

RIHN Annual Report
2003

Inter-University Research Institute Corporation
National Institutes for the Humanities
Research Institute for Humanity and Nature (RIHN)

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Message from Director-General

It is my great pleasure to publish the second issue of the RIHN's Annual Report. Comparing with the first issue, we find a lot more staff now. The success of management to our master plan brought us more and more researchers and officials. Most of new coming researchers are coming from Humanities including social sciences.

Whoever reads the part of "Individual Achievements" will see that new staff members with various achievements from very different fields joined us in 2003. So we believe that RIHN has become real unique institute as it was expected.

With more number of projects to go, these staff from such various academic areas are working on cross-disciplinary studies that RIHN is aiming at.

A few projects, which started in 2001, were already assessed by the RIHN Evaluation Committee. Though the result was bitter to some projects, I believe it was fair. They were encouraged in many aspects towards the very study we should attempt.

In the third issue, we will be able to deliver a part of significant achievement for the solution of the environmental problems on the earth. Our problem now is how should we connect these results and also how can we contribute it to the world.

I hope your understanding with warm and careful eyes.

Now lastly, I would like to add some points for reading the section of "Individual Achievements". We listed there even columns, essays, public lectures and so on. It shows RIHN's fundamental understanding how much the relationship between RIHN and the public is important, because most of our research fund is coming from Japanese government.

Director-General
HIDAKA Toshitaka

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

Mission of RIHN

The Research Institute for Humanity and Nature (RIHN) was founded in April 2001. This inter-university research institute, under the Japanese Ministry of Education, Culture, Sports, Science, and Technology, was established to carry out integrated research that innovates solutions to problems related to the global environment.

Environmental problems, such as global warming, loss of biodiversity, and depletion of water resources are 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 broadest sense of the word.

One of the difficulties in assessing global environmental problems is that many of them have appeared across the vast regions of the earth in most unpredictable manner. There are a number of problems facing us caused by factors seemingly far removed from reality both in time and space. Moreover, recent studies show that not only natural-scientific but also economic, politic, historical, and philosophical, and other factors in the broadest sense are exerting strong influences.

The complexity of this work means that these multi-faced problems cannot be solved by conventional thinking. In fact, the measures hitherto taken are based on the idea of controlling nature, which has yielded few solutions.

Our first and most fundamental posit is to define what is meant by problems in the global environment and to re-examine the conventional ways of thinking which developed during the 20th century.

Firstly we examine keenly how man interacts with nature, an intricately complex matter. It must be hard work. However this is our primary mission.

Secondly, from such perspective we need to consider how we can sustain the global environment that has all the future possibilities and what sorts of life style we must adopt in order to achieve it. To achieve these goals, a new academic approach is called for.

To embody the result, RIHN is tackling a new trial stated in the message from Director-General of RIHN. And we intend to announce to the public how mankind can benefit from our research, while building academic "knowledge" to further contribute to resolving the problems now present in the environment.

Roles and Functions of RIHN

Integration

In recent years many studies aimed at solving global environmental problems have been conducted in various ways in the world, but we now have reached a point where new directions are needed. We are faced with questions such as "What sorts of lifestyles will be acceptable in the future, and how large an area of tropical forest should be retained?" To answer these simple but socially demanding questions, it is necessary to develop a new integrated approach, bringing together different disciplines of the natural sciences, social sciences, humanity studies, engineering, land and food sciences, medical sciences, and others.

Fluidity

It is extremely important to maintain high fluidity in the academic center to integrate research in cross-disciplinary fields. RIHN proposes a research organization with the highest possible fluidity meeting the requirements of the "project-based format."

Globalization

It is essential to build a research organization with international vision in order to take a cross-disciplinary, integrated approach toward the solution of global environmental problems. RIHN will develop strong links with international as well as national research organizations, actively promote international research projects, and participate in the planning and operation of international research projects. It will also appoint many non-Japanese professors and researchers as integral members of its research staff.

Leadership

Strong leadership is necessary to carry out integrated research in 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 its leading role in these studies.

National Institutes for the Humanities (NIHU)

All national Inter-University Research Institutes are privatized fiscal year, 2004. RIHN then become one of the member institutes of a new organization "National Institute for the Humanities" along with the following institutes, National Museum of Ethnology, International Research Center for Japanese Studies, National Museum of Japanese History, National Institute of Japanese Literature, which all are concerned with different viewpoints surrounding cultural problems. RIHN intends to contribute to the solution of global environmental issues within this group, and construct an academic concept on which to base human culture.

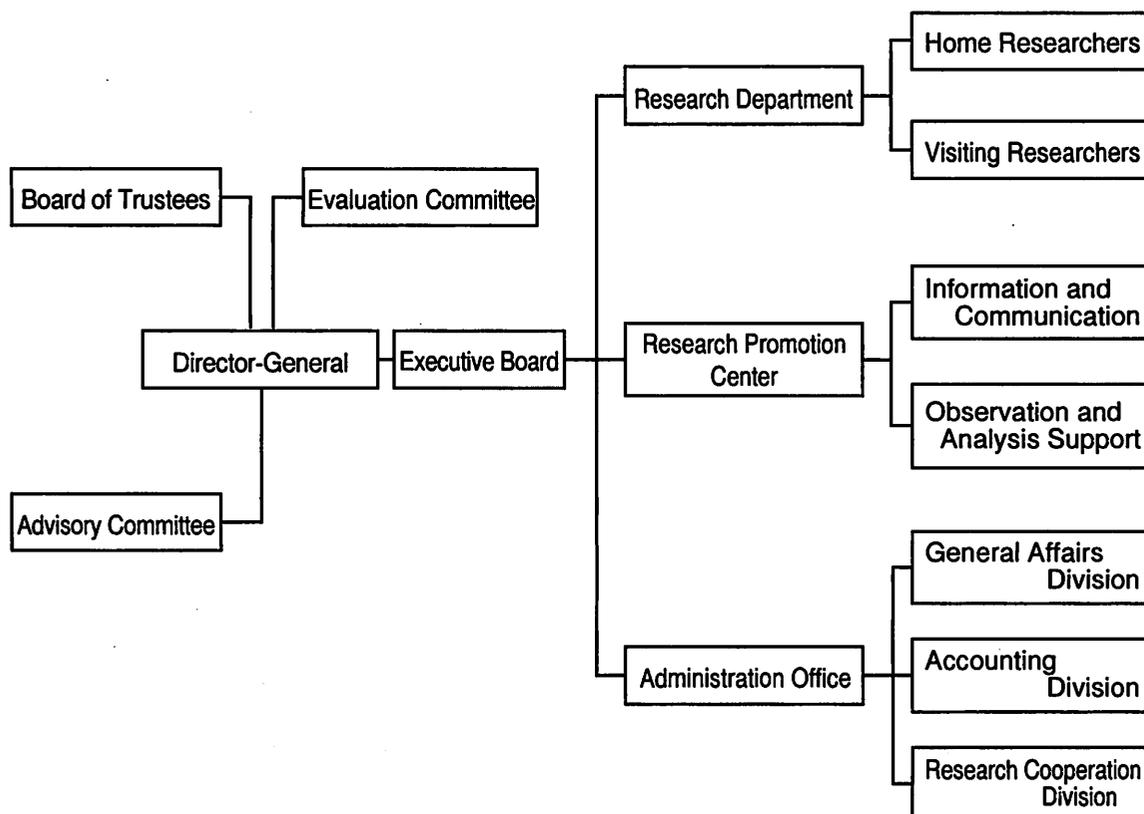
Research Project System

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

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 global environmental problems and identifying each research project along the direction of the appropriate axis.

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, the project 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.

Organization



Partner Organizations for Fluid Association (Fiscal Year 2003)

- 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-)
- Institute of Low Temperature Science, Hokkaido University (2003-)
- Tropical Biosphere Research Center, University of Ryukyus (2003-)

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
ISHIGE, Naomichi	Professor Emeritus, National Museum of Ethnology
KATO, Naotake	President, Tottori University of Environmental 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	Professor, The University of the Air
TANAKA, Masayuki	Professor, Tohoku Institute of Technology
TORII, Hiroyuki	Professor, Research Laboratory for Nuclear Reaction, Tokyo Institute of Technology
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, 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 Temperature 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), Bangkok, Thailand
EHLERS, Eckart	Professor, University of Bonn, 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	Director, Research Center for Chemical Risk Management, National Institute of Advanced Industrial Science and Technology
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, Hydrospheric-Atmospheric Research Center, Nagoya University

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
HAYASAKA, Tadahiro	Program Director, Research Institute for Humanity and Nature Director, Research Promotion Center, RIHN
HIDAKA, Toshitaka	Director-General, Research Institute for Humanity and Nature
NAKAWO, Masayoshi	Program Director, Research Institute for Humanity and Nature
WADA, Eitaro	Program Director, Research Institute for Humanity and Nature
YOSHINO, Masami	Director, Administration Office, 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 HAYASAKA, Tadahiro
NAKAWO, Masayoshi WADA, Eitaro
- ◇ **Professor Emeritus** NAKANISHI, Masami
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KINOSHITA, Tetsuya OSADA, Toshiki NAKASHIZUKA, Tohru
NAKAWO Masayoshi SATO, Yo-Ichiro TAKASO, Tokushiro
WADA, Eitaro WATANABE, Tsugihiro YUMOTO, Takakazu
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HARA, Toshihiko
Professor, The Institute of Low Temperature Science, Hokkaido University
HAN, Jiangkang
Professor, Hunan Normal University, China
INOUE, Takashi
Executive Producer, NHK Special TV Program Center
VON FALKENHAUSEN, Lothar
Professor, Department of Art History, UCLA, U.S.A.
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OKUMIYA, Kiyohito TANIGUCHI, Makoto UCHIYAMA, Junzo
UMETSU, Chieko YACHI, Shigeo YOSHIOKA, Takahito
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YATAGAI, Akiyo
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TAKAHASHI, Yasuhiro TANAKA, Takuya USHIMARU, Atsushi
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- ◇ **Research Fellows (JSPS)** HARROLD, Timothy HYODO, Fujio MAILISHA
MATSUOKA, Kenichi ONISHI, Hideyuki
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OGAWA, Akiko MIYAJIMA, Toshiaki SHIMIZU, Ichiro
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YUMEN, Yoshie
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HIROSE, Kumi
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SUEZAWA, Reiko
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- Clerk** KAJI, Sachiko

Research Activities

Research Axes and Research Projects

Each project will be organized through the period of incubation study (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, the project 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

To study possible changes in natural environment and their impacts on human-ecological system.

- 1-1 Impact of climate changes on agricultural production system in the arid areas (P. 10)
- 1-2 Recent rapid change of water circulation in the Yellow River and its effects on the environment (P. 15)

AXIS 2: Human Activity Impact Assessment

To study impacts on the global environment of human industrial and economic activities and their changes that are induced by reforms and replacement of political and ideological domains.

- 2-1 Emissions of greenhouse gases and aerosols and human activities (P. 18)
- 2-2 Sustainability and biodiversity assessment on forest utilization options (P. 20)
- 2-3FS Human activities in Northeastern Asia and their impact on the biological productivity in North Pacific Ocean (P. 27)

AXIS 3: Spatial Scale

To clarify the whole interactions between humans and nature in a given region, and explore for constructing sustainable society.

- 3-1 Multi-disciplinary research for understanding interactions between humans and nature in the Lake Biwa-Yodo River watershed (P. 29)
- 3-2 Interactions between natural environment and human social systems in subtropical islands (P. 35)

AXIS 4: History and Time Scale

To demonstrate sustainability and transformation by examining historical and temporal processes of interactions between global environmental changes and human activity.

- 4-1 Historical evolution of the adaptability in an oasis region to water resource changes (P. 38)
- 4-2 A trans-disciplinary study on the regional eco-history in tropical monsoon Asia (P. 41)

AXIS 5: Conceptual Framework for Global Environmental Issues

Theoretical and empirical analysis for building conceptual framework of global environmental issues.

- 5-1 Global water cycle variations and the current world water resources issues and their perspectives (P. 45)
- 5-2 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. 47)

Research Projects

Full-scale research

Research axis: Environmental change impact assessment
Project number: 1-1
Project name: Impact of climate changes on agricultural production system in arid areas
Project leader: WATANABE, Tsugihiko (RIHN)
Core members: see Table I attached at the end

1. Research objectives and topics

Research objectives

- a) To examine and diagnose the structure of land and water management in agricultural production system in arid areas, especially to evaluate quantitatively the relationship between cropping system and hydrological cycle and water balance in farmland and region.
- b) 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.
- c) To assist the development and improvement of the Regional Climate Model (RCM) for more certain prediction with higher resolution of future changes in regional climate.
- d) 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

- a) This project selects two case study areas, the Mediterranean region of Turkey and 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.
- b) 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.
- c) 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.
- d) 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 natural system 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 natural changes like 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 the table 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 2001. According to development of the research environment, some practical modifications are executed on the research area and the way to implement in Turkey, as below.

- 1) At the initial stage, the Nile Delta in Egypt was planned to be a case study area of this project, and there

some preliminary researches and organization of the research team were initiated. However, establishment of the research organization has not been accomplished yet and exact research activity has not been commenced. Because it seems difficult to complete the preparation and organization for this project soon, at present only collection of information about the research development on the topic of climate change impact on agriculture is being planned.

- 2) In Turkey, TÜBİTAK (The Scientific and Technical Research Council of Turkey) has joined RIHN for implementation of this project with a larger amount of financial support, since it recognizes this project very important where younger researcher should be involved and educated. With these expectations in Turkey, this project is being implemented with long-term vision so as to be a base for future joint research projects on global environmental problems.

5. Progress of the project (From April 2003 to March 2004)

Main activities of the project can be summarized as below.

Research Meeting

- 1) Project Research Meeting (Four times; May, September, December 2003, and February 2004)
- 2) Project Seminar (Three times; September 2003, and January and February 2004)
- 3) Sub-Group Meetings (many, properly)
- 4) Core-members Meetings (Two times; April and October 2003)

Field study in Turkey

- 1) Research method and organization (Project Leader; Three times, total 30 days)
- 2) Climate Sub-group (One person, 9 days)
- 3) Hydrology and Irrigation Sub-group (Seven persons, total 150 days)
- 4) Crop Productivity Sub-group (Eleven persons, total 140 days)
- 5) Vegetation (Three persons, total 60days)
- 6) Socio-economics (Nine persons, total 195 days)

Invitation of foreign collaborators

Turkish researchers and engineers (Ten persons, total 150 days)

Research Meeting in Egypt on research method and organization (Project Leader, 3 days)

Publish of the Interim Report (March 2004, total 170 pages)

6. Outcomes (2003)

Major outcomes of the project until the end of the fiscal year 2003-2004 are summarized as follows.

Progress of the whole project

- 1) After changing our main research area from Israel to Turkey during the feasibility study in 2001, we invested a lot of time and effort on setting up research framework and collected basic information. We agreed on international research collaboration with TÜBİTAK (The Science and Technical Research Council of Turkey.)
- 2) Research progress of the first year (FY2002) was summarized in the proceedings of the kick off meeting (held in Adana, July 2002) and in the proceedings of the international workshop (held in Kyoto, January 2003.)
- 3) Research progress of the second year (FY2003) was published as the Interim Report at the end of March 2004.
- 4) The basic framework for interaction of sub-models and integration of sub-topics was confirmed. With 'land and water management' as a main focus, the project will analyze following four main issues; i) crop pattern change in the Lower Seyhan irrigation scheme, ii) main factors that affect growth and production of major crops including wheat, iii) changes of land use in the upper Seyhan Basin (due to grazing, development of new farm land, and opening of forest), and iv) water budget of farm plots, irrigation district, and the Seyhan Basin. Quantitative parameters and qualitative scenarios will be exchanged between sub-groups to outline structure of influence and impact on the whole system.

Progress of sub-groups

1) Climate sub-group

- a. The daily precipitation data produced by the MRI-CGCM ensemble runs under SRES-A scenario were analyzed. A decrease in precipitation around the Mediterranean region was significant.
- b. By analyzing precipitation data of Turkey (1977-2000), the following trends became apparent; i) decrease of precipitation in the western region in January, ii) increase of precipitation for whole Turkey in April with a few exceptions, iii) increase of precipitation in whole Turkey in October except the southern region.
- c. Regional climate model (TERC-RAMS and MM5) was test-run, nested with MRI-GCM output (resolution of 280km.) Monthly rainfall distribution in the 2070s was estimated. The model still cannot simulate year-to-year variation of monthly precipitation. Appropriate nesting grid size and region for better resolution were examined.

2) Hydrology and water resource sub-group

- a. Distributed hydrological model, 'Hydro-BEAM', was developed and modified. While collecting necessary input data for the Seyhan Plain, the model was test-run on the Yasu Basin of Shiga Prefecture, Japan. Reasonable reproducibility of the river flow was obtained.
- b. By field survey in the Lower Seyhan Plain, it became clear that irrigation is feeding groundwater and groundwater in the eastern region is flowing out to Ceyhan River.
- c. A saturated-unsaturated density-dependent flow model for simulating salt-water intrusion was developed. Laboratory experiments were carried out to investigate influence of sea level rise.

3) Irrigation and drainage sub-group

- a. Field trips for baseline assessment was carried out. Basic data for irrigation scheme were collected from State Hydraulic Works (DSİ). Questionnaire and hearing were conducted at 20 Water Users Associations (WUAs) in the Lower Seyhan Basin.
- b. Present irrigation efficiency of the scheme was found to be below 50%. Irrigation scheme designed for cotton mono cropping in the 1960s has not been updated for diversified cropping pattern in the last 20 years.
- c. Lower part of irrigation district suffers from severe salinity problem. Assessment of impact of sea level rise in the future and consideration of possible counter-action are necessary.
- d. DSİ handed over operation and maintenance of irrigation facilities to WUAs in the middle of 1990s. Some of WUAs suffer from financial difficulty due to their small sizes. The cost for rehabilitation of infrastructure also is immense burden for all WUAs.

4) Vegetation sub-group

- a. Vegetation in the Seyhan Basin and the neighboring Ceyhan Basin has wide ecologic diversity, being exposed to cool climate of northern region and semi-arid climate of the southern region. It is characteristic of the Anatolian Peninsula.
- b. Seven permanent investigation plots were selected in the Seyhan and Ceyhan Basins. Each plot represents region's typical vegetation. Stand structure and productivity will be investigated in those plots.
- c. There are three main vegetation belts in the high mountain, which are; 1) sub-alpine grasslands above the timberline (above 2000m), 2) mountain forest consisting mainly of *Cedrus libani* and *Abies cilicica* between 1200m and 2000m, 3) Deciduous oak forest below 1200m.
- d. On the lower altitude, coniferous forest is found up to 1000m. Below 700m, a dense, *xerophyll* scrubland called 'machia' dominates. It can also be seen at the coastal level.
- e. On the plain, natural vegetation is barely found due to high cultivation pressure. Few solitary stands of *Wuercus ithaburensis* can be found. At the coastal zone of the plain, a complex wetland system is formed. Around the river estuaries, salt marshes cover large area.

5) Crop productivity sub-group

- a. Using GCM output for rainfall and temperature of 2070s, evapotranspiration and irrigation water demand of crops under climate change were calculated. The methodology still needs modification. Preliminary result was, that no great change in evapotranspiration or water demand occurred for

- corn and pasture grass.
- b. In the Lower Seyhan Plain, on-site observation in a maize field (water budget, transpiration, etc) is continued and data are being accumulated. Obtained data will be used to determine parameters for plant growth models such as the SWAP.
 - c. To analyze an effect of climatic change on physiology of wheat, growth chamber trial in Japan and on-site trial with different sowing time in Çkurova University are being carried out. Results from these experiments will be used to develop a wheat growth model.
- 6) Socio-economic sub-group
- a. Input-output Model was used to analyze the impact of agricultural crop production in Turkish economy. The results show that the influence of agricultural sector to the Turkish economy is rather small while the cereal sector receives great influence from the Turkish economy. In the next stage, regional econometric model will forecast the impact of climate variability on crop production.
 - b. Legal institution of land ownership for pasture was studied so as to identify the issues for sustainable management of government, common and private land. Illegal occupation and rehabilitation of government pasture will be analyzed further.
 - c. From rainfed and irrigated agricultural area, six villages were selected of household survey. Average household size is 4.3-5.5 persons per household. Land holdings are in average 21.2 ha in irrigated areas and 17.6 ha in rainfed areas. Farms in irrigated area employ more agricultural labors, about 2.5 times, compared to rainfed areas. Reliance on female labors in irrigated areas is about one fourth of that in rainfed areas. Also more tenants are found in irrigated areas.
 - d. Based on the results of household survey, further analysis is underway to reveal resource use patterns of farmers and factors influencing them.

Table 1 Project Member: Project Leader and Collaborators

Sub-group and role	Name (family/given)	Organization
Project Leader	©WATANABE, Tsugihiro	Research Institute for Humanity and Nature
Advisor	MATSUBARA, Masatake	The National Museum of Ethnology
[Climate] Analysis of regional climate system and prediction of future climate	* KIMURA, Fujio KITOH, Akio SUMI, Akimasa ABE, Ayako ASANUMA, Jun * YATAGAI, Akiyo	Terrestrial Environment Research Center, University of Tsukuba Meteorological Research Institute, Japan Meteorological Agency Center for Climate System Research, University of Tokyo Center for Climate System Research, University of Tokyo Terrestrial Environment Research Center, University of Tsukuba Research Institute for Humanity and Nature
[Basin Hydrology and Water Resources] Impacts of climate change on basin hydrology and resources	* KOJIRI, Toshiharu TANIGUCHI, Makoto * FUJINAWA, Katsuyuki NAWAHDA, Amin FURUKAWA, Masanao	Disaster Prevention Research Institute, Kyoto University Research Institute for Humanity and Nature Faculty of Engineering, Shinshu University Graduate School of Engineering, Kyoto University Graduate School of Science and Technology, Shinshu University
[Crop Production]	* YANO, Tomohisa	Arid Land Research Center, Tottori University

Impacts of climate change on on-farm soil-water-plant dynamics	ODANI, Hiromichi	School of Environmental Science, University of Shiga Prefecture
	KOBATA, Tohru	Faculty of Life and Environmental Science, Shimane University
	KORIYAMA, Masumi	Marine and Highland Bioenvironment Center, Saga University
	TANAKA, Akira	Marine and Highland Bioenvironment Center, Saga University
	TAKEUCHI, Shinichi	Faculty of Engineering, Kyushu Kyouritsu University
	NAKAGAWA, Hiroshi	Ishikawa Agricultural College
	HARAGUCHI, Tomokazu LIU, Yuanbo	Faculty of Agriculture, Kyushu University Arid Land Research Center, Tottori University
[Vegetation] Impacts of climate change on vegetation	* TAMAI, Shigenobu ANDO, Makoto SANO, Junji	Arid Land Research Center, Tottori University Field Science Education and Research Center, Kyoto University Faculty of Agriculture, Tottori University
[Irrigation and Drainage] Changes in irrigation and drainage management due to changes in on-farm and basin hydrological regime	©WATANABE, Tsugihiro * UMETSU, Chieko AODA, Tadao NAGANO, Takanori	Research Institute for Humanity and Nature Research Institute for Humanity and Nature Faculty of Agriculture, Niigata University Research Institute for Humanity and Nature
[Farm and Agro-Economics] Changes of farmers' behavior, farm economy and regional agriculture	* TSUJII, Hiroshi ASAMI, Atsuyuki KAGATSUME, Masaru KAMEYAMA, Hiroshi TAKAHARA, Atsushi KUSADOKORO, Motoi MAIMAITI, Gulinuer MARU, Takeshi KONDO, Hidetoshi	Graduate School of Agriculture, Kyoto University Graduate School of Agriculture, Kyoto University Graduate School of Agriculture, Kyoto University Faculty of Agriculture, Kagawa University Graduate School of Agriculture, Kyoto University Graduate School of Agriculture, Kyoto University Graduate School of Agriculture, Kyoto University Graduate School of Agriculture, Kyoto University Graduate School of Agriculture, Kyoto University
Turkey/Adviser	KILINCER, Neşet	TÜBİTAK (The scientific and technical research council of Turkey)
Turkey/Coordinator	KANBER, Rıza	Faculty of Agriculture, Çukurova University, Turkey
Turkey/Climate Change and Agriculture	SAYDAM, Cemal KAPUR, Burçak	Faculty of Engineering, University of Hacettepe, Turkey Faculty of Agriculture, Çukurova University, Turkey
Turkey/Hydrology and Water Resources	EKMEKÇİ, Mehmet TEZCAN, Levent TOPALOĞLU, Fatih İRVEM, Ahmet PELEN, Nurettin AKYATAN, Adil	International Research Center For Karst Water Resources (UKAM), Hacettepe University, Turkey Faculty of Engineering, University of Hacettepe, Turkey Faculty of Agriculture, Çukurova University, Turkey Faculty of Agriculture, Çukurova University, Turkey DSİ (State Hydraulic Works), Turkey DSİ (State Hydraulic Works) VI Adana, Turkey
Turkey/Plant Productivity	AYDIN, Mehmet KANBER, Rıza EVREDİLEK, Fatih	Faculty of Agriculture, Mustafa Kemal University, Turkey Faculty of Agriculture, Çukurova University, Turkey Faculty of Agriculture, Mustafa Kemal University, Turkey

	KOÇ, Müjde KILIÇ, Şeref YILMAZ, Tuluhan ÜNLÜ, Mustafa	Faculty of Agriculture, Çukurova University, Turkey Faculty of Agriculture, Mustafa Kemal University, Turkey Faculty of Agriculture, Çukurova University Turkey Faculty of Agriculture, Çukurova University Turkey
Turkey/Vegetation	ALTAN, Türker AKTOKLU, Ekrem	Faculty of Agriculture, Çukurova University, Turkey Faculty of Agriculture, Mustafa Kemal University, Turkey
Turkey/Irrigation and Drainage	ÖZEKİCİ, Bülent KAPUR, Selim ÖNDER, Sermet DONMA, Sevgi	Faculty of Agriculture, Çukurova University, Turkey Faculty of Agriculture, Çukurova University, Turkey Faculty of Agriculture, Çukurova University, Turkey DSİ (State Hydraulic Works) VI Adana, Turkey
Turkey/Farm Economics	ERKAN, Onur	Faculty of Agriculture, Çukurova University, Turkey
Israel/Plant Productivity and Irrigation	BEN-ASHER, Jiftah	The Wyler Dept. of Dryland Agriculture, Ben-Gurion University of Negev, Israel
Israel/Climate Change	ALPERT, Pinhas	Dept. of Geophysics and Planetary Science, Tel-Aviv University, Israel
Israel/Agro-Economics	SHECHTER, Mordechai	Dept. of Economics, Natural Resources & Environmental Research Center, University of Haifa, Israel
Egypt/Adviser	NOUR EL-DIN, Mohamed	Ain-Shams University, Egypt
Egypt/Coordinator	ABED, Laila	Environment & Climat Research Institute (ECRI) National Water Research Center, Egypt
Canada/Hydrology	P. SIMONOVIC, Slobodan	Dept. of Civil and Environmental Engineering, University of Westem Ontario, Canada

(©: Project leader, *: Japanese Core-member)

Full-scale research

Research axis: Environmental change impact assessment

Project number: 1-2

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

Project leader: FUKUSHIMA, Yoshihiro (RIHN)

Core members: see No.3

1. Research objectives and topics

Since 1972, the frequency which river water in the Yellow River does not reach to the Bo-Hai Bay has rapidly increased due to uptake of river water to irrigation in the midstream area. In the lower reaches area

of the Yellow River basin, people suffer water shortage for irrigation, industrial and drinking water. In addition to these, the shortage of river water induces the decrease of groundwater level and increase of water pollution. Chinese Academy of Science is now carrying out a synthetic national project from 1999 to 2003. According to the increase in population and food demand on the earth, such a case seems to increase and to spread much more in near future worldwide. How can we recognize and resolve this problem is the most important and urgent for human being. Recent crisis occurred in the Yellow River basin is complicated because natural climate fluctuation, global warming and change of land utilization may affect each another. This research aims at enhanced knowledge on planning countermeasures in the Yellow River drainage basin through the contribution from specific research fields under international collaboration with Chinese Academy of Science and IGBP/LOICZ community. We plan to achieve this study through the following sub-studies; (1) Field observations and analyses on land-atmosphere interactions in the Loess Plateau, (2) Field observations and analyses on interactions between river water, groundwater, and seawater in the Yellow River delta, (3) Development of socio-economical model for sustainable developments, (4) Development of ecological model of Bohai Bay, and then (5) Development of an integrated model to evaluate the effects of land use change on the water circulation in the Yellow River basin. We wish to get how land use change affect to water cycle over the Yellow River drainage basin and what kinds of effect may occur by the decrease of groundwater stages in the downstream to marine circumstance through five years research. This study may be at the forefront of the ecological studies in the coastal zones where many people live, and we may be able to evaluate the effects on the marine products in the Sea of Japan through Bohai Sea and Yellow Sea.

2. Relation with research program

The axis 1 is "Environmental Change Impact Assessment" to study possible changes in natural environment and their impacts on human-ecological system. The Yellow River basin is located in the arid area, therefore water environment in the basin is vulnerable due to not only natural environmental changes such as global warming but also by human activities. Therefore this project is based on both Axis 1 and Axis 2 "Human Activity Impact Assessment". However, the project will focus on the environmental change impact first, then evaluate the human activities.

3. Project members

Name	Institute	Role
◎ FUKUSHIMA, Yoshihiro	RIHN	Leader
* MA, Xieyao	FRSGC	Hydrological modeling
WATANABE, Tsugihiko	RIHN	
CHEN, Jianyao	Sun Yat-Sen University	
LIU, Changming	United Research Center for Water Problems, CAS	
XIA, Jun	Institute of Geographical Science & Natural Resources, CAS	
* HIYAMA, Tetsuya	HyARC, Nagoya University	Land-Atmosphere Interaction
HIGUCHI, Atsushi	HyARC, Nagoya University	
TSUBOKI, Kazuhisa	HyARC, Nagoya University	
SHINODA, Taro	HyARC, Nagoya University	
TAKAHASHI, Atsuhiko	RIHN	
LI, Wei	Nagoya University	
* TANIGUCHI, Makoto	RIHN	Land-Ocean Interaction
MIYAOKA, Kunihide	Mie University	
TOKUNAGA, Tomochika	University of Tokyo	
ONODERA, Shin-ichi	Hiroshima University	
* YANAGI, Tetsuo	RIAM Kyushu University	Ecological modeling

GUO, Xinyu	Ehime University	
HAYASHI, Mitsuru	Kobe University	
* IMURA, Hidefumi	Nagoya University	Socio-economical modeling
OKUDA, Takaaki	Nagoya University	
TANIKAWA, Hiroki	Wakayama University	
ONISHI, Akio	Nagoya University	
KANEKO, Shinji	Hiroshima University	

(©: Project leader, *: Core member)

4. Modification on the original plan

No change

5. Progress of the project (2003)

July 16 to August 4, 2003

Y. Fukushima, T. Watanabe, X. Ma and others visited to upstream and mid-stream areas of Yellow River basin for Water Use and Agro-Ecological Experiment

August 3-6, 2003

T. Yanagi and M. Hayashi visited to Ocean University of China at Qingdao to discuss the relationships between Yellow River discharge and environmental changes in Bohai bay.

September 8-22, 2003

M. Taniguchi, S. Onodera, K. Miyaoka, T. Tokunaga and X. Chen visited to Yellow River delta for field experiments on Land-Ocean Interactions.

October 6-11, 2003

C. Liu, R. Li, and W. Liu were invited to RIHN to discuss the research plan on the field experiments for Land-Atmosphere interaction studies at Agro-Ecological Experiment Station the Loess Plateau.

October 27-29, 2003

Joint meeting of Yellow River project (RIHN) and Yellow River study (Research Revolution 2002) was held to discuss both research results.

February 10, 2004

Project meeting with core members was held to discuss research plan for 2004.

March 24-27, 2004

Y. Fukushima and T. Hiyama visited to Agro-Ecological Experiment Station at the Loess Plateau and Institute of Soil and Water Conservation to discuss a research plan and the logistic matters.

