. S. Pathak and K. G. Saxena (eds.) *Ecology Today: An Anthology of Contemporary Ecological Research*, pp.407-430. International Scientific Publishers, New Delhi.

Articles

Wada, E., Tayasu, I. and Hyodo, F.

2003 Bussitujunkan to mizushigen-suikei wo chūshin to shite (Material cyclings and water resources with emphasis on a watershed). *Enerugī to Shigen* (Energy and Resources) 24: 27-33. [In Japanese]

Tayasu, I., F. Hyodo, T. Abe, T. Inoue, and A. V. Spain

2002 Nitrogen and Carbon Stable Isotope Ratios in the Sympatric Australian Termites, *Amitermes laurensis and Drepanotermes rubriceps* (Isoptera: Termitidae) in Relation to Their Feeding Habits and the Quality of Their Food Materials. *Soil Biology and Biochemistry* 34: 297-301.

Tayasu, I., F. Hyodo and T. Abe

2002 Caste-Specific N and C Isotope Ratios in Fungus Growing Termites with Special Reference to Uric acid Preservation and Their Nutritional Interpretation. *Ecological Entomology* 27: 355-361.

Tayasu, I., T. Nakamura, K. Oda, F. Hyodo, Y. Takematsu and T. Abe

2002 Termite Ecology in a Dry Eergreen Forest in Thailand in Terms of Stable- ($\delta^{13}C$ and $\delta^{15}N$) and Radio- (^{14}C, ^{137}Cs and ^{210}Pb) *Isotopes. Ecological Research* 17: 195-206.

Hyodo, F., I. Tayasu, J. -I. Azuma, N. Kirtibutr and T. Abe

2001 Effect of the Soil-Feeding Termite, *Dicuspiditermes makhamensis*, on Soil Carbon Structure in a Seasonal Tropical Forest as Revealed by CP/MAS ^{13}C NMR. *Sociobiology* 38: 487-493.

Eggleton, P. and I. Tayasu

2001 Feeding Groups, Life Types and the Global Ecology of Termites. *Ecological Research* 16: 941-960.

Hyodo, F., T. Inoue, J. -I. Azuma, I. Tayasu and T. Abe

2000 Function of the Symbiotic Fungi in the Fungus Growing Termite, *Macrotermes gilvus* (Isoptera: Macrotermitinae). *Soil Biology and Biochemistry* 32: 653-658.

Tayasu, I., F. Hyodo, Y. Takematsu, A. Sugimoto, T. Inoue, N. Kirtibutr and T. Abe

2000 Stable Isotope Ratios and Uric Acid Preservation in Termites Belonging to Three Feeding Habits in Thailand. *Isotopes in Environmental and Health Studies* 36: 259-272.

Tayasu, I.

1999 Nettaiurin kenkyu ni okeru anteidōitai no ōyō: Taikoku Sakerāto ni okeru kēsu sutadī (Stable isotopic studies in tropical forest: A case study at Sakaerat Environmental Station in Thailand). *Nihon Seitaigakkaishi* (Japanese Journal of Ecology) 49: 53-58. [In Japanese]

Okuda, N., I. Tayasu and Y. Yanagisawa

1998 Determinate Growth in a Paternal Mouthbrooding Fish Whose Reproductive Success is Limited by the Buccal Capacity. *Evolutionary Ecology* 12: 681-699.

Tayasu, I., T. Inoue, L. R. Miller, A. Sugimoto, S. Takeichi and T. Abe

1998 Confirmation of Soil-Feeding Termites (Isoptera: Termitidae: Termitinae) in Australia Using Stable Isotope Ratios. *Functional Ecology* 12: 536-542.

Sugimoto, A., T. Inoue, I. Tayasu, L. R. Miller, S. Takeichi and T. Abe

1998 Methane and Hydrogen Productions in Termite-Symbiont Systems. *Ecological Research* 13: 241-257.

Tayasu, I.

1998 The Use of Carbon and Nitrogen Isotope Ratios in Termite Research. *Ecological Research* 13: 377-387.

Activities in Academic Societies

March 2003 "Antei dōitai wo mochiita shiroari to mimizu no shokusei to kinou no hikaku ni tsuite. (Feeding habits and ecological roles of termites and earthworms by C and N stable isotope analysis)", I. Tayasu, F. Hyodo, S. Konaté, J. E. Tondo, and P. Lavelle, 50th Annual Meeting of the Ecological Society of Japan, Tsukuba University. [in Japanese]

November 2002 "Role of Termite-Symbiont Systems in Tropical Forests", I. Tayasu and F. Hyodo, DIVER/DIWPA Joint Symposium "New Frontiers in Biodiversity Science - From Microbes to Landscape", Kyodai Kaikan, Kyoto, Japan.

September 2002 "A Nitrogen and Carbon Stable Isotopic Study of Soil Macrofauna (Earthworms and Termites) in the Lamto Reserve in Ivory Coast", Tayasu, I., F., Hyodo, S., Konaté, J. E. Tondo, and P. Lavelle, 7th International Symposium on Earthworm Ecology, Cardiff, UK.

July - August 2002 "An Isotopic Study of Termites and Earthworms in the Lamto Reserve in Ivory Coast", I. Tayasu, F. Hyodo, S. Konaté, J. E. Tondo, and P. Lavelle, 14th Congress of the International Union for the Study of Social Insects, Sapporo, Japan.

March 2002 Hokubu Aruzenchin no suiden kōsakuchi ni okeru ooari no tsuka keisei to dojyō dōbutsusō no henka (Feeding habits of an ant [*Camponotus punctulatus*] and other soil animals in response to the abandonment of rice field in northern Argentina), I. Tayasu, P. Folgarait, F. Thomas, T. Desjardins and P. Lavelle, 49th Annual meeting of the Ecological Society of Japan, Tohoku University. [in Japanese]

December 2000 "Utility of Stable Isotopes for Analyzing Soil-Faunal Diversity and Ecosystem Process", I. Tayasu, A Food Web Conference, Kyoto University, Kyoto.

May 2000 "Isotopic Approaches on the Study of Soil Foodwebs: An Experiment and Field Observation", I. Tayasu, Biodiversity Workshop, Silwood Park, Ascot, UK.

May 2000 "Stable Isotope Ratios and Uric Acid Preservation of Termites Belonging to Three Feeding Habits in Thailand", I. Tayasu, F. Hyodo, Y. Takematsu, A. Sugimoto, T. Inoue, N. Kirtibutr and T. Abe, 2nd Conference on Applications of Stable Isotope Techniques to Ecological Studies, Braunschweig, Germany.

January 1999 "N and C stable Isotope Ratios of Termites from Thailand", I. Tayasu, Annual Meeting of the Stable Isotope Mass Spectrometry Users Group, Exeter, UK.

December 1998 "Nitrogen and Carbon Stable Isotope Ratios of Termites in a Dry Evergreen Forest in Sakaerat, Thailand", I. Tayasu, A. Sugimoto, T. Inoue, F. Hyodo, Y. Takematsu, S. Kawaguchi, N.

Kirtibutr, H. Takeda and T. Abe, 13th Congress of the International Union for the Study of Social Insects, Adelaide, Australia.

July 1998 "Nitrogen and Carbon Isotope Ratios Indicate a Role of Termites in the Pedogenic Process", I. Tayasu, VII International Congress of Ecology, Florence, Italy.

May 1998 "Anteidōitaihi wo motiite dōjyōdōbutsu no nani ga wakaruka? (What can we know using stable isotope ratios?)", Tayasu, I., 21st Annual Meeting of the Japanese Society of Soil Zoology. [in Japanese]

April 1998 "Feeding Habits of Detritivorous Termites in the Decomposition Process", I. Tayasu, 1st International Conference of Applications of Stable Isotope Techniques to Ecological Studies, Saskatoon, Canada.

Awards

Inoue Research Award for Young Scientists (1999)

Research Activities

Field Research in Japan

March 2002 - March 2003 Lake Biwa watershed (Material cyclings and biology)

Field Research in Foreign Countries

December 2002 Thailand (Ethno-biological research of the use of natural resources in Northern Thailand)

Social Activities and Public Lectures

Guest scientist of the Center for Ecological Research, Kyoto University

YATAGAI, Akiyo ——— Assistant Professor

Born in 1968.

Curriculum Vitae

Academic Career

Department of Geoscience, University of Tsukuba, D. Course (1996)

Department of Geoscience, University of Tsukuba, M. Course (1992)

Department of Natural Sciences, 1st Cluster of Colleges, University of Tsukuba (1990)

Professional Career

Assistant Professor, Research Institute for Humanity and Nature (RIHN) (2002-)

COE Research Fellow, Disaster Prevention Research Institute, Kyoto Universit (2001)

Research Fellow, National Space Development Agency of Japan/Earth Observation Research Center (NASDA/EORC) (1995)

Higher Degrees

Ph. D. (Science) (University of Tsukuba, 1996)

M. S. (University of Tsukuba, 1992)

Fields of Specialization / Background

Climatology, Atmospheric science

Academic Society Memberships

Meteorological Society of Japan, the American Meteorological Society, American Geophysical Union, the Japan Society of Hydrology and Water Resources, the Association of Geographers

Major Publications

Articles

Yatagaya, Akiyo

2003 Hydrological Balance and Its Variability over the Arid/Semi-Arid Regions in the Eurasian Continent Seen from ECMWF 15-Year Reanalysis Data. *Hydrological Processes* 17: 2871-2884.

2003 Characteristics of Orographical Precipitation over South Asia Seen from TRMM/PR. *Proceedings of the 1st International Conference on Hydrology and Water Resources in Asia Pacific Region APHW2003*, pp.51-56.

Yatagai, A., M. Sugita, N. Yamazaki and M. Oh'izumi

2003 A Comparative Study of the Surface Fluxes Derived from Meteorological Four Dimensional Data Assimilation Products (GAME Reanalysis) with Asian Automatic Weather Station Network (AAN) Observations over the Tibetan Plateau. *Proceedings of the 1st International Conference on Hydrology and Water Resources in Asia Pacific Region APHW2003*, pp.722-727.

Yatagai, A., N. Yamazaki, K. Takahashi and T. Kurino

2002 Ajia chiiki no kōbunkainō yojigen dōka purodakuto (GAME saikaiseki) ni yoru mizu jyunkan hyōka: Sekisetsu jyōhō kairyō no kōka (Evaluation of Hydrolofical Circulation over Asia Using Fine Resolution Four Dimensional Data Assimilation Products (GAME Reanalysis): An Impact Study of Satellite Snow Information). *Annuals of the Disaster Prevention Research Institute, Kyoto University* 45B: 141-148. [in Japanese with English abstract]

Yatagaya, Akiyo

2001 Estimation of Precipitable Water and Relative Humidity over the Tibetan Plateau from GMS-5 Water Vapor Channel Data. *Journal of Meteorological Society of Japan* 79: 589-598.

2001 Three-Dimensional Features of Summer Monsoon Precipitation Seen from TRMM/PR and Latent Heat Release over South Asia. *Proceedings for the AMS Annual Meeting "Symposium on Precipitation Extremes: Prediction, Impacts, and Responses"*, pp.195-198.

Tanaka, H. L., and A. Yatagai

2000 Comparative Study of Vertical Motions in the Global Atmosphere Evaluated by Various Kinematic Schemes. *Journal of Meteorological Society of Japan* 78: 289-298.

Murakami, T., J. Matsumoto and A. Yatagai

1999 Similarities as Well as Differences between Summer Monsoons over Southeast Asia and the Western North Pacific. *Journal of Meteorological Society of Japan* 77: 887-906.

Yatagai, A and T. Yasunari

1998 Variation of Summer Water Vapor Transport over and around the Arid Region in the Interior of the Eurasian Continent. *Journal of Meteorological Society of Japan* 76: 799-815.

Suzuki, R, A. Yatagai and T. Yasunari

1998 Global Vegetation Index and Evapotranspiration Derived from Assimilated Atmospheric Data over Asia. *Journal of Meteorological Society of Japan* 76: 663-671.

Activities in Academic Societies

July 2003 "A Comparative Study of the Surface Luxed Derived from 4DDA Products (GAME reanalysis) with Asian Automatic Weather Station Network (AAN) Observations", International Union of Geophysics and Geodesy (IUGG), Sapporo.

July 2003 "Four Dimensional Precipitation and Latent Heat Release Distribution with the Asian Summer Monsoon Circulation: The Relationship between the North and the South of the Plateau", International Union of Geophysics and Geodesy (IUGG), Sapporo.

March 2003 "A Comparative Study of the Surface Fluxes Derived from Meteorological Four Dimensional Data Assimilation Products (GAME Reanalysis) with Asian Automatic Weather Station Network (AAN) Observations over the Tibetan Plateau", 1st International Conference on Hydrology and Water Resources in Asia Pacific Region (APHW2003), Kyoto.

March 2003 "Characteristics of Orographical Precipitation over South Asia Seen from TRMM/PR", 1st International Conference on Hydrology and Water Resources in Asia Pacific Region (APHW2003), Kyoto.

Awards

Research Activities

Field Research in Foreign Countries

August 2003 China (Research on the water vapor transport around Qiyi glacier, Northwest China)

October 2002 Turkey/Egypt/Israel (Collecting information on desertification over the East/West part of the Eurasian continent)

September 2002 China (Collecting information on desertification over the East/West part of the Eurasian continent)

July 2002 Turkey (Research on the impact of climate changes on the semiarid agricultural lands)

March 2002 Bangladesh (Study about relationships between meteorological conditions and epidemic diseases)

CHEN, Jianyao ——— Research Fellow

Born in 1966.

Curriculum Vitae

Academic Career

Department of Earth Science, Chiba University, Ph. D. in Regional Environmental Science (2003)

Department of Hydrology, Institute of Geography, Chinese Academy of Sciences (CAS), Ph. D. in Hydrology and Water Resource (1999)

International Institute for Aerospace and Earth Science (ITC), the Netherlands, M. Sc. in Remote Sensing and GIS (1995)

Department of Hydrology, Institute of Geography, Chinese Academy of Sciences (CAS), M. Sc. in Hydrology and Water Resource (1990)

Department of Geography, Nanjing University (1987)

Professional Career

Research Fellow, Research Institute for Humanity and Nature (RIHN) (2003)

Associate Professor, Department of Hydrology, Institute of Geography, CAS (1997)

Assistant Professor, Department of Hydrology, Institute of Geography, CAS (1990)

Higher Degrees

Ph. D. (Chiba University 2003, CAS 1999)

M. Sc. (ITC 1995, CAS 1990)

Fields of Specialization / Background

Hydrology, Physical Geography, Isotopic Hydrology, Groundwater, RS and GIS

Academic Society Memberships

Chinese Geographical Union, IAH

Major Publications

Articles

Chen, JY., CY. Tang, YJ. Shen, A. Kondoh, S. Sakura and J. Shimada

2003 Use of Water Balance and Calculation and Tritium to Examine the Dropdown of Groundwater Table in the Piedmont of the North China Plain (NCP). *Environmental Geology* 44: 564-571.

Chen, JY., CY. Tang, S. Sakura and YJ. Shen

2003 Nitrate Pollution in Groundwater in the Lower Reach of the Yellow River: Case Study in Shandong Province,

China. In I. Kono, M. Nishigaki and M. Komatsu (eds.) *Groundwater Engineering - Recent Advances*, pp.279-283. Lisse: Swets & Zeitlinger.

Chen, JY., CY. Tang, S. Sakura, A. Kondoh and YJ. Shen

2002 Groundwater Flow and Geochemistry in the Lower Reach of the Yellow River: Case Study in Shandong Province, China. *Hydrogeology Journal* 10: 587-599.

Chen, JY., CY. Tang, S. Sakura, A. Kondoh, YJ. Shen and Z. Ouyang

2001 The Impacts of Diversion from the Yellow River on the Local Aquifer: Case Study in Shandong Province, China. In KP. Seiler and S. Wohnlich (eds.) *New Approaches Characterizing Groundwater Flow*, pp.1143-1147. Lisse: A. A. Balkema Publishers.