6. Outcomes (2003)

(1) Hydrological Modeling

Ma, X., Y. Fukushima, C. Liu and X. Wu (2003) : A hydrological model application to the small tributary basin of the Yellow River. In EGS - AGU - EUG Joint Assembly, Nice, France.

Ma, X., Y. Fukushima and T. Yasunari, (2003) : Research of the hydrological modeling in northern region. In XXIII General Assembly of the International Union of Geodesy and Geophysics, Sapporo, Japan.

(2) Land-Atmosphere Interactions

Higuchi, A., Hiyama, T., Fukuta, Y. and Fukushima, Y. (2004): A behavior of surface temperature /vegetation index (TVX) matrix derived from 10 days AVHRR composite imageries over monsoon Asia. Hydrological Processes, (submitted).

Strunin, M.A., Hiyama, T., Asanuma, J. and Ohata, T. (2004): Aircraft observations of the development of thermal internal boundary layers and scaling of the convective boundary layer over non-homogeneous land surfaces. Boundary-Layer Meteorology, (in press).

Suzuki, R., Hiyama, T., Asanuma, J. and Ohata, T. (2004): Land surface identification near Yakutsk in eastern Siberia using video images taken from a hedgehopping aircraft. International Journal of Remote

Sensing, (in press).

Shimoyama, K., Hiyama, T., Fukushima, Y. and Inoue, G. (2004): Seasonal and inter-annual variation in water vapor and heat fluxes in a west Siberian continental bog. *Journal of Geophysical Research*, (in press).

Hamada, S., Ohta, T., Hiyama, T., Kuwada, T., Takahashi, A. And Maximov, T. C. (2003): Hydrometeorological behaviors of pine and larch forests in eastern Siberia. *Hydrological Processes*, (in press).

(3) Land-Ocean Interactions

Taniguchi, M., W.C. Burnett, C.F. Smith, R.J. Paulsen, D. O'Rourke, S.L. Krupa, and J.L. Christoff (2003): Spatial and temporal distributions of submarine groundwater discharge rates obtained from various types of seepage meters at a site in the Northeastern Gulf of Mexico. *Biogeochemistry*, 66, 35-53.

Taniguchi, M., J.V. Turner, and A. Smith (2003): Evaluations of groundwater discharge rates from subsurface temperature in Cockburn Sound, Western Australia. *Biogeochemistry*, 66, 111-124.

Chanton, J.P., W.C. Burnett, H. Dulaiova, D.R. Corbett, and M. Taniguchi (2003): Seepage rate variability in Florida Bay driven by Atlantic tidal height. *Biogeochemistry*, 66, 187-202.

Burnett, W.C., H. Bokuniewicz, M. Huettle, W.S. Moore, and M. Taniguchi (2003): Groundwater and pore water inputs to the coastal zone. *Biogeochemistry*, 66, 3-33.

(4) Bio-ecological Modeling

Yanagi, T., M. Hayashi and N. Fujii (2002): Estimations of the origins of phosphorus and nitrogen in the coastal zone. *Coastal Oceanography*, 41(1), 49-52.

(5) Socio-Economical Modeling

W. Fang and H. Imura (2003): Comparison of Empirical PET Estimation Methods in the Yellow River Basin. *Environmental System*, 31, 217-225.

Ozawa, R., S. Ogawa, W. Fang and H. Imura (2003): A study on water demand estimations in Yellow River Basin. *Environmental System*, 31, 295-302.

Full-scale research

Research axis: Human activity impact assessment

Project number: 2-1

Project name: Emissions of greenhouse gases and aerosols, and human activities

Project leader: HAYASAKA, Tadahiro (RIHN)

Core members: IWAMI, Toru (Univ. of Tokyo)

KAWAMOTO, Kazuaki (RIHN)

SAEKI, Tazu (RIHN)

NAKAZAWA, Takakiyo (Tohoku Univ.)

NAKAJIMA, Teruyuki (Univ. of Tokyo)

HAYASHIDA, Sachiko (Nara Women's Univ.)

SHI, Guangyu (Institute of Atmospheric Physics, CAS, China)

1. Background and objectives

Most of human activities have been based essentially on the individual climate, culture, and social economic system, but recently they are being changed drastically by the influences of the globalization and developing market of economy and global-scale climate change. The human activities affected by the various global phenomena give rise to various environmental issues and emissions of greenhouse gases and aerosols, which again bring about many problems in large area or over the world. In this research project, the atmospheric constituent is studied, taking account of global warming issues. Therefore, it is not a mere local air pollution study, but the study on the relationship between human activities and climate change through emissions of greenhouse gases and aerosols.

The recent growth of economy in East Asian region is being watched with keen interest. The relationship between human activities and emissions of greenhouse gases and aerosols in this region are studied

with collaboration of socioeconomic analysts and atmospheric scientists. This research project consists of macro-analysis of economy, development of emission inventory, analysis of atmospheric transport by using model and satellite data, and ground-based observation around Japan and China.

The objectives of the present research project are to investigate

- 1) the relationship between changes in economy, industry, social system under the globalization and changes in anthropogenic emissions of greenhouse gases and aerosols, and
- 2) influences of these greenhouse gases and aerosols emitted in Asian region on the global-scale atmospheric environment and climate change.

2. Strategy

While most of studies similar to this research project are mainly carried out by atmospheric scientists, viewpoints from human activities are emphasized in this study.

- 1) Socioeconomic analyses on the anthropogenic emissions are carried out. Changes in land use, consumption, quality, and transport process of energy for the past 20 years in Asia are analyzed.
- 2) Regional emissions of greenhouse gases and aerosols due to human activities are estimated through the analysis of observed data with atmospheric transport model.
- 3) The effects of greenhouse gases and aerosols emitted by human activities in Asia are evaluated synthetically.

3. Relation with research program

In the past few decades, socioeconomic situations in Eastern Asia have been changing largely. It is consistent with the purpose of research axis 2 to study the relationship between those changes and emissions of greenhouse gases and aerosols, which are major anthropogenic factors in recent climate changes.

4. Outcomes in 2003

- Although advantage of latecomers as shown by the Environmental Kuznets Curve is suggested from analyses of GDP, and emissions of CO₂ and SO₂, it does not sufficiently contribute to regulating the increases in greenhouse gases and aerosols in the atmosphere.
- Energy in China has been used for transformation of energy. Coal consumption, particularly in the industrial sector, changed to decrease since 1996 while oil and natural gas are still increasing.
- Impact of emission of green house gases and aerosols due to transport sector is small although the number of cars has been increasing rapidly.
- Emission of SO₂, which is a precursor of sulfuric acid and sulfate aerosol, has been increasing, and its geographical distribution shows an inverse correlation with effective particle radius of low clouds. This suggests the indirect effect of aerosols.
- The aerosol indirect effect of the first kind is found over the south China particularly in winter and autumn.
- Relationship among the satellite measurements, ground-based observations and atmospheric transport model simulations of aerosols is consistent.
- Vertical differences of CO₂ concentration and carbon isotope ratio over Japan have been found to increase. It might suggest the increase in fossil fuel consumption in China.
- According to model simulations for vertical profiles of the CO₂ concentration over Japan, CO₂ concentration in the lowermost atmospheric layer (~2km) is mainly affected by the emission from Japan, while that in the middle layer (2~4km) is primarily affected by the emission from China.

5. Publication list in 2003

- Iwami, T., 2003: Economic development and emissions of CO₂ and SO₂ in East Asia. *Keizaigakuronshu*, 69(2) 2-21.
- Hayasaka, T. et al., 2003: Aerosol and radiation measurements in Fukue-jima and Amami-ohshima islands,

- Japan during APEX-E3 campaign. Sixth International Symposium on Tropospheric Profiling, Leipzig, Germany, Sep. 14-19, 2003, pp222-224
- Iwabuchi, H. and T. Hayasaka, 2003: Multi-spectral nonlocal method for retrieval of boundary layer cloud optical thickness and droplet effective radius. *Remote Sensing Environment*, 88, 294-308.
 - Kawamoto, K., T. Hayasaka, T. Nakajima, D. Streets and J-H. Woo, 2003: Possible effects on low-level cloud properties by anthropogenic SO₂ emission, Proc. International Symposium on Tropospheric Profiling, Leipzig, Germany, Sep. 14-19, 2003, pp.300-302.
 - Kuba, N., H. Iwabuchi, K. Maruyama, T. Hayasaka, T. Takeda, and Y. Fujiyoshi, 2003: Parameterization of the effect of cloud condensation nuclei on the optical properties of a non-precipitating water layer cloud. *J. Meteor. Soc. Japan*, 81, 393-414.
 - Nakajima, T., 2003: Significance of direct and indirect radiative forcings of aerosols in the East China Sea region. *J. Geophys. Res.*, 108, No(D23), 8658, doi:10.1029/2002JD003261.
 - Sano I., S. Mukai, Y. Okada, B. N. Holben, S. Ohta, T. Takamura, 2003: Optical properties of aerosols during APEX and ACE-Asia experiments, *J. Geophys. Res.*, 108 (D23), 8649, doi:10.1029/2002JD003263.
 - Takemura T., T. Nakajima, A. Higurashi, S. Ohta, N. Sugimoto, 2003: Aerosol distributions and radiative forcing over the Asian Pacific region simulated by Spectral Radiation-Transport Model for Aerosol Species (SPRINTARS), *J. Geophys. Res.*, 108 (D23), 8659, doi:10.1029/2002JD003210.
 - Uno I., et al., 2003: Regional chemical weather forecasting system CFORS: Model descriptions and analysis of surface observations at Japanese island stations during the ACE-Asia experiment, *J. Geophys. Res.*, 108 (D23), 8668, doi:10.1029/2002JD002845.

Full-scale research

Research axis: Human activity impact assessment

Project number: 2-2

Project name: Sustainability and biodiversity assessment on forest utilization options

Project leader: NAKASHIZUKA Tohru (RIHN)

Core members: see No.3

1. Research objectives and topics

In this project, we try to evaluate the sustainability of forest utilization in various aspects, with particular emphasis on biodiversity aspects. The goods and ecosystem services that may be lost with decreasing biodiversity should be identified. Also the evaluations from the aspects of socio- and environmental economy will be assessed for various forest utilization systems including the traditional, and so-called sustainable systems in the region. The driving forces and incentives to cause the recent change in forest utilization system are also to be studied. Finally we try to present new criteria or ways of thinking to evaluate the forest utilization systems. The target research sites are, 1) Tropical rainforest area around Lambir Hills National Park, Sarawak, Malaysia, 2) Tropical forest areas in Saba, Malaysia, 3) Temperate evergreen forest area in Yaku Island, Japan and 4) Temperate deciduous forest area in Abkuma Mts., Japan. Research items below are to be studied in all the site above and compared; 1) The historical change in forest utilization and its drivers are to be studied by socio-economical analyses, 2) Effects of forest change on biological diversity is to be studied, 3) The ecological services critically associated with biodiversity are to be studied, and 4) Models for forest utilization change and biodiversity will be developed.

2. Relation with research program

The anthropogenic factors caused by socio-economic, and/or political change have been greatly affected forest change. This project will elucidate the socio-economic drivers caused such changes in ecosystems and biodiversity, as well as the evaluating ecological services which are provided by biodiversity. This approach meets the direction of the Program-2 of the RIHN.

3. Project members

- ©NAKASHIZUKA, Tohru (RIHN): Project leader
- *MOMOSE, Kuniyasu (Ehime University): Researches in Lambir, Sarawak
- *ICHIKAWA, Masahiro (RIHN): Researches in Lambir, Sarawak
- YOSHIMURA, Mitsunori (RIHN)
- MIGUCHI, Hideo (Niigata University)
- Lucy, CHONG (Foerst Reseach Center Sarawak)
- SAKAI, Shoko (Tsukuba University)
- KANAZAWA, Kentaro (Kobe College)
- ICHIOKA, Takao (Nagoya University)
- Rhett, HARISON (Kyoto University)
- HATADA, Aya (Echigo-Matsunoyama Museum of Natural Science)
- MURASE, Kaori (JT Biodiversity Research Hall)
- Johan B Hi, RAHMAN (Forest Research Center, Sarawak)
- ICHIE, Tomoaki (Hokkaido University)
- TANAKA, Kenta (Hokkaido University)
- NAGAMITSU, Teruyoshi (Forestry and Forest Research Institute)
- KAGA, Michi (Kyoto University)
- NOMURA, Masahiro (Kyoto University)
- MATSUMOTO, Takashi (Nagoya University)
- NAKAGAWA, Michiko (RIHN)
- KUROKAWA, Hiroko (Kyoto University)
- MOROOKA, Toshiyuki (University of Tokyo)
- SAMEJIMA, Hiromitsu (Kyoto University)
- TAKEUCHI, Yayoi (Kyoto University)
- KISHIMOTO, Keiko (Nagoya University)
- TANAKA, Hiroshi (Nagoya University)
- AIBA, Masahiro (Kyoto University)
- KOIZUMI, Miyako (Kyoto University)
- *KITAYAMA, Kanehiro (Kyoto University) : Researches in Kinabaru, Saba
- TODA, Masanori (Hokkaido University)
- HASEGAWA, Hiroshi (Hiroshima Shudo University)
- ITO, Masamichi (Yokohama National University)
- TAKYU, Masaaki (Tokyo University of Agriculture)
- SANO, Makoto (Forestry and Forest Products Research Institute)
- Noreen, MAJALAP (Foerst Reseach Center Sabah)
- HASEGAWA, Motohiro (Forestry and Forest Products Research Institute)
- MATSUBAYASHI, Hisashi (Kyoto University)
- SEINO, Tatsuyuki (Kyoto University)
- TANABE, Shin-ichi (Kanazawa University)
- AKUTSU, Kosuke (Hokkaido University)
- OKABE, Fumie (Hokkaido University)
- KOTTE, Rina (University of Tokyo)
- TAKENAKA, Kohei (Hokkaido University)
- *KOHYAMA, Takashi (Hokkaido University): Researches in Yaku Island
- *AIBA, Shin-ichiro (Kagoshima University): Researches in Yaku Island
- *YUMOTO, Takakazu (RIHN): Researches in Yaku Island
- KUDOH, Gaku (Hokkaido University)

MATSUI, Kiyoshi (Nara University of Education)
 TAKAMIYA, Masayuki (Kumamoto University)
 NOMA, Naohiko (University of Shiga Prefecture)
 AGETSUMA, Naoki (Hokkaido University)
 David, SPRAGUE (Institute for Agricultural Environment)
 KANETANI, Seiichi (Forestry and Forest Products Research Institute)
 OHTANI, Tatsuya (Forestry and Forest Products Research Institute)
 MORINO, Mari (Yokohama National University)
 HANYA, Goro (Kyoto University)
 AGETSUMA, Yoshimi (Yakushima Ecology Group)
 IMAMURA, Akio (RIHN)
 FUCHO, Yoshiko (Hokkaido University)
 KOYAMA, Rika (Kumamoto University)
 SAKAI, Miyuki (Kumamoto University)
 TAKEDA, Shiro (Kumamoto University)
 HASEGAWA, Daisuke (Kagoshima University)
 FUKUI, Dai (Hokkaido University)
 MATSUOKA, Noriaki (Kagoshima University)
 SATO, Hirotoishi (Kyoto University)
 TERAOKAWA, Mari (Nara University of Education)
 TSUJINO, Ryo (Kyoto University)
 HINO, Takafumi (Hokkaido University)

- *NIYAMA, Kaoru (Forestry and Forest Products Research Institute): Researches in Abukuma
 OHKOCHI, Isamu (Forestry and Forest Products Research Institute)
 ISAGI, Yuji (Hiroshima University)
 MAETO, Kaoru (Kobe University)
 ISONO, Masahiro (Forestry and Forest Products Research Institute)
 IEHARA, Toshiro (Forestry and Forest Products Research Institute)
 MAKINO, Shun-ichi (Forestry and Forest Products Research Institute)
 TANAKA, Hiroshi (Forestry and Forest Products Research Institute)
 TANAKA, Nobuhiko (Forestry and Forest Products Research Institute)
 OKABE, Kimiko (Forestry and Forest Products Research Institute)
 HAMAGUCHI, Kyoko (Forestry and Forest Products Research Institute)
 SHIBATA, Mitsue (Forestry and Forest Products Research Institute)
 INOUE, Taisei (Forestry and Forest Products Research Institute)
 KAGAYA, Etsuko (Forestry and Forest Products Research Institute)
 GOTO, Hideaki (Forestry and Forest Products Research Institute)
 MIYAMOTO, Asako (Forestry and Forest Products Research Institute)
 YAGIHASHI, Tsutomu (Forestry and Forest Products Research Institute)
 YASUDA, Masatoshi (Forestry and Forest Products Research Institute)
 NAGAIKE, Takuo (Forest Research Institute, Yamanashi Prefecture)
 USHIMARU, Atsushi (RIHN)
 KONDO, Toshiaki (Hiroshima University)
 TATENNO, Ryunosuke (Kyoto University)
 FUJIMORI, Naomi (Kyoto University)
- *SATO, Jin (University of Tokyo): Sociological analyses on forest utilization
 ABE, Rhuichiro (University of Tokyo)
 IZUMI, Keiko (University of Tokyo)
 YAMASHITA, Izumi (University of Tokyo)

HIRANO, Yuichiro (University of Tokyo)
 IWASAKI, Aki (University of Tokyo)
 ASAO, Mariko (University of Tokyo)
 OH, TOMOHIRO (University of Tokyo)

* AKAO, Ken-ichi (Waseda University): Ecological and economic model of forest use
 SATAKE, Akiko (Kyushu University)

(©: Project leader, *: Core member)

4. Research schedule

Apr. 2002 – Mar. 2003 (Feasibility study)

- Collect the information on each study site
- Screen the utilization options
- Screen the target organisms for biodiversity studies
- Establish the protocol methods of the studies

Apr. 2003 – Mar. 2004 (First year)

- Establish GIS in each site
- Evaluate biodiversity in the target utilization options
- Study the mechanisms to maintain biodiversity
- Study the relationships between taxonomic groups and their roles in the ecosystem
- Retrospective study on the past utilization of forests

Apr. 2004 – Mar. 2005 (2nd year)

- Evaluate biodiversity in the target utilization options
- Study the mechanisms to maintain biodiversity
- Study the relationships between taxonomic groups and their roles in the ecosystem
- Retrospective study on the past utilization of forests

Apr. 2005 – Mar. 2006 (3rd year)

- Study the mechanisms to maintain biodiversity
- Detect the driving forces and incentives to cause utilization change
- Economic value of each utilization options

Apr. 2006 – Mar. 2007 (4th year)

- Summarize the mechanisms to maintain biodiversity
- Summarize the relationships between taxonomic groups and their roles in the ecosystem
- Detect the driving forces and incentives to cause utilization change
- Economic value of each utilization options

Apr. 2007 – Mar. 2008 (5th year)

- Integrate the evaluation
- Develop better evaluation methods to evaluate sustainability

5. Modification on the original research plan:

- The socio-economic analyses were started earlier than planned.
- The preliminary model of forest use has been developed a bit earlier than planned schedule, following the recommendation of the evaluation committee.

6. Progress of the project

1) Past forest use and GIS formulation

The collection of the information on past forest use has been completed. The information has been formulated into GIS (about 70%). The socio-economic analyses has been started to analyze the driver of the past forest change.

2) Evaluation of biodiversity in various forest usage

The diversity of plants, invertebrates, small mammals and so on was assessed for various types of forest uses. Though it may take time for some taxa (in particular those difficult to identify species), the biodiversity assessment is ongoing almost as planned.

3) Evaluation of ecological services provided by biodiversity

Several changes in interactions between organisms along forest changes have been clarified in the study sites. The effects of those changes in interactions on ecological services are to be studied in the following years. Some aspects of cultural services provided by biodiversity have been studied in tropical areas.

4) Socio-economic factors of forest change

Based on information provided by GIS, the studies on drivers of forest change have been started.

5) The model of spatial arrangement of forest ecosystem and biodiversity

Following the recommendation by evaluation committee, we started the discussion and construction of preliminary model of forest change. The forest use model considering forest values and recovering ability was considered.

7. Problems for implementation or points need to change plan

- Target ecological services that will be discussed in the project have to be identified.

8. Research plan in next fiscal year

- The biodiversity assessment is to be developed, in particular the relationship between functional groups and ecosystem function should be analyzed.
- The evaluation on ecosystem services provided by biodiversity should be discussed and analyzed more.
- The socio-economic analyses on the drivers of forest change should be developed.
- The model for spatial models on forest and biodiversity will be developed.

9. Outcomes (2003)

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Feasibility study**Research axis:** Human Activity Impact Assessment**Project number:** 2-3FS**Project name:** Human activities in Northeastern Asia and their impact to the biological productivity in North Pacific Ocean**Project leader:** NARITA Hideki (RIHN)**Core members:** see No.3**1. Research objectives and topics**

This is a project assessing the role of Amur River on biomass production and the prediction of human impacts in the Amur River basin on the marine ecology in the Sea of Okhotsk and the northern North Pacific. Primary goal of the project is to elucidate the mechanism how the dissolved iron are to be formed and transported to the ocean both by the Amur River and through the atmosphere, and how the flux change of dissolved iron will affect the phytoplankton production in the Sea of Okhotsk and the northern North Pacific. Secondly, we will clarify the anthropogenic impacts on flux changes of dissolved iron to the ocean. Finally, we will present a guideline of sustainable land-use in the Amur River basin to maintain the present ecosystem in the Sea of Okhotsk and the northern North Pacific. More specifically, we will propose so-called "sustainable threshold" on the flux of dissolved iron, which can maintain the biomass production in the Sea of Okhotsk and the northern North Pacific. This will give us an ideal management of the land-use in the Amur-River basin and besides in other analogous river basin.

2. Relation with research program

The Sea of Okhotsk and the northern North Pacific are known to be one of the most biomass productive oceans in the world. The relatively less civilized situation of Amur River basin enables the river to transport various kinds of terrestrial materials to the Sea of Okhotsk.

The Amur River drainage was historically developed after the end of 19th century in the Russian part. In Chinese part, i.e., Songhua Jyang basin, intensive human activities dates back to several hundreds years. Accelerated human impacts became more obvious after the middle of 20th century in both side of the Amur River. The area is being disturbed currently by various anthropogenic and natural impacts such as forest fire, deforestation, agricultural and industrial activities, flooding and drought. Land-use changes in the Amur River drainage, therefore, might have caused or may cause significant changes in the flux of dissolved iron, which might or may result in the biomass production changes in the ocean. To clarify a series of studies of the various anthropogenic disturbance, natural impacts and biomass production changes in ocean contribute to the study of human activity assessment on environmental problem.

3. Member of the project

Name	Affiliation	Role
WAKATSUCHI, Masaaki	Institute of Low Temperature Science, Hokkaido Univ.	Physical oceanographic conditions
KITAGAWA, Hiromitsu	Faculty and Graduate School of Engineering, Hokkaido Univ.	Physical oceanographic conditions
YASUDA, Ichiro	Department of Earth & Planetary Science, University of Tokyo	Physical oceanographic conditions
OOSHIMA, Keiichiro	Institute of Low Temperature Science, Hokkaido Univ.	Physical oceanographic conditions
FUKAMACHI, Yasushi	Institute of Low Temperature Science, Hokkaido Univ.	Physical oceanographic conditions
NAKATSUKA, Takeshi	Institute of Low Temperature	Oceanic geochemistry / biogeochemical

	Science, Hokkaido Univ.	transport from river to ocean
*MATSUNAGA, Katsuhiko	Yokkaichi Univ.	River-ocean interaction
KUMA, Kenshi	Graduate School of Fisheries Science, Hokkaido Univ.	Iron analyses in ocean
SUZUKI, Koji	Graduate School of Environmental Earth Sciences, Hokkaido Univ.	Ocean biogeochemistry
NISHIOKA, Jun	Central Research Institute of Electric Power Industry, LTD	Rare metal analyses in ocean
*SHIBATA, Hideaki	Field Science Center for Northern Biosphere, Hokkaido Univ.	Biogeochemistry from land to river
*NAGAO, Seiya	Graduate School of Environmental Earth Sciences, Hokkaido Univ.	Organic matters analyses
YOH, Muneoki	Environmental Conservation, Tokyo Univ. of Agriculture & Technology	Biogeochemistry from land to river
ISHII, Yoshiyuki	Institute of Low Temperature Science, Hokkaido Univ.	Hydrological analyses in Siberia
*KAKIZAWA, Hiroaki	Graduate School of Agriculture, Hokkaido Univ.	Forest management analyses
*IWASHITA, Akihiro	Slavic Research Center, Hokkaido Univ.	Political analyses on China/Russia
HARA, Toshihiko	Institute of Low Temperature Science, Hokkaido Univ.	Dynamics of Forest
OONISHI, Hideyuki	Research Institute for Humanity and Nature	Minority people in Siberia
SAKAMOTO, Masahiko	Doshin Information Institute, LTD	Economics and politics of Russia
*HARUYAMA, Shigeko	Graduate School of Frontier Science, Uni. of Tokyo	Land-use change monitoring
HIMIYAMA, Yukio	Hokkaido Uni. of Education, Asahikawa	Land-use changes and the background
*SHIRAIWA, Takayuki	Institute of Low Temperature Science, Hokkaido Univ.	Ice core analyses
*UEMATSU, Mitsuo	Ocean Research Institute, Univ. of Tokyo	Aerosol analyses
©NARITA, Hideki	Research Institute for Humanity and Nature	Ice core analyses
KOSHIMA, Shiro	Tokyo Institute of Technology	Biomass in ice core
AZUMA-GOTO, Kumiko	National Institute of Polar Research	Chemistry of ice core
NAKAWO, Masayoshi	Research Institute for Humanity and Nature	Dust variation reconstruction
TAKEUCHI, Nozomu	Research Institute for Humanity and Nature	Biomass in ice core
HONDOH, Takeo	Institute of Low Temperature Science, Hokkaido Univ.	Ice core analyses
MATOBA, Sumito	National Institute for Environmental Studies	Trace metal analyses in ice cores
TACHIBANA, Yoshihiro	Liberal Arts Education Center, Tokai Univ.	Natural variability analyses
OHATA, Tetsuo	Institute of Low Temperature Science, Hokkaido Univ.	Water and Energy flux in Siberia

YAMAGATA, Kotaro	Joetsu University of Education	Land form development
TAKAHARA, Hikaru	Kyoto Prefectural Univ.	Pollen analysis
MATSUDA, Hiroyuki	Graduate School of Environment and Information Sciences, Yokohama National Univ.	Biomass modelling
* SAITO, Seiichi	Graduate School of Fisheries Science, Hokkaido Univ.	Satellite monitoring of phytoplankton
* ARAI, Nobuo	Slavic Research Center, Hokkaido Univ.	Sea product analyses in the Far East
KISHI, Michio	Graduate School of Fisheries Science, Hokkaido Univ.	Marine ecosystem model
MUKAI, Hiroshi	Field Science Center for Northern Biosphere, Hokkaido Univ.	Marine ecosystem analyses

(◎ : Project leader, * : Core member)

4. Progress of the project

The research team has been organized. The research members were selected from the most outstanding experts from various institutions in Japan. Theme of the project was discussed through four meetings during the incubation stage (year 2002) and three meetings during the feasibility stage (year 2003). A report describing the sub-themes on this project as well as meeting summaries was published and distributed in December 2003. Two preliminary research trips were carried out in search of international collaborations and information on available data-set in the fiscal year 2003: one to Vladivostok/Khabarovsk and the other to Changchun / Harbin / Khabarovsk. Reports on the two preliminary research trips were prepared and distributed.

The implementation plan of the project was made according to the discussions and results obtained by January 2004 and a Web site introducing the present project was started (<http://www.chikyu.ac.jp/AMORE/>). An international workshop was held in March 3-4, 2004 in Kyoto to confirm the implementation plan among the project members and the international collaborators.

5. Outcomes (2003)

2003 Amur-Okhotsk Project Report No. 1 (In Japanese, 88pp)

2003 Report on Preliminary Research Trip to Russia (In Japanese, 19pp)

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 No.3

1. Research objectives and topics

We aim to develop a methodology for revealing interactions between human activities and nature in a watershed ("watershed diagnosis") and for consensus building through an interdisciplinary study and practice with the residents and administration in the Lake Biwa-Yodo River watershed.

A watershed is regarded as an essential spatial unit for the effective management of hydrological cycling, material cycling and ecosystems. It is, however, usually composed of a main river as well as various large and small tributaries branching out like a tree. This hierarchical (or nested) structure of its river systems,

to which human social (decision making) systems are hierarchically structured in parallel (e.g., administrative districts, such as prefecture-cities-communities), causes the people that live in the watershed area where different elements exist, to experience their lives differently, thus, have different interests and opinions. Therefore, in the process of building consensus on managing a certain watershed, there will be much disagreement and opposition regarding what the subjects are. We regard this disagreement on the main watershed management issues between spatial scales as the most important watershed management issue, and aim to develop a methodology to overcome it. In other words, 1) we aim to develop a methodology to empowerment the residents to build a bottom-up vision of their water environment beneficiary for them, and 2) to develop a methodology to find a consistent solution in the conflict between the bottom-up vision of the residents and the top-down policy. On the basis of the project activities, we make proposals for the management of the Lake Biwa-Yodo River watershed.

We proposed "hierarchical watershed management" concept as an ideal model of watershed management to overcome the difficulties in consensus building arising from the nested structure of the watershed. The main objective of our project is to test the effectiveness of this idea through our study and practice in the Lake Biwa-Yodo River watershed. To tackle on this problem, we identify three levels (or spatial scales) in the Lake Biwa watershed, the social decision making of each level seems to have each influential effect on the Lake Biwa eutrophication. They are; "Shiga prefecture (or the Lake Biwa watershed)" as macroscopic-level, "Aisei land improvement district (or Inae area in Hikone city)" as meso-level, which is an agricultural area located in the east of the Lake Biwa, and the "towns in the Aisei improvement district" as microscopic-level, where the levels are embedded in the order of micro, meso, and macro. Setting these three levels as our main research sites, we organized four working groups (WGs): "material cycling", "social & cultural system", "ecosystem" and "watershed information & modeling". Focusing on water environmental issue, we are promoting synthetic study and practice with an interdisciplinary partnership at the above three levels (macro, meso, micro) of the Lake Biwa-Yodo River watershed. At each level, 1) we seek an effective method to promote "adaptive management" by stakeholders of each level to develop and use watershed diagnosis tools, such as models and indicators which are designed for each level. 2) we also aim to develop a methodology which enables stakeholders of the three levels to find and share the differences in how to see watershed and the way of thinking, for the mutual understanding between levels. Specifically, we seek for a way which enables both the empowerment of the residents to build a bottom-up vision of their water environment at the meso and micro levels and a method for consensus-building between meso-micro levels and macro level towards reducing the pollution load by agricultural drainage, thus to the improvement of the Lake Biwa water environment. The followings are the activities of four WGs:

■ Material cycling working group (WG)

The material cycling WG elucidates the human disturbances on material cycling at various spatial scales by using mainly "stable isotope" techniques, extends and establishes "indicators" as a tool of watershed diagnosis methodology, and develops "environmental capacity" concept to evaluate the human load permissible in the watershed by using total available dissolved oxygen in the Lake Biwa.

■ Social and cultural system WG

The social & cultural system group mainly focuses its activity at the meso and micro-levels (Aisei land improvement district and the towns in it), supports the residents and administration to make a regional environmental vision of the district by using sociological methods and information obtained by the project ("sub-project"), researches the environmental policy of the Shige prefecture to find the solution to balance the macro environmental policy and the beneficiary of the stakeholders at the meso and micro levels, develops important concepts of watershed management for residents participation and consensus building (e.g., governance, empowerment, adaptive management, etc.) by organizing workshops on these topics and through practice in the sub-project.

■ Ecosystem WG

The ecosystem WG co-operates with the material cycling WG to survey biodiversity at the meso and micro levels to characterize each region, model the interactions between human activities and the Lake Biwa

eutrophication at the macro level, collaborate with the watershed information & modeling WG to develop a platform for sharing and integrating information at the three levels of the watershed by GIS and modeling, develop tools which facilitate communication within and between levels for building consensus.