Chen, JY.

1998 The Simulation of Runoff Using Time-Area Graph Derived from DTM. *ITC Journal* 2: 113-117.

KIKUCHI, Nobuyuki ——— Research Fellow

Born in 1966.

Curriculum Vitae

Academic Career

Department of Geophysics, Graduate School of Science, Tohoku University, D. Cource (1998)

Department of Geophysics, Graduate School of Science, Tohoku University, M. Cource (1993)

Department of Geophysics, Faculty of Science, Tohoku University (1991)

Professional Career

Research Fellow, Research Institute for Humanity and Nature (2001)

Research Fellow, Tohoku University (1998)

JSPS Research fellow, Tohoku University (1996)

Higher Degrees

D. Sc. (Tohoku University, 1998)

M. Sc. (Tohoku University, 1993)

Fields of Specialization / ackground

Meteorology, Atmospheric Radiation

Academic Society Memberships

Meteorological Society of Japan

Major Publications

Articles

Kuji, M., N. Kikuchi

2001 Shōwa kichi jushin NOAA eisei HRPT deita no yomidasi tsūru no kaihatsu (Development of a Tool to Read out HRPT Data of NOAA Polar Orbiter Received at Syowa Station), *Nankyoku Shiryō* (Antarctic Record) Vol.45, No.3, 353-361, National Institute of Polar Research, Tokyo. [in Japanese]

Kuji, M, N. Kikuchi, N. Hirasawa, and T. Yamanouchi

2001 A Method of Cloud Field Detection over Antarctica during the Polar Night Using AVHRR Data. *Polar Meteorology and Glaciology* 15: 114-123.

Kuji, M., T. Hayasaka, N. Kikuchi, T. Nakajima and M. Tanaka

2000 The Retrieval of Effective Particle Radius and Liquid Water Path of Low-Level Marine Clouds from NOAA AVHRR Data. *Journal of Applied Meteorology* 39: 999-1016.

Hayasaka, T. and N. Kikuchi

2000 Eisei ni yoru kumo no bibutsuritokusei no kansoku (Cloud Microphysics Measurements Using Satellite), *Gekkan Kaiyō* (Monthly Ocean) Vol.32, No.5, 291-296. [in Japanese]

Activities in Academic Societies

October 2002 "San hachō kumo bunkō hōshakei wo mochiita kumo butsuriryō to kumo fukinshitsusei no suitei (Estimation of the Parameters of Cloud Microphysics and Cloud Inhomogeneity Using a Three Channel Cloud Spectroradiometer)", presented by N. Kikuchi, H. Ishida, S. Asano and H. Kuroiwa, at Fall Meeting of the Meteorological Society of Japan. [in Japanese]

May 2002 "Tahachō sensā wo mochiita kumo butsuriryō to kumo fukinshitsu paramēta no dōshutsu (The Retrieval of the Parameter of Cloud Microphysics and Cloud Inhomogeneity Using a Multiwavelength Sensor), presented by N. Kikuchi and T. Hayasaka, at Spring Meeting of the Meteorological Society of Japan. [in Japanese]

October 2001 "Kanki no fukidashi ni tomonau kumo no kōgakuteki atsusa to unryō no suitei (Estimation of the optical thickness and amount of clouds in the cold air mass)", presented by N. Kikuchi at Fall Meeting of the Meteorological Society of Japan. [in Japanese]

Februrary 2001 "Retrieval of the Optical Thickness of Inhomogeneous Clouds from Multispectral Satellite Measurements", presented by N. Kikuchi, H. Iwabuchi and T. Hayasaka at CEReS International Symposium on "Remote Sensing of the Atmosphere and Validation of Satellite Data", Center for Environmental Remote Sensing, Chiba University, Chiba, Japan.

October 2000 "Fukinshitsu kumo no hōsha tokusei wo arawasu "Effective Gradient" no dōnyū to LANDSAT eisei kōkaizōdo dēta wo mochiita kōgakuteki atsusa no suitei (A New Parameter of Cloud Inhomogeneity of Effective Gradient and Estimatation of Cloud Optical Thickness Using High Resolution Data of LANDSAT Satellite)", presented by N. Kikuchi, H. Iwabuchi and T. Hayasaka at Fall Meeting of the Meteorological Society of Japan. [in Japanese]

May 1998 "NOAA AVHRR to GMS VISSR de suiteishita kumo no kōgakuteki atsusa no hikaku (Comparison of NOAA AVHRR and GMS VISSR for Estimated Cloud Optical Thickness)", presented by N. Kikuchi, T. Hayasaka and M. Tanaka at Spring Meeting of the Meteorological Society of Japan. [in Japanese]

2000-2002 Collaborator, Ordinary Joint Study in National Institute of Polar Research (A study of variation of cloud and water vapor in Antarctica using remote sensing data)

Research Activities

Field Research in Japan

July 2002 - Observatory of Atmospheric Environment in Fukue Island, Miiraku-cho Minamimatsuura-gun Nagasaki (Observation of radiation and aerosol).

INOUE, Mitsuyuki ——— Research Felllow

Born in 1971.

Curriculum Vitae

Academic Career

Department of Oriental History, Graduate School of Letters, Kyoto University, D. Course (2001)

Department of Oriental History, Graduate School of Letters, Kyoto University, M. Course (1998)

Department of Oriental History, Faculty of Letters, Kyoto University (1995)

Professional Career

Research Fellow, Research Institute for Humanity and Nature (2003)

Research Assistant, Institute for Research in Humanities, Kyoto University (2002)

Research Fellow, Documentation and Information Center for Chinese Studies, Institute for Research in Humanities, Kyoto University (2002)

Higher Degrees

Litt. M. (Kyoto University, 1998)

Fields of Specialization / Background

Oriental History

Academic Society Memberships

Tōyōshi Kenkyūkai (The Society of Oriental History)

Major Publications

Books

Inoue, Mitsuyuki, and Kyoto University Library (eds.)

2002 *Manabi no sekai* (The World of Study). Catalog of Exhibition. Kyoto University Library. [in Japanese]

Inoue, Mitsuyuki, and Kyoto University Library (eds.)

2001 *Kinsei no Kyoto zu to sekai zu* (The Maps of Kyoto and the World Maps). Catalog of Exhibition. Kyoto University Library. [in Japanese]

Inoue, Mitsuyuki, and Kyoto University Library (eds.)

2001 *Kyoto daigaku shozō kochizu mokuroku* (Catalog of Old Maps Owned by Kyoto University). Graduate School of Letters, Kyoto University. [in Japanese]

Articles

Inoue, Mitsuyuki

2003 "Gokeizu" "Likukeizu" hanpon shōkō (On Woodblock-Printed Books of "Wu jing tu" and "Liu jing tu"). In Kida, Akiyoshi (ed.) *Kotengaku no Genzai* (The Situation of Classical Studies) V, pp.149-178. [in Japanese]

2000 Min matsu no bunjin Ri Jitsuka no shumi seikatsu (On Artistic Life of Li Rihua). *Tōyōshi Kenkyū* (The Journal of Oriental History) 59(1): 1-28. [in Japanese]

Research Activities

Field Research in Japan

October 2003 Kumamoto City and Shimabara City (Research of old maps)

Field Research in Foreign Countries

March 2003 Korea (Research of old maps)

NAGANO, Takanori ——— Research Fellow

Born in 1970.

Curriculum Vitae

Academic Career

Division of Science and Technology on Regional Environment, Graduate School of Agriculture, Kyoto University, D. Ag. (2002)

Division of Science and Technology on Regional Environment, Graduate School of Agriculture, Kyoto University, M. Ag. (1997)

Department of Agricultural Engineering, Faculty of Agriculture, Kyoto University (1995)

Professional Career

Research Fellow, Research Institute for Humanity and Nature (2001)

Higher Degrees

D. Agr. (Kyoto University, 2002)

M. Agr. (Kyoto University, 1997)

Fields of Specialized / Background

Irrigation and Drainage, Soil Hydrology

Academic Society Memberships

The Japanese Society of Irrigation, Drainage and Reclamation Engineering, the Japanese Association for Arid Land Studies, Japan Association for African Studies

Major Publications

Nagano T., H. Horino, T. Mitsuno and M. Kimura

2003 Growth Environment of Sloped Millet Field in the Southwestern Niger and Effects of Introducing Contour Ridges. *Transactions of The Japanese Society of Irrigation, Drainage and Reclamation Engineering* 71(2): 53-64

Nagano, T., H. Horino and T. Mitsuno

2002 A Study on Conservation of Millet Field in the Southwestern Niger, West Africa. In Jiao Juren (eds.) *Proceedings of 12th International Soil Conservation Conference, Beijing, China*, 3: 68-76.

Nagano, T., H. Horino, T. Mitsuno and N. Shimizu

2001 Changes in Surface Runoff Due to Crust Formation and Conservation Techniques. *The Case of On-Farm Study in Niger, West Africa. Agricultural Engineering International: The CIGR Journal of Scientific Research and Development* (Manuscript LW 01 005, Vol.III).

Nagano, T., N. Shimizu and T. Mitsuno

2000 Nijēru ni okeru jūmin sanka gata sabakuka bōshi no genjō: PASP wo rei to shite (The Present State of Participative Anti-Desertification Approach in Niger: The Case of PASP). *Journal of Arid Land Studies* 10(4): 309-320. [in Japanese].

Horino, H., T. Nagano and T. Mitsuno

2000 Nijēru koku ni okeru suimon kansoku taisei to kangai jyōkyō (System for Observation of Hydrological Data and Irrigation Conditions in Niger). *Journal of Arid Land Studies* 10(3): 225-230. [in Japanese].

Activities in Academic Societies

September 2002 "Efficient Use of Flora and Fauna for Conservation of Millet Fields in the Southwestern Niger, West Africa" presented by T. Nagano and T. Watanabe, International Conference on the Optimum Allocation of Water Resource, the Ecological Environment Construction and the Sustainable Development in Arid Zone. Huhhot, Inner Mongolia, China.

May 2002 "A Study on Conservation of Millet Field in the Southwestern Niger, West Africa", presented by T. Nagano, H. Horino and T. Mitsuno, the 12th International Soil Conservation Conference, Beijing, China.

November and December 2000 "Changes in Surface Runoff Due to Crust Formation and Conservation Techniques", presented by T. Nagano, H. Horino, T. Mitsuno and N. Shimizu, the 14th Memorial CIGR World Congress 2000 "The Case of On-Farm Study in Niger, West Africa", Tsukuba, Japan.

Research Activities

Field Research in Foreign Countries

1997-2000 Niger (A study on conservation of sloped millet field in Niger)

September 2002 China (Field trip to Oasis in Zhangye. Salinity assessment in Hetao Irrigation District, Inner Mongolia)

October 2002 Egypt, Turkey (Impact of Climate Changes on Agricultural Production System in the Arid Areas)

SAKAI, Akiko ——— Research Fellow
Born in 1970.

Curriculum Vitae

Academic Career

Faculty of Science, University of Nagoya, D. Course (2001)
Department of Geoscience, Faculty of Environmental Earth Science, University of Hokkaido, M. Course (1995)
Department of Geophysics, Faculty of Science, Hokkaido University (1993)

Professional Career

JSPS Researcher, Nagoya University (2002)
COE Researcher, Research Institute for Humanity and Nature (2001)

Higher Degrees

D. Sc. (University of Nagoya, 2001)
M. Sc. (University of Hokkaido, 1995)

Fields of Specialization / Background

Glaciology,

Academic Society Memberships

The Society of Snow and Ice
The Japan Society of Hydrology and Water Resources

Recent Publications

Articles

Sakai, A., M. Nakawo and K. Fujita
2002 Distribution Characteristics and Energy Balance of Ice Cliffs on Debris-Covered Glaciers, Nepal Himalaya. *Arctic, Antarctic, and Alpine Research* 34(1): 12-29.

Sakai, A., T. Yamada and K. Chikita
2001 Thermal Regime of a Moraine-Dammed Glacial Lake, Tsho Rolpa, in Rolwaling Himal, Nepal Himalayas. *Bulletin of Glacier Research*, 18: 37-44.

Sakai, A.
2001 Iwakuzu ni oowareta hyōga no yūkaikatei (Ablation Process of Debris-Covered Glaciers). *Seppyo* (Journal of the Japanese Society of Snow and Ice) 63(2): 191-200.

Sakai, A., K. Chikita, T. Yamada
2000 Expansion of a Moraine-Dammed Glacier Lake, Tsho Rolpa, in Rolwaling Himal, Nepal Himalaya. *Limnology & Oceanography*: 45(6): 1401-1408.

Activities in Academic Societies

October 2003 "Hyōgako no kābingu niyoru kakudaikaisijiki nituite (Initiation of Glacial Lake Expansion in the Nepal Himalayas.)", Nihon Seppyo Gakkai zenkoku taikai (Annual Conference of Japanese Society of Snow and Ice), Joetsu. [in Japanese]

October 2002 "Nepal Himalaya Imja Hyōgako no kakudai to kobon no henka (Size Change of the Imja Glacier Lake, in the Nepal Himalaya.)", Nihon Seppyo Gakkai zenkoku taikai (Annual Conference of Japanese Society of Snow and Ice), Yamagata. [in Japanese]

Awards

Nakaya Ukichirō Kagaku Shōrei-Shō in 2001 (Scientific Award of Ukichirō Nakaya).

Research Activities

Field Research in Japan

October 2003 Tatemaya (monitoring for snow patch)

June 2003 Tatemaya (monitoring for snow patch)

Field Research in Foreign Countries

August 2003 Qilian mountains, China (research on discharge from glaciers)

September 2002 Qilian mountains, China (research on discharge from glaciers)

June 2002 Qilian mountains, China (research on discharge from glaciers)

March 2002 Nepal (research on glacial lake in Nepal)

TANAKA, Takuya ——— Research Fellow

Born in 1966.

Curriculum Vitae

Academic Career

Division of Environmental Science and Technology, Faculty of Agriculture, Kyoto University, D. Course (1999)

Department of Forestry, Faculty of Agriculture, Kyoto University, M. Course (1995)

Department of Forestry, Faculty of Agriculture, Kyoto University. (1992)

Professional Career

Research Fellow, Research Institute for Humanity and Nature (2001)

School-Affairs Assistance Member, Center for Ecological Research, Kyoto University (1999)

Higher Degrees

M. Agr. (Kyoto University, 1995)

Fields of Specialization / Background

Forestry, Anthropology

Major Publications

Articles

Yachi, Shigeo, Ken'ichi Wakita, Yuichi Hara and Takuya Tanaka

2002 Mizujunkan to ryūikiken: Ryūiki no mizukankyō no sōgōtekina shindanhō (Developing a Comprehensive Diagnosis Methodology for Assessing the Human and Natural Environment of a River Basin). *Kankyō jōhō kagaku* (Environmental Information Science) 31(4): 17-23. [in Japanese]

Research Reports

Tanaka, Takuya (ed.)

2002 *Suikei kenkyū no shiten: Biwako Yodogawa suikei ni okeru kēsu sutadī* (Perspectives on Watershed Research: Case Studies of Lake Biwa and Yodo River Basin Area). Center for Ecological Research, Kyoto University. (JSPS Research for the Future Program "Environmental Conservation in the Asian Region", Wada Project (JSPS-RFTF97I00602)) [in Japanese]

Wada Project Members (eds.)