■ Watershed information and modeling WG

The watershed information & modeling WG establishes common protocols for information sharing and processing among the four WGs and develops GIS and modeling as tools of our diagnosis methodology. This WG organizes other three WG towards constructing an "open data base" for the sub-project and in compiling the project products.

■ Unifying WG Committee

It consists of the core members of the four WGs and aims to promote collaboration and integration of the project.

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. Staffs and the collaborative researchers (◎: Project leader, *: core member)

◎Project Office

WADA, Eitaro (RIHN): project leader
 KITAMURA, Ayako (RIHN): secretary
 KAWAGUCHI, Hiromi (RIHN): secretary

(1) Material cycling group

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

*TAYASU, Ichiro (RIHN): diagnosis indicators

IGETA, Akitake (RIHN): diagnosis indicators

UEDA, Takaaki : sampling

SHIMIZU, Isamu (Center for Ecological Research, Kyoto University): diagnosis indicators

SUGIMOTO, Takashige (Ocean Research Institute, the University of Tokyo): Yodo River

NAKANO, Takashige (Graduate school of life and environmental sciences, University of Tsukuba):
 diagnosis indicators

NAKAMURA, Masahisa (Lake Biwa Institute, Shiga): non-point source adviser

NAKAMOTO, Nobutada (Fac. of Textile Science & Technology, Shinshu University): water quality adviser

HYODO, Fujio (PDF): diagnosis indicators

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

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

NAKAMOTO, Nobutada (Applied Biology, Faculty of Textile Science & Technology, Shinshu University):
 water quality adviser

NAKAMURA, Masahisa (Lake Biwa Research Institute, Shiga): non-point source adviser

(2) Ecosystem group

- * YACHI, Shigeo (RIHN): chief of the ecosystem group
- * FUJITA, Noboru (Center for Ecological Research, Kyoto University): human activity and biodiversity relationship
- IWATA, Tomoya (Yamanashi University): watershed ecosystem adviser
- USHIMARU, Atsushi (RIHN): ecological research adviser
- KATO, Motomi (Center for Ecological Research, Kyoto University): ecosystem modeling
- KANAO, Shigefumi (Fac. of Environmental Science, University of Shiga University): ecological research
- KOHZU, Ayato (Center for Ecological Research, Kyoto University): ecological research
- KOHMATSU, Yukihiro (RIHN): ecological research
- TAYASU, Ichiro (RIHN): facilitator of the material cycling group and ecosystem group
- NAGATA, Toshi (Center for Ecological Research, Kyoto University): adviser on aquatic ecosystem
- NARITA, Tetsuya : ecological research
- MARUYAMA, Atsushi (Fac. of Science & Technology, Ryukoku University): ecological research
- MITSUHASHI, Hiromune (Museum of Nature and Human Activities, Hyogo): adviser on GIS-based regional ecosystem conservation methodology
- YAMAMURA, Norio (Center for Ecological Research, Kyoto University): ecosystem modeling & database

(3) Social & cultural system group

- * WAKITA, Ken-ichi (Iwate Prefectural University): chief of the social and cultural system group
- * TANAKA, Takuya (RIHN): social research
- IMADA, Miho (RIHN): social research
- OHNO, Tomohiko (School of global environmental studies, Kyoto University): internship study
- KAKIZAWA, Hiroaki (Lab. of Forest Policy, Faculty of Agriculture, Hokkaido University): adviser on watershed management issue
- KATO, Junzo (School of Sociology, Kwansai Gakuin University): adviser on social psychology
- SAKAGAMI, Masaji (Fac. of Social & Information Sciences, Nihon Fukushi University): adviser on social research
- HIROSE, Yukio (Graduate school of environmental studies, Nagoya University): adviser on social psychology
- MITSUMATA, Gaku (Fac. Of Agriculture, Kyoto University): social research

(4) Watershed information & modeling group

- * HARA, Yuuichi (Watershed information division, Pacific Consultants Co.): chief of the watershed information and modeling group
- UEDA, Atsushi (RIHN): GIS operator
- NAITO, Masaaki (Kyoto Institute for Eco-sound Social Systems): general adviser

(©: Project leader, *: Core member)

4. Progress of the project (from April 2003 to March 2004)

(1) Conceptual framework

1) International workshop

We invited researchers, administration at the Shiga prefecture and NGO to update recent new ideas on watershed management, discuss and explore a new methodology to overcome the conflicts among multiple stakeholders towards consensus building. We had an intensive discussion obtained new insights on the “hierarchical watershed management” concept of the project.

2) Human Impact Seminar

Ecosystem WG co-organized “Human impact seminar” with the staffs of the Center for Ecological Research, Kyoto University and invited five guest speakers tackling on environmental issue to bridge the

human activity and ecosystem issue. The knowledge obtained there was incorporated into the project methods in practice.

3) Comparative Observation of the South-East Asia watersheds

We made a short inspection visit to see the watershed management of a watershed in North Thailand and the Tonle Sap Lake in Cambodia for the comparison with the watershed management in Japan. The results are summarized in a report.

(2) Internship

We admitted a graduate student in the internship program of the Environmental Management Course at the Graduate school of global environmental studies, Kyoto University to equip the student with the advanced knowledge and problem-solving skills on the watershed management issue from September 2003 to February 2004.

(3) Outcomes in each scale

■ Macroscopic scale

Social & cultural system WG collected and summarized the environmental policy of the Shiga prefecture. In that process, digital data, such as agricultural and national census are integrated into the GIS database system.

■ Meso and microscopic scale

1) Information collecting on the research region

Social and cultural system WG collected information on the Aisei land improvement district and its adjacent regions, integrated into a map and a database. Waterway map data offered by the Aisei land improvement district on our request was integrated into the GIS database system.

2) Interview in Aisei Land Improvement District

Social & cultural system WG has done interviews with each board of 35 residents' association of rural communities and housing area in Inae district as a micro level. In this interview, research was made on managers and maintenance activities of various water facility, agricultural water utilization around the time when the land improvement has been done, and sources of fuel wood in each community. The interview data was converted to digital formats and compiled map data into GIS database system. According to the result of this survey and the discussion with officers of Aisei L.I.D., 5 rural communities to hold local workshop were selected in which the project aims to develop a methodology to support making the vision of the rural environment.

Ecosystem WG, material cycling WG and Social & cultural system WG have done inspection visit on biodiversity in this district.

3) Preparation of the workshop for regional environmental vision

4) Between scales

Collected digital data at the three scales are being stored into the GIS database system. Ecosystem WG and watershed information & modeling WG compiled ideas to develop tools which facilitate communication within and between levels for building consensus and are preparing a GIS workshop for the purpose.

(4) Outcomes of Material cycling WG

■ Macroscopic scale

In the 2003 fiscal year, river waters, biological materials, and river sediments were collected from 40 rivers surrounding the Lake Biwa, and from the three major rivers of the Yodo River, the lower reach of the watershed. These samples were subjected to analyze stable isotope ratios of N, C, Sr, nutrient salts, major cations and anions, and heavy metals. It was concluded that eutrophication of the river systems were caused by accumulation of significant amount of slime and loading of nutrient in the

surroundings of small rivers so far examined. Loading of sewage, red tide phenomena in dams also promote the eutrophication along the watershed. It could be emphasized the occurrence of two processes in urban areas and in paddy fields: perturbation of redox boundary and enhancement of mineralization.

■ Meso scale

In addition to the Hebisuna River – Lake Nishinoko watershed, field surveys were focused on two small rivers in the Aisei area in the eastern plane of the Lake Biwa. The transport of particulate matter (PM) involving silts and sands took place extensively during the season of trans-plantation of rice plant, that is, from the beginning of May to middle of June. The transport of PM by rainfall was not so significant as compared with the above-mentioned phenomenon. The accumulation of slime in the lower reaches of the small rivers in question should promote the process of $\text{NO}_3^- \rightarrow \text{N}_2\text{O}$ and finally contribute to enrich ^{15}N in the Lake Biwa where waters flow into from these small catchments.

■ Microscopic Scale

Field surveys were carried out in the Aisei area in corporation with the members in the Social and Cultural group. Some qualitative results were obtained for the variation of water quality of streams in small villages where water flows were precisely regulated by the residents.

■ Other Results

Selenge River in Mongolia, and Mekong River were also surveyed to collect samples for $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ measurements as the comparative studies. A sample preparation system was also established for the measurement of organic materials $\Delta^{14}\text{C}$.

5. Selected references

- 2003 Yuuichi Hara, Atsushi Ueda & Satomi Fujii “Developing a watershed diagnosis methodology” In Proceedings of the 12th Annual meeting of the GIS Association in Japan. 303-306. [in Japanese]
- 2003 Wada, Eitaro “Biosphere and its environments with emphasis on redox boundary.” In 17th Open Symposium of the University and Science on Biodiversity. “Seibututayousei no sekai”. 139-147pp. [in Japanese]
- 2004 Wada, Eitaro “Material cycles in nature with special reference to stable isotope ratios of biogenic elements.” *Gendaikagaku*. 396: 14-21. [in Japanese]

(2) Project 3-1 Working Paper Series edited by the project 3-1 office

1) Series in Japanese

Tanaka, Takuya

- 2004 Tōnan Ajia Ryūiki Stadii tuā Hōkoku (Report of the study tour on environmental management of river basins in Cambodia and North Thailand) *Purojekuto 3-1 Wākingu Pēpā (Project 3-1 Working Paper Series) No.7* [in Japanese]

- 2004 Biwako-Yodogawa Suikei ni okeru Ryūikikanri moderu no kōchiku no gurando dezain –purojekuto o susumeru rōdo mappu no shian toshite- (Draft proposal of a grand design to advance the RIHN Project 3-1: Multi-Disciplinary Research for Understanding Interactions between Humans and Nature in the Lake Biwa-Yodo River Watershed) *Purojekuto 3-1 Wākingu Pēpā (Project 3-1 Working Paper Series) No.10* [in Japanese]

Saitoh, Haruo Mitsumata Gaku Tanaka, Takuya

- 2004 Shinanogawa ryūiki niokeru daikibo suiryoku hatsuden to tiiki jūmin –kurashi o uruosu mizu no yukue- (Seeking for Better Solution for Water Allocation Problems: Who benefits from Water?) *Project 3-1 Working Paper Series No.9* [in Japanese]

Shigeo Yachi

- 2003 Biwako-Yodogawa suikei ni okeru ryūikikanri moderu no koutiku-zentai kousou- (The goal of the Project 3-1) *Purojekuto 3-1 Wākingu Pēpā (Project 3-1 Working Paper Series) No.3* [in Japanese]

2) Series in English

- 2003 Material Cyclings Working Group 'Behavior of nutrient salts in paddy waters.' Project 3-1 Working Paper No.1.
- 2003 Material Cyclings Working Group 'Nitrification and denitrification.' Project 3-1 Working Paper No.2.
- 2003 Material Cyclings Working Group 'Methane formation in waterlogged paddy soils and its controlling factors.' Project 3-1 Working Paper No.3.
- 2003 Material Cyclings Working Group 'Natural abundance of $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ in soil organic matter with special reference to paddy ecosystems in Japan.' Project 3-1 Working Paper No.4.
- 2003 Material Cyclings Working Group 'Intramolecular stable isotope ratios of dissolved N_2O in several aquatic ecosystems.' Project 3-1 Working Paper No.5-1.
- 2003 Material Cyclings Working Group 'Radiatively active gases in the Hebisuna River and Lake Nishino-ko.' Project 3-1 Working Paper No.5-2.
- 2003 Material Cyclings Working Group 'Nutrient dynamic in Lake Biwa with emphasis on intramolecular stable isotope ratio of N_2O .' Project 3-1 Working Paper No.6.
- 2003 Material Cyclings Working Group 'Stable isotopes in the biosphere and its significances.' Project 3-1 Working Paper No.7.
- 2003 Material Cyclings Working Group 'Natural isotopic composition of organic nitrogen with emphasis on anthropogenic loading to the river ecosystems.' Project 3-1 Working Paper No.8.
- 2003 Material Cyclings Working Group 'Interface between matter cyclings and human dimensions.' Project 3-1 Working Paper No.9.
- 2003 Social & Culture System Working Group 'Making a factor diagram in the Biwako-Yodo river basin: a collaborative method for finding basin-specific factors towards consensus-building.' Project 3-1 Working Paper No.10.

Full-scale research

Research axis: Spatial scale

Project number: 3-2

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

Project leader: TAKASO, Tokushiro (RIHN)

Core members: see No.3

1. Research objectives and topics

A variety of environmental problems have arisen on islands around the world, including Iriomote Island, and precious local cultures are disappearing. A thorough understanding of the interaction between the natural environment and human social systems on islands is required to resolve these issues. Since islands are relatively closed systems with a limited geographical expanse, they display a combination of uniqueness and vulnerability in both the natural environment and human social systems. The vulnerable nature of phenomena that exist on islands is often held accountable for problems once they have occurred (perhaps opposite sides of the same coin), so deepening our understanding of island vulnerability can provide a guide to solving the problems. The natural environments of islands are vulnerable to typhoons and other natural disasters, as well as human activities associated with industry. In addition, it is recently feared that the introduction of foreign organisms and global warming will seriously impact island forest and marine ecosystems. This research project focuses on and aims to deepen our understanding of the vulnerability of the natural environment to human activities, taking into consideration the vulnerability of the human social system itself. As a model, Iriomote Island can be considered ideal for the launch of academic environmental research focusing on vulnerability since it is a typical humid subtropical island that, even today, has rich water and forest resources.

2. Relation with research program

In the research axis of spatial scale, study is expected to have strong connection with “areas” in which land is strictly limited. Islands are relatively closed systems in water and material cycles, in the natural environment and in the human social system.

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. Project members

Name	Affiliation	Position	Role
©TAKASO, Tokushiro	Research Institute for Humanity and Nature	Professor	overall care of project analysis of pollination mechanism
*ISHIJIMA, Suguru	Professor Emeritus, University of the Ryukyus	Professor Emeritus	analysis of meteorological characteristics
*MAEKADO, Akira	Faculty of Law and Letters, Univ. of the Ryukyus	Professor	analysis of water balance, study of soil erosion
INOKURA, Youji	Faculty of Agriculture, Kagoshima University	Associate Prof.	analysis of water balance
YOKOTA, Masatsugu	Graduate School of Engineering and Science, Univ. of the Ryukyus	Professor	analysis of plant diversity, study of endangered plants
TATEISHI, Youichi	Faculty of Education, Univ. of the Ryukyus	Professor	analysis of plant diversity, study of introduced plants
YONEKURA, Koji	Graduate School of Life Sciences, Tohoku University	Assistant Prof.	analysis of plant diversity
PENG, Ching- I	Academia Sinica, Taiwan, Institute of Botany	Head Res-earcher	analysis of plant diversity
CHIANG, Tzen- Yuh	Faculty of Biology, Cheng-Kung University	Professor	analysis of plant diversity
*NAKASHIZUKA, Tohru	Research Institute for Humanity and Nature	Professor	numerical analysis of forest ecosystem
HAGIWARA, Akio	Graduate School of Engineering and Science, Univ. of the Ryukyus	Professor	analysis of forest ecosystem
ENOKI, Tsutomu	Faculty of Agriculture, Univ. of the Ryukyus	Assistant Prof.	analysis of forest ecosystem
*KUBOTA, Yasuhiro	Faculty of Education, Kagoshima University	Associate Prof.	analysis of forest ecosystem
AIBA, Shin-ichiro	Faculty of Education, Kagoshima University	Assistant Prof.	analysis of forest ecosystem
*HIDAKA, Toshitaka	Research Institute for Humanity and Nature	Director	analysis of animal behavior
UEDA, Keisuke	Faculty of Science, Rikkyo University	Professor	analysis of bird diversity, ecology and genetics of endemic bird subspecies
IZAWA, Masako	Faculty of Science, Univ. of the Ryukyus	Associate Prof.	analysis of ecosystem requirements of Iriomote cat
OTA, Hidetoshi	Tropical Biosphere Research Center, Univ. of the Ryukyus	Associate Prof.	study of impacts of introduced animals on ecosystem
KOHNO, Hiroyoshi	Okinawa Regional Research Center,	Researcher	analysis of animal behavior

	Tokai University		
SEKINO, Tatsuki	Research Institute for Humanity and Nature	Associate Prof.	limnological and ecological studies using information technology
*KINJO, Masakatsu	Tropical Biosphere Research Center, Univ. of the Ryukyus	Associate Prof.	analysis of insect diversity and ecology
MAETA, Yasuo	Professor Emeritus, Shimane University	Professor Emeritus	study of pollination symbiosis and life cycle of bees
HAYASHI, Masami	Faculty of Education, Saitama University	Professor	analysis of insect diversity and ecology
KOMAI, Furumi	Faculty of Arts, Osaka University of Arts	Associate Prof.	analysis of insect diversity and ecology, ecological and systematic analysis of Lepidoptera
SUGIURA, Naoto	Faculty of Science, Kumamoto University	Lecturer	study of pollination symbiosis and life cycle of bees
MIYANAGA, Ryuichi	Faculty of Life and Environmental Science, Univ. of Shimane	Assistant Prof.	study of pollination symbiosis and life cycle of bees
*SAKAI, Kazuhiko	Tropical Biosphere Research Center, Univ. of the Ryukyus	Associate Prof.	ecological study of coral and coral reef
NAKASHIMA, Yasuhiro	College of Economics, Nihon Univ.	Professor	study of fish in coral reef
KUMAZAWA, Norichika	Tropical Biosphere Research Center, Univ. of the Ryukyus	Professor	study of microorganism-invertebrate interactions
*ARAMOTO, Mitsunori	Tropical Biosphere Research Center, Univ. of the Ryukyus	Professor	study of forest bioresources, ethnobotany
UENO, Masami	Graduate school of Agriculture, Univ. of the Ryukyus	Professor	remote sensing of forests
SHINZATO, Takakazu	Faculty of Agriculture, Univ. of the Ryukyus	Associate Prof.	study of forest bioresources, analysis of plant diversity
NAKAZATO, Nagahiro	Okinawa Regional Research Center, Tokai University	Lecturer	study of <i>Podocarpus</i> tree growth and timber resources
OSHIRO, Hajime	Center for Asia-Pacific Island Studies, Univ. of the Ryukyus	Professor	economical analysis
KABIRA, Nario	Faculty of Law and Letters, Univ. of the Ryukyus	Professor	economical analysis of agriculture
FUJITA, Yoko	Faculty of Law and Letters, Univ. of the Ryukyus	Associate Prof.	economical analysis of industries, study of ecotourism
MURAYAMA, Seiichi	Graduate school of Agriculture, Univ. of the Ryukyus	Professor	historical analysis of crop production
*SATOI, Yoichi	Faculty of Law and Letters, Univ. of the Ryukyus	Associate Prof.	historical analysis of land use
AKAMINE, Masanobu	Faculty of Law and Letters, Univ. of the Ryukyus	Professor	analysis of view of nature from folk material
TATARA, Masaya	Iriomote Wildlife Center, Ministry of Environment	Conservation expert	administration of environmental conservation

(©: Project leader, *: Core member)

4. Modifications on the original research plan

We have made a more careful selection of individual studies regarding research on 1) geography and water balance and 2) forest and coral reef regions, which are deemed necessary to understanding the natural environment on Iriomote Island. When it comes to research on 3) social systems that form the background to

human activities affecting the natural environment, the majority of anthropological studies, which were previously given major emphasis, has been eliminated and the focus has been shifted to concentrate on research in the economic field. The reason for putting the focus on the economic realm is that resort development and public works projects are still brisk on Iriomote Island (as well as on many other subtropical islands). We have taken a fresh look at the fact that this kind of development is relevant to activation of the regional economy and expansion of employment, and decided that it is necessary to understand the current state of economic activities and examine their background as a priority in this project. An overview of future economic activities on Iriomote and other subtropical islands will also be given by the project.

5. Progress of the project (From April 2003 to March 2004)

To respond to the comments by the evaluation committee in March 2002, the previous research plan was fully revised in April. The revised research plan was approved in May. The process of the two-time evaluations was notified to all members with the request of modification in their individual research plans. Member meetings were held in September and December to gain mutual understanding of the revised individual research plans.

6. Outcomes (2003)

For the study of ecosystems in forests and coral reefs, areas have been selected for periodical surveys throughout the project. A preparatory list of entomofauna in the mangrove forest and a distribution list of wild bees in the Southwestern Islands have been drafted. Results of past research conducted on Iriomote Island have been collected, organized into about 3,000 items and put into a database.

Full-scale research

Research axis: History and time scale

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 No2

1. Research objectives and contents

(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.

2. Project members excluding members in foreign institutions (◎: Project leader, *: core member)

Name	Institute	Role
◎NAKAWO, Masayoshi	Research Institute for Humanity and Nature	
*ENDO, Kunihiko	Nihon University	Lake sediment analysis
*SOUMA, Hidehiro	Nara Women's University	Geographical Information Analysis (Historical Reconstruction)
MURATA, Taisuke	Nihon University	
HORI, Kazuaki	Meijo University	
*SUGIYAMA, Masaaki	Kyoto University	Historical Document Analysis (Historical Reconstruction)
*KATO, Yuzo	Research Institute for Humanity and Nature	
ARAKAWA, Shintaro	Tokyo University of Foreign Studies	
INOUE, Mitsuyuki	Research Institute for Humanity and Nature	
IGURO, Shinobu	Research Institute for Humanity and Nature	
KINOSHITA, Tetsuya	Research Institute for Humanity and Nature	
KICENGGE	Kyoto University	
SHIRAISHI, Noriyuki	Niigata University	
SUGIYAMA, Kiyohiko	Osaka University	
HAMADA, Masami	Kobe University	
FURUMATSU, Takashi	Kyoto University	
HORI, Sunao	Kohnan University	
MATSUKAWA, Takashi	Otani University	
YAMANAKA, Ichiro	Kyoto University	
YAMAMURO, Shinichi	Kyoto University	
YUBA, Tadanori	Kyoto Tachibana Women's University	
*FUJII, Yoshiyuki	National Institute of Polar Research	Climate Analysis
*TAKEUCHI, Nozomu	Research Institute for Humanity and Nature	Ice Core and Tree-ring Analysis (Historical Reconstruction)
AZUMA, Kumiko	National Institute of Polar Research	
UETAKE, Jun	Tokyo Institute of Technology	
OHTA, Keiichi	The University of Shiga Prefecture	
KOHSHIMA, Shiro	Tokyo Institute of Technology	
KOHNO, Mika	National Institute of Polar Research	
KOBAYASHI, Osamu	Ehime University	
SHIRAIWA, Takayuki	Hokkaido University	

SEGAWA, Takahiro	Tokyo Institute of Technology	
NAKAZAWA, Fumio	Nagoya University	
NAKATSUKA, Takeshi	Hokkaido University	
NARITA, Hideki	Hokkaido University	
MATOBA, Sumito	National Institute for Environmental Studies	
MIYAKE, Takayuki	Research Institute for Humanity and Nature	
*KONAGAYA, Yuki	National Museum of Ethnology	Socio-economic Analysis
OZAKI, Takahiro	Kagoshima University	(Water Circulation System)
KODAMA, Kanako	Nagoya University	
SHINJILT	Hitotsubashi University	
NAKAMURA, Tomoko	Tohoku University	
HUHBATOR	Showa Women's University	
MAILISHA	Research Institute for Humanity and Nature	
YANG, Haiying	Shizuoka University	
YOSHIDA, Setsuko	Shikoku Gakuin University	
*KUBOTA, Jumpei	Research Institute for Humanity and Nature	Hydrological, and Glaciological, Process Analysis, including Irrigation System
*FUJITA, Koji	Nagoya University	Analysis
*WATANABE, Tsugihiko	Research Institute for Humanity and Nature	(Water Circulation System)
AKIYAMA, Tomohiro	Nagoya University	
ITO, Tatsuya	Fukui University of Technology	
ISHII, Yoshio	Okayama University	
UJIHASHI, Yasuyuki	Fukui University of Technology	
KONYA, Keiko	Hokkaido University	
SAKAI, Akiko	Nagoya University	
SATOW, Kazuhide	Nagaoka Institute of Technology	
TAMAGAWA, Ichiro	Gifu University	
TSUJIMURA, Maki	Tsukuba University	
NAITO, Nozomu	Hiroshima Institute of Technology	
NAGANO, Takanori	Research Institute for Humanity and Nature	
NAKAMURA, Kenji	Nagoya University	
NARAMA, Chiyuki	Tokyo Metropolitan University	
MIKI, Naoko	Okayama University	
YATAGAI, Akiyo	Research Institute for Humanity and Nature	
MATSUDA, Yoshihiro	Nagoya University	
YAMAZAKI, Yusuke	Kyoto University	
YOSHIKAWA, Ken	Okayama University	

4. Progress of the project

It was found that similar water problems seem to have taken place, in our study area (Heihe River Basin in western China), four times in the last 2000 years. The cause of the problems and the people's reaction/counter measure, however, is not the same in the four cases: people have abandoned to stay, in the region, in some cases, and kept staying at different times. The re-construction of the environment and people's life is now being made in detail. The achievement is behind the schedule by about one year because of SARS problems in China in 2003, since intensive field observations and an import of ice core samples were difficult to make in 2003.

5. Outcomes (2003)

The output of the project includes Project Report on an Oasis-region Vol. 3 (Nos. 1 and 2), and Survey Reports on water resources in the Heihe Basin (2 volumes), in addition to individual publications, which are not listed here.

A visual program entitled "Oasis Project—Considering human beings relationship with nature—" for 14 minutes was produced and available in either form of HVHS videotape or DVD in Japanese or English.

An international symposium on the Silk Road was held in Nara on 28 February, 2004, which was co-organized by the Oasis Project.

Full-scale research

Research axis: History and Time Scale

Project number: 4-2

Project name: A trans-disciplinary study on the regional eco-history in tropical monsoon Asia

Project leader: AKIMICHI, Tomoya (RIHN)

Core members: see No.3

1. Outline of research project

(1) Research Objectives

This research project aims to demonstrate human-nature interactive consequences in the tropical monsoon Asia as the regional eco-history, focusing on World War II through present-day period (1945-2005). This region is characterized by marked monsoonal seasonality and diverse ecological environments where a number of ethnic groups have retained unique life-styles and cultures. As socio-political upheavals have occurred in this region during the past several decades, modernization, development, and external impacts have affected people's life to a great deal. We conduct integrative analyses as to how local inhabitants have coped with such upheavals in terms of subsistence complex, nutrition and health, and resource use and management, and ultimately demonstrate consequences of the regional eco-history

(2) Contents and Methodology

In this project, we focus upon several sub-themes; (1) ethno-history of various ethnic groups and their interactions with the external factors, (2) impacts of subsistence activities upon ecological disturbance, and eco-history of commodity production and distribution, (3) decision-making process by communities responding to micro-climate fluctuation, and (4) life history of individuals manifested as the changes in nutrition and health status of the people. By combing these analyses at individuals, communities and the region, we explore to construct an integrative figure of human nature interactions as the regional eco-history.

Research are conducted in Yunnan province of southwestern China, Laos and north Thailand. Various ethnic groups inhabiting in these areas are chosen for the intensive study, and interactions and transformation between these people and the surrounding environments are examined through

time during these several decades.

As methodologies, multiple approaches are employed by disciplines such as nutritional and epidemiological assessments in human ecology domains, analyses of subsistence complex by ethnobiological, ethno-technological, and ecological anthropological studies, studies of resource management and the commons, geographical spatial analyses, history and documentation analyses.

2. Relation to research axis

The concept of ecological history has significances as one of the historical study approach. In general, human and nature interactions are realized through practical human decision-making and physical activities, as well as seasonal onset and fluctuation of the natural environmental phenomena. Once modified environments also give impacts upon human physical, economic, social aspects. These interactions are complex, and the processes are not always synchronizing but delayed, or accelerated in terms of time series. Furthermore, not only cyclic and periodical phenomena, but also historical change may be taken into account in the complex ecological history. These are good reasons why we take eco-historical approach within the framework of historical research axis.

3. Project members excluding members in foreign institutions (◎: Project leader, *: Core-member)

◎AKIMICHI, Tomoya (RIHN)

(1) Yunnan History Group: Eco-history in the south of Yuan Jiang, and ethnography of ethnic minorities

*CHRISTIAN, Daniels (Tokyo University of Foreign Studies)

*ABE, Kenichi (Center for Area Studies, National Museum of Ethnology)

TSUKADA, Masayuki (National Museum of Ethnology)

KUROSAWA, Naomichi (Tokyo University of Foreign Studies)

SHIMIZU, Ryo (Nihon University)

TATEISHI, Kenji (Tokai University)

NISHIKAWA, Kazutaka (Chuo University)

NOMOTO, Kei (Gakushuin University)

MASUNO, Atsuyuki (Tokai University)

(2) Human Ecology Group: Health survival in the Mekong watershed

*MOJI, Kazuhiko (Institute of Tropical Disease, Nagasaki University)

*NAKAMURA, Satoshi (International Medical Center of Japan)

ATAKA, Yuji (Institute of Tropical Disease, Nagasaki University)

ABE, Taku (Meiji University)

INAOKA, Tsukasa (Saga University)

IWASA, Mitsuhiro (Chiba University)

UMEZAKI, Masahiro (Tokyo University of Medicine and Dentistry)

ONISHI, Hideyuki (RIHN)

OBA, Tamotsu (National Institute of Social Security and Population Studies)

OKUMIYA, Kiyoto (Research Institute for Humanity and Nature)

KATANODA, Kotaro (National Institute of Public Health)

KANEDA, Eiko (Institute of Tropical Disease, Nagasaki University)

KAWABATA, Masato (Kobe University)

KAWABE, Toshio (Takasaki City University of Economics)

KOBAYASHI, Jun (JICA)

SUZUKI, Katsumi (Chiba University)

TAKEL, Hideo (Chiba University)

NAKAZAWA, Minato (Yamaguchi Prefectural University)

NAKATSU, Shusuke (Institute of Tropical Disease, Nagasaki University)

MATSUBAYASHI, Kozo (Center for Southeast Asian Studies, Kyoto University)
 MATSUMURA, Yasuhiro (National Institute of Health and Nutrition)
 MIDORIKAWA, Hiroshi (Suzuka University of Medical Sciences)
 MURAYAMA, Nobuko (Niigata Medical and Welfare University)
 YAMAUCHI, Taro (University of Tokyo)
 YAMAMOTO, Taro (Kyoto University)
 WATANABE, Mikitsugu (Institute of Tropical Disease, Nagasaki University)

(3) Wetland-Plain Group: Ecology, economy and life structure in wetland riparian habitats

*NONAKA, Kenichi (RIHN)

AJISAKA, Tetsuro (Kyoto University)
 IKEGUCHI, Akiko (Nagoya Industrial University)
 IKEYA, Kazunobu (National Museum of Ethnology)
 ISARA, Yanathan (Nagoya University)
 OKAMOTO, Kohei (Nagoya University)
 ONO, Eisuke (Nagoya University)
 KATO, Kumiko (Nagoya University)
 SAITO, Haruo (Kyoto University)
 TAKENAKA, Chisato (Nagoya University)
 NAKANISHI, Masami (ex-RIHN)
 NISHIMURA, Yuichiro (RIHN)
 MASUNO, Takashi (Graduate University of Advanced Studies)
 MIYAGAWA, Shuichi (Gifu University)
 MIYAMURA, Haruna (Mie University)
 MORI, Seiichi (Gifu University of Economics)
 WAKANA, Isamu (Eco-Museum Center of Lake Akan)

(4) Agro-Forestry Group: Ecology, economy, culture and society in agro-forestry communities

*KONO, Yasuyuki (Center for Southeast Asian Studies, Kyoto University)

UCHIDA, Yukari (Kyoto University)
 OCHIAI, Yukino (Research Museum of Kagoshima University)
 KASHINAGA, Masao (National Museum of Ethnology)
 KATO, Makoto (Kyoto University)
 KURODA, Yosuke (Kyoto University)
 SAKURAI, Katsutoshi (Kochi University)
 SATO, Yoichiro (RIHN)
 TAKAI, Yasuhiro (Otani University)
 TANAKA, Koji (Center for Southeast Asian Studies, Kyoto University)
 TAKEDA, Shinya (Kyoto University)
 TOMITA, Shinsuke (Center for Southeast Asian Studies, Kyoto University)
 TOMOOKA, Norihiko (Institute of Agricultural Bio-Resources)
 NAKATA, Tomoko (National Museum of Ethnology)
 NAKANISHI, Mami (Kyoto University)
 NAWATA, Eiji (Kyoto University)
 HIROTA, Isamu (Kyoto University)
 HYAKUMURA, Yoshihiko (Research Institute of Global Environmental Strategy)
 FUJITA, Yuko (Lake Biwa Museum)
 HOTTA, Mitsuru (Kagoshima Women's College)
 MATSUURA, Miki (Kyoto University)

MATSUDA, Akira (Kyoto University)
 MATO, Toru (Kyoto University)
 MUTO, Chiaki (Gifu University)
 YOKOYAMA, Satoshi (Kumamoto University)
 ANOULOM, Vilayphone (Kyoto University)
 NATHAN, Badenoch (Kyoto University)

(5) Materials and Information Group: Data base analyses and construction of digital eco-history archives

*KUBO, Masatoshi (National Museum of Ethnology)

KANESHIGE, Tsutomu (Shiga University)

KAWANO, Kazuaki (Reimei-kan, Kagoshima Prefectural Center of Historical Documents)

KOJIMA, Mabun (Kagoshima Junshin Women's College)

GOTO, Akira (Doshisha Women's University)

SHIMIZU, Ikuro (RIHN)

TAGUCHI, Rie (RIHN)

TSUNAMI, Soichiro (Gankoji Institute of Cultural Property)

HASHIMURA, Osamu (National Museum of Japanese History)

MIYAWAKI, Chie (RIHN)

YAMADA, Hitoshi (National Museum of Ethnology)

YOSHIDA, Hirohiko (Oyasato Museum, Tenri University)

(©: Project leader, *: Core member)

4. Modification on the original plan

(1) Minor change of the title

In order to clearly show the nature of the study, we have changed the title of the project by adding 1945 - 2005. These time-span is appropriately chosen in eliciting and reconstructing information from historical documents and through interviews.

(2) Change and addition of members

In establishing organization more powerful and dynamic, we have revised the research organization and, furthermore invited younger scholars so as for them to stay longer period and obtain in-depth information.

5. Progress of the project (2003)

During the 2003 and 2004, we have promoted the MOU (Memorandum of Understanding) with relevant counterparts in China, Laos and Thailand. Research has also been conducted by individual scholars.

With Yunnan University Chinese scholars have conducted field research in 23 communities in southern parts of Yunnan Province. Academic seminar is in progress and we will have the workshop in October, 2004. Collection of historical inscriptions has been conducted and a number of documents are obtained by Japanese team.

In Laos, we have made agreement with National Institute of Public Health (NIOPH) in August, 2003, and our office has been established in the institute. At the moment, the construction of field station is in progress in one community in Savannakhet Province. We have made agreement with Institute of Lao Culture, Ministry of Information and Culture (ILC of MIC) in August, 2003, and established the mutual collaboration in the research activity. Agreement with Department of Livestocks and Fisheries, Ministry of Agriculture and Forestry (DLF of MAF) has also been made in September, 2003, and we have three office rooms in Vientiane city. In December, 2003, we have made agreement with National Agriculture and Forestry Research Institute of Ministry of Agriculture and Forestry (NAFRI of MAF) and we continue to seek to build a field station in northern part of Laos. With National University of Laos (NUOL), we are continuing to have MOU with the University. For the Faculty of Forestry, we are preparing the Herbarium and it is expected to

enhance the development of ethnobotanical study in the University and collection and conservation of plant in Laos.

In Thailand, we have made academic agreement with the Faculty of Social Sciences, Chiang Mai University in July, 2003. Especially, mutual understanding to study indigenous knowledge of ethnic minorities in northern Thailand have been reached, and we continue to conduct research in the region.

In Japan, documents and records originally collected by Japanese researchers during the post-war period have been searched extensively at museums and institutions: Harano Agricultural Museum and Prefectural Museum in Kagoshima, National Museum of Ethnology, Tenri Oyasato Museum of Tenri University, University of Tokyo Museum, and Nanzan University were visited, and a number of materials, photos, and reports have been collected. These information are now in preparation as the Digital Eco-history Archives.

6. Outcomes (2003)

We have summarized research reports and articles as one volume of "The 2003 Annual Research Project Report" and published in 2004. It includes 67 papers and reports by members of the Project. Materials and documents are also in process as the Digital Eco-history Archives.

Full-scale research

Research axis: Conceptual framework for global environmental issues

Project number: 5-1

Project name: Global water cycle variation and the current world water resources issues and their perspectives

Project leader: OKI, Taikan (RIHN) and KANAE, Shinjiro (RIHN)

Core members: see No.3

1. Research objectives and topics

This research project focused on water as one of the most common factors in global environmental studies. A population increase in conjunction with continuous desire for high QOL necessitates more increases in water demand for human life, food production and industry, resulting in more intense use of water resources in the world. It is recently called "water crisis in the 21st century." Although much information on water issues is now available, some of it seems groundless and often emotional. One of the problems on water issues is that scientifically reliable information and groundless prejudice are distributed with confusion. Another problem is such that only a little information is dispatched by Asian countries including Japan. This project aims to clarify the true nature of world water issues and present perspectives in the future, from Japan as a part of Asia. As a result of this project, the following products will be expected: a prediction of the world water resources supply/demand probably to the next IPCC report, a report of fresh water resources for the Millennium Assessment of the United Nations, and a way for settlement of regional water issues in Asia. Furthermore, by examining new concepts of water resources, such as Virtual Water, we aim to encourage awareness on water issues and establishing guidelines for sustainability development in society in terms of water.

This project, included in the axis of Conceptual Framework for Global Environmental Issues, wishes to stand on incredulity whether the world water crisis really exists. Then, this project can reveal true aspects of world water crisis, one after another. This project consists of three parts: global research part, regional research part and integration/information part. This project will be of use, from the viewpoint of RIHN which seeks sustainability development and future possibility of the world.

2. Relation with research program

The "Conceptual Framework for Global Environmental Issues" is a new axis which was changed from "Integration" in this institute. Since this project has been attempting to develop a new concept and new

information related to global water issues, this change is very relevant for us. Quantification of “virtual water”, one of the main outcomes of this project, needs to be investigated more in deep from the viewpoint of its concept. It will be a next subject in near future, and probably will be a good topic among the projects in the program.

3. Leader name concerned with the project, joint researcher name (Affiliation)

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

©OKI, Taikan (RIHN) and KANAE, Shinjiro (RIHN)

- * 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 School of Agricultural and Life Sciences, The Univ. of Tokyo): Agricultural water demand model considering an international grain price.
- * KIM, Wonsik (Department of Atmospheric Science, Yonsei University): Observation of water cycles in Asia.
- * KITSUREGAWA, Masaru (Institute of Industrial Science, The Univ. of Tokyo): Development of global environmental water information library
- * KURAJI, Kooichiro (Graduate School of Agricultural and Life Sciences, The Univ. of Tokyo): Water management in forest area and local community
- * MATSUMOTO, Jun (Graduate School of Science, The Univ. of Tokyo): Seasonal change of Asian monsoon
- * MORIYAMA, Toshiyuki (Faculty 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

(©: Project leader, *: Japanese Core-member)

4. Modifications on the original research plan

First of all, the axis itself (of the institute) was changed from “integration” to “conceptual framework.” The project title was changed accordingly. Although the basic structure of the project has not been changed, some viewpoints have been changed in order to keep relevance with the axis changes.

5. Progress of the project

We succeeded in the quantification of Virtual Water trade in the world, and its time series in these decades.

Impact of VW trade on relaxation of world water resources deficit was assessed. This success has brought us to be one of the leading groups in this field. We also started to develop a numerical model which is useful to quantify water quality issues and environmental flow issues in the global water resources assessment. A 100-year hindcast of global river discharge was also conducted which is necessary to incorporate floods and droughts in the global water resources assessment.

A multi-background discussion between many natural and societal researchers, which is very much encouraged by this institute, in the regional research part can be regarded as an outcome. This has been carried out focusing a real water conflict in a small basin which seems to be very common in Asia.

6. Outcomes (2003)

The result of the feasibility study of this project was awarded as the Tison Award of International Association of Hydrological Sciences in 2003.

The quantification and visualization of the global VW trade, a very new concept originally developed in UK in 1990's, was carried out. It was and has been reported not only in scientific publications but also in newspapers, magazines and TV programs. Therefore, we think, the minimum requirement of the project as a part of the axis "Conceptual Framework" was already attained. Such newspaper articles, magazine articles and etc. must be an important part of outcome in 2003.

The refinement of the global water resources assessment has been also achieved. A breakthrough is being achieved with the incorporation of water quality element in the global water resources assessment. A 200-year global hydrological simulation with the extraction of drought and flood is also being achieved (the past 100-year simulation was already carried out), which is very useful for global water assessment considering floods and droughts.

Full-scale research

Research axis: Conceptual framework for global environmental issues

Project number: 5-2

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 No.3

1. Research objectives and contents:

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 to research axis:

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. Although people's environmental consciousness and environmental values are important concepts on global environmental issues, theoretical and empirical studies have not been carried out sufficiently. In this project, we will develop the interdisciplinary methodology to theoretically and empirically analyze the conceptual framework of the global environmental issues.

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 University	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.	Research Institute for Humanity and Nature Institute of Statistic Mathematics (till Sept.)	Assoc. Prof.	Statistical survey of environmental consciousness
*KOBAYASHI, K.	Interdisciplinary Grad. Sch. Science and Engineer, Tokyo Institute of Technology	Assoc. Prof.	Development of analytical procedures for environmental valuation
*FUJIHARA, 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.	Grad. Sch. Agr. Kyoto Prefecture University	Prof.	Pollen analysis of forest vegetation
*KONOHIRA, E.	Grad. Sch. Environ. Stud. Nagoya University	Assist. Prof.	Modeling of material cycling
NAGATA, M.	Fac. Humanities and Social Sci., Mie Univ.	Assoc. Prof.	Environmental sociology and psychology
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
YOSHIDA, T.	Field Science Center for Northern Biosphere, Hokkaido University	Assist. Prof.	Land plant population dynamics
IKEGAMI, Y.	Field Science Center for Northern Biosphere, Hokkaido University	Assist. Prof.	Vegetation and land-use analyses
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
HAYAKAWA, K.	Lake Biwa Research Institute, Shiga	Senior	Lacustrine material cycling

		Researcher	
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

(©: project leader, *: core member)

4. Modification from 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, we have 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.

This project originally belonged to the Spatial Scale axis during the incubation and the feasibility studies, because its objective field was a forest watershed. However, the project has been moved to the Conceptual Framework for Global Environmental Issues axis, when the axis was reorganized in 2003. Since the project needs the conceptual considerations on the environmental consciousness and environmental valuation, the change in the axis was proper itself. The project would be implemented to make clear these conceptual frameworks.

5. Progress of the project:

The field surveys on the material cycling have been continued in the Lake Shumarinai watershed. Data on the temporal environmental changes after clear logging have been collected in the forests in Wakayama. Sediment cores have been collected from several sites in Lake Shumarinai and their chemical analyses have been initiated. More than 1270 stream samples have been collected in Japan. Their ionic composition will be analyzed with the properties of the catchment areas such as land use and geology. PnET-BGC model is selected as a basic model for the forest ecosystem. Prof. M. Mitchell (State University of New York) was invited to discuss about the model. According to the discussion, the response-prediction model will be developed as a collaborative study with researchers on the PnET-BGC model in USA.

A map indicating the relationship between objects collected from the keyword questionnaire has been constructed using UML (Unified Modeling Language). The validity of the transformation module in IDEA in elucidating the people's interests on the environment has been vigorously evaluated.

6. Outcomes (2003): Relating Publications

Yoshioka, T. 2003. Watershed studies on the effects of global environmental changes. Japanese Journal of Limnology, 64:203-207.

Incubation Studies

Incubation Study

Title: Inquiry into the environmental problems from the viewpoint of the history of milieu (Fudo)

Researcher: ABE, Hiroshi (Assistant Professor)

"The environmental problems" should be solved by different way in each region, because every district has various problems. What kind of concept is useful for the solution of such different problems? In this

IS, I tried to create the fundamental concept for the solution of environmental problems by rethinking the concept "milieu" of Japanese philosopher, Watsuji Tetsuro.

Incubation Study

Title: Perception of global change issues — Why is it differently perceived by individuals?

Researcher: HAYASAKA, Tadahiro (Professor)

Differences of perception of global warming between newspapers and scientific magazines were analyzed. Influences of global warming on the society or ecosystem are mainly focused in newspapers, while the mechanism of global warming is mainly discussed and interdisciplinary studies are insufficient in the scientific magazines. Both of them seem to look at one phenomenon of the problem and miss the essence of global warming issue.

Incubation Study

Title: Expansion of humanosphere in view of energy, population and food

Researcher: KAWAMOTO, Kazuaki (Assistant Professor)

The purpose of this Incubation Study is to obtain a better understanding of how activities, existence and fields of humanity (defined as Humanosphere here) have changed in conjunction with energy, population and food. Effects of anthropogenic energy consumption on the atmosphere are investigated this time. In China, not only CO₂ emission but also SO₂ emission have increased since 1980 due to the open door policy. Satellite data analysis reveals that cloud optical depth increased and cloud droplet size decreased during this period. Importance of wide-area monitoring on long-term is suggested, because increases in emission and aerosols result in pollution of atmospheric environment, and changes in cloud properties dominate radiation budget and hence influence climate changes.

Incubation Study

Title: Historical research into eurasian cultures of daily life as the emergent system from interaction between human beings and nature

Researcher: KINOSHITA, Tetsuya (Professor)

Each regional culture in Eurasia has emerged from the diverse and profound interactions between itself and others, since prehistoric times. This project makes various historical analyses of these based on the history of human life in Eurasia, and clarifies pluralistic interactions from which each of them emerged. Through this clarification we will finally come to illuminate the interactions as core lines between human beings and human beings with nature, from which each Eurasian culture's daily life emerged historically. And then we will acquire a basic view point to project future must-do relationship lines between human beings and nature from.

Incubation Study

Title: Knowledge collection on the physiology and natural history of life -Gendai Honzo-

Researcher: KOHMATSU, Yukihiro (Assistant Professor, Research Promotion Center)

In this study, we discussed following two questions regarding the degradation of biodiversity. (1) Could extinction of a certain species be a problem for other species? (2) What does the extinction of the species mean for human? In order to answer to the first problem, it is crucial to accumulate the knowledge about the physiological response of each species to the environmental change. For the latter, we need to deepen our knowledge about the history of the relationship between human and the species. Furthermore, these two questions are not independent from each other, so we assume that the biodiversity problem will be solved by collecting these two kinds of knowledge and integrating them each other.

Incubation Study

Title: Historical evaluation of forest as environmental resources

Researcher: KUBOTA, Jumpei (Associate Professor)

Development of human activities, especially the increase of populations, has caused serious damages on terrestrial ecosystems, resulting in land degradation problems, such as deforestation and desertification due to agricultural development and fuel consumption. Land degradation sometimes has considerable effects on climate through land-atmosphere interactions. Because of its severe natural environment, terrestrial ecosystems in arid and semi-arid regions are fragile and sensitive to human impacts. This study has aimed to clarify the role of terrestrial ecosystems including forest as not only productive resources, but also environmental resources. Moreover, we tried to find a threshold of capacity in natural environment for human impacts.

Incubation Study

Title: The eating habits in the world - A comparative study of eating to provide the basis for considering environmental issues

Researcher: NONAKA, Kenichi (Associate Professor)

The aim of this study is to build a framework to treat daily human dietary habits as human-environment relations through all the processes of eating (from the production and distribution of food to the consumption of food) and to clarify the problems that how eating habits imply a deeper meaning to the environmental issues. This study focuses on these three topics, 1)The reality of eating habits, 2) Eating habits that are incorporated into environmental issues 3)Diversity and affluence.

The key to this study is how eating as part of environmental issues should be related with the characteristics of food as living things. How food is incorporated from nature and how the potentialities of creatures are developed so that necessary features are extracted from them. The topics and study area will be worked out in the future.

Incubation Study

Title: The historical reconstruction of living conditions by linguistic methodology and their examination by natural science with special reference to the Indus civilization

Researcher: OSADA, Toshiki (Professor)

We have two main targets in our project. One is the methodology on the historical linguistics, the other is a historical reconstruction of the Indus civilization. From methodological point of view, the combination between Archaeology and Linguistics is recent trends among the prehistoric research. As far as the Indus civilization is concerned, there are some unsolved problems; e.g. the Indus script, the food system, the cause of rise and fall of the Indus civilization, etc.

Incubation Study

Title: Evolution of cultivated plants and man-made habitat

Researcher: SATO, Yo-ichiro (Professor)

An idea of agricultural revolution (Childe, 1925) has been widely accepted in the European countries. Certainly, habitat has been drastically altered after the appearance of settlement in the Occidental area. However, development of agriculture and transition of food resources from gathering to agricultural production seems to alter slowly in the Asian countries. This project is a research project supported by RIHN (Research Institute for Humanity and Nature) that deals with the evaluation of agricultural activity for the alternation of man-made habitat in Eurasia. This project focuses on the contribution of the agricultural activities such as evolution of cultivated plants on the alternation of man-made habitat in Eurasia.

Incubation Study

Title: "Information Map" about RIHN's research projects

Researchers: SEKINO, Tatsuki (Associate Professor) and YOSHIOKA, Takahito (Associate Professor)

"Information Maps", which showed relationships between collected information in RIHN's research project activities, were drawn to survey research activities of our institute.

The maps, drawn based on subjects, investigation methods and collected information in the projects, showed that treatment of information in the projects could be classified into some types according to research objectives of the projects. To analyze relationship among the projects, figures indicating position of each project on the temporal and spatial scale and indicating difference in approach to a subject among the projects were also drawn in this IS.

Incubation Study

Title: Evaluations of human impacts from subsurface environments and establishments of early warning systems for global environment changes

Researcher: TANIGUCHI, Makoto (Associate Professor)

The purposes of this study are to evaluate the human impacts on subsurface environments and to establish a warning system for global environment changes, from the points of view of geothermics, global hydrology, and information science of earth history. Subsurface indexes which are integrated signals of human impacts are used in the urbanized areas of coastal zone which is vulnerable to climate changes and natural disasters. Two meetings were held for this Incubation Study (First meeting was held in February 10, 2004; 8 presentations and commentators, Second meeting was held in March 10-11, 2004; 8 presentations). The discussion and a research plan were made for the feasibility study project.

Incubation Study

Title: Poverty and environmental resource management: A study on human resilience against environmental variability

Researcher: UMETSU, Chieko (Associate Professor)

Poverty is our largest challenge against humanity in the 21st century. In developing countries, most of the poor sector live in agricultural areas and critically depend on environmental resources for livelihood. Poor people tend to have less resilience against environmental risk. Resource management that enhances options available to the poor sector is urgently required for poverty reduction. Income has been a major index for poverty in the past. However, since Amartya Sen suggested capability approach, the concept of poverty focuses more on the combination of individually achievable functions. The purpose of this research is to consider human activity from the viewpoint of resource accessibility and resilience of the poor people and to analyze the role of regional resource management for building resilience.

Incubation Study

Title: Perspectives of the biodiversity research in lake Baikal and tropical rain forests in the South-east Asia.

Researcher: WADA, Eitaro (Professor)

The central subject and its new paradigm were discussed with emphasis on the biodiversity research under the global environmental issues in the cooperative meeting of both BICER (Baikal International Center for Ecological Research) and DIWPA (DIVERSITAS Western Pacific and Asia). Implementation was as follows:

- i) International workshop on "Terrestrial Sediments in the Eastern Part of Eurasia under Long-term Environmental Variations." and "Perspectives of the Biodiversity Research in the Western Pacific and Asia in the 21st Century." were held in Kanazawa and in Kyoto, respectively, in autumn, 2003.
- ii) On the basis of these meetings, the cooperative meeting of BICER and DIWPA was held in Nagoya in February, 2004 to elucidate new paradigm on the biodiversity research.
- iii) The survey data on the biodiversity research was collected from 20 scientists in the related fields to classify possible future research subjects.

Incubation Study

Title: Nature of archaeologically-Hydrologically synthetic flood (Noah's flood)

Researcher: YATAGAI, Akiyo (Assistant Professor)

The Noah's Flood story written in Genesis of the Bible describes an event of divine judgment when all the springs of the great deep burst forth, and the floodgates of the heavens were opened (Genesis 7:11). According to the Bible story, on Noah's family and the creatures with them on the ark survived the flood. The Noah's Ark story and the Genesis flood hold a fascination for people of all ages as well as scholars such as theologians, archeologists and paleo-environmental scientists. As an incubation study, we collected literatures which deal with Noah's flood, flood myths, and paleo-environment in the Near East, and had discussions with environmental scientists. In the recent 10 years, some earth scientists suggested that the Noah's flood occurred around the Black Sea. However, there are still many other hypotheses to be discussed, including the possibility that the entire story may have been fiction.

Incubation Study

Title: Experimental study on global tracing and describing for natural activities

Researcher: YOSHIMURA, Mitsunori (Associate Professor)

The final goal of our study is to develop the methodology how to tracing and describing some specific natural activities by combining the micro and macro-point of spatial views. As far as the macro point, external factors of some specific phenomena were discussed. In the micro point consideration, the mechanism of human spatial recognition was limited by the geographical factors and discussed how to express its mechanism objectively. As the result of macro point discussion, remote sensing and its related measurement method is confirmed to be one of powerful tools. It is necessary to be continues discussion for the mechanism of human spatial recognition.

Incubation Study

Title: Reconstructing the concept of symbiosis a historical approach to the cases in the Far Eastern Archipelago and surrounding areas

Researcher: YUMOTO, Takakazu (Professor)

Core members: ABE, Hiroshi (RIHN)

ANKEI, Yuji (Faculty of International Studies, Yamaguchi Prefectural Univ.)

MURAKAMI, Noriaki (Graduate School of Science, Kyoto Univ.)

OKITSU, Susumu (Faculty of Horticulture, Chiba Univ.)

SHIMIZU, Isamu (Center for Ecological Research, Kyoto Univ.)

TANAKA, Hiroyuki (Primate Research Institute, Kyoto University)

TSUJI, Sei-ichiro (National Museum of Japanese History)

UCHIYAMA, Junzo (RHIM)

YAHARA, Tetsukazu (Faculty of Science, Kyushu Univ.)

YAMAGUCHI, Hirofumi (Graduate School of Agriculture and Biological Science, Osaka Prefecture Univ.)

The Far Eastern Archipelago, facing the Eurasian Continent on the west, has accepted a numerous number of organisms from the Continent over the ages in which the climate has changed globally, so that unique flora and fauna have been formed. In this IS, we discussed on the possibility to investigate the symbiotic relations among organisms under the global environmental changes by elucidating the history of partnership between angiosperm and other organisms (e.g. pollination, seed dispersal, mycorrhiza) in the Japanese Islands and their surrounding areas. Furthermore, we discussed on the methods to describe the relationships between humans and nature diachronically in terms of environmental archaeology and ethnosciences, and to propose a desirable relationship between them through the philosophical examination.

Research Promotion Center

Activities in the fiscal year 2003

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:

SAITO, Kiyooki, Professor (Science communication) as from January, 2004
SEKINO, Tatsuki, Associate Professor (Information collection and processing)
MOMOKI, Akiko, Associate Professor (Science communication)
YOSHIMURA, Mitsunori, Associate Professor (Observation and analysis)
KOHMATSU, Yukihiro, Assistant Professor (Observation and analysis)

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.

Image Database

Database about pictures and video images collected through research projects and the Center's activities.

Publication Database

Database about pamphlets and annual reports published by research organizations in Japan and other countries and directory about organizations and researchers relating with the publications.

Map Database

Database about maps collected through the Center's activities in 2002.

Science communication

- 1) For constructing a base for the science communication activities that are to communicate outcomes of the RIHN's research activities 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 science communication activities by other Japanese and foreign research organizations.
- 2) Events for promoting dialogues between the scientists and the citizens, organized by French national institutes, were visited and studied, in the framework of the study on science communication activities by foreign research organizations.
- 3) RIHN's science communication activities in relation to the science journalism were studied.
- 4) The 2nd RIHN Forum was organized and "Proceedings of the RIHN Forum 2003 (No. 2)" was published.

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 developing 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 and exchanged through some of interviews.

Workshop list

The 2nd Study group meeting on "Integration of information from humanity research and nature research" (Coordinator: SEKINO, Tatsuki)

Date: 12 May, 2003

Venue: RIHN

Topic: Digital image processing technology for reproducing ancient civilizations

Speaker: INOUE, Takashi (NHK Enterprises 21, Inc.)

The 4th Workshop on observation/analysis-physical parameters expected from remote sensing

Main theme: Light and Clouds

Date : 31 January - 1 February, 2004

Venue: Tomakomai, Hokkaido

Coordinator: YOSHIMURA, Mitsunori

Topics:

- 1) The cloud characteristics observed by GLI
NAKAJIMA, Takashi (EORC, JAXA)
- 2) The optical characteristics of aerosol by SKYNET SKY Radiometer Network
AOKI, Kazuma (Toyama University)
- 3) The low stratus characteristics and CO₂ emissions over the sky of China
KAWAMOTO, Kazuaki (RIHN)
- 4) Mitigation of the cloud influence in land covering classification
MATSUOKA, Masakiyo (RIHN)
- 5) The scaling up from individual leaf in photosynthesis research
ICHIE, Tomoaki (Field Science Center for Northern Biosphere, Hokkaido University)
- 6) Measurement of Light Environmental Parameters and its Application for Vegetation Activities
YOSHIMURA, Mitsunori (RIHN)
- 7) Cloud Cover Estimation by Hemisphere Image Analysis
YAMASHITA, Megumi (RIHN)
- 8) Cloud Removal by Multi-Satellite Data
NISHIDA, Kenro (Tsukuba University)
- 9) Framework of Phenological Eyes Network
TSUCHIDA, Satoshi (National Institute of Advanced Industrial Science and Technology)

The 5th Workshop on observation/analysis-physical parameters expected from remote sensing

Date : 26-27 March, 2004

Venue: RIHN

Coordinator: YOSHIMURA, Mitsunori

Topics:

- 1) Cloud Measurement and remote sensing
YOSHIMURA, Mitsunori (RIHN)

- 2) Phenology Observation by using shortwave infrared spectral characteristics
KAWATO, Wataru (National Institute of Advanced Industrial Science and Technology)
- 3) Modeling of the energy, water, and carbon dioxide exchange process between the forest and the atmospheres
KUMAGAI, Tomoomi (Kyushu University)
- 4) Present Status of PEN - Automatic fish-eye digital camera
TSUCHIDA, Satoshi (National Institute of Advanced Industrial Science and Technology)

The Workshop on Kohmatsu Project

Date: 22-23 March, 2004

Venue: North Lake Biwa

Coordinator: KOHMATSU, Yukihiro (RIHN)

Public lectures

Coordinator: MOMOKI, Akiko, Associate Professor

Lecture on the environment to residents in Kasuga area community

Date: 23 May, 2003

Theme : People and nature in South India

Speaker : UMETSU, Chieko (Associate Professor)

Consulting meeting with residents in Kasuga area community

Date: 16 June, 2003

Theme : Glacial variation and water resource

Speaker: TAKEUCHI, Nozomu (Assistant Professor)

Date: 16 February, 2003

Theme: What is "living together"?

Speaker: UCHIYAMA, Junzo (Associate Professor)

Outreach Programs and Events

1. RIHN Forum

“What are the global environmental problems?” “What are the integrated global environment studies?”
“What will be the outcomes of such studies?” “What will be the future of the global environmental problems?” “Will their solution be possible?”

The RIHN Forum is organized, based on the principles and outcomes of the RIHN's research activities, and especially on the understanding that “the so-called environmental problems are fundamentally problems of human culture”, to raise questions and animate discussion about up-to-date topics around the problems, to help us find answers to the above fundamental questions.

The 2nd RIHN Forum

Global Warming — Nature and Culture

13:30-18:00, Friday, 13 June, 2003 (Japanese-English simultaneously interpreting)
Kyoto International Conference Hall Annex Hall

Program

13:30 – 13:40 Opening address HIDAKA, Toshitaka, Director-General, RIHN

Part 1. Lectures

13:40 – 14:25 “Global warming issues perceived by an atmospheric scientist”
HAYASAKA, Tadahiro, Professor, RIHN

14:25 – 15:10 “Agriculture — Wisdom of Land and Water - in front of Global Warming”
WATANABE, Tsugihiko, Professor, RIHN

15:10 – 15:30 Coffee Break

Part 2. Panel Discussion

15:30 – 18:00 MOJI, Kazuhiko × UEDA, Makoto × HAYASAKA, Tadahiro × WATANABE, Tsugihiko ×
HIDAKA, Toshitaka

Topic 1. How will global warming affect people's health and life in developing countries?
MOJI, Kazuhiko, Professor, Nagasaki University

Topic 2. Historical Backgrounds of Global Warming
UEDA, Makoto, Professor, Rikkyo University

Chair : AKIMICHI, Tomoya, Professor, RIHN

2. Research Seminars

2-1 RIHN Seminars

The RIHN Seminars are organized to provide opportunities for the RIHN's scientists to share the latest topics and research trends in different fields of global environment research with speakers invited from Japanese or foreign institutes, and to get inspired with new directions of research; these seminars also serve to create substantial collaborations in research between RIHN and such other institutes. Several seminars are held a year, where well-studied and reflected subjects of different fields are chosen for discussion.

April 2003-March 2004

The 9th 11 June, 2003

Speaker : Dr. ZhongXiang ZHANG (Senior Economist, East-West Center, Honolulu, Hawaii, USA)

Title : Towards a less carbon intensive economy in China: Accomplishments, joint accession and the path forward

Abstract : Given the global characteristics of climate change and China's, importance as a source of future CO₂ emissions in line with its industrialization and urbanization, balancing China's energy needs to fuel its economic growth with the resulting potential impacts of climate change presents an enormous climate policy dilemma, not simply for China but for the entire world. This is the major reason why the role of China is an issue of perennial concern in the international climate change negotiations.

In my talk, I will first examine the historical contributions of inter-fuel switching, energy conservation, economic growth and population expansion to China's CO₂ emissions. Next, I will talk about to what extent China can benefit from participating in international emissions trading. Then, I will discuss whether recent proposal for a joint cap-and-trade arrangement between China and the US is in the interest of China. Finally, I will address why China has consistently refused in international negotiations even to discuss participation in a global cap-and-trade regime even if such a regime is so beneficial to China, and envision the path forward keeping international climate negotiations moving.

The 10th 4 September, 2003

Speaker : Prof. Jiftah BEN-ASHER (Ben Gurion University of Negev, Visiting Prof.)

Title : Water availability in Israel in the year 2020

Abstract : Technological development of irrigation has improved the water use efficiency (WUE) dramatically during the last 5 decades. One may identify two decades of sharp reduction in annual water application. First from 1950 to 1960, when pressurized irrigation (sprinkler irrigation) replaced surface (gravitational) irrigation, and the second decade from 1970 to 1980, when trickle irrigation replaced sprinkler irrigation. These technological changes along with the introduction of the National Water Carrier have enabled Israel to increase the irrigated areas by about five folds during this period. Moreover, during these years the relative agricultural productivity has been also notably improved and raised 2.5 times from the reference year in 1955. In spite of the impressive development in our ability to save water and improve water use efficiency at the same time, several consecutive years of drought and overuse of water have lowered the Israeli water reservoirs level below the "red line" which marks a point of water catastrophe. With the current water crisis, should we stop irrigated agriculture and return to the rain-fed agriculture? In this lecture I tried to address the questions.