2002 *Ryūiki kanri no tameno sōgō chōsa manyuaru* (A Comprehensive Manual for Assessing the Human and Natural Environment of a River Basin). Center for Ecological Research, Kyoto University. (JSPS Research for the Future Program "Environmental Conservation in the Asian Region", Wada Project (JSPS-RFTF97I00602)). [in Japanese]

Activities in Academic Societies

March 2002 Ryūiki kanri no tameno atarashī sōgō chōsa hōhō to Systematic Conservation Planning Systematic (A New Methodology for Assessing the Human and Natural Environment of a River Basin and

Systematic Conservation Planning Systematic) "Konsabēshon puraningu no rinen to kadai (Philosophy and Issues on Systematic Conservation Planning)", Ecological Society of Japan. [in Japanese]

Research Activities

Field Research in Japan

July 2003 Hikone City, Shiga Prefecture (Water utilization Survey in Inae District)

Field Research in Foreign Countries

August 2003 Cambodia and Thailand (Research on watershed Management in South-East Asia)

USHIMARU, Atushi ——— Research Fellow

Born in 1970.

Curriculum Vitae

Academic Career

Graduate School of Science, Kyoto University, D. Course (1998)

Graduate School of Science, Kyoto University, M. Course (1995)

Faculty of Agriculture, Kyoto University (1993)

Professional Career

Research fellow, Research Institute for Humanity and Nature (2001)

JSPS Research fellow, Center for Ecological Research, Kyoto University (2000)

COE Research fellow, Center for Ecological Research, Kyoto University (1999)

Higher Degrees

D. Sc. (Kyoto University, 1998)

M. Sc. (Kyoto University 1995)

Fields of Specialization / Background

Botany, Ecology

Academic Society Memberships

Ecological Society of Japan

Major Publications

Books

Ushimaru, A.

1999 Hana no sei: Ryōsei shokubutsu ni okeru jika wagōsei to jidōteki jika jyufun no shinka (Evolution of Self-Compatibility and Autonomous Self-Pollination in Hermaphroditic Flowers. In The Society for the Study Species Biology (ed.) *Hanaseitaigaku no saizensen: Utsukushisa no shinkateki haikei wo saguru* (New Perspectives in Floral Ecology), pp.75-95, Bunichi Sogo Shuppan. [in Japanese]

Articles

Nakashizuka, T., M. Saito, K. Matsui, A. Makita, T. Kanbayashi, T. Masaki, T. Nagaike, H. Sugita,T. Kanazashi, T. Seki, T. Ohta, G. Hitsuma, T. Yagi, T. Hashimoto, A. Sakai, D. Kabeya, K. Takata, K. Hoshizaki, A. Ushimaru, M. Abe, S. Ohba, T. Fukuda, N. Arai, M. Kamisako, T. Kenta, T. Ichie, S. Mahoro, Y. Inui, M. Nakagawa, H. Kurokawa, N. Fujimori, H. Samejima, A. Hatada, M. Hori and S. Sawada

2003 Shirakami sanchi ni okeru kotonatta kōzō wo motsu buna-rin no dōtai monitaringu (Monitoring Dynamics of Beech Forests with Different Structure in Shirakami Mountains). *Tohoku Journal of Forest Science* 8: 67-74. [in Japanese]

Ushimaru, A., T. Itagaki and H. S. Ishii

2003 Variation in Floral Organ Size Depends on Function: A Test with *Commelina communis*, an

Andromonoecious Species. *Evolutionary Ecology Research* 5: 615-622.

Ushimaru, A., T. Itagaki and H. S. Ishii

2003 Floral Correlations in an Andromonoecious *Commelina communis*. *Plant Species Biology*. [in press]

Ushimaru, A., A. Fukui and A. Imamura

2003 Effect of Floral Organ Size on Female Reproductive Success in *Erythronium japonicum* (Liliaceae). *Journal of Plant Biology*. [in press]

Nakata, K. and A. Ushimaru and T. Watanabe

2003 Using Past Experience in Web Relocation Enhances the Foraging Efficiency of the Spider *Cyclosa argenteoalba*. *Journal of Insect Behaviour* 16: 371-380.

Watanabe, T., T. Tanigaki, H. Nishi, A. Ushimaru and T. Takeuchi

2002 A Quantitative Analysis of Geographic Color Variation in Two *Geotrupes* Dung Beetles. *Zoological Science* 19: 351-358.

Ushimaru, A. and K. Nakata

2002 The Evolution of Flower Allometry in Selfing Species. *Evolutionary Ecology Research* 4: 1217-1227.

Ushimaru, A. and A. Imamura

2002 Large Flower Size Variation in the Myco-Heterotrophic Plant, *Monotropastrum globosum*: Effects of Floral Display on Female Reproductive Success. *Plant Species Biology* 17: 147-153.

Watanabe, T., T. Tanigaki, H. Nishi, A. Ushimaru and T. Takeuchi

2002 Geographic Color Variation in Two *Geotrupes* Dung Beetles: A Further Study. *Entomological Science* 5: 291-295.

Ushimaru, A., and K. Nakata

2001 Evolution of Flower Allometry and Its Significance on Pollination Success in Deceptive Orchid, *Pogonia japonica*. *International Journal of Plant Sciences* 162: 1307-1311.

Matsui, K., A. Ushimaru and N. Fujita

2001 Pollinator Limitation in a Deceptive Orchid, *Pogonia japonica*, on a Floating Peat Mat. *Plant Species Biology* 16: 231-235.

Ushimaru, A. and K. Matsui

2001 Sex Change in Tree Species: Long-Term Monitoring of Sex Expression in *Acer rufinerve*. *Nordic Journal Botany* 21: 397-399.

Ushimaru, A., and K. Kikuzawa

1999 Variation of Breeding System, Floral Rewards, Reproductive Success in Clonal *Calystegia* species. *American Journal of Botany* 83: 436-446.

Nakata, K., and A. Ushimaru

1999 Feeding Experience Affects Web Relocation and Investment in Web Threads in an Orb-Web Spider, *Cyclosa argeteoalba*. *Animal Behavior* 57: 1251-1255.

Public Lecture

September 2002 "Hishi-shokubutsu (hana) to konchu no chotto ii hanashi (Historical Relationship between Flowers and Insects)", Konan Junior High School, Ashiya. [in Japanese]

KATO, Motomi ——— JSPS Research Fellow

Born in 1973.

Curriculum Vitae

Academic Career

Department of Zoology, Faculty of Science, Kyoto University, D. Course (2001)

Department of Botany, Faculty of Science, Kyoto University, M. Course (1998)

Faculty of Science, Kyoto University (1996)

Professional Career

JSPS Research Fellow (PD), Research Institute for Humanity and Nature (2002)

JSPS Research Fellow (PD), Center for Ecological Research, Kyoto University (2001)

JSPS Research Fellow (DC2), Center for Ecological Research, Kyoto University (2000)

Higher Degrees

D. Sc. (Kyoto University, 2001)

M. Sc. (Kyoto University, 1998)

Fields of Specialization / Background

Ecology

Academic Society Memberships

Ecological Society of Japan

Major Publications

Articles

Genkai-Kato, M., T. Sekino, T. Yoshida, H. Miyasaka, T. V. Khodzher, O. A. Belykh, N. G. Melnik, Z. Kawabata, M. Higashi and M. Nakanishi

2002 Nutritional Diagnosis of Phytoplankton in Lake Baikal. *Ecological Research* 17: 135-142.

Genkai-Kato, M. and N. Yamamura

2000 Profitability of Prey Determines the Response of Population Abundances to Enrichment. *Proceedings of the Royal Society of London, Series B* 267: 2397-2401.

Genkai-Kato, M., K. Nozaki, H. Mitsuhashi, Y. Kohmatsu, H. Miyasaka and M. Nakanishi

2000 Push-Up Response of Stonefly Larvae in Low-Oxygen Conditions. *Ecological Research* 15: 175-179.

Genkai-Kato, M. and N. Yamamura

1999 Unpalatable Prey Resolves the Paradox of Enrichment. *Proceedings of the Royal Society of London, Series B* 266: 1215-1219.

Genkai-Kato, M. and N. Yamamura

1999 Evolution of Mutualistic Symbiosis without Vertical Transmission. *Theoretical Population Biology* 55: 309-323.

Activities in Academic Societies

June 2002 "Profitability of Prey Determines the Response of Population Abundances to Enrichment" (American Society of Limnology and Oceanography, Victoria, British Columbia, Canada)

March 2002 "Baikaru ko ni okeru mizu no enchoku kongō ga shokubutsu purankuton gunshū ni ataeru eikyō (Effects of Water Mixing on the Phytoplankton Community in Lake Baikal)" (Ecological Society of Japan, Tohoku University) [in Japanese]

October 2001 "Effects of Enrichment on One Predator-Two Prey Systems with Different Prey Profitability" (DIALOG symposium, American Society of Limnology and Oceanography, Bermuda Biological Station, Bermuda)

March 2001 "Fueiyōka ga hisentaku teki hoshokusha to oisisa no kotonaru esa nishu kara naru kei no anteisei ni ataeru eikyō (Effects of Enrichment on the Stability in Daphnia-Algal Systems with Different Prey Profitability)" (Ecological Society of Japan, Prefectural University of Kumamoto) [in Japanese]

September 2000 "Baikaru ko ni okeru shokubutsu purankuton no eiyō shindan (Nutritional Diagnosis of Phytoplankton in Lake Baikal)" (Japanese Society of Limnology, Fukuoka University) [in Japanese]

September 2000 "Teisanso jōkenka ni okeru kawagera yōchū no udetate fuse hannō (Push-Up Response of Stonefly Larvae in Low-Oxygen Conditions)" (Japanese Society of Limnology, Fukuoka

University) [in Japanese]

June 2000 "Stonefly Larvae Do Push-Ups in Response to the Oxygen Supply" (North American Benthological Society, Keystone, Colorado, USA)

March 2000 "Esa no 'mazusa' ga fueiyōka ni taisuru kotaisū hannō wo kimeru (Profitability of Prey Determines the Response of Population Abundances to Enrichment)" (Ecological Society of Japan, Hiroshima University) [in Japanese]

October 1999 "Ooyama kawagera no bisai bunpu no kisetsu henka: Sanso no kakutoku to nagare (Seasonal Changes in the Microhabitat Distribution of *Oyamia lugubris*: Oxygen Supply and Water Flow)" (Japanese Society of Limnology, University of Shiga Prefecture) [in Japanese]

March 1999 "Mazui esa ga kei wo anteika suru (Unpalatable Prey Resolves the Paradox of Enrichment)" (Ecological Society of Japan, Shinshu University) [in Japanese]

September 1998 "Kawagera no yōchū no 'udetate fuse' kōdō: Ryūsoku to udetate fuse kaisū no kankei (Push-Up Behavior of a Stonefly Larva: Relationship between Current Velocity and the Frequency of Push-Ups)" (Japanese Society of Limnology, Shinshu University) [in Japanese]

Research Activities

Field Research in Japan

May 2002 Daisen Mountain, Tottori Prefecture (Research on sex expressions of a Japanese maple tree)

Field Research in Foreign Country

June 2002 - March 2003 Wisconsin, USA (Research on ecosystem management in lakes)

HARROLD, Timothy Ives — JSPS Research Fellow

Born in 1967, Australia.

Curriculum Vitae

Academic Career

School of Civil and Environmental Engineering, University of New South Wales, Ph. D. (2002)

School of Natural Resources, University of New England, M. Nat. Res. (1993)

School of Engineering, University of Newcastle (1990)

Professional Career

JSPS Postdoctoral Fellow, Research Institute for Humanity and Nature (2003-2004)

Research officer, Climate Impact Group, CSIRO Atmospheric Research, Australia (2002)

Tutor, School of Civil and Environmental Engineering, UNSW (1998-2001)

Hydrologist, New South Wales Department of Land and Water Conservation (1994-1998)

Research assistant, Centre for Water Policy Research, UNE (1994)

Tutor, School of Natural Resources, UNE (1992-1993)

Higher Degrees

Ph. D. (UNSW, 2002)

M. Nat. Res. (UNE, 1993)

Fields of Specialization / Background

Stochastic hydrology, climate change impacts

Major Publications

Thesis

Harrold, T. I.

2002 Stochastic Generation of Daily Rainfall for Catchment Water Management Studies. PhD Thesis, School of Civil Engineering, University of New South Wales. Available from <http://adt.caul.edu.au>.

Journal Articles

Harrold, T.I., A. Sharma and S.J. Sheather

2003 A Nonparametric Model for Stochastic Generation of Daily Rainfall Amounts. *Water Resources Research* 39(12), 1343, doi: 10.1029/2003 WR002570.

2003 A Nonparametric Model for Stochastic Generation of Daily Rainfall Occurrence. *Water Resources Research* 39(10), 1300, doi: 10.1029/2003 WR002182.

2001 Selection of a Kernel Bandwidth for Measuring Dependence in Hydrologic Time Series Using the Mutual Information Criterion. *Stochastic Environmental Research and Risk Assessment* 15(4): 310-324.

Book Chapter

Harrold, T. I., and R. N. Jones.

2003 Generation of Rainfall Scenarios Using Daily Patterns of Change from GCMs. In S. Franks, G. Bloschl, M. Kumagai, K. Musiake and D. Rosbjerg (eds.) *Water Resources Systems-Water Availability and Global Change* (Proceedings of symposium HS2a held during IUGG2003 at Sapporo, July 2003). IAHS Publ. no.280, IAHS Press, Wallingford UK.

Awards

2001 Modelling and Simulation Society of Australia and New Zealand, Student Prize in Natural Systems.

Research Activities

My postdoctoral research topic is "Changes in the stochastic structure of precipitation and the incidence of floods and droughts under global warming scenarios". My research interests include stochastic modeling of daily rainfall, the hydrologic impacts of climate variability and climate change, nonparametric and data-driven statistical methods, and Monte Carlo simulation.

Social Activities and Public Lectures

Member, Kyoto Assembly Church

Teacher for an english Bible class at Kyoto University

Public Lecture: "What Christians think about the environment", at Kyoto University, 2003.

Mailisha ——— JSPS Research Fellow

Born in 1958, P. R. China.

Curriculum Vitae

Academic Career

Hitotsubashi University, Graduate School of Sociology, D. Course (2000)

Hitotsubashi University, Graduate School of Sociology, M. Course (1993)

Inner Mongolian University, Faculty of Foreign Languages, Department of Japanese, China. P. R. (1983)

Professional Career

JSPS Research Fellow, Research Institute for Humanity and Nature (2002-)

Higher Degrees

D. Socio. (Hitotsubashi University, 2000)

M. Socio. (Hitotsubashi University, 1993)

Fields of Specialization / Background

Sociology, Educational Sociology

Academic Society Memberships

The Education and Sociology Society, the Asian Comparative Pedagogy Society the Japanese Agricultural Education Society

Major Publications

Articles

2000 "Lifetime learning and participation of the masses–The character formation in spontaneous village building endeavors–". Tokyo: Doctoral theses submitted to the Graduate School of Social Sciences, Hitotsubashi University.

1998 "Network of lifelines connecting cities and rural villages–Exchanges between cities and rural villages in the practice of organic agriculture–". We continue asking questions, from schools, from companies, from regional communities. Tokyo: A study meeting for a teaching practice.

1998 "The point from making a community to environmental education". Studies on Education and Society. Vol.8. Tokyo: The Society for the Study on Education and Society Hitotsubashi University.

Research activities

Field Research in Japan

1998 Takahata, Yamanashi Prefecture (Research into spontaneous village building endeavors)

Field Research in Foreign Countries

August 2002 (Ethnological research in the oasis project) along the basin of the Heihe river, Guansu Province, China

MIYASAKA, Hitoshi ——— JSPS Research Fellow

Born in 1969.

Curriculum Vitae

Academic Career

Research student, Center for Ecological Research, Kyoto University (2002)
Graduate School of Environmental Earth Sciences, Division of Geosciences, Hokkaido University, D. Course (2000)
Graduate School of Environmental Earth Sciences, Division of Geosciences, Hokkaido University, M. Course (1997)
Faculty of Bioresources, Division of Sustainable Resource Sciences, Mie University (1995)

Professional Career

JSPS Postdoctoral Fellow, Research Institute for Humanity and Nature (2003)

Higher Degrees

M. Sci. (1997)

MATSUOKA, Kenichi ——— JSPS Research Fellow

Born in 1971.