The 11th 19 September, 2003

Speaker: Prof. TAKENAKA, Toru (Western history, Osaka Univ. Graduate School of Letters)

Title: "Is 'Ecology' leftist?"— Backgrounds in terms of thought for the environmental protection in modern Germany

The 12th 9 October, 2003

Speaker: Prof. KIKKAWA, Jiro (Rainforest Cooperative Research Centre, The University of Queensland, Australia)

Title: Aesthetic values of tropical rain forests.— A novel method to derive perceptual description
Abstract: In Australia, the wet tropical rain forests of some 900,000 ha survive today as islands of closed dark-green vegetation, designated as a World Heritage Area. Their ecological integrity is propounded and needs to be interpreted as a cultural resource.

In collaboration with Professor Ken Polakowski, a landscape architect from University of Michigan, Dr Len Webb (formerly of CSIRO Rainforest Ecology Unit) and I developed a method to identify the aesthetic values derived from selected criteria of landscape features by deducing the physical and biological factors of the rain forest that contribute to an observer's aesthetic perception. It does not attempt to evaluate, rank or compare different forests aesthetically.

The rain forest perceptual effect is the result of the observer's comprehending or visually constructing a defined or enclosed space within a forest and the synthesizing of instant cognition and expectations. To apply the properties of site values to rain forest perceptual effects, we reduce the macro-scale of the landscape to the micro-scale of the rain forest volume, in which the observer is situated. We then test the assumption that particular rain forest perceptual effects, such as serenity, grandeur, seclusion, mystery and gaiety, can be described through combinations of site values by means of objective scoring. The trial of this methodology at 38 diverse rain forest sites in north Queensland indicated that there is a wide range of perceptual differences between sites, which roughly correspond to the ecological criteria on the one hand, and to presumed rain forest perceptual effects on the other. Further validation is necessary, but these linkages provide a fresh approach to nature conservation, management and interpretation of rain forests.

2-2 Luncheon 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 2003 — March 2004

- No.38 7 April, 2003
 Speaker: Assist. Prof. KOHMATSU, Yukihiro (Research Promotion Center)
 Title: Introduction of my study and research plan.
- No.39 21 April, 2003
 Speaker: Dr. KOMATSU, Hikaru (research fellow)
 Title: Introduction of my study and research plan.
- No.40 7 May, 2003
 Speaker: Prof. YUMOTO, Takakazu
 Title: Mutualism in biotic communities and coexistence of human and nature
- No.41 19 May, 2003
 Speaker: Assoc. Prof. TANIGUCHI, Makoto
 Title: Groundwater — Integrations of scales in time and space under pressures by human and environmental changes —
- No.42 2 June, 2003
 Speaker: Dr. MATSUOKA, Masayuki (RR research fellow)
 Title: Land surface monitoring by optical remote sensing
- No.43 16 June, 2003
 Speaker: Assoc. Prof. NONAKA, Kenichi
 Title: The study of the relationship between human and insect
- No.44 30 June, 2003
 Speaker: Dr. CHEN, Jianyao (RR research fellow)
 Title: Groundwater — a 'tracer' for human activity and natural process, case study in the North China Plain (NCP)
- No.45 7 July, 2003
 Speaker: Dr. HOSHIKAWA, Keisuke (RR research fellow)
 Title: Water use for agriculture in Asia: Tradition and Modernization
- No.46 22 July, 2003
 Speaker: Prof. VON FALKENHAUSEN, Lothar (visiting professor)

- Title: On anthropology in China
- No.47 1 September, 2003
Speaker: Assist. Prof. ABE, Hiroshi
Title: Why is the word "Symbiosis (kyosei)" so popular in Japan?
- No.48 21 October, 2003
Speaker: Dr. TAKAHASHI, Atsuhiko (research fellow)
Title: Studies on CO₂ production within forest soil and momentum transport in the atmospheric turbulence
- No.49 4 November, 2003
Speaker: Prof. KINOSHITA, Tetsuya
Title: Nature and maternal right
- No.50 17 November, 2003
Speaker: Assoc. Prof. NARITA, Hideki
Title: Role of glaciological study in "Amur-Okhotsk" (2-3FS) project
- No.51 25 November, 2003
Speaker: Dr. NISHIMURA, Yuichiro (research fellow)
Title: Geography and daily life: gender perspective to consider human-nature relationship
- No.52 1 December, 2003
Speaker: Prof. OSADA, Toshiki
Title: India from 1978 to 2003 —nature-oriented society vs. norm-oriented society-
- No.53 15 December, 2003
Speaker: Assoc. Prof. KANAE, Shinjiro
Title: Simulated 100-year land surface hydrology, flood, drought, and some expectations for future related studies
- No.54 15 December, 2003
Speaker: Assoc. Prof. UCHIYAMA, Junzo
Title: Beyond the affluent image of the past: Reconstructing various their formation process of prehistoric societies
- No.55 2 February, 2004
Speaker: Assoc. ICHIKAWA, Masahiro
Title: Land use by the Iban of Sarawak, East Malaysia
- No.56 17 February, 2004
Speaker: Prof. SATO, Yo-ichiro
Title: An attempt of in situ conservation of wild rice : Keywords : wild rice genetic resources genetic diversity
- No.57 1 March, 2004
Speaker: Prof. OKUMIYA, Kiyohito
Title: Ageing and health, in the association with culture and environment- a new approach by field medicine
- No.58 15 March, 2004
Speaker: Assoc. Prof. ZHENG, Yuejun
Title: Considering the possibility of international harmony on environmental issues from viewpoints of cross-cultural survey
- No.59 29 March, 2004
Speaker: Assist. Prof. TAKEUCHI, Nozomu (colloquium coordinator)
Title: Discussion on RIHN colloquiums 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, 2003 – March, 2004, Evening Seminars (Shusen Saloon)

No.6 23 May, 2003

Speaker: Assoc. Prof. UMETSU, Chieko

Title : Thoughts in India-Grass-roots global environmental studies from grass-root perspective

No.7 17 June, 2003

Speaker: Assist. Prof. TAKEUCHI, Nozomu

Title : Nippon viewed from Alaska. How RIHN to lead Japan and the world?

No.8 26 September, 2003

Speaker: Assist. Prof. TAYASU, Ichiro

Title: "Sogo Chikyu Kankyogaku Kenkyujo" and "Research Institute for Humanity and Nature"

No.9 17 October, 2003

Speaker: Assoc. Prof. OKI, Taikan

Title : Future global environmental studies

No.10 14 November, 2003

Speaker: Director-General. HIDAKA, Toshitaka

Title : What does RIHN do?

No.11 13 January, 2004

Speaker: Assist. Prof. YATAGAI, Akiyo

Title: Global environmental studies from the perspective of the Bible- What does Noah's flood mean?-

No.12 19 February, 2004

Speaker: Prof. SAITO, Kiyooki

Title: On the next RIHN Forum

No.13 26 February, 2004

Speaker : Dr. HARROLD, Timothy (JSPS post-doctoral fellow)

Title : The first half

What Christians think about the environment

The second half

My experiences regarding education, climate change research, and research funding in Australia.

3. Presentation of Project Research

Venue: Kyoto Pa-lu-lu Plaza

Date: Dec. 22-Dec. 23, 2003

Individual Achievements

Individual Achievements

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 (1995-2001)

The Corporate Adviser for the Opening of the University of Shiga Prefecture (1993-1995)

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)

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, Japan Association for International Centre of Insect Physiology and Ecology, The Japanese Society for Comparative Physiology and Biochemistry, International Society for Neuro-Ethology, Société 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 System Studies, etc.

Major Publications

Books

Year of publication *Original Japanese title* (English Translation) . Publisher,

Hidaka, Toshitaka

2003 *Dobutsu to ningen no sekaininshiki* (Recognition of the "World" in animals and man) . Chikuma Shobo [in Japanese]

<Co-Authored Books>

Hidaka, Toshitaka et al.

2003 *Man-yō kodaigaku* (Old Age of Man-yō) Daiwa Shobo [in Japanese]

2003 *Watashi no sensei* (My Teachers) Iwanami Shoten. [in Japanese]

<Supervised Book>

2004 *Sekai dobutsu daizukan* (Translated edition of "Animal") , Neco Publishing. [in Japanese]

Articles

Year of publication Original Japanese Title of Article (English Translation) . *Original Japanese Title of Dissertation/Journal* (English Translation) . Publisher.

Yasuoki Takami, Chiharu Koshio, Minoru Ishii, Hisashi Fujii, Toshitaka Hidaka and Isamu Shimizu

2004 Genetic diversity and structure of urban populations of *Pieris* butterflies assessed using amplified fragment length polymorphism. *Molecular Ecology* 13: 245-258.

Eiko Kan, Narao Fukuhara, and Toshitaka Hidaka

2003 Parasitism by tachinid parasitoids (Diptera: Tachinidae) in connection with their survival strategy. *Applied Entomology and Zoology* 38 (1): 131-140.

Essays

Hidaka, Toshitaka

2004

March Marēsia no rōtari (The rotary system in Malaysia: Note of My Travels All Over the World, "Zenjin" Tamagawa University Press)

March Cho no Seibutsutayosei (Biodiversity in the intestine: Nekonome-gusa, "Nami" Shinchosha) .

March Inu to Boku no bimyo na kankei (Delicate relation of the Dog with me: "Inu no irujinsei Inu no irukurashi" Bungeishunju)

March Idenshi no Takurami (The conspiracy of the genes: Gakushi-kai kaiho)

February Supittsuberugen (Spitsbergen:Note of My Travels All Over the World, "Zenjin" Tamagawa University Press)

February Kinoko wo Taberu Katatsumuri (Snails that feed on fungi: "Tengan" The Kyoto Shinbun)

February Kininaru Kotoba (Words which make me worry: Nekonome-gusa, "Nami" Shinchosha)

February Iryujon wa Genso ka (Is illusion mere fantasy?: "Chikuma" Chikumashobo)

February Kyodo to Sozo de Kanaderu Chiiki-jichi (The regional autonomy:Zenkoku jichi Seisaku kenkyu koryu-kai sinpojiumu)

January Shimokita-Hantō no Osore-zan (Mt.Osorezan of Shimokita:Note of My Travels All Over the World, "Zenjin" Tamagawa University Press)

January Hōjin-ka (The national "corporation": "Tengan" The Kyoto Synbun)

January Yukimushi (The snow-insects: Nekonome-gusa, "Nami" Shinchosha)

January Oroka de Kashikoi Boku no Onjin (My benefactors who are stupid as well as clever "Watashi no Onjin" Seiron)

January Yama kara oritekita Saru (The monkeys who have come down from the hills: "Sinsyun zuiso" Houken)

2003

December Taiwan Poli no Pinkie-chan (The sweet "Pinky" of Taiwan: Note of My Travels All Over the World, "Zenjin" Tamagawa University Press)

December Kawa no Hyōjō (The looks of rivers: "Tengan" The Kyoto Shinbun)

December Rainen no Eto: Saru (Monkey: the animal of the coming year: 'Each World for Animals' The Chunichi Shinbun)

December Yasei no Kenkō (The health of the wild: Nekonome-gusa, "Nami" Shinchosha)

December Seito no manabu iyoku wo kanki-suru Risū no Jugyō (The lesson of science and mathematics which encourages pupils)

December Tokyo Monshiro·Sujiguro Monogatari (Pierid butterfly stories in Tokyo: Monthly Magazine "The National Science Museum")

November Kiki no Masai-Mara (My wife KiKi in Masai-Mara National Park: Note of My Travels All Over the World, "Zenjin" Tamagawa University Press)

November	Hito wa Jitsubutsu ga Mieruka? (Can we see the "reality"?: Nekonome-gusa, "Nami" Shinchosha)
November	Sagi ni Tsumetai Man-yōjin (The ancient Japanese who were not kind to herons: 'Each World for Animals' The Chunichi Shinbun)
November	Gakkō no soto de Sekai wo shiru (Knowing world outside of school: "Anokoro" The Yomiuri-Shinbun)
November	Ima Naze Natural History ka (Why the Natural History now?: "Natural History and Folklore" Kyoto Univ. Press)
October	Kōmori (The Bat: Fresh Mama in Animals' World, Tamago-club)
October	Doitsu no shōtoshi Tübingen (Tübingen-a small town in Germany: Note of My Travels All Over the World, "Zenjin" Tamagawa University Press)
October	Tabi suru chō (The butterflies which travel: "Tengan" The Kyoto Shinbun)
October	Inoshishi (Wild Boar: 'Each World for Animals' The Chunichi Shinbun)
October	Yūyake-koyake no Akatombo (Dragonfly in the sunset: Nekonome-gusa, "Nami" Shinchosha)
September	Raion (The Lion: Fresh Mama in Animals' World, Tamago-club)
September	Fushigi no shima, Kami no shima Bari (Bali: Island of mystery: island of the God: Note of My Travels All Over the World, "Zenjin" Tamagawa University Press)
September	Seibutsutayōsei (The Biodiversity: "Tengan" The Kyoto Shinbun)
September	Tombo (The Dragonfly: 'Each World for Animals' The Chunichi Shinbun)
September	Semi-tachi to Ondan-ka (Cicadas and the global warming: Nekonome-gusa, "Nami" Shinchosha)
September	Kankyōkenkyū no Genjō to Kadai (The present and future of environmental research: The 20 th Anniversary Commemoration talk, Bulletin 'Rekihaku', National Museum of Japanese History)
August	Tsubame (The Swallow: Fresh Mama in Animals' World, Tamago-club)
August	Sarawaku no Cat City (The Cat City of Sarawak: Note of My Travels All Over the World, "Zenjin" Tamagawa University Press)
August	Shako-gai (The Giant Clam: 'Each World for Animals' The Chunichi Shinbun)
August	Jōshiki to Tōwaku (2) (The common knowledge and the embarrassment 2 :Nekonome-gusa, "Nami" Shinchosha)
July	No-usagi (The Hare: Fresh Mama in Animals' World, Tamago-club)
July	Iru do Re (L'île de Re: Note of My Travels All Over the World, "Zenjin" Tamagawa University Press)
July	Iriomote-jima (The Iriomote Island : "Tengan" The Kyoto Shinbun)
July	Natsu no Semi-tachi (Cicadas of the summer: 'Each World for Animals' The Chunichi Shinbun)
July	Jōshiki to Tōwaku (1) (The common knowledge and the embarrassment 1: Nekonome-gusa, "Nami" Shinchosha)
June	Enaga (A bird with the beautiful nest: Fresh Mama in Animals' World, Tamago-club)
June	Chūgoku-Ranshū no maboroshi no Suzuri (The reputed inkstone of Lan Zhou, China: Note of My Travels All Over the World, "Zenjin" Tamagawa University Press)
June	Hon o dō uru-ka? (How to sell books? : "Tengan" The Kyoto Shinbun)
June	Kōmori (The Bat: 'Each World for Animals' The Chunichi Shinbun)
June	Aru Seibutsu-Gaka (A natural painter: Nekonome-gusa, "Nami" Shinchosha)
June	Hito to Shizen (People and Nature: 'Koen-Ryokuchi' Parks and Open Space Association of Japan)
June	Mongoru no michi (The road in Mongolia: 'Expressway and Car' Express Highway and Research Foundation of Japan)

May	Kangarū (Kangaroo: Fresh Mama in Animals' World, Tamago-club)
May	Herushinki, Tanuki no Fuku to Finlando-go (Helsinki-Clothes of Raccoon dog and Finnish Words: Note of My Travels All Over the World, "Zenjin" Tamagawa University Press)
May	Taue-ki no Omoide (The rice-planting machine: "Tengan" The Kyoto Shinbun)
May	En-gai (The Monkey-caused damages: 'Each World for Animals' The Chunichi Shinbun)
May	Haru no Omoi (Feeling the spring: Nekonome-gusa, "Nami" Shinchosha)
May	Ikimono no Katachi to Iro to Moyō (Figure, Color and Design of Living things : 'MAKINO Yonekichi Ikimono Zukan')
April	Togeuo (The stickleback: Fresh Mama in Animals' World, Tamago-club)
April	Afurika no Omiyage (Souvenir of Africa: Note of My Travels All Over the World, "Zenjin" Tamagawa University Press)
April	Bigaku to Ningen-sei (Aesthetics and Humanity: "Tengan" The Kyoto Shinbun)
April	Wataridori Yurikamome (The Laughing gull: a migratory bird : 'Each World for Animals' The Chunichi Shinbun)
April	Matsugare no mushi to Sei feromon (Pine-killing beetles and their sex pheromones: Nekonome-gusa, "Nami" Shinchosha)

Activities in Academic Societies

Director-General, Kyoto Municipal Science Center for Youth; Councilor, Kyoto University Center for Southeast Asian Studies; Councilor, National Institute of Polar Research; Councilor, Okazaki National Research Institute; Councilor, National Institute for Basic Biology, Okazaki National Research Institute; Councilor, Institute of Low Temperature Science, Hokkaido University; Councilor, Japan Aerospace exploration Agency, Institute of Space and Astronautical Science; Councilor, Shimonaka Memorial Foundation; Councilor and Chairman, Biwako Hall; Chairman of The Steering Committee, Biwako Prize for Ecology, Shiga Prefectural Government; Adviser, Nature Film Network; Adviser, The University of Shiga Prefecture; Councilor, The Inamori Foundation; Selector, Foundation of The International Garden and Greenery Exposition Osaka, Japan 1990; Commissioner, Nakayama Science Foundation; Commissioner, Suntory Chemical Biology Institute; Adjunct Instructor, The University of Shiga Prefecture; Adjunct Instructor, Study and Training Courses in Japanese Language and Culture, The Center of Student Exchange, Kyoto University; Adjunct Instructor, The University of Air

Awards

Nihon Esseisuto Kurabu shō in 2002 (The 50th Japan Essayist Club Awards 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

2004

January "Dōbutsu Kōdō-gaku to Kyōiku no Shiza (Ethology and the viewpoint for education)", lecture, Board of Education of Yasu, Shiga Prefecture [in Japanese]
 January "Ningen towa dōi Dōbutsu ka (What animals are Human Beings?)", lecture, Cultural Association for Tanabe-city and Kinan Culture Hall [in Japanese]

2003

December "Imanishi, Kinji ga hasshinsuru mono (What is said by Kinji Imanishi)", discussion,

	'Kagaku' Iwanami Shoten [in Japanese]
November	"Dōbutsu Kōdō-gaku kara mita Kosodate (Child-raising viewed from Ethology)", lecture, Parent-Teacher Association of Takashima High School [in Japanese]
November	"Puroguramu sareta Oi (The programmed senescence)", keynote speech, Sankeisinnbun and 2100committee of Kansai [in Japanese]
October	"Iroirona dōbutsu no iroirona ronri (Various logics of various animals)", lecture, Kyoto city Zoo 100 th Anniversary Commemoration [in Japanese]
October	"Kankyō towa nanika? (What is the environment?)", lecture, Yokaichi Citizen University [in Japanese]
September	"Byōki wa naze arunoka? (Why is there Illness?)", special lecture, the 42 nd All Japan Meeting for Community Health of Government-Run Health Insurance [in Japanese]
August	"Inochi towa nanika (What is "life"?)", lecture, Kameoka Citizen's Life Learning College [in Japanese]
July	"Iden to Gakushū to Kankyōmondai (Genetics, Learning and environmental problem)", lecture, Kyushu University [in Japanese]
July	"Mijikana shizen ni manabu (Learning from familiar nature)", lecture, the 10 th Anniversary Commemoration, the Forest Center of Honenin [in Japanese]
July	"Boku ga fushigini omottakoto (What I ever wondered)", lecture for children and their Parents of Ryogaoka Elementary School
July	"Shizen to dō tsukiau ka (How should we treat Nature?)", lecture, the 37 th College de Kameoka [in Japanese]
May	"Ningen towa dōiu dobutsu ka? (What kind of animals is a Human being?)", special speech, University of Human Environments [in Japanese]
May	"Mongoru kara saguru chikyū no mirai (Asking earth's future from Mongolia)", discussion about Mongolia 'Kagaku' [in Japanese]
May	"Kankyō-kenkyū no genjou to kadai (The present and future of environmental research)", 20 th Anniversary Commemoration talk, Bulletin 'Rekihaku', National Museum of Japanese History [in Japanese]
March	"Seibutsutayōsei wo kangaeru (Understanding the biodiversity)", lecture, National Institute of Science and Technology Policy

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, Faculty 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)

Fields of Specialization / Background

Ecological Anthropology, Ethno-Biology

Academic Society Memberships

The Society of Bio-Sophia Studies, The Society of Human and Animals Relations, Japanese Society of Coral Reef Studies, The Society of Ecological Anthropology, The Society of Environmental Sociology, The Society of Tropical Ecology, Japanese Society of Cultural Anthropology

Major Publications

Books

Co-authors

Akimichi, Tomoya

- 2004 Umi tonō kyōsei no chie: nihonkai engan no kita to minami (Wise knowledge to coexist with the sea: north and south of the Japan Sea) Koizumi Itaru and Seike Akitoshi eds. *Nihonkai-gaku no sinseiki : kiki to kyōsei*. (A new era of the Japan Sea studies: crisis and co-existence) , Kadokawa-Gakugei Shuppan, pp.280-290.
- 2004 5: Oseania no shimajima (5: Islands in Oceania) , Matsuura Ine ed., *Sekai shikōhin hyakka*. (Encyclopedia of appetizing food in the world) , San-ai shoten, pp.197-207.
- 2003 Bunka no naka no namazu- mekon to nyūginia no jirei kara. Sigakenritsu Biwako Hakubutsukan (ed.) *Namazu- sakana to bunka no tayōsei*. (Catfish and culture: cases of Mekong river and New Guinea. In Lake Biwa Museum ed., *Catfish- Diversity in fish and culture*) , pp.73-85, Sunrise Publishing Co.
- 2003 Umi to Jinrui. In Umi no ajia ① *Umi no paradaimu*. (The sea and human beings. In Maritime Asia ① The paradigm of the sea) , pp. 25-56. Iwanami Shoten. [in Korean]
- 2003 Yasei-seibutsu no hogo-seisaku to chiiki-shakai-ajia ni okeru chou to jugon (Conservation policy of wildlife and local societies: butterflies and dugong in Asia) Ikeya Kazunobu ed., *Chikyū-kankyō mondai no jinruigaku: sizen-sigen heno hyūman inpakuto* (Anthropology of global environmental issues: human impacts to natural resources) , Sekaishisō-sha, pp. 230-250.

Fumihito, Akishinomiya, Akimichi Tomoya and Kawanabe Hiroya

- 2003 Teidan: Namazu no miryoku. Sigakenritsu Biwako Hakubutsukan (ed.) *Namazu- sakana to bunka no tayōsei*. (A three-cornered talk: Attractive Catfish. In Lake Biwa Museum ed., *Catfish- Diversity in fish and culture*.) , pp.15-45, Sunrise Publishing Co.

Articles

Akimichi Tomoya, Ueda Makoto, Hidaka Toshitaka, Moji Kazuhiko, and Watanabe Hitotsugu

- 2004 Dai-ni-bu Paneru disukasshon. Chikyū-ken fōramu kouen kirokushū 2003. *Chikyū ondanka: shizen to bunka* (Part two Panel discussion. Proceeding of the 2nd Chikyūken forum: Global warming: Nature and Culture) , Research Institute for Humanity and Nature, pp.19-74.

Mori Koichi, Kojima Tomiko, Akimichi Tomoya, Tanabe Satoru, and Maehira Fusaaki

- 2004 Dentō-bunka Kassei-ka sinpojiumu: Umi ga hakobi sodateta dentō bunka (paneru disukasshon) (A symposium on promoting traditional culture: Dispersion and development of traditional maritime cultures) *Dentō-Bunka* 10 : 5-26.

Akimichi Tomoya, Kato Makoto, Hayashi Yoshihiro, and Fukui Katsuyoshi

- 2003 Zadankai: Minzoku-seibutsugaku wa nani wo mezasuka: Ikimono-bunkashi gakkai no hossoku ni atatte. (Discussion: The goal of the folk-biology: as the inauguration of the Society of Biosophia) , *Kagaku* 73 (6) : 696-703.

Miscellaneous

Akimichi, Tomoya

- 2004 Umi no minzoku chi wo kangaeru. *Hito to umi no kyosei wo mezashite. 150 nin no opinion.* (Considering local knowledge of the maritime world. Towards the coexistence of human and the sea. 150 opinions.) Ship and Ocean Foundation, pp. 304-305.
- 2004 Gendai no kotoba Tairyō shobun. (Words update Mass killing.) *Kyoto Shinbun* 3/22.
- 2004 Kyōto kara no tegami Inochi to kyōzon no mondai. (A letter from Kyoto Life and co-existence.) *Economist* 3/16: 66.
- 2004 Tokushū hi no yūwaku Isaribi monogatari. (Special issue on the luring fire A story of fishing fire.) *Yuhōjin* 3 (22) : 20-21.
- 2004 Kyōto kara no tegami Shitsugo shō ningen ga oosugiru. (A letter from Kyoto Too many apathic people.) *Economist* 2/17: 64.
- 2004 Gendai no kotoba Kurage to saigai. (Words update Jellyfish and hazard.) *Kyoto Shinbun* 1/23.
- 2004 Kyōto kara no tegami Shizen hogo ni daitai senryaku wa naimono ka. (A letter from Kyoto Is there alternative strategy in nature conservation ?) *Economist* 1/20: 69.
- 2003 Kyōto kara no tegami Nihon wa ierō kadō wo tsukitsukerarete iru. (A letter from Kyoto A yellowcard putting under Japanese nose.) *Economist* 12/16: 64.
- 2003 Sango-shō no yume to yūtsu- sono hozon to jizoku teki na riyō wo motomete. (Dream and depression for coral reefs: towards conservation and sustainable use.) *Rakuen* 12 : 52-54.
- 2003 Ikimono bunkashi biosutōri kankō ni saishite. (At the publication of Biostory.) *Biostory* 0 : 2-3.
- 2003 Kyōto kara no tegami Sin no kokueki towa nan darouka. (A letter from Kyoto What is the true benefit of the nation ?) *Economist* 11/18: 60.
- 2003 Gendai no kotoba Girei to shukusai. (Words update Ritual and feast.) *Kyoto Shinbun* 11/17.
- 2003 Minami kara no Nihon bunka (jō · ge) Sasaki Koumei cho. (Shohyō) (Japanese cultures from the south. Two volumes by Sasaki Komei.) (book review) *Nihon Keizai Shinbun* 10/26.
- 2003 Kyōto kara no tegami Pudiugu no youna mono. (A letter from Kyoto Like pudding.) *Economist* 10/21: 64.
- 2003 Kyōto kara no tegami Mekon gawa wo wataru dappokusha tachi. (A letter from Kyoto Escape from north Korea, crossing the Mekong.) *Economist* 9/23: 60.
- 2003 Gendai no kotoba Shizen no kimochi wo manabu. (Words update Lessons of nature's views.) *Kyoto Shinbun* 9/10.
- 2003 Kyōto kara no tegami Chibikko nachurarisuto no natsuyasumi. (A letter from Kyoto Summer vacation for the kids naturalists. *Economist* 8/26: 60.
- 2003 Kyōto kara no tegami Eirian wa gomi ijō ni yakkai da. (A letter from Kyoto Aliens are more troublesome than garbage. *Economist* 7/22: 70.
- 2003 Gendai no kotoba Kaihatsu to tenkan. (Words update Development and transition.) *Kyoto Shinbun* 7/16.
- 2003 Kyōto kara no tegami Kiki kanri nouryoku to omoiari. (A letter from Kyoto Risk management and sympathy.) *Economist* 6/24:72.
- 2003 Kyōto kara no tegami Ikimono tononō tayō na kankei wo saguru. (A letter from Kyoto Exploring diverse relations with living organisms. *Economist* 5/27: 64.
- 2003 Kyōto kara no tegami Uminchu no koe. (A letter from Kyoto Voices of fishermen.) *Economist* 4/22: 62.
- 2003 Kyōto kara no tegami Yamaneko no inai shima. (A letter from Kyoto An island that wildcat disappears.) *Economist* 3/25: 64.
- 2003 Kyōto kara no tegami Kawa wa nagare kankyō henka wa kuni wo koeru. (A letter from Kyoto Flowing rivers may change the environment beyond the nations.) *Economist* 1/28 : 64.
- 2003 Umi ga kieru! (Disappearing Sea.) *Yuhōjin* 2 (9) :11.
- 2002 Kyōto kara no tegami Mishiranu bunka ya koi wo ronzzuru haguruma. (A letter from Kyoto A gear

- wheel to discuss unknown culture and unfamiliar conduct.) *Economist* 12/24: 76.
- 2002 Fōramu to shiteno hito to doubutsu no kankei gakkai wo mezashite. (The Society of Human and Animal Relations as Forum.) *Journal of Human and Animal Relations* 12: 6-7.
- 2002 Kyōto kara no tegami Wazuka go senchi no itoyo naredo. (A letter from Kyoto stickleback despite of smallness of 5cm long.) *Economist* 11/26: 72.
- 2002 Kyōto kara no tegami Yama no bunka to sizen hogo no seishin. (A letter from Kyoto Culture in the mountains and nature conservation ethics.) *Economist* 11/5: 76.
- 2002 Kyōto kara no tegami Tai no gaikokujin rōdōsha. (A letter from Kyoto Overseas workers in Thailand.) *Economist* 10/1: 84.
- 2002 Nihon no chiiki shakai to yasei seibutsu wo kangaeru. (Consideration of local communities in Japan and wildlife. *Sokendai Journal* 2: 36-43.
- 2002 Kyōto kara no tegami Chikyū kankyō no shio kagen wo mamorunoha. (A letter from Kyoto To keep the earth in a good seasoning. *Economist* 9/3: 60.
- 2002 Koi suru mekon no ōnamazu. (Mekong giant catfish in mating.) *Quarterly journal of Vesta* 47: 51.
- 2002 Kyōto kara no tegami batā cha to chūgoku no kankyō mondai. (A letter from Kyoto Butter tea and environmental issues in China.) *Economist* 7/30: 70.
- 2002 Kyōto kara no tegami Kankyō mondai wa ningenbunka no mondai de aru. (A letter from Kyoto Culture as the cause of environmental issues. *Economist* 7/2 : 64.
- 2002 Fukahire. Kani Koumei, Shiwa Yoshinobu Yū Chū Kun eds., *Kakyō · Kajin jiten*, Koubundō. (Sharkfin. Kani Koumei, Shiwa Yoshinobu and Yu Chu Kun eds., Encyclopedia of Overseas Chinese and the Chinese. pp. 679-680, Koubundo.)
- 2002 Namako. Kani Koumei, Shiwa Yoshinobu Yū Chū Kun eds. *Kakyō · Kajin jiten*, Koubundō. (Sea-cucumber. Kani Koumei, Shiwa Yoshinobu and Yu Chu Kun eds., Encyclopedia of Overseas Chinese and the Chinese. pp. 584-585, Koubundo.)
- 2002 Kyōto kara no tegami Ningen to kujira wo meguru kankei. (A letter from Kyoto Relations between human and whale. *Economist* 6/4: 68.
- 2002 Mizu: chiiki de sekai de. Mekon-gawa ni miru hito to shizen. *Kyōto Shinbun* 5/29. (Human and Nature in the Mekong River.)
- 2002 Kyōto kara no tegami Hito to inu tonon aida niha. (A letter from Kyoto Between human and dog. *Economist* 4/30 & 5/7: 84.
- 2002 Umi no sekaishi no nakano ryūkyū rettō kaisanbutsu kōeki – tokuni kairui shigen ni furete Dai 4 kai Okinawa kenkyū kokusai sinpojiumu jikko iinkai (ed.) *Dai 4 kai Okinawa kenkyūkokusai sinpojiumu sekai ni hiraku okinawa kenkyū*. (Trade of marine products of Ryukyu Islands with spetial attention to gastropods: a perspective in the world history. In the 4th Okinawa study international symposium executive committee ed., Okinawa studies towards the world, pp. 426-432. [in Japanese]
- 2003 Kyōto kara no tegami Tatoeba negi nimo dorama ga aru. (A letter from Kyoto A drama of long onion.) *Economist* 4/2: 68 .
- Akimichi Tomoya and Hayashi Yoshihiro
- 2003 Tokushū Taidan: Bunka Jinruigaku no shiten. (Special dialogue: Scope of cultural anthropology.) *Aiken* 19 : 1-3.
- Akishinomiya Fumihito, Kawanabe Hiroya and Akimichi Tomoya
- 2003 Itoyo samitto pāto 1: Shizen to kyōsei suru machi zukuri sinpojiumu; Tansui gata itoyo seisoku kankyō hozon to mizu junkan wo kangaeru. (Stickleback summit part 1: Symposium on constructing the community to coexist with nature.) *Heisei 14 Report on the stickleback conservation program*. Otsuchi-cho, pp.7-14.
- Akimichi Tomoya, Akishinomiya Fumihito, Konagaya Yuki, Fukui Katsuyoshi and Yuasa Hiroshi
- 2003 Paneru disukasshon Ikimono to bunka no sougo sayō. (Panel discussion: Interaction between living organisms and culture.) *Bistory* 0 : 8-14.
- Akimichi Tomoya, Kuwako Toshio, Mori Seiichi, and Tamiya Yasumi

2003 Wākushoppu Ikimono to kurashi no tsunagari wo motomete. (Exploring links between living organisms and human life.) Biostory 0 : 16-23.