Curriculum Vitae

Academic Career

Graduate School of Earth Environmental Sciences, Hokkaido University, D. Course (2002)
Graduate School of Earth Environmental Sciences, Hokkaido University, M. Course (1997)
Department of Applied Physics, Faculty of Engineering, Hokkaido University (1995)

Professional Career

JSPS Research Fellow, Research Institute for Humanity and Nature (2002-)
Research Assistant, Institute of Low Temperature Science, Hokkaido University (2000-2002)
Assistant Professor, Institute of Low Temperature Science, Hokkaido University (1998-2000)
JSPS Research Fellow, Institute of Low Temperature Science, Hokkaido University (1998)

Higher Degrees

D. Sc. (Hokkaido University, 2002)

M. Sc. (Hokkaido University, 1997)

Fields of Specialization / Background

Glaciology, Remote Sensing

Academic Society Memberships

International Glaciological Society, American Geophysical Union, Japan Society of Snow and Ice

Major Publications

Articles

Matsuoka, K., T. Furukawa, S. Fujita, H. Maeno, S. Uratsuka, R. Naruse and O. Watanabe

2003 Crystal-Orientation Fabrics within the Antarctic Ice Sheet Revealed by a Multi-Polarization-Plane and Dual-Frequency Radar Survey. *Journal of Geophysical Research* 108(B10), 2499, doi:10.1029/2003JB002425.

Matsuoka, K., H. Maeno, S. Uratsuka, S. Fujita, T. Furukawa and O. Watanabe

2002 A Ground-Based, Multi-Frequency Ice-Penetrating Radar System. *Annals of Glaciology* 34: 171-176.

Matsuoka, K. and R. Naruse

1999 Mass Balance Features Derived from a Firn Core at Hielo Patagonico Norte, South America. *Arctic, Antarctic and Alpine Research* 31: 333-340.

Activities in Academic Societies

May 2002	"Impact of the Future Satellite Gravity Missions on Ice-Sheet Researches", invited talk, the Joint Meeting of Earth and Planetary Sciences, Tokyo.
2002 and 2003	Cooperative Research Fellow, National Institute of Polar Research, Tokyo, Japan.
2002	Cooperative Research Fellow, Institute of Low Temperature Science, Hokkaido University, Sapporo, Japan.

Research Activities

Field Research in Foreign Countries

April 2002 Iceland (Radar investigations on internal and basal structures of glaciers)

ŌNISHI, Hideyuki ——— JSPS Research Fellow

Born in 1969.

Curriculum Vitae

Academic Career

Department of History (Archaeology), Faculty of Literature, University of Hokkaido, D. Course (2001)

Department of History (Archaeology), Faculty of Literature, University of Hokkaido, M. A. (1995)

Department of History, Faculty of Literature, Meiji University (1993)

Professional Career

JSPS Research Fellow PD (2002)

JSPS Research Fellow DC2 (1997-1999)

Higher Degrees

M. A. (University of Hokkaido, 1995)

Fields of Specialization / Background

Anthropology, Archaeology

Academic Society Memberships

Japanese Society of Cultural Anthropology, the Japanese Archaeological Association, the Society of Ecological

Anthropology, the Japanese Society for Oceanic Studies

Major Publications

Articles

Ōnishi, Hideyuki

2003 Shijōkeizai ni yoru "dentō-kōgei" no saisei: Luzon-tō hokubu-sanchimin no hataori wo jirei toshite (Traditional Handicraft Reproduced by Market Economy: A Study on Philippine Highlanders' Weaving in Northern Luzon). *Nanpō-Bunka* 30: 85-117

2003 Kyōkai no mura no kyojūsha: "Tobinitai-bunka" shūraku niokeru kyojūsha no shutsuji to setaikōsei (Residents of Cultural Boundary Area: Lineage and Household Composition of the "Tobinitai Culture" in Northern Japan). *Nihon Kōkogaku* (Journal of the Japanese Archaeological Association) 16: 157-177.

2003 Tsuka no kioku: Mokkō niokeru Ainu no hitobito no shintaigihō no rekishi (The Memory of Handle of Knife: History of the Techniques of Body in Relation to Woodworking among Ainu People). *Mingu-Monthly* 36(4): 11-18.

2003 Shakaiteki-jissen toshiteno kōgei-gijyutsu no henyō: Philippine Luzon sanchimin-shakai ni okeru hataori no sangyōka wo meggute (Change of Craft Technology as Social Practice: A Study on the Industrialization of Weaving as Folk Craft in the Philippine Highlanders' Society, Northern Luzon). *Asia-Africa Gengo-Bunka Kenkyu* (Journal of Asian and African Studies) 65: 67-88.

2001 "Tobinitai-bunka" naru genshō no tuikyū (Meaning of the "Tobinitai Culture"). *Busshitsu Bunka* (Material Culture: Journal of Archaeologico-Folkloric Studies) 71: 22-56.

Research Activities

Field Research in Japan

August 2003 Tokunoshima and Amami-Ohshima (Ethnographical research on "traditional" handicraft and common-use property)

March 2002 Tokunoshima and Amami-Ohshima (Ethnographical research on "traditional" handicraft)

September 2001 Tokunoshima (Ethnographical research on "traditional" handicraft)

April - September 1999 Hokkaido (Archaeological research on the *Satsumon* culture)

Field Research in Foreign Countries

October 2003 Thailand (Ethnographical research on common-use property in Ing River area, Northern part of Thailand)

July - August 2002 The Philippines and Taiwan (Ethnographical research on "traditional" handicraft in the Highlanders' society, the Philippines and Taiwan)

Budget 2001

Expenditures (Fiscal Year 2001)

Category	Amount (Yen in thousands)
Personnel Expenses	205,253
Non-Personnel Expenses	330,679
Total	535,932

External Sources of Funding (Fiscal Year 2001)

Category	Amount (Yen in thousands)
Fund for Promotion of Academic and Industrial Collaboration	3,945
Donation for Research	8,550
Grants-in-Aid for Scientific Research	29,570

Budget 2002

Expenditures (Fiscal Year 2002)

Category	Amount (Yen in thousands)
Personnel Expenses	383,415
Non-Personnel Expenses	972,181
Total	1,355,596

External Sources of Funding (Fiscal Year 2002)

Category	Amount (Yen in thousands)
Fund for Promotion of Academic and Industrial Collaboration	57,460
Grants-in-Aid for Scientific Research	53,988

Research fields of project members

(As of Oct. 25, 2003)