Academic Lectures

- May 9, 2003 Sango-shō ni okeru esuno-nettowāku no mondai (On the ethno-network in the coral reef world) (A lecture at JICA office), Yokohama City.
- May 10, 2003 Ikimono-bunkashi gakkai setsuritsu soukai: paneru disukasshon (The inauguration meeting of the Society of Biosophia Studies: Panel discussion) (chairperson), Tokyo.
- May 27, 2003 Ko ni yadoru zentai dai 3 kai kenkyūkai: yuki (chairperson), (The 3rd study meeting "From individuals to the whole"), Kyoto City.
- June 13, 2003 Dai 2 kai chikyū-ken fōramu: paneru disukasshon (The 2nd Chikyu-ken Forum: panel discussion) (chairperson), Kyoto City.
- June 29, 2003 Conservation of coral reef ecosystems and socio-economic dilemma. Paper presented at the JICA Seminar on the coral reef management. International coral reef monitoring center Ishigaki City.
- November 8, 2003 Ikimono-bunkashi to umi to ikiru koto no igi (Ikimono bunkashi gakkai dai 1kai gakujutsu taikai koukai sinpojiumu) (The Society of Biosophia Studies and the significance of living with the sea world) Oral presentation and chairperson, Toba City.
- November 14, 2003 Yasei-doubutsu no shoku wo kangaeru- jujutsu · shoku-bunka · byōki (Hito to doubutsu no kankeigakkai dai 19 kai gakujutsu taikai sinpojiumu) (Thinking on wildlife as food: magic, food culture and disease. The Society of Human Animal Relations the 19th academic meeting, symposium) (oral presentation and chairperson), Kyoto City.
- December 10, 2003 Biosutōri Taidan: Hotta Mitsuru shi (A Biostory dialogue with Dr. Hotta Mitsuru), Suita City.
- December 16, 2003 Biosutōri Taidan: Nakamura Keiko shi (A Biostory dialogue with Dr. Nakamura Keiko), Takatsuki City.
- December 20, 2003 Kaiyō shigen kanri to eko-komonzu (Houhou to shite no Okinawa kenkyu sinpojiumu. Umi kara no siza: Tousho-shakai ni okeru hito · mono · nettowāku) (marine resource management and ethno-network. Okinawa study symposium as methodology. Scope from the sea: people, artifacts and network) Oral presentation, Naha City.
- December 25, 2003 Niwatori no minzoku seibutsugaku. HCMR kaigi (Ethnobiology of chicken. Human-Chicken Multi-Relationships meeting), Bangkok City.
- January 22, 2004 Biosutōri Taidan: Imamori Mitsuhiro shi (A Biostory dialogue with Mr. Imamori, Mitsuhiro), Katada Cho.
- January 24, 2004 Chiiki, shakai, bunka to yasei seibutsu- kawa to sakana kara toyama wo kangaeru (Ikimono bunkashigakkai dai 2 kai reikai, Toyama Daigaku) (Area, society, culture and wildlife- thinking of Toyama from rivers and fish) (The 2nd meeting of the Society of Biosophia Studies, Toyama University) Oral presentation, Toyama City.
- January, 27, 2004 Biosutōri Taidan: Kawai Masao shi (A Biostory dialogue with Dr. Kawai Masao), Kaibara-Cho.
- February 1, 2004 Sigen to seitai-shi: kūkan ryōiki no senyū to kyōyū (Resources and eco-history: territoriality and the commons of the space), Oral presentation, Hachioji City.
- February 3, 2004 Marine Fisheries Conflict and Eco-Politics (Hiroshima University Comparative Study of Laws Seminar), Higashi-hiroshima City.
- February 6, 2004 Seitashi purojekuto ni tsuite (chikyuken purojekuto zentaikaigi) Koutouhappyou, Kagoshima Kenritsu Shiryou sentā Reimeikan, Kagoshima shi (On the Eco-history project: General meeting on the Eco-history Project), Oral presentation, Kagoshima City.
- February 8, 2004 Mangurōbu to Yonara Suidō (Sougou Kenkyū Daigakuin Daigaku Kyōdō Kenkyū) Taketomi-Cho, (Mangrove and the Yonara channel) (Joint study meeting of the

- Graduate University of Advanced Studies) . Taketomi-Cho.
- February 14, 2004 Biosutōri Taidan: Kagohashi Naoki shi (A Biostory dialogue with Mr. Kagohashi Naoki), Kyoto City.
- February 16, 2004 Biosutōri Taidan: Nakahigashi Hisao shi (A Biostory dialogue with Mr. Nakahigashi Hisao), Kyoto City.
- February 27, 2004 Yugō to tōgō ni mukete. Monbukagakushō (Toward merging and integration) Monbukagakusho, Tokyo.
- February 27, 2004 Biosutōri Taidan: Sugiura Kouhei shi (A Biostory dialogue with Mr. Sugiura Kouhei), Tokyo.
- March 5, 2004 Biosutōri Taidan: Oguro Yomo shi (A Biostory dialogue with Ms. Oguro Yomo), Kyoto City.

Activities in Academic Societies

Director of Science, Ministry of Education, Science, Technology and Sports (2002-) , Member, Preparatory Committee for the Agency of Inter-University Research Institutes (2002-) , Special member, 21 century COE program evaluation committee (2001-) , Chairperson, Committee of conservation of spring water environment, Otsuchi-Cho, Iwate prefecture (2001-) , Member of Editorial committee of Ecosophia (1998-) , Vice president, The Society of Domestic Fowl Studies (2001-) , A member, Evaluation committee of Research proposal in Lake Biwa Museum (1998-) , Research Cooperator, Center of Southeast Asian Studies, Kyoto University (1998-) , Joint researcher, National Museum of Ethnology (2002-) , Project Member, Exhibition Project in National Museum of Japanese History (2002-) , Part-time Lecturer, Graduate University of Advanced Studies (2002-) , Member, Promotion Committee, Maritime Culture Museum of National Okinawa Memorial Park (2003-) , Member, Promoting Organization of the Japan Seas Study (2003-) , Member, 2003 Technological Development of Maritime Zones of the Ministry of Land, Infrastructure and Transportation (2003) .

Awards

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

Research Activities

Field Research in Foreign Countries

- June, 2003 Thailand (Research on the Eco-History of Environmental Use in Northern Thailand)
- August, 2003 Thailand (Research on the ownership and management of Ing river watershed)
- November, 2003 China (Eco-historical study in Yunnan Province)
- January, 2004 Cambodia and Viet Nam (Use of aquatic resources in Cambodia and Viet Nam)

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

- Special researcher from Japan Society for the Promotion of Science (1)
- Special researcher from Indonesia as the foreign program of Japan Society for the Promotion of Science (1)
- Special post-graduate course student of Sokendai (2)

Social Activities and Public Lectures

Public Lectures

- January 25, 2004 Kakou kara mita shizen to bunka (Ichinomiya Shiritsu Hakubutsukan renzoku kouenkai) (Nature and culture looking from the estuary) Oral presentation, Ichinomiya City.
- February 11, 2004 Kawa to sakana no bunka - Kyōto to Nihonkai no hazamade (Kameoka Garelia

- kouenkai) Kameoka-shi (Culture of rivers and fish: between Kyoto and Japan Sea)
Kameoka Galeria Lectures, Kameoka City.
- February 29, 2004 Chiiki no takaramono wo sagasō : biosutōrī no siten (Ono shi Itoyo shinpojiumu)
(Looking for the treasure of the area: the scope of Biostory) (Itoyo symposium at Ono
City) , Ono City.
- March 23, 2004 Yūsui kankyō hozen kentō iinkai (A committee of conservation of spring water
environment) , Otsuchi-Cho.

FUKUSHIMA, Yoshihiro

Professor

Born in 1942.

Curriculum Vitae

Academic Career

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

Professional Career

Professor, Research Institute for Humanity and Nature, Inter-University Research Institute, Ministry
of Culture, Sports, Sciences and Technology (2001)

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

Associate Professor, Kyoto University (1989)

Instructor of Kyoto University (1966)

Higher Degrees

D.Agri (Kyoto University, 1981)

Fields of Specialization Fields / 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

Fukushima, Y.

2003 *Discharge in torrent, How to measure forest system*. Editorial Committee of Japanese Forestry
Society, Kokon Publication Ltd. 156-159. (in Japanese)

Articles

2003

S.Sirisampan, T.Hiyama, A.Takahashi, T.Hashimoto, Y.Fukushima (2003) : Diurnal and Seasonal Variations
of Stmatal Conductance in a Secondary Temperate Forest. *JJpn Soc.Hydro.&Water Resour.*, 16 (2) , 113-
130 (in Japanese with English Abstract) .

Committee of YRiS (the Yellow River Studies) (Sept. 2003) : Brochure of the Yellow River Studies.
http://www.chikyu.ac.jp/vris_RIHN_Japan

Committee of YRiS (Sept 1. 2003) : NewsLetter Vol. 1. <http://www.chikyu.ac.jp/vris> , RIHN, Japan

Committee of YRiS (scheduled on Feb. 2004) : NewsLetter Vol.2. <http://www.chikyu.ac.jp/vris> , RIHN,
Japan.

Fukushima, Y., M.Taniguchi, C.Liu (2003) : The Yellow River Studies - An Integrations of Hydrological
sciences on Atmosphere-Land-Ocean Interactions under the Climate Changes and Human Activities.
Global Water System Project Open Science Conference. Portsmouth, USA.

Hayasaka, T., Y. Fukushima, T. Watanabe and T. Oki (2003) : Yellow River Research Project: A study on the
relationship between water cycle and human activities, The 10th U.S.-Japan Workshop on Global

Climate Change, January 15-17, 2003, The Beckman Center, Irvine, USA.

Chen, J., C. Tang, Y. Fukushima and M. Taniguchi (2003) : Water environmental problems associated with natural processes and human activities in the lower reach of the Yellow River. Proc. The 1st Inter'l Yellow River Forum on River Basin Management, Vol.5, 263-274, Zhengzhou, China.

Ma, X., Y. Fukushima, C. Liu and X. Wu (2003) : A hydrological model application to the small tributary basin of the Yellow River. In EGS - AGU - EUG Joint Assembly, Nice, France.

Ma, X., Y. Fukushima and T. Yasunari. (2003) : Research of the hydrological modeling in northern region. In XXIII General Assembly of the International Union of Geodesy and Geophysics, Sapporo, Japan.

Matsuoka, M., T. Hayasaka, Y. Fukushima and Y. Honda (2003) : Land Cover Analysis over Yellow River Basin using Satellites Data in RR2002 Project, ISPRS WG VII/6 International Workshop on Monitoring and Modeling of Global Environmental Change.

Matsuoka, M., T. Hayasaka, Y. Fukushima and Y. Honda (2003) : Land Cover Classification over Yellow River Basin using Terra/MODIS in RR2002 Project, Asian Conference on Remote Sensing. Watanabe, T., Y. Fukushima, T. Hayasaka and T. Oki (Oct. 2003) : Perspective and Framework of An Innovative

Research Project on the Hydrological Water Cycle and Water Resources management in the Yellow River Basin - The inter'l integrated Yellow River research project of RIHN -. Proc. The 1st Yellow River Forum on River Basin Management, Vol.2, 23-29, Zhengzhou, China

Social Activities

Mar. 1995 – Sub-committee member of Natural Science, UNESCO Japan Domestic Committee

HAYASAKA, Tadahiro Professor

Born in 1959.

Curriculum Vitae

Academic Career

Department of Geophysics, Graduate School of Science, Tohoku University, D. Course (1988)

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

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

D. 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

Articles

2003 Hayasaka, T. et al., 2003: Aerosol and radiation measurements in Fukue-jima and Amami-ohshima islands, Japan during APEX-E3 campaign. Sixth International Symposium on Tropospheric Profiling,

- Leipzig, Germany, Sep. 14-19, 2003, pp. 222-224.
- 2003 Kawamoto, K., T. Hayasaka, T. Nakajima, D. Streets and J-H. Woo, Possible effects on low-level cloud properties by anthropogenic SO₂ emission, Proc. International Symposium on Tropospheric Profiling, Leipzig, Germany, Sep. 14-19, 2003, pp.300-302.
- 2003 Iwabuchi, H. and T. Hayasaka, Multi-spectral nonlocal method for retrieval of boundary layer cloud optical thickness and droplet effective radius, *Remote Sensing Environment* 88, 294-308.
- 2003 Kuba, N., H. Iwabuchi, K. Maruyama, T. Hayasaka, T. Takeda, and Y. Fujiyoshi, Parameterization of the Effect of cloud condensation nuclei on the optical properties of a non-precipitating water layer cloud, *J. Meteor. Soc. Japan* 81, 393-414.

Activities in Academic Societies

Committee Member etc.

- 2001-present IAMAS International Radiation Commission Member
- 2001-present WCRP GEWEX Radiation Panel Member
- 1996-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
- 2003 Organizing committee member of the 1st Asia-Pacific Radiation Symposium Oral Presentation etc.
- 2003 Hayasaka, T., Overview of aerosol and radiation measurements in Fukuejima during APEX-E3, 6th APEX International Workshop, June 25-27, 2003, Amaji, Japan.
- 2003 Hayasaka, T. and Y. Muraji, A brief review of observational studies on aerosol physical properties in east Asia, International Union of Geodesy and Geophysics (IUGG) general assembly, Jun. 30-Jul. 11, 2003, Sapporo, Japan.
- 2003 Hayasaka, T., K. Kawamoto and J. Xu, Surface Shortwave Radiation Budget over China, The 1st Asia-Pacific Radiation Symposium (APRS) , Aug. 25-27, 2003, Xian, China.
- 2003 Kawamoto, K., T. Hayasaka, T. Nakajima, D. Streets and J. Woo, Implication of human activity in low-level clouds over China via long-term monitoring from satellites, International Union of Geodesy and Geophysics (IUGG) general assembly, Jun. 30-Jul. 11, 2003, Sapporo, Japan.
- 2003 Kawamoto, K., T. Hayasaka, T. Nakajima, D. Streets and J. Woo, Behaviors of low cloud properties to anthropogenic SO₂ emission over China, The 1st Asia-Pacific Radiation Symposium (APRS) , Aug. 25-27, 2003, Xian, China.
- 2003 Kawamoto, K., T. Hayasaka, T. Nakajima, D. Streets and J. Woo, Cloud properties derived from satellite remote sensing and their relationships with other factors in East Asia, EGS (European Geophysical Society) -AGU (American Geophysical Union) - EUG (European Union of Geosciences) Joint Assembly, Apr. 6-11, 2003, Nice, France.
- 2003 Kawamoto, K., T. Nakajima and T. Hayasaka, Long-term analysis of the cloud parameters derived from AVHRR data, International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences, Vol. XXXIV, Part. 7/W14, J4, International Workshop on Monitoring and Modeling of Global Environmental Change, 21-22 October 2003, Kyoto, Japan
- 2003 Kawamoto, K., T. Hayasaka, T. Nakajima, D. Streets and J. Woo, Implications of the anthropogenic SO₂ emission in low-level clouds over China, Gordon Research Conference on 'Solar Radiation and Climate' , July 13-17, 2003, New London, NH, USA.
- 2003 Matsuoka, M., T. Hayasaka, Y. Fukushima, and Y. Honda, Land cover analysis over Yellow River basin using satellite data in RR2002 project, International Workshop on Monitoring/Modeling Global Environmental Change, October, 2003, Kyoto International

Community House, Kyoto, Japan.

- 2003 Matsuoka, M., T. Hayasaka, Y. Fukushima, and Y. Honda, Land cover classification over Yellow River basin using Terra/MODIS in RR2002 project, Asian Conference on Remote Sensing, November, 2003, Busan Exhibition and Convention Center, Busan, Korea.

Social Activities and Public Lectures

Public Lectures

- 2003 Global warming issues perceived by an atmospheric scientist, The 2nd RIHN Forum, 13 June 2003, Kyoto International Conference Hall Annex Hall, Kyoto, Japan

KINOSHITA, Tetsuya

Professor

Born in 1950.

Curriculum Vitae

Academic Career

- Department of Philosophy, Faculty of Literature, Kyoto University, D. Course (1979)
 Department of Philosophy, Faculty of Literature, Kyoto University, M. Course (1976)
 Department of Philosophy, Faculty of Literature, Kyoto University (1974)

Professional Career

- Professor, Research Institute for Humanity and Nature (2003)
 Professor, Faculty of Literature, Okayama University (2001)
 Assistant Professor, Faculty of Literature, Okayama University (1984)
 Instructor, Faculty of Literature, Okayama University (1981)
 Research Assistant, Faculty of Literature, Kyoto University (1979)

Higher Degrees

M. Sc. (Kyoto University, 1976)

Fields of Specialization / Background

Chinese philosophical history, Neo-Confucianism, History of Chinese Classical Studies

Academic Society Memberships

The Sinological Society of Japan, The Institute of Eastern Culture, The Society of Oriental Researches

Major Publications

Books

Kinoshita, Tetsuya

- 1999 *Shuki saidoku – Shushigaku rikai no ichi josetsu* (Reread of Zhu-xi's Texts – An Introduction to Understanding Neo-Confucianism) . Kenbunshuppan. [in Japanese]

Articles

- 2003 Tsuchida-Kenjiro-shi "Dogaku no keisei" dai 4 sho 'Teii no shisou to dogaku no tojo' wo yomu (Read the chapter 4 'Ch' eng I' s 程頤 Philosophy and Formation of Tao-hsüeh 道学' of Tsuchida Kenjiro' s 土田健次郎 "The Formation of Tao-hsüeh") *Toyo-kotengaku-kenkyu* (Journal of Oriental Classical Studies) 16: 183-202. [in Japanese]
- 2003 Shushigaku no ichi [XI] – Junchi no risou to genjitu [IV] (On the place of Neo-Confucianism in the Whole Chinese History [XI] – Ideal and Reality of Cultivating [IV]) . *Toyo-kotengaku-kenkyu* (Journal of Oriental Classical Studies) 16: 13-39. [in Japanese]
- 2003 Shushigaku no ichi [X] – Junchi no risou to genjitu [III] (On the place of Neo-Confucianism in the Whole Chinese History [X] – Ideal and Reality of Cultivating [III]) . *Toyo-kotengaku-kenkyu* (Journal of Oriental Classical Studies) 15: 1-22. [in Japanese]

- 2003 *Shushi no shizenkan (Zhu-xi's view of nature) . Kankyo to bunka, bunmei, rekishi (Culture, Civilization, History and Environment) . Okayama-daigaku: 49-57. [in Japanese]*
- 2002 *Shushigaku no ichi [IX] – Junchi no risou to genjitu [II] (On the place of Neo-Confucianism in the Whole Chinese History [IX] – Ideal and Reality of Cultivating [II]) . Toyo-kotengaku-kenkyu (Journal of Oriental Classical Studies) 14: 39-71. [in Japanese]*
- 2002 *Shushigaku no ichi [VIII] – Junchi no risou to genjitu [I] (On the place of Neo-Confucianism in the Whole Chinese History [VIII] – Ideal and Reality of Cultivating [I]) . Toyo-kotengaku-kenkyu (Journal of Oriental Classical Studies) 13: 81-103. [in Japanese]*
- 2001 *Shushigaku no ichi [VII] – “Boken” no genjitu [V] (On the place of Neo-Confucianism in the Whole Chinese History [VII] – Actuality of Maternal Rights in Classical China [V]) . Toyo-kotengaku-kenkyu (Journal of Oriental Classical Studies) 12: 21-50. [in Japanese]*
- 2001 *Rongo ni arawareru dai-ichi-ninsho-daimeisi “yu 予” ni tuite (On the first person “yu 予” of Lun-yü) . Kotengaku no saikochiku, dai ikki kobo-kenkyu ronbunshu: 186-193. [in Japanese]*
- 2001 *Syogaku (Studies of Letters and Words in Classical China) . Chugoku shiso bunka jiten, Tokyo-daigaku-shuppankai: 360-364. [in Japanese]*
- 2001 *Shushigaku no ichi [VI] – “Boken” no genjitu [IV] (On the place of Neo-Confucianism in the Whole Chinese History [VI] – Actuality of Maternal Rights in Classical China [IV]) . Toyo-kotengaku-kenkyu (Journal of Oriental Classical Studies) 11: 1-21. [in Japanese]*
- 2001 *Shincho-Koshogaku to Rongo (Classical Studies of the Qing Dynasty and Lun-yü) . Gekkan-sinika, Taishukan-shoten: 52-57. [in Japanese]*
- 2000 *Tei-isen no “shu-itu” ni tuite (On a meaning of Cheng-yichuan's “zhu-yi”) . Okayama-daigaku Bungakubu Kiyo (Journal of the Faculty of Letters, Okayama University) 34: 235-244. [in Japanese]*
- 2000 *Shuki no shisaku, sono omozasi to kanosei (Features and Possibilities of Chu His' s Reflections) . Nihon-chugoku-gakkaiho (Bulletin of the Sinological Society of Japan) 52: 133-147. [in Japanese]*
- 2000 *Shushigaku no ichi [V] – “Boken” no genjitu [III] (On the place of Neo-Confucianism in the Whole Chinese History [V] – Actuality of Maternal Rights in Classical China [III]) . Toyo-kotengaku-kenkyu (Journal of Oriental Classical Studies) 10: 1-19. [in Japanese]*
- 2000 *Shushigaku no ichi [IV] – “Boken” no genjitu [II] (On the place of Neo-Confucianism in the Whole Chinese History [IV] – Actuality of Maternal Rights in Classical China [II]) . Toyo-kotengaku-kenkyu (Journal of Oriental Classical Studies) 9: 19-41. [in Japanese]*
- 2000 *Shuki tekisuto no kaidoku yori (From Deciphering Zhu-xi's Texts) . Kotengaku no genzai [I] : 88-98. [in Japanese]*
- 1999 *Shushigaku no ichi [III] – “Boken” no genjitu [I] (On the place of Neo-Confucianism in the Whole Chinese History [III] – Actuality of Maternal Rights in Classical China [I]) . Toyo-kotengaku-kenkyu (Journal of Oriental Classical Studies) 8: 1-22. [in Japanese]*
- 1999 *Shushigaku no ichi [II] – Tatakau minseikantachi[II] (On the place of Neo-Confucianism in the Whole Chinese History [II] – Struggling Civilians in Song Dynasty[II]) . Toyo-kotengaku-kenkyu (Journal of Oriental Classical Studies) 7: 1-21. [in Japanese]*

Research Activities

Field Research in Foreign Countries

November-December, 2003 Taiwan (Research on Documents of Qing Dynasty)

Activities in Academic Societies

2003 Core Member of IV-3 Project in “Jinsha” Project, JSPS

NAKASHIZUKA, Tohru(ASANO , Tohru)

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**

- 2003 Nakashizuka, T. 2003. "LTER", "Ontai-rin (temperate forest)", "Shinrin (forest)", "Shinrin koushin (forest regeneration)", "Tashu no kyozon kikou (coexistence mechanisms of multiple species)", "Choki seitaigaku teki kenkyu (long-term ecological studies)". In Iwasa, Y., Matsumoto, T. & Kikuzawa, K. (eds.), "Seitaigaku Jiten (Dictionary of Ecology)", Kyoritsu Shuppan, pp. 41-42, 52, 282-283, 284-285, 383, 399-400. [in Japanese]
- 2003 Nakashizuka, T. 2003. "Shinrin towa (What is the forest?)", "Shinrin, jumoku no kozo to kino (Structure and function of forest and trees)", "Shinrin no seni to dotai (Succession and dynamics of forests)", "Seibutsu tayosei to sinrin (Biological diversity and forests)". In Inoue, M., Sakurai, S., Suzuki, K., Tomita, B. and Nakashizuka, T. (eds.), "Shinrin no hyakka (Encyclopedia of forests)", Asakura Shoten. pp. 2-7, 33, 110-117, 677-681. [in Japanese]
- 2003 Nakashizuka, T. 2003. "Nettai rin no seitai (Ecology of tropical forests)", In Fuwa, K. & Morita, M. (eds.), "Chikyu kankyo handobukku (Handbook of global environment)". Second ed. Asakura Shoten, 562-566. [in Japanese]

Articles

- 2003 Nomiya, H., Suzuki, W., Kanazashi, T., Shibata, M., Tanaka, H. & Nakashizuka, T. 2003. The effect of deer removal on forest vegetation and tree regeneration in a riparian deciduous forest, central Japan. *Plant Ecology* 164: 263-276.
- 2003 Nagaike, T., Kamitani, T. & Nakashizuka, T. 2003. Plant species diversity in abandoned coppice

- forests in a temperate deciduous forest area of central Japan. *Plant Ecology* 166: 145-156.
- 2003 Kurokawa, H., Yoshida, T., Nakamura, T., Lai, J. & Nakashizuka, T. 2003. The age of tropical rain-forest canopy species, Borneo isonwood (*Eusideroxylon zwageri*), determined by ¹⁴C dating. *Journal of Tropical Ecology* 19: 1-7.
- 2003 Harrison, R. D., Hamid, A. A. Kenta, T., LaFrankie, J., Lee, H. S., Nagamasu, H., Nakashizuka, T., & Palmito, P. 2003. The diversity of hemi-epiphytic figs (*Ficus*: *Moraceae*) in a Bornean lowland rain forest. *Biological Journal of Linnean Society* 78: 439-455.
- 2003 Ozanne, C.M.P., Anhuf, D., Boulter, S.L., Keller, M., Kitching, R.L., Korner, C., Meinzer, F.C., Mitchell, A.W., Nakashizuka, T., Silva Dias, P.L., Stork, N.E., Wright, S.J. & Yoshimura, M. 2003. Biodiversity meets the atmosphere: A global view of forest canopies. *Science* 301: 183-186.
- 2003 Nakagawa, M., Itioka, T., Momose, K., Yumoto, T., Komai, F., Morimoto, K., Jordal, B. H., Kato, M., Kaling, H., Hamid, A. A., Inoue, T. & Nakashizuka, T. 2003. Resource use of insect seed predators during general flowering and seeding events in a Bornean dipterocarp rain forest. *Bulletine of Entomological Research* 93: 455-466.
- 2003 Masaki, T., Sugita, H., Kanazashi, T., Nagaïke, T., Ohta, T., Hitsuma, G., Sakai, A., Arai, N., Ichie, T., Kamisako, M., Kanbayashi, T., Hatada, A., Matsui, K., Sawada, S. & Nakashizuka, T. 2003. Tohoku chihou no buna ten-nen koushin segyou-chi no genjou. Futatsu no jirei to seitai puroseshu (Situation in natural regeneration applied in northeastern Japan. Two examples and ecological processes). *Journal of Japanese Forestry Society* 85: 259-264 [in Japanese with English summary].
- 2003 Nakashizuka, T., Saito, M., Matsui, K., Makita, A., Kambayashi, T., Masaki, T., Nagaïke, T., Sugita, H., Kanazashi, T., Seki, T., Ohta, T., Hitsuma, G., Yagi, T., Hashimoto, T., Sakai, A., Kabeya, D., Takada, K., Hoshizaki, K., Ushimaru, A., Ohba, S., Arai, N., Abe, M., Kamisako, M., Kenta, T., Ichie, T., Suzukui, M., Inui, Y., Nakagawa, M., Kurokawa, H., Naomi, F., Samejima, H., Hatada, A., Hori, M., & Sawada, S. 2003. Shiragami sanchi ni okeru kotonatta kouzou wo motsu buna rin no doutai monitaringu (Monitoring dynamics of beech forests with different structure). *Journal of Tohoku Forest Society* 8: 67-74.
- 2003 Nakashizuka, T. 2003. Rei-ontai no haifuku-sei to chukan-ontai (Dorsi-ventrality of forest zonation in northern Japan). *Japanese Journal of Historical Botany*, 11: 39-43 [in Japanese with English summary].
- 2003 Kenta, T. & Nakashizuka, T. 2003. Variability in pollination conditions, pollen dispersal patterns, and pollen relatedness: an example of a tropical emergent tree. *TROPICS* 13: 101-105.

Activities in Academic Societies

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

Oral presentations

- 1) Nakashizuka, T. 2003. Jumoku gunshu no shu-tayousei wo kettei suru youin (Factors determining species diversity in tree community). The 114th Annual Meeting of Japanese Forestry Society, Abstract p. 2.
- 2) Nakashizuka, T., Takeuchi, Y., Samejima, H. & Kenta, T. 2003. Seibutsu-kan sogo-sayou no hyouka-houhou toshiteno iden-teki shuhou (Genetic methods to evaluate interactions among organisms). Workshop of Japanese Society of Tropical Ecology, Ehime, p. 9.
- 3) Nakashizuka, T. 2003. Canopy biodiversity research in Lambir Hills National Park, Sarawak. Abstract, BBEC International Conference 2003, Tuaran, Malaysia, 15.

Awards

Award of Japan Forestry Society (2003)

Matsushita Konosuke Kinensho for Study Group for Tropical Rainforests in Eastern Malaysia (represented by Ogino, K., Yamakura, T. and Nakashizuka, T) , March 2004.

Research Activities

Field Research in Japan

May, 2003-March, 2004 Kita-ibaraki, Ibaraki: Researches on dynamics of trees and forests
 September, 2004 Togakushi, Nagano: Research on beech regeneration
 October, 2003 Towada, Aomori: Research on beech forest dynamics
 June, September, 2003 Shirakami, Aomori: Monitoring of beech forest dynamics
 September, 2003 Ohdai, Nara: Effect of deer on forest regeneration

Field Research in Foreign Countries

Sarawak, Malaysia: Canopy processes of tropical rain forest (April, Aug., & Nov. 2003, Feb. 2004)

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

Special Collaborative Researcher of RHIN (4 graduate students from Kyoto University)

Social Activities and Public Lectures

Social Activities

Working Group for "Water and Life", Kansai Forum for Environment (2002-) , Investigation Committee on the structure and dynamics of the beech forests in Shirakami World Natural Heritage (2001-2002) , Consulting Committee, Nature Conservation Society Japan (2002-) , Steering committee for "Koshiji Mizu to Midori no kai", (2002-) , Steering committee for "Shizen Haishoku Kyokai", (2002-) , Working group for Ecosystem and Biodiveristy, Japanese Council for Science and Technology (2003-)

Public Lectures

- 1) Nakashizuka, T. 2003. Nettairin no genjo to shoushitsu ni yotte ninngen ni motarasareru mono (Decrease of tropical forests and its consequences to human being) . Ikeda Junior High School, Sept. 20, 2003.
- 2) Nakashizuka, T. 2003. Nettairin no rinkan ni okeru seitai-ken ki-ken sougo-sayou no mekanizumu no kaimei (Interacting mechanisms of ecosphere-atmosphere in the canopy of tropical rainforest) . The 5th CREST Symposium, 40-51.
- 3) Nakashizuka, T. 2004. Naze nettai-rin wo siraberu noka? (Why we study tropical forests?) . Memorial lecture of Matsushita Kohnosuke Kinensho, Osaka, March 13, 2004.

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

Adjunct Professor, Nanjing University (2003)
 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)

Research Associate, 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

Articles

Nakawo, Masayoshi

2004 Positive degree-day factors for ice ablation on four glaciers in the Nepalese Himalayas and Qinghai-Tibetan Plateau., *Bulletin of Glaciological Research* 20, 7-14.

2003 Simulations of stable isotopic fractionation in mixed cloud in middle latitude-taking the precipitation at Urumqi as an example. *Advances in Atmospheric Sciences* 20, 261-268.

Video Products

2004 Oasis Project – considering human beings relationship with nature – (14 minutes)

Activities in Academic Societies

2003, May ~ present

Council member / Chair of Academic Committee, Japanese Society of Snow and Ice May, 2003

Kori-koa chuno dasutono kiroku (Dust records in ice cores) . Japan Earth and Planetary Science. Joint Meeting August, 2003

The groundwater recharge mechanism revealed by stable isotopes and chemical solutions analysis in an arid region, western China. IUGG General Assembly

Research Activities

Field Research in Foreign Countries

August-September, 2003 China (Field Investigations on the Oasis Project)

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

Vice supervisor of DC students (2)

JSPS Research Fellows (2)

Social Activities and Public Lectures

Public Lectures

March, 2003 Who possesses water. Third World Water Forum

Social Activities

2003 – present Japanese Representative for International Commission on Snow and Ice

2002 – present member, Japan National Committee for Polar Science, Science Council of Japan

OSADA, Toshiki

Professor

Born in 1954.

Curriculum Vitae**Academic Career**

Department of Tribal & Regional Languages, Faculty of Arts, Ranchi University (India) , D. Course (1990)

Department of Linguistics, Faculty of Arts, Hokkaido University, M. Course (1984)

Department of Linguistics, Faculty of Arts, Hokkaido University (1981)

Professional Career

Professor, Research Institute for Humanity and Nature (2003)

Professor, Department of Arts, Kyoto University of Arts and Design (2001)

Research Associate, International Research Center for Japanese Studies (1992)

Temporary Teacher, Shukutoku Sugamo High School (1991)

Higher Degrees

Ph. D. (Ranchi University, 1991)

M. A. (Hokkaido University, 1984)

Fields of Specialization / Background

Linguistics, South Asian Studies.

Academic Society Memberships

The Japanese Society of Linguistics, The Japanese Society of South Asian Studies.

Major Publications**Books**

OSADA, Toshiki

2002 *Shinindogaku* (New Indology) . Kadokawa. [in Japanese]

2001 (An Introduction to the Mundari Language) . Institute for the Study of Languages and Cultures of Asia and Africa, Tokyo University for Foreign Studies. [in Japanese]

2001 *Munda go tokuhon* (A Reader in Mundari) . Institute for the Study of Languages and Cultures of Asia and Africa, Tokyo University for Foreign Studies. [in Japanese]

2000 *Munda-jin no nōkō-girei: Ajia hikaku inasaku bunka-ron josetsu —Indo-Tōnanajia-Nihon—*. (The Agricultural Rituals of the Mundas in Eastern India: A Preliminary Comparative Study of Asian Rice Culture —India, Southeast Asia and Japan) . International Research Center for Japanese Studies. [in Japanese]

VOVIN, Alexander and OSADA Toshiki (eds.)

2003 *Nihon-go keitō-ron no genzai* (The Origins of Japanese Language: States of Art) .

International Research Center for Japanese Studies. [in Japanese & English]

Articles

2003 Hajimeni (Introduction) . In: Alexander Vovin & Toshiki Osada (eds.) *Nihon-go keitō-ron no genzai* (The Origins of Japanese Language: States of Art) , pp.3-12. International Research Center for Japanese Studies. [in Japanese]

2003 *Nihon-go keitō-ron wa naze hayaranaku natta ka* (Why are the Japanese Linguists taking seriously the debate on the origins of Japanese language?) In: Alexander Vovin & Toshiki Osada (eds.) *Nihon-go keitō-ron no genzai* (The Origins of Japanese Language: States of Art) , pp.373-418. International Research Center for Japanese Studies. [in Japanese]

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- 1999 Munda minzoku-shi nōto (3) —Inasaku bunka, Hatasaku bunka, Hukugō seigyō ron (Ethnographic notes on Munda (3) —Paddy field culture, dry field culture, the theory of a multiple vocational culture) , *Nihon-kenkyū* 19: 412-388. [in Japanese]
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Research Reports under the support of Grant-in-Aid for Scientific Research

Osada Toshiki with Madhu Perti

- 2004 The Reexamination on Noun/Verb Distinction in Mundari Appeared in the Selected Entries of Encyclopaedia Mundarica. (2001-2003 Research Project)

Osada Toshiki with Madhu Perti

- 2000 Deeney's Ho-English Dictionary with Mundari and Hindi Words. (1998-2000 Research Project)

Activities in Academic Societies

November, 2003 Changing the Japanese name for the Society of Japanese Linguistics: From KOKUGOGAKKAI to NIHONGOGAKKAI, Globalization, Localization, and Japanese Studies in the Asia-Pacific Region. Sydney University.

October, 2003 Munda kenkyū-sha kara no ichi teigen —indo-gaku, minami-ajia chiiki kenkyū, Shin Indo gaku (A Proposal from the Mundaist: Indology, South Asian Areal Studies and New Indology) , The Annual Meeting of the Japanese Society of South Asian Studies. [in Japanese]

December, 1999 Personal pronouns and related phenomena in South Asian linguistic area: Convergent features or convergence-resisting features? International Symposium on South Asian Languages: Contact, Convergence and Typology. ILCAA, Tokyo University for Foreign Studies.

October, 1999 Moji no sōzō ?minzoku no kiki ga umidasu moji (Creation of the new script — Scripts created by the crisis of ethnic minority) , Serial lectures on "The scripts in Asia and Africa", ILCAA, Tokyo University for Foreign Studies. [in Japanese]

July, 1999 Theory and data in linguistics: In the case of South Asian linguistics-Towards an

adequate description of Munda languages-, The Annual Meeting of South Asian Language Analysis Roundtable, Illinois University.

Research Activities

Field Research in Foreign Countries

- February, 2004 India (Field Research on the Munda society)
 February, 2003 India (Field Research on the Mundari language)

Social Activities and Public Lectures

Public Lectures

- November, 2001 Hatashite Āriya-jin no shinnyū wa atta no ka? (Has the Aryan invasion occurred?), Sekai-shi kenkyū-kai (The association for the study of world history), Kawai-juku. [in Japanese]
 June, 2001 Munda-jin no dōbutsu kugi (Animal sacrifice of the Mundas), Kugi-ron kenkyū-kai (The association for the study on sacrifice) [in Japanese]

SAITO, Kiyooki

Professor

Born in 1945.

Curriculum Vitae

Academic Career

Department of Agricultural Biology, Faculty of Agriculture, Kyoto University (1969)
 Department of Education, Faculty of Education, Kyoto University (1971)

Professional Career

Senior Staff Writer, Staff Writer, The Mainichi Newspaper (2003~1971)
 Professor, Research Institute for Humanity and Nature (2004)

Fields of Specialization / Background

Study of Nature, Journalism

Academic Society Memberships

The International Society of Volunteer

Major Publications

Books

Saito, Kiyooki

- 2002 *Imanishi Kinji Fuirudo Noto* (Field Note of Dr.Kinji Imanishi) Kyoto daigaku gakujutu shupankai. (in Japanese)
 2002 *Foto Dokyumento Imanishi Kinji* (Phot Document of Dr.Kinji Imanishi) Kinokuniya syoten. (in Japanese)
 2001 *Metasekoia no meimeisya Miki Shigeru hakase no sokuseki* (The Life of Dr. Shigeru Miki who named Metasequoia) The Memorial Committee of Dr. Shigeru Miki. (in Japanese)
 2000 *Nankyoku hatu chikyu kankyou repouto* (Global Environmental Report from Antarctic) Chuoukouron-shinsha. (in Japanese)
 1999 *Tonkou-gaku to sono syuhen* (Tun-fun Studies with Dr. Akira Hujieda) Burein senta. (in Japanese)

Co-Authored Books

Saito, Kiyooki

- 2001 *Kankyomondai to boranthia* (Enviromental Problems and Volunteer) . in Seizi Utumi (ed.) Gendai boranchia gaku (Modern Volunteer Study) .pp. 2-24, Shouwadou. (in Japanese)
 2000 *Chikyukankyomondai to kokusainingengaku* (Global Environmental Problems and International

- Humanity Study) . in Techuo Yamaori (ed.) Kokusainingengaku nyumon (Guide of International Humanity Study) .pp. 273-282, Shunpusha. (in Japanese)
- 2000 *Gakujutu tanken to Kyoto* (Scientific Expedition and Kyoto) . in Keijiro Tanaka (ed.) Genba no Gakumon Gakumon no Genba (Field Study and Study of Field) ,pp. 271-287 Sekaishisousha. (in Japanese)

Articles

Saito, Kiyooki

- 2003 Shizen wo sougoutekini toraeta fuidowauku to shisou (Field work and Thought of Dr.Kinji Imanishi) . *Kagaku*, 73 : 1297-1303. (in Japanese)
- 2002 Ningen tanken Tanaka kouichi (About Engineer Mr Kouichi Tanaka who owned Nobel prize) . *Economist* Nov.26th, pp. 82-85. (in Japanese)
- 2001 Imanishi Kinji no nokoshita tizu no bigaku (Aesthetics of Dr.Kinji Imanishi's maps) . *Ecosophia*, 8 : 9-14. (in Japanese)
- 2001 Himaraya wo egaita saisyo no nihonjin Ishizaki Kouyou (Ishizaki Kouyou, the first japanese who painted Himalayas) . *Gakujin*, Jan. pp. 71-78 Feb. pp. 148-152. (in Japanese)
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- 2000 Umesao Tadao -hikari wo ubawaretemo kouino hito (About Dr. Tadao Umesao) . *Chuoukouron*, Jan. (in Japanese)
- 1999 Tozanka-shizenkagakusha Nakao Sasuke (Mountaineer ana Natural scientist Dr. Sasuke Nakao) *FRONT*, Dec. pp. 38. (in Japanese)

Activities in Academic Societies

Cooperative Research Fellow, International Research Center for Japanese Studies

Member, Editorial Board for Journal of Volunteer Studies (The International Society of Volunteer)

Member, Editorial Board for Ecosophia (The Research Society of Ethno-Natural History)

Research Activities

Field Research in Foreign Countries

March, 2004 Myanmar (Research on forest resources and field studies)

Social Activities and Public Lectures

Social Activities

Member, Japanese National Committee for Antarctic Research

Public Lectures

October,2003 Jinrui no mirai to nougaku no kanousei (Human future and possibility of Agriculture) Faculty of Agriculture, Kyoto University (in Japanese)

SATO, Yo-ichiro

Professor

Born in 1952.

Curriculum Vitae

Academic Career

Department of Agronomy, Kyoto University, M. Course. (1979)

Faculty of Agriculture, Kyoto University (1977)

Professional Career

Professor, Research Institute for Humanity and Nature (2003)

Assoc. Prof., Shizuoka University (1994)

Research Associate, National Institute of Genetics (1983)

Higher Degrees

D. Agr. (Kyoto University, 1986)

M. Agr. (Kyoto University, 1979)

Specialized Fields

Genetics, Ecological Genetics, DNA archaeology

Academic Society Membership

J. Soc. Breeding, Society of Tropical Ecology

Major Publications

Books

Sato, Yo-ichiro

2003 *Ine ga kataru nihon to chugoku* (Rice in Japan and China) . Nobunkyo. [in Japanese]

2002 *Ine no nihonshi* (History of Japanese rice) . Kadokawa Shoten. [in Japanese]

Ine no bunmei (Rice and civilization) . PHP Kenkyusho. [in Japanese]

2002 *Jomon noukou wo torae naosu* (What is the Jomon agriculture?) . Bensei Shuppan.

2001 *DNA koukougaku no susume* (Introduction to DNA archaeology) . (Maruzen Library 355) Maruzen Shuppan. [in Japanese]

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2002 Zakkan Inasaku to Nihonjin no kokoro (Rice cultivation and Japanese people) , *Nihon kodai ine kenkyukai jyugoshunen kinenshi, Kodai ine wa ikiteiru* 119- 122

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- 2001 Kuri to jomon noukou (Chestnuts and Jomon agriculture) , *Vesta* 44: 71.
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- 2000 Nihon no ine wa dokokara kitaka (Origin of Japanese rice) , *Koukougaku to kagaku wo musubu*, (Mabuchi Hisao, Tminaga Ken ed.) . Toudai Shuppankai.
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- 1999 Nihon no ine Sono kigen to denpa (Japanese rice-its history) *Shinsho no kenkyu* 4. Daiichi Shobou.
- 1999 Noukou to seitaikei- "Inasaku zengo" no seitaikei (Agriculture and man-made habitat) , *Kankyo to rekishi* (Ishi Hiroyuki ed.) . Shinseisha.

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- 1999 Jomon to manyou no hana gokoro (Flowers in Jomon and Man-nyo) . *Field 10 gatsu gou*:27-28.
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Public Lectures

Sato, Yo-ichiro

- 2003 DNA koukogaku (DNA archaeology) , Kanagawa ken sakae higashi koukou kougi, Isehara shi, November.
- 2003 DNA koukogaku (DNA archaeology) , Fushimi shuzou kumiai, Kyoto shi, November.
- 2003 1 tsubu no kome kara wakaru koto...saishin nyusu (DNA archaeology) *Kagaku* hen, JA shizuoka okome koukai kouza, JA shizuoka, Shizuoka shi, October.
- 2003 Jomon jidai no noukou to Sannai maruyama iseki (Jomon agriculture) , Kita no mahoroba Sannai maruyama iseki kara Nihon jin to doubutsu·shokubutsu no identeki kigen wo kangaeru, Aomori shi bunka kaikan dai horu, Aomori shi, October.
- 2003 Ine no nihonshi (History of Japanese rice) , Hyounochou raifu karejji kouen kai, Hyouno chou, September.
- 2003 Ine no nihonshi (History of Japanese rice) , Shimane ken fudoki no oka, Matsue shi, September.
- 2003 Okome wa dokokara kitano? (Where was rice from?) *Kyoyou to rekishi hen* —Ninon jin to okome no ohanashi — JA shizuoka okome koukai kouza, JA shizuoka, Shizuoka shi, September.
- 2003 Kaiteki kankyou to gokan (What is comfortable life?) , Atami gyousei senta Ikiiki puraza, Atami shi, July.
- 2003 Kaiteki kankyou to gokan (What is comfortable life?) , Shizuoka ken shouhisha dantai renmei, Shizuoka ken danjyo kyoudou sankaku senta Azarea, Shizuoka shi, May.
- 2003 Ine no nihonshi (History of Japanese rice) , Shizuoka ken minzoku gakkai, Shizuoka shi shichokaku senta shicyokaku horu, May.
- 2003 Ine no nihon shi (History of Japanese rice) , Ono shiritsu koukokan shunki tokubetsu ten kinen kouenkai, Ono shoukou kaikan, Ono shi, April.
- 2003 Ine no kita michi saizen sen (Road of rice to Japan) , Yayoi bunka hakubutsu kan, Izumi shi, March.
- 2003 Nou to chikyu kankyou (Agriculture and enviroment) , Shoku no bunka foramu, Ajinomoto shoku no bunka senta, Hoteru edomonto, Tokyo to, March.
- 2003 Toro no jidai no ine to inasaku (Rice and rice cultivation ca 1800 years ago) , Toro shinpojiumu (Shizuoka ken kyouiku iinkai) , March.
- 2003 Jomon no noukou ni yosete (On the Jomon agriculture) , Dai 5 kai jomon gaku kouza (Mikatacyo jomon hakubutsukan) , Tsuruga tanki daigaku, Tsuruga shi, March.
- 2003 DNA ga kataru inasku bunmei (Origin of rice) , Dai 7 kai akamai shinpojiumu, Nihon kodai ine kenkyuukai shusai, Nara paku hoteru, Nara shi, February.
- 2003 Dai 36 kai jomon jyuku Tokyo shibu reikai, Sannai maruyama jomon hasshin no kai shusai Saishin joho·jomon no kuri –Jomon no kuri wa umi wo watatta noka? (Did chestnuts seeds come from

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- 2002 Tokyo daigaku semina, Ine no kigen to shinka (Origin and evolution of rice), December.
- 2002 Ine no nihon shi (History of Japanese rice), Hiroshima jomon jyuku, Hiroshima kokusai hoteru, Hiroshima shi, December.
- 2002 Jomon jidai no shoku bunka (Foods in Jomon era), Fuji chouri seika senmon gakkou matsudaira koudou, Fuji shi, November.
- 2002 DNA koukogaku no sono go (DNA archaeology), Heisei 14 nendo hakkutsu chousa iinkai Shizuoka no genshou wo saguru, Shizuoka kenritsu chuou toshokan, Shizuoka shi, November.
- 2002 DNA (DNA), Higashi nihon no suidenato wo kangaeru kai, Shizuoka shi toro iseki hakubutsu kan, Shizuoka shi, November.
- 2002 Iseki shutsudo butsu no DNA bunseki (DNA analysis for remains), Kami parupu gijyutsu kyokai nenji taikai, Shizuoka konbenson tsua senta Guranshippu, Shizuoka shi, October.
- 2002 Ine no kita michi (Origin of Japanese rice) - DNA koukogaku wo motoni -, 2002 nendo Shoku bunka Gakujyutsu kouenkai Inasaku no kigen wo motomete, Kurashiki sakuyou daigaku, Kurashiki shi, October.
- 2002 Shokubutsu iden gaku kara mita isehikari no miryoku (Isehikari : a new variety of rice), Tokyo nichie jinjya, Tokyo to, September.
- 2002 Kome no tanjyo Karatsu inakadate 300 nen (Birth of rice), Inakadatemura kyouiku iinkai Jomon no dentou uketsugu nettai jyaponika _ inakadate mura ine hasshou no nazo toki _, Inakadate mura bunka kaikan, Inakadate mura, July.
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- 2002 Mori to tanbo no kuraishisu (Crisis of man-made habitat), Heisei 14 nendo Inaya shizen tomo no kai Soukai kinen kouen, Iida shi bijyutsu hakubutsu kan, Iida shi, May.
- 2002 Shinrin to tayousei (Diversity of the forest), Dai 53 kai zenkoku shokujyu sai kinen Shinrin foramu (Dai 53 kai zenkoku shokujyu sai yamagataken jikkou iinkai rinya chou kokudo ryokka suishin kikou yamagata ken shinrin kumiai), Yamagata kokusai kouryu puraza, Yamagata shi, May.
- 2002 Ine DNA kara kodai nihon no nougyou wo kataru (Ancient agriculture in Japan), Nihon kagakukai Dai 81 shuuki nenkai (2002) tokubetsu kouen, Waseda daigaku kokusai kaigi jyuu, Tokyo to, March.
- 2002 Kawaru Ine no nihon shi (History of Japanese rice), Housou daigaku shizuoka gakushu senta kouenkai, Shizuoka gakushu senta, Mishima shi, March.
- 2002 Sekai no kome to sono rekishi (History of world rice), Shizuoka ken inasaku kenkyu kai soukai kouen kai, Nougyou shiken jyuu fukyuu ka, Fujieda eminasu, Fujieda shi, March.
- 2002 DNA koukogaku no tenkai (DNA archaeology) _ misu matti na kumiawase no mukouni mietamono _, Dai 5 kai kagaku gijyutsu semina, kenchou shokou roudou bu kagaku gijyutsu shitsu, Shizuoka kencho, Shizuoka shi, February.
- 2002 DNA koukogaku (DNA archaeology), Tsukuba daigaku idenshi jikken senta kouenkai, Tsukuba shi, February.
- 2001 Heisei 13 nendo dai 2 kai shokuin kenshuu kai, Zaidan houjin chiba ken bunka zai senta shusai DNA koukogaku - ine no kigen to denpa - (How Japanese agriculture has been developing?), chiba kenritsu gendai sangyou kagaku kan, November.
- 2001 Heisei 13 nendo shimin kyoyou kouza Kurasi no nakano koukishin, Numatsu shi kyouiku iinkai shusai, Idenshi kara mita nihon no nougyou (How Japanese agriculture has been developing?), Numatsu shimin bunka senta, November.
- 2001 Kami ina no kodai mai Shiro ke mochi wo kaimei suru (Ancient rice in the upper Ina valley), Shiro

- ke mochi kouen kai, Kami ina noumin kumiai, Ina shiyakusho, Ina shi, November.
- 2001 Ine, shirarezaru 1 mannen no tabi (10,000 years History of rice), Koukai semina Nihonji harukana tabi, Kitakata puraza bunka senta Kitakata shi, November.
- 2001 Nihon no kome wa dokokara kitanoka (Origin of Japanese rice), Heisei 13 nendo koganei shi seijin daigaku kouza, koganei kouminkan, koganeishi, November.
- 2001 Ine to inasaku no nihon shi (History of Japanese rice and rice cultivation), Kokusai foramu DNA ga kataru harukanaru raisu roudo, Izumi shi, October.
- 2001 Ine, shirarezaru 1 mannen no tabi (10,000 years History of rice), koukai semina Nihonjin harukana tabi, Toyama kokusai kaigi jyou, Toyama shi, October.
- 2001 Kodai shoku (Joumon shoku) yori miru nihon shoku (History of Japanese food), Fuji chouri seika senmon gakkou kouen, Doukou matsudaira kinen koudou, Fuji shi, September.
- 2001 Ine ga ine ni natta toki (From wild rice to cultivated rice), Kinki sakumotsu ikushu kenkyukai shinpojiimu Yasei ine kara saibai ine he, Osaka furitsu daigaku, Sakai shi, August.
- 2001 DNA koukogaku (DNA archaeology) Yayoi jidai no kome no genryuu, Shimonoseki shiritsu kouko hakubutsukan ippan kyoyou kouza Shizenkagaku ga tokiakasu genshi kodai, Shimonoseki kouko hakubutsukan, Shimonoseki shi, July.
- 2001 DNA koukogaku (DNA archaeology), Shizuoka kenritsu kakegawa nishi koutou gakkou mini daigaku kouza, Shizuoka kenritsu kakegawa nishi koutou gakkou, Kakegawa shi, June.
- 2001 21 seiki no shokuji (Foods in 21st century), Shizuoka ken shuudan kyushoku kyokai fuji shibu soukai kinen kouen, Fuji sougou chousha, Fujishi, May.
- 2001 Harukanaru raisu roudo (Rice road), Ikegami sone shiseki kouen kaien kinen kouen kai, Izumi shi, May.
- 2001 Ine no ririkisho (History of rice), Heisei 11 nendo ajia gaku kouza "ajia no shoku bunka", Zaidanhoujin fukuoka kokusai kouryu kyokai, Tenjinbiru, Fukuokashi, March.
- 1999 Dai 9 kai Higashinohon no suidenato wo kangaeru kai, DNA bunseki kara mita ine inasaku no torai to tenkai, Suidenato yakihata wo meguru sizen kagaku - sono kensho to saibai shokubutsu - (Introduction and dispersal of rice in Japan), September, Sendai.

Awards

- 2001 Dai 9 kai Matsushita kounosuke to midori no hakurankai kinen shourei shou, Zaidan houjin matsushita kounosuke hana no banpaku kinen zaidan, February.

TAKASO, Tokushiro

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

Professor, Research Institute for Humanity and Nature (2003)

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

2003 Conifer Reproduction : Diversity in an ancient group. In R. R. Mill (ed.) , Proceedings of the fourth international conifer conference, *Acta Horticulture* 615, pp. 115-120.

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

January 23, 2004 Special lecture on " mangrove plants" at Japanese Society of Medical Imaging Technology Meeting

February 9, 2004 Appearance on NHK TV program "Cikyu Fushigi Daishizen"

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, Research Institute for Humanity and Nature (July31, 2004)

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

Major Publications

Books

Wada, Eitaro

- 2004 Nettaikankyō wo hakaru: Chikyukagakuteki shuhō kara Biogeochemical metluds. In: *Nettai Seitai*gaku. Tropical Ecology, Toshihide Nagano (ed) . Asakura shoten. pp. 44-58.
- 2003 Material Cyclings Working Group 'Behavior of nutrient salts in paddy waters.' Project 3-1 Woking Paper No.1.
- 2003 Material Cyclings Working Group 'Nitrification and denitrification.' Project 3-1 Woking Paper No.2.
- 2003 Material Cyclings Working Group 'Methane formation in waterlogged paddy soils and its controlling factors.' Project 3-1 Woking Paper No.3.
- 2003 Material Cyclings Working Group 'Natural abundance of $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ in soil organic matter with special reference to paddy ecosystems in Japan.' Project 3-1 Woking Paper No.4.
- 2003 Material Cyclings Working Group 'Intramolecular stable isotope ratios of dissolved N_2O in several aquatic ecosystems.' Project 3-1 Woking Paper No.5-1.
- 2003 Material Cyclings Working Group 'Radiatively active gases in the Hebisuna River and Lake Nishino-ko.' Project 3-1 Woking Paper No.5-2.
- 2003 Material Cyclings Working Group 'Nutrient dynamic in Lake Biwa with emphasis on intramolecular stable isotope ratio of N_2O .' Project 3-1 Woking Paper No.6.
- 2003 Material Cyclings Working Group 'Stable isotopes in the biosphere and its significances.' Project 3-1 Woking Paper No.7.
- 2003 Material Cyclings Working Group 'Natural isotopic composition of organic nitrogen with emphasis on anthropogenic loading to the river ecosystems.' Project 3-1 Woking Paper No.8.
- 2003 Material Cyclings Working Group 'Interface between matter cyclings and human dimensions.' Project 3-1 Woking Paper No.9.

Articles

- 2003 K. Koba*, M. Hirobe, L. Koyama, A. Kohzu, N. Tokuchi, K. J. Nadelhoffer, E. Wada and H. Takeda Natural ^{15}N abundances of plants and soil in a temperate coniferous forest. *Ecosystems*. 6: 457-469.
- 2003 Wada, E. Isotope ecology in Lake Baikal. In: *Lectures by Honorary Professors of Siberian Branch of RAS*. Publishing House of Siberian Branch of the Russian Academy of Science, Nobosibirsk. pp99-111.
- 2003 Wada, Eitaro "Biosphere and its environments with emphasis on redox boundary." In 17th Open Symposium of the University and Science on Biodiversity. "Seibututayousei no sekai". 139-147pp.

Activities in Academic Societies

- December, 2003 "Interface between material cyclings and human consensus building." International Workshop on "Seeking an Effective Watershed Management System Through Interdisciplinary Approach"-considering multiple spatial and stakeholders-. Shiran Kaikan, Kyoto.
- December, 2003 "Diagnosis of a watershed by stable isotope techniques." Workshop on Soil Sciences in the 21 Century. Kyushu University, Fukuoka.
- December, 2003 Timoshkin Oleg A., Wada Eitaro, Coulter George, Yuma Masahide, Bondarenko Nina A., Kravtsova Lyubov S., Karabanov Eugene B. "Landscape-ecological approach in lacstrine ecosystems: towards establishment of the universal pattern of the ecosystem's monitoring." DIWPA symposium on "Perspectives of the biodiversity research in the 21st

- century." Kyoto.
- December, 2003 "Interface between material cyclings and human dimensions." RIHN Project presentation. Palulu Plaza, Kyoto.
- January, 2004 "Integrated manual on the interactive cycle between material cycles and human activities." Open Symposium on "Conservation of ecosystems in Asia. JSPS Kozai Kaikan, Tokyo.

Research Activities

Field Research in Japan

- April, 2003 Shiga Prefecture (Research on water quality)
- May, 2003 Shiga Prefecture (Research on water quality, Water Sampling)
- August, 2003 Kyoto Prefecture (Research on water quality)
- September, 2003 Osaka Prefecture (Research on water quality)
- September, 2003 Osaka Prefecture (Water sampling)
- November, 2003 Osaka Prefecture (Research on water quality)
- December, 2003 Osaka Prefecture (Research on water quality)
- December, 2003 Kyoto Prefecture (International workshop on)
- January, 2004 Shiga Prefecture (Workshop on water cycle)
- January, 2004 Iwate Prefecture (Workshop on Project 3-1)
- February, 2004 Shiga Prefecture (Research on field)
- February, 2004 Kyoto Prefecture (Workshop on GIS)
- February, 2004 Kagawa Prefecture (Analysis of water samples)
- March, 2004 Shiga Prefecture (Workshop on "MIZU NO MIRAI")
- March, 2004 Shiga Prefecture (Visit FUKUHARA Farm)

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

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

Other (1)

Social Activities and Public Lectures

Social Activities

- Member of advisory committee, Global Observation System<Apr. 2003-Mar. 2005>
(Research and Development, Science and Technology, Ministry of Education, Culture, Sports, Science and Technology)
- Member of the selection committee for JSPS research fellowships for young scientists
- Member of Yodo River watershed committee<Feb. 2003-Jan. 2005> (Ministry of Land, Infrastructure and Transport Kinki Regional Development Bureau)
- Member of advisory committee, CREST, R&D of Hydrological System Modeling and Water Resources System (Japan Science and Technology Agency) <Apr. 2003-Mar. 2005>
- Member of administrative committee<Apr. 2004 -Mar. 2006> / research-planning committee<Apr. 2003-Mar. 2005> (Center for Ecological Research, Kyoto University)
- Member of National Committee for MAB/Coordinating Committee for MAB<Dec. 2003-Dec. 2005> (Japanese National Commission for UNESCO)
- Member of administrative committee of Foundation for Riverfront Improvement and Restoration<Apr. 2003-Mar. 2005>
- Member of selection committee for teachers at center for environmental remote sensing Chiba University<Jan. 2004-Apr. 2004>
- Member of evaluation committee for 21st Century COE Program<Apr.2003-Mar.2005> (JSPS)

Public Lectures

(Special Lecture)

April, 2003 From the isotope biogeochemistry to environmental sciences. – past, present and future.
Ehime University.

(University Lectures)

July, 2003 An Intensive lecture at Nagoya University on "Ecosystem".

July, 2003 An Intensive lecture at Nara University of Education on "Natural Ecosystem".

September, 2003 An Intensive lecture at Kyoto University on " Stable Isotope"..

Editorial Board

A member of editorial board for "Isotope Practice and Environmental Health". (Germany)

A member of editorial board for "Science in Hand", (Russian Academy of Sciences, SB, Russia) .

WATANABE, Tsugihito

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

Professor, Research Institute for Humanity and Nature (2003)

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. Agr. (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**

Tsugihito Watanabe

2003 Nougyou no mizu, chiiki no mizu (water for agriculture and water for region) ', Yukiko Kada ed. *Mizu wo meguru hito to shizen – Nihon to sekai no genba kara* (People and Nature around water- from actual scenes in Japan and the world) , Yuhikaku, pp.231-264. [in Japanese]

2003 'Kariforunia Sanhowakin-heiyano hatachi-kanngai to suishitsu mondai (Irrigation and water quality problems in the San-Joaquin Valley of California) ', Atarashii hatachi seibi kougaku henshu iinkai ed.

Shoku no anzen to chiikino yutakasa wo motomete (Toward food security and real regional prosperity – Innovated field reclamation engineering) , JSIDRE, pp.151-153. [in Japanese]

Articles

Takashi Kume, Takanori Nagano, Tsugihiko Watanabe and Toru Mitsuno
2003 'Salinity Measurement of Homogeneous Soil Using Electromagnetic Induction Method', Transaction of JSIDRE, 227, pp.105-111.