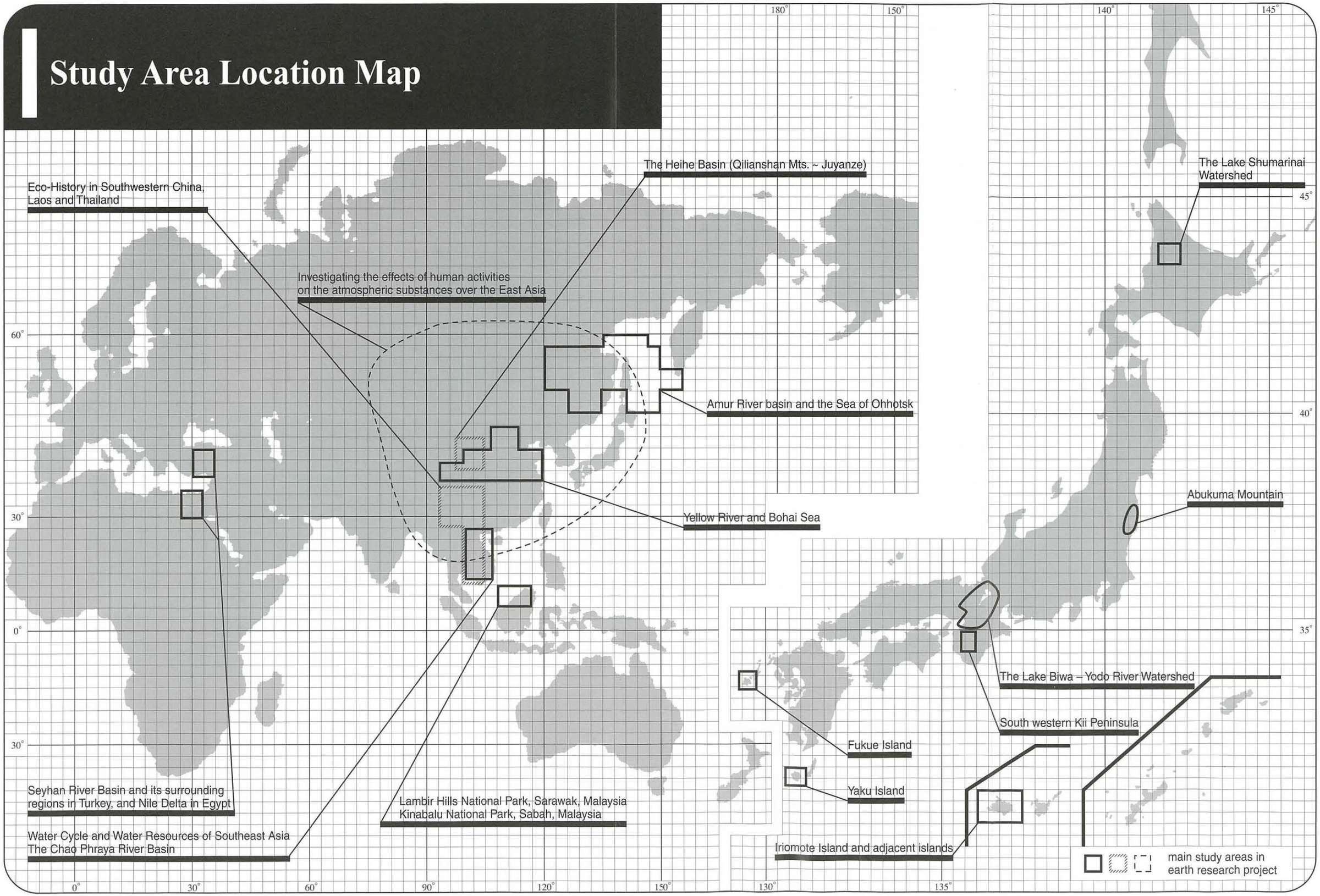
Project	The number of project members			Research background of project members
	Humanities and Social Science	Natural Science	Interdisciplinary	
P1-1 Impacts of climate changes on agricultural production system in the arid areas	9	26	1	(Humanities and Social Sciences) Agricultural economics, etc. (Natutal Sciences) Soil hydrology, Biology, Climatology, Micro-climatorogy, Plant production and environment, etc. (Interdisciplinary) Irrigation and drainage engineering
P2-1 Emissions of greenhouse gases and aerosols, and human activities in Eastern Asia	5	22	0	(Humanities and Social Sciences) Economics, Politics, Social engineering, etc. (Natutal Sciences) Atmospheric physics, Meteorology, Satellite climatology, Remote sensing, etc. (Interdisciplinary)
P3-1 Multi-disciplinary research for understanding interactions between humans and nature in the Lake Biwa-Yodo River watershed	3	8	3	(Humanities and Social Sciences) Cultural Anthropology, Environmental Sociology, Biogeochemistry, Animal biology, etc. (Natutal Sciences) Isotope biogeochemistry, Environmental Engineering, Plant biology, Aquatic ecology, etc. (Interdisciplinary)
P4-1 Historical evolution of the adaptability in an oasis region to water resource changes	22	16	7	(Humanities and Social Sciences) Sociology, Ethnology, Social history, Anthropology, Chinese Legal History, etc. (Natutal Sciences) Hydrology, Glacial biology, Geography, Clacial chemistry, Satellite climatology, Organic chemistry, Glacioclimatology, Social environment, Glacial biology, Soil hydrology, etc. (Interdisciplinary) Global Environment
P5-1 Integrated management system for water issues by global environmental information library and world water model	2	42	20	(Humanities and Social Sciences) Politics, etc. (Natutal Sciences) Agricultural engineering, Urbern engineering, Forest hydrology, River environment, etc. Remote sensing, Climatorogy. Hudrological remote sensing, Hydrological climatology, International information, etc. (Interdisciplinary) Water management, Environmental assessment, Urbern life science, etc
P1-2FS Recent rapid changes of water circulation in the Yellow River and its effects on the environment	1	12	9	(Humanities and Social Sciences) Statistics economics (Natutal Sciences) Climatology, Environmental geology, Ground water, Forest hydrology, Hydrological climatology, etc. (Interdisciplinary) Water quality environment, Agricultural hydrology, Water resources, Marine environment, etc.
P2-2FS Evaluation of sustainable forest-use options and their perspectives	10	36	3	(Humanities and Social Sciences) Forest management, Forest policy, Forest economics (Natutal Sciences) Forest ecology, Forest biology, Forest economics, Environmental information, etc. (Interdisciplinary) Forest economics, Environmental information, Forest policy, etc.
P3-2FS Interactions between environmental quality of the watershed and environmental consciousness – with reference to environmental changes caused by the use of land and water resources	6	15	4	(Humanities and Social Sciences) Environmental economics, Environmental sociology, Social psychology, Ecology, etc (Natutal Sciences) Forest hydrology, Forest biology, Forest soil, Limnology, etc. (Interdisciplinary) Social statistics, Informatics
P4-2FS Interplay between lake ecosystems and human activities: the past, present and future for water resources	5	13	1	(Humanities and Social Sciences) Geography, History (Natutal Sciences) Theoretical ecology, Biology, Earth chemistry, Hydrological physics, Geology, etc. (Interdisciplinary) Informatics
P4-3FS Constructing a regional eco-history model in tropical monsoon Asia	9	10	12	(Humanities and Social Sciences) History, Cultural anthropology, Social anthropology, Ethnics, Anthropology, etc. (Natutal Sciences) Anthropological biology, Plant genetcs, Tropical medicine, Tropical biology, Forest biology, (Interdisciplinary) Biological anthropology, Tropical agriculture, Tropical environmental utilization, etc.
P3-3IS Interactions between the natural environment and human social system on subtropical islands	9	23	2	(Humanities and Social Sciences) Environmental economics, Environmental sociology, Administration law, etc. (Natutal Sciences) Forest ecology, Plant morphology, Plant taxonomy, Animal biology, Entomology, Microbiology Forest resources, Forest system engineering, Tropical plant production, Forestry (Interdisciplinary) Environmental design, Environmental protection
Total	81	223	62	

Number of Project Members

○Analysis Sheet by organizations (As of Oct. 25, 2003)

Title of the project	Sub total	University / College			Inter-University Research Institute	Public Institution	Private Institution	Post doctral /Graduate student	Others	Overseas institution
		National	Public	Private						
P1-1 Impacts of climate changes on agricultural production system in the arid areas	36	19	1	1	4	1		3		7
P2-1 Emissions of greenhouse gases and aerosols, and human activities in Eastern Asia	27	18			5	2				2
P3-1 Multi-disciplinary research for understanding interactions between humans and nature in the Lake Biwa-Yodo River watershed	14	6	1		4	2	1			0
P4-1 Historical evolution of the adaptability in an oasis region to water resource changes	45	20		5	10			9	1	0
P5-1 Integrated management system for water issues by global environmental information library and world water model	64	40		2	2	5		14		1
P1-2FS Recent rapid changes of water circulation in the Yellow River and its effects on the environment	22	14			3	1				4
P2-2FS Evaluation of sustainable forest-use options and their perspectives	49	10	1	3	3	14		16		2
P3-2FS Interactions between environmental quality of the watershed and environmental consciousness – with reference to environmental changes caused by the use of land and water resources	25	13	1	1	4	4	2			0
P4-2FS Interplay between lake ecosystems and human activities: the past, present and future for water resources	19	5	1	3	1	2	1	6		0
P4-3FS Constructing a regional eco-history model in tropical monsoon Asia	31	17	1	3	8				2	0
P3-3IS Interactions between the natural environment and human social system on subtropical islands	34	27		4		3				0
Total	366	189	6	22	44	34	4	48	3	16

Study Area Location Map



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