General Reports

Tsugihiko Watanabe

2004 'Cross-disciplinary Approach to Impact Assessment of Climate Change on Agricultural Production in Arid Region', Proceedings of Symposium on Water Resources and Its Variability in Asia an the 21st Century, pp.127-130

2004 'Kohakcho ga hirai suru suiden to chiiki yousui (Paddy field as habitats for Bewick's swans and irrigation water for regional use) ', JSIDRE, *Shin-kohoku-chiku chiiki yousui kinou zoushin chosa houkokusho* (Report of the research project on promotion of regional water use) , pp.49-59. [in Japanese]

2004 Sesshon houkoku 'Azia Taiheiyo no mizu mondai ' (Session Report 'Water issues in Asia and Pacific Regions') , Journal of Japan Society of Hydrology and Water Resources. 17 (2) , pp.201-205 [in Japanese]

Tsugihiko Watanabe, Yoshihiro Fukushima, Tadahiro Hayasaka and Taikan Oki

2003 'Perspective and Framework of An Innovative Research Project on the Hydrological Water Cycle and Water Resources Management in the Yellow River Basin - The international integrated Yellow River research project of RIHN -', Proceedings of the First Yellow River Forum.

Activities in Academic Societies

Administrative Works

- 2002- Member of Committee for Selection and Award Candidates, JSHWR.
- 2000- Board Member, JSHWR (Japan Society of Hydrology and Water Resources) .
- 1999-2003 Member of Editorial Committee for Revision of the Glossary for Irrigation Engineering, JSIDRE.
- 1999- Member of Committee for Accreditation of Engineering Education, JSIDRE.
- 1999-2003 International Committee on Irrigation and Drainage. Member of Working Group on Irrigation and Drainage Performance.
- 2003- International Committee on Irrigation and Drainage. Member of Working Group on Irrigated Agriculture under Droughts and Water Shortage.
- 2003- Member of Editing Board of *Paddy and Water Environment*. International Society of Paddy and Water Environmental Engineering.
- 1998- Member of the Committee on General Affairs, JSHWR.
- 1998- Board Member, JAWRE (Japanese Association for Water Resources and Environment) .
- 1998-2004 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.

Lectures

July 2003 Lecture 'Agriculture – Wisdom of Land and Water – in front of Global Warming' 23rd RIHN Forum, Kyoto

Oral Presentations

2003 'Research on Land and water management in the global environment related projects', Annual meeting of JSIDRE, Naha

Research Activities

Field Research in Japan

July 2003 - March 2004 Kohoku Region, Shiga Prefecture (Studies on conditions of paddy plots as habitat of migratory birds)

Field Research in Foreign Countries

May, June to July, October to November 2003, and March 2004 Turkey (Studies on Impact of climate change on agricultural production)

July, October and November 2003 China (Studies on water balance structure of large-scale irrigation scheme)

Other Academic Activities

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.

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.

Social Activities and Other Activities

Lectures

January, 2004 Special Lecture 'Management of Irrigation and Drainage and Global Environment', Graduate School of Agriculture, Kyoto University

September, 2003 Lecture 'World Irrigation Management Problems and Research Projects in the Yellow River', The Hetao Irrigation District, China

Committee Work for Other Organizations

2004 Member of the Committee on Grants-in-Aid for Scientific Research, Japan Society for the Promotion of Science.

2003 to date Member of the Committee on Evaluation of Independent Administrative Institutions, Ministry of Foreign Affairs.

2003 to date Extra member of the Committee on Evaluation of Independent Administrative Institutions, Ministry of Agriculture, Forestry and Fisheries.

2003 to date Member of Research Liaison Committee for Social Environmental Engineering, The Science Council of Japan.

2003 to date Member of the Committee on Strategic Environmental Impacts Assessment, Advice Center for Rural Environment Support.

2003 to date Member of the Committee on Technical Research, Advice Center for Rural Environment Support.

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 Reduction of Negative Impacts of Farmland Consolidation on Environment, Japan Institute of Irrigation and Drainage.

1999 to 2004 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.

YUMOTO, Takakazu

Professor

Born in 1959.

Curriculum Vitae**Academic Career**

Department of Botany, Graduate School of Science, Kyoto University, D. Course (1987)

Department of Botany, Graduate School of Science, Kyoto University, M. Course (1984)

Faculty of Science, Kyoto University (1982)

Professional Career

Professor, Research Institute for Humanity and Nature (2003)

Associate Professor, Center for Ecological Research, Kyoto University (1994)

Lecturer, Faculty of Science, Kobe University (1992)

Lecturer, College of Liberal Arts, Kobe University (1992)

Research Assistant, College of Liberal Arts, Kobe University (1989)

Research Fellow, Japan Society for the Promotion of Science (1987)

Higher Degrees

D. Sc. (Kyoto University, 1987)

M. Sc. (Kyoto University, 1984)

Fields of Specialization / Background

Plant Ecology, Tropical Ecology

Academic Society Memberships

The Ecological Society of Japan, The Botanical Society of Japan, The Japan Society of Tropical Ecology, Japan Association for African Studies, The Society for the Study of Species Biology, Japanese Association of Historical Botany

Major Publications**Books**

Yumoto, Takakazu

- 2003 *Hana to kajitu karamita syokubutu no sekai* (Plant ecology based on flowers and fruits) . In: *Seibutu Tayousei Kagaku no Susume* (Introduction to Biodiversity Science) . ed. by Ohgushi, Takayuki. pp. 44-69. Maruzen Kabushikigaisha. (in Japanese)
- 2003 *Seibutushu wa chikyu jou ni dorekurai irunoka, dokoni takusan irunoka* (How many species of organisms do occur on the earth, and where are many of them found?) . In: *Atarashii Kyouyou no Susume, Seibutugaku* (Introduction to New Biology) . ed. by Nishida, Toshisada and Sato, Noriyuki. pp. 25-40. Showado. (in Japanese)
- 2003 *Soufun kyousei* (Pollination mutualism) In: *Shinrin no Hyakka* (Encyclopedia of Forests) . ed. by Inoue, Makoto; Sakurai, Shobu; Suzuki, Kazuo; Miyata, Bun'ichiro and Nakashizuka, Toru. pp.163-173. Asakura Shoten. (in Japanese)
- 2001 *Rinkan seitaigaku: Syokubutu no hansyoku wo meguru doubutu tono kyousei* (Canopy ecology: mutualism between plants and animals on plants' reproductive processes) . In: *Shouyoujurin Bunkaron no Gendaiteki Hatten* (Modern Development of the Theory on Evergreen Broad-leaved Forest Culture) . ed. by Kaneko, Tsutomu and Yamaguchi, Hirofumi, pp.43-64. Hokkaido Daigaku Tosho Kankoukai. (in Japanese)
- 1999 *Nettai urin* (Tropical Rainforests) . Iwanami Shoten. (in Japanese)
- 1999 *Hana to kontyu* (Flowers and their insects) . In: *Hana to Hana* (Flowers and Blossoms) , ed. by Katachi no Bunka Kai, pp.57-65. Kohsaku-sha. (in Japanese)
- 1999 *Doubutu wa shushisanpu to donoyouni kakawatteiruka* (How are animals interacted with plants in their seed dispersal) . In: *Shushisanpu - Tasukeai no Sinkaron 1* (Seed Dispersal: an Evolutional Story of Mutualism vol.1) . ed. by Ueda, Keisuke, pp.1-16. Tsukiji Shokan. (in Japanese)

- 1999 *Azia nettai urin niokeru shinrin no kuhdouka to reichorui no shushisanpu* (Empty forests in Asia and seed dispersal by primates) . In: *Shushisanpu – Tasukeai no Sinkaron 2* (Seed Dispersal: an Evolutional Story of Mutualism vol.2) . ed. by Ueda, Keisuke, pp. 29-36. Tsukiji Shokan. (in Japanese)
- 1999 *Yakushima ohpun firudo hakubutsukan eno michi* (The way to Yakushima open field museum) . In : *Nihonzaru no Shizenshakai : Ekomyujiamu tositeno Yakushima* (Natural Life of Japanese Monkey: Yakushima Island as Eco-museum) . ed. by Takahata, Yukio and Yamagiwa, Juichi. pp. 191-214. Kyoto Daigaku Gakujutu Shuppankai. (in Japanese)

Articles

Kitamura, S., Yumoto, T., Poonswad, P., Chuailua, P., Plongmai, K., Maruhashi, Y. and Noma, N.

- 2002 Interactions between fleshy fruits and frugivores in a tropical seasonal forest in Thailand. *Oecologia* 133:559-572. Yumoto, T.

Yumoto, T. and Takenoshita, Y.

- 2002 *Syokusei chousa to syokubutu hyouhon no syori* (Vegetation survey and collection of plant specimen) . *Reichorui Kenkyu* (Primate Research) 18: 284-289. (in Japanese)

Takenoshita, Y. and Yumoto, T.

- 2002 *Syokumotu shigen no hyouka notameno kajitsuryou to kaki no chousa* (Census of fruit abundance and phenology for the evaluation of food availability) . *Reichorui Kenkyu* (Primate Research) 18: 290-294. [in Japanese]

Itioka, T., Inoue, T., Kaling, H., Kato, M., Nagamitsu, T., Momose, K., Sakai, S., Yumoto, T., Mohamad, S. U., Hamid, A. A. and Yamane, Sk.

- 2001 Six-year population fluctuation of the giant honey bee *Apis dorsata* (Hymenoptera: Apidae) in a tropical lowland dipterocarp forest in Sarawak. *Annals of the Entomological Society of America* 94: 545-549.

Kimura, K., Yumoto, T. and Kikuzawa, K.

- 2001 Fruiting phenology of fleshy-fruited plants and seasonal dynamics of frugivorous birds in four vegetation on Mt. Kinabalu, Borneo. *Journal of Tropical Ecology* 17: 833-858.

Yumoto, T.

- 2000 Bird-pollination of three *Durio* species (Bombacaceae) in a tropical rainforest in Sarawak, Malaysia. *American Journal of Botany* 87: 1181-1188.

Yumoto, T.

- 1999 Seed dispersal by Salvin's curassow, *Mitu salvini*, in a tropical forest of Colombia: direct measurements of dispersal distance. *Biotropica* 31: 654-660.

Yumoto, T., Kimura, K. and Nishimura A.

- 1999 Seed dispersal by red howlers (*Alouatta seniculus*) and Humboldt's woolly monkeys (*Lagothrix lagotricha lagotricha*) in a Colombian forest. *Ecological Research* 14: 179-191.

Yumoto, T. and Maruhashi, T.

- 1999 Pruning behavior and intercolony competition of *Tetraoponera* (*Pachysima*) *aethiops* (Pseudomyrmecinae, Hymenoptera) in *Barteria fistulosa* in a tropical forest, Democratic Republic of Congo. *Ecological Research* 14: 393-404.

Yumoto, T., Momose, K. and Nagamasu, H.

- 1999 A new pollination syndrome - squirrel pollination in a tropical rainforest in Lambir Hills National Park, Sarawak, Malaysia. *Tropics* 9: 133-137.

Sakai, S., Momose, K., Yumoto, T., Kato, M. and Inoue, T.

- 1999 Beetle pollination of *Shorea parvifolia* (section *Mutica*, Dipterocarpaceae) in a general flowering period in Sarawak, Malaysia. *American Journal of Botany* 86: 62-69.

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

- 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.

Activities in Academic Societies

- Editorial board of Japanese Journal of Historical Botany (2003~)
- Steering committee member of The Japan Society of Tropical Ecology (1998~)
- Editorial board of Japanese Journal of Conservation Ecology (1996~)
- Liaison committee member of Ecology and Environments, The Science Council of Japan (2001~2004)
- Steering committee member of The Society for the Study of Species Biology (2001~2004)

Research Activities

Field Research in Japan

- March, 2004 Nagasaki Prefecture (Research on endemism in Tsushima Island)
- October, 2003 Okinawa Prefecture (Research on endemism on Ryukyu Archipelago)
- September, 2003 Kagoshima Prefecture (Research on endemic pine, *Pinus amamiana*, in Tanegashima Island)
- July, 2003 Gunma Prefecture (Research on endemic plant, *Japonolirion osense*, on Mt. Shibutsu)

Field Research in Foreign Countries

- January, 2004 Indonesia (Research on bioinventory)
- July, 2003 Mongolia (Research on biodiversity in Mongolian pasture)

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

- 7 graduate students of Graduate School of Science, Kyoto University
- 1 graduate student of Nara University of Education
- 1 graduate student of University of Shiga Prefecture

Social Activities and Public Lectures

Public Lectures

- December, 2003 Intensive series of lectures on "Introduction to Ecology" in Faculty of Horticulture, Chiba University (Chiba University, Matsudo-shi)
- November, 2003 Intensive series of lectures on "Biological Technology 2" in Faculty of Technology, Kansai University (Kansai University, Suita-shi)
- October, 2003 Lecture in Hanshin Senior College "Introduction to Tropical Rainforests" (Association of Enrichments to Senior Lives in Hyogo Prefecture, Amagasaki-shi)
- September, 2003 Intensive series of lectures on "Wildlife Managements" in Faculty of Agriculture, Gifu University (Gifu University, Gifu-shi)
- August, 2003 Yakushima Fieldwork Course (Kamiyaku-cho, Kyoto University 21st century COE, Kamiyaku-cho)
- July, 2003 Lecture in Global Environment College "Ecology of Tropical Rainforests" (NPO Senior College on Nature, Osaka-shi)
- June, 2003 Doshisha University Public Lecture "Introduction to Tropical Rainforests" (Doshisha University, Kyotanabe-shi)

BEN-ASHER, Jiftah

————— Visiting Professor

Born in 1938, Israel.

Curriculum Vitae

Academic Career

Department of Soil Science, Faculty of Agriculture, The Hebrew University of Jerusalem, Israel, B. Course (1967)

Department of Soil Science, Faculty of Agriculture, The Hebrew University of Jerusalem, Israel, M.

Course (1969)

Department of Soil Science, Faculty of Agriculture, The Hebrew University of Jerusalem, Israel.

Ph.D. Course (1974)

Professional Career

Visiting professor, Research Institute for Humanity and Nature (March 15- September 15, 2003)

Professor, Institute for Desert Research, Ben Gurion University of the Negev, Israel (1993)

Head of the Katif Research Center for Coastal Desert Development, Institute for Desert Research, Ben Gurion University of the Negev, Israel (1987)

Incumbent of the Gerdad Freiberg, Chair for Agricultural Water Management, Institute for Desert Research, Ben Gurion University of the Negev, Israel (1992)

Head, Department of Desert Agrobiolgy Institute for Desert Research, Ben Gurion University of the Negev, Israel (1990-1995)

Head, Department of Salinity and Water Engineering, Institute for Desert Research Ben Gurion University of the Negev, Israel (1982-1987)

Higher Degrees

Ph. D. (Hebrew University of Jerusalem Israel, 1974)

M. Sc. (Hebrew University of Jerusalem Israel, 1969)

Fields of Specilization/Background

Soil and water, field crops

Academic Society Memberships

Soil Science Society of America

Agronomy Society of America

International Society of Soil Science

Israeli Society of Soil Science

American Institute of Hydrology

Major Publications

Books

Aksoy, U., D. Arnac, S. Anac, J. Beltrao, J. Ben-Asher, J. Cuartero, T.J. Flowers and S. Hepaksoy (eds.)
2002 *Techniques to Control Salination for Horticultural Production* (ISHS Acta Horticulture 573) .

Articles (since 1999)

Daniels, J., D.G. Blumberg, L.D. Vulfson, A.L. Kotlyar, V. Freiliker, G. Ronen and J. Ben-Asher
2003 Microwave Remote Sensing of Physically Buried Objects in the Negev Desert: Implications for Subsurface Martian Exploration, *Journal of Geophysical Research* 108 (E4) , 8033, doi:10.1029/2002JE001868.
n.d. *Microwave Remote Sensing of Physically Buried Objects in the Negev Desert: Implications for Environmental Research. Remote Sensing of the Environment.*

Qiu, Guo Yu, Jiftah Ben-Asher, Tomisha Yano and Kazuro Momii

1999 Estimation of Soil Evaporation Using the Differential Temperature Method. *Soil Science Society of America Journal* 63: 1608-1614.

Ephrath, J.E., J. Ben-Asher, C. Alekparov, M. Silberbush and E. Dayan

2001 The Growth and Development of *Hippeastrum* in Response to Temperature and CO₂.
Biotronics 30.

Ephrath, J.E., J. Ben-Asher, C. Alekparov, M. Silberbush, S. Wolf and E. Dayan

2001 The Effect of Temperature on the Development of *Hippeastrum*: A Phytotron Study.
Biotronics 30.

Ephrath, J.E., J. Ben-Asher, F. Baruchin, C. Alekparov, M. Silberbush and E. Dayan

2001 Various Cutting Methods for the Propagation of *Hippeastrum* Bulbs. *Biotronics* 30.

Silbebush, M. and J. Ben-Asher

2001 Simulation Study of Nutrient Uptake by Plants from Soilless Culture as Affected by Salinity Buildup

- and Transpiration. *Plant and Soil* 233: 59-69.
- Ben-Asher, J. Beltrau, M. Costa, S. Anac, J. Cuartero and T. Soria
2002 Modeling the Effect of Sea Water Intrusion on Ground Water Salinity in Agricultural Areas in Israel, Portugal, Spain and Turkey. *Acta Horticulture*.
- Ben-Asher, Jiftah
2000 Soil and Water Contamination in Arid Coastal Zone and Its Effect on Agroproductivity. Proceedings of the International Workshop on the Role of Arid Zone for Overcoming Food Deficits in the 21st Century, Tottori, Japan, pp.45-51.
- Silbebusch M. and J. Ben-Asher
2002 Simulation of Nutrient Uptake by Plants from Hydroponics as Affected by Salinity Buildup and Transpiration. In J. Ben-Asher et al. (eds.) *Techniques to Control Salination for Horticultural Production* (ISHS Acta Horticulture 573) , pp.97-106.
- Vulkan R, U. Mingelgrin, J. Ben-Asher and H. Frenkel
2002 Copper and Zinc Speciation in the Solution of a Soil: Sludge Mixture. *Journal of Environmental Quality* 31: 193-203.
- Beltrao J., S.B. Jesus, T. Panagopolus, J. Ben-Asher, D. Trinadade, M.G. Miguel and M.A. Neves
2002 Combined Effect of Salts and Nitrogen on the Yield Function of Lettuce. *Techniques to Control Salination for Horticultural Production* (ISHS Acta Horticulture 573) , pp.363-376.
- Ben-Asher J.
2001 Arid Land Irrigation and Agroproductivity: A Closed Circuit from Theories through Models and Laboratories to Field Implementation. In Guanhua Huang (ed.) *Theory and Practice of Water Saving Agriculture - Proceedings of Chinese Israeli Bilateral International Workshop on Water Saving Agriculture*, pp. 40-53. *CICTA*, Beijing China.
- Dayan, E., E. Presnov, M. Fuchs and J. Ben-Asher
2002 Rose Grow: A Model to Describe Greenhouse Rose Growth. In J.H. Lieth and L.R. Oki (eds.) *IV International Symposium on Models for Plant Growth and Control in Greenhouses: Modeling for the 21st Century - Agronomic and Greenhouse Crop Models* (ISHS Acta Horticulture 593) , pp.200-205.
- Ben-Asher, Jiftah
n.d. The Expected Effect of Hi-Tech Irrigation on Water Availability in the Year 2020: A Closed Circuit between Theories, Models Laboratory Tests and Field Applications. In E. Rozental (ed.) *Water Problems in Israel in the Year 2020*.
- Silberbusch M., J.E. Ephrath, Ch. Alekperov and J. Ben-Asher
2003 Nitrogen and Potassium Fertilization Interactions with Carbon Dioxide Enrichment in *Hippeastrum* Bulb Growth. *Sci. Hort.* 1877: 1-5.

Awards

- The Ben-Gurion Award for Desert Development (1980)
Selected member of the American Institute of Hydrology (1997)

Research Activities

Field Research in Japan

March, 2003 Impact of Global Climate Change on Agriculture. ICCAP RIHN, Kyoto.

Current Research Grants and Contracts for Related Subjects

October, 1998 - January, 2002 Control of Salination and Combating Desertification Effects in the Mediterranean Region. European Commission - Science, Research and Development. \$80K/yr.

January, 1998 - January, 2002 (equivalent imagries) Soil Moisture Monitoring for Global Change Detection, Monitoring and Assessment in Israel. EU German (PIK and GFZ) - Israel Project. \$5K/yr.

Permanent Support The Katif Research Center for Coastal Deserts Development. \$100K/yr.

- 1999 - 2003 Development of Algorithm for Automatic control of Microclimate in Green Houses. MOS. \$20K/yr.
- 2000 - 2003 Effects of Different Water Regimes on Plant Development, Ruiting and Water Relations in Three Vine Cactus Crops. BARD. \$120K/yr.
- 2001 - 2008 Vulnerability of Water Resources Due to Climate Change in Eastern Mediterranean Ecosystems - An Integrated Approach to Sustainable Management. GLOWA - Jordan River - Joint German - Israeli Research Project. Bundesministerium fur Bildung und Forschung (BMBF) . Ministry of Science, Culture and Sport (MOS) . \$40K/yr.
- 2002 Medical Use of Nuplea for MOS. \$20K.
- 2002 - 2004 Non Linear Unit Hydrograph. ILAC. \$7.5K/yr.
- Total 8 running research grants \$ 392.5K/yr.

Social Activities and Public Lectures

Public Lectures

- January, 2003 A new technique to analyze agricultural experiments with combined GIS and geostatistical methods (ICCAP RIHN, Kyoto)
- March, 2003 The use of Radar to retrieve soil water content (Tottori Arid Land Research Center)
- April, 2003 Salinity and agricultural productivity (ICCAP RIHN, Kyoto)
- September, 2003 The water situation in Israel in the year 2020 (ICCAP RIHN, Kyoto)
- September, 2003 The Dew paradox (ICCAP RIHN, Kyoto)

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 of Plant Physiology, Society for the Study of Species Biology

Major Publications

Books

2003

Herben T. & Hara T. (2003) Spatial pattern formation in plant communities. In: *Morphogenesis and Pattern Formation in Biological Systems - Experiments and Models* - (T.

Sekimura, S. Noji, N. Ueno & P.K. Maini, Eds) , pp. 223-235. Springer-Verlag, Tokyo.

Articles

2003

Moharekar S.T., Lokhande S.D., Hara T., Tanaka R., Tanaka A. & Chavan P.D. (2003) Effect of salicylic acid on chlorophyll and carotenoid contents of wheat and moong seedlings.

Photosynthetica 41: 315-317.

Takahashi K., Uemura S., Suzuki J. & Hara T. (2003) Effects of understory dwarf bamboo on soil water and growth of overstory trees in a dense secondary *Betula ermanii* forest, northern Japan.

Ecological Research 18: 755-762.

Matsuki S., Ogawa K., Tanaka A. & Hara T. (2003) Morphological and photosynthetic responses of *Quercus crispula* seedlings to high-light conditions. *Tree Physiology* 23: 769-775.

Homma K., Takahashi K., Hara T., Vetrova V.P. & Florenzev S. (2003) Regeneration processes of a boreal forest in Kamchatka with special reference to the contribution of sprouting to population maintenance. *Plant Ecology* 166: 25-35.

Takahashi K., Mitsuishi D., Uemura S., Suzuki J. & Hara T. (2003) Stand structure and dynamics during a 16-year period in a sub-boreal conifer-hardwood mixed forest, northern Japan. *Forest Ecology and Management* 174: 39-50.

Lokhande S.D., Ogawa K., Tanaka A. & Hara T. (2003) Effect of temperature on ascorbate peroxidase activity and flowering of *Arabidopsis thaliana* ecotypes under different light conditions.

Journal of Plant Physiology 160: 57-64.

Activities in Academic Societies

Organization of the International Symposium "Diversity of Reproductive Systems in Plants: Ecology, Evolution and Conservation" 16-17 October 2003, Sapporo, Japan

Research Activities

Field Research in Japan

June 2003 Moshiri, Hokkaido (growth dynamics of boreal forests)

Field Research in Foreign Countries

August 2003 Kamchatka, Russia (growth dynamics of boreal forests)

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

DC Students (3)

JSPS Research Fellows (2)

INOUE, Takashi

Visiting Professor

Born in 1952.

Curriculum Vitae

Academic Career

1976 School of Law, Waseda University

Professional Career

Executive Produce, NHK Tokyo Head Office, Special Programmes Center (2003-present)

Executive Manager, Cultural Programme, NHK Enterprises 21, Inc. (2001)

Executive Producer, NHK Enterprises 21, Inc. (2000)

Senior Producer, NHK Tokyo Head Office, Programme Production Department (1998)

Senior Producer, NHK Tokyo Head Office, Special Programme Department (1993)

Senior Producer, NHK Tokyo Head Office, Programme Production Department (1990)

Programme Director, NHK Tokyo Head Office, Programme Production Department (1981)

Programme Director, Yamaguchi Bureau, NHK (Nippon Hoho Kyokai; Japan Broadcasting Corporation) (1976)

Higher Degrees

B.L. (Waseda University, 1976)

Fields of Specialization / Background

Television documentary production (in the field of civilization/history)

Major Accomplishments

Books

Inoue, Takashi

2003 *Afuganisutan Ushinawareta kokuhō* (Afghanistan, Lost Treasures) , Nippon Hoso Shuppan Kyokai (Japan Broadcast Publishing Co., Ltd.) [in Japanese]

Inoue, Takashi et al.

2000 *Yondai bunmei Ejipto* (The Four Great Civilizations, Egypt) , Nippon Hoso Shuppan Kyokai (Japan Broadcast Publishing Co., Ltd.) [in Japanese]

2000 *Yondai bunmei Mesopotamia* (The Four Great Civilizations, Mesopotamia) , Nippon Hoso Shuppan Kyokai (Japan Broadcast Publishing Co., Ltd.) [in Japanese]

2000 *Yondai bunmei Indasu* (The Four Great Civilizations, Indus) , Nippon Hoso Shuppan Kyokai (Japan Broadcast Publishing Co., Ltd.) [in Japanese]

2000 *Yondai bunmei Chūgoku* (The Four Great Civilizations, China) , Nippon Hoso Shuppan Kyokai (Japan Broadcast Publishing Co., Ltd.) [in Japanese]

Awards

Haivijyon awōdo 2000 Guranpuri (Grand prix award High-Definitions TV Programmes for the year 2000 by Hi-Vision Promotion Association in 2000)

Research Activities

Field Research in Foreign Countries

August through September, 2003 People's Republic of China (Historical ruin-site research at Ningxia Hui Autonomous Region, Gansu Province, China)

Social Activities and Public Lectures

Productions of civilization, culture and historical television programmes as few listed below.

2003 *NHK Supesharu Toruko: bunmei no jyūjūro*

(NHK Special Turkey; crossroad of civilization)

Episode 1 *Topukapu kyūden no kirameki*

(Glitter of Topkap Palace)

Episode 2 *Yomigaeru tetsu no ōkoku: Hittaito*

(Hittite; resurrection of kingdom of iron)

2002 *NHK Supesharu Afuganisutan: Shihō wa yomigaeruka*

(NHK Special Afghanistan; will the valuable treasure be rescued?)

Hai-vijyon Supesharu Bukkyō no furusato: Gandāra

(Hi-Vision Special Homeland of Buddhism: Gandhara)

2001 *NHK Supesharu kieta kokuhō: senka no naka no Afugan bunkazai*

(NHK Special Vanished national treasures; Afghan cultural asset amidst of orrors of war)

2000 *NHK Supesharu Yondai bunmei* (NHK Special The Four Great Civilizations)

Episode 1 *Soshite piramiddo ga tsukurareta: Ejipto*

(Egypt: And the pyramid was built)

Episode 2 *Sorewa hitotsubu no mugi kara hajimatta: Mesopotamia*

(Mesopotamia: All began from one grain of wheat)

Episode 3 *Nazono tami wa umi wo watatta: Indus*

(Indus: The enigmatic people crossed the sea)

Episode 4 *Koudo ga unda seidō no ōkoku: Chūgoku*

(China: Loess that birthed the bronze kingdom)

Episode 5 *Chikyūbunmei karano messēji*

(Message from global civilizations)

SHI, Guang-Yu

Visiting Professor

Born in 1942, Shandong, China.

Curriculum Vitae

Academic Career

Department of Physics, Shandong University, Jinan, China (1967)

Center for Upper Atmospheric Physics, Faculty of Science, Tohoku University, Sendai 980, Japan (1982)

Professional Career

Professor, Institute of Atmospheric Physics, Chinese Academy of Sciences (IAP/CAS), Beijing 100029, China (April 1 - present)

Visiting Professor, Research Institute of Humanity and Nature, Kyoto, Japan (Oct. 2003~March 2004)

Professor, IAP/CAS (August, 1997~Sept. 2003)

Professor, National Climate Center, China Meteorology Administration (NCC/CMA), Beijing 100081, China (Mar 1997~July 1997)

Visiting Professor, Center for Environmental Remote Sensing (CEReS), Chiba University, Chiba 263, JAPAN (Oct. 1996 - Mar. 1997)

Professor, NCC/CMA (May 1995 - Oct 1996)

Professor, IAP/CAS (May 1994 - May 1995)

Visiting Professor, Center for Climate System Research (CCSR), University of Tokyo, Tokyo 153, Japan (Nov. 1993 - May 1994)

Professor, IAP/CAS (Feb. 1992 - Oct. 1993)

Guest Worker, Division of Applied Physics, CSIRO, Sydney, Australia (Nov. 1991 - Jan. 1992)

Visiting Scholar, Atmospheric Science Research Center (ASRC), SUNY at Albany, NY 12205, U. S. A. (June 1991 - Oct. 1991)

Associate Professor, IAP/CAS (Dec. 1988 - May. 1991)

Senior Scientist, Atmospheric and Environmental Research Inc. (AER), 840 Memorial Drive, Cambridge, MA 02139, U.S.A (Mar. 1986 - Nov. 1988)

Associated Professor, IAP/CAS (May. 1982 - Feb. 1986)

Visiting Scholar, Tohoku University, Sendai 980, Japan (Oct. 1979 - Apr. 1982)

Assistant Professor, IAP/CAS (Jan. 1970 - Sept. 1979)

Higher Degrees

Ph. D. (Tohoku University, 1982)

Fields of Specialization / Background

Atmospheric Physics – Atmospheric Radiation, Greenhouse Effect, Radiative Forcing of Climate Change and Global Change

Academic Society Memberships

American Geophysical Union (AGU)

Beijing Meteorological Society, CMA

Committee Member of Chinese National Committee for IGBP

Major Publications**Books**

Shi, G.-Y. and M. Tanaka
2005 Atmospheric Radiation (in Chinese and to be published in 2005)

Selected Articles

- Shi, G.-Y. and S.-X. Zhao
2003 Several scientific issues in the dust storm studies, *Chinese Journal of Atmospheric Sciences*, 27, No.4, 591.
Zhang, P. and G.-Y. Shi
- 2003 The Theoretic Study on the Retrieval of Aerosols' Volume Distribution from Solar Spectral Reflectance, *Acta Meteorologica Sinica*, Vol. 61, No.1, pp85-94.
- Zhang, H., T. Nakajima, G.-Y. Shi et al.
2003 An optimal approach to overlapping bands with correlated k distribution method and its application to radiative calculations, *J. Geophys. Res.*, 108, D20, 4641-.
- Shi, G.-Y., X.-H. Wang, L.-S. Zhang, X.-Y. Huang, Z.-C. Zhao, X.-J. Gao and Y. Xu
2002 Impact of human activities on the climate, II Impacts on the Climate Change over East Asia and China, *Climate and Environmental Studies*, 7, 255-266.
- Shi, G.-Y. et al.
2002 The Role of Human Activity in the Environment Revolution over Western Part of China, in *Assessment Report of Environment Revolution over Western Part of China* edited by D.-H. Qin, China Meteorology Press, Beijing, 2002, p171-216.
- Liu, Y.-Z., W.-A. Xiao and G.-Y. Shi
2002 On the Saturation of Greenhouse Effect due to Carbon Dioxide, *Advances in Earth Science*, Vol.17, No.5, p653-658.
- Zhang, H. and G.-Y. Shi
2002 Numerical explanation for accurate radiative cooling rates resulting from the correlated *K-distribution hypothesis*, *Journal of Quantitative Spectroscopy & Radiative Transfer*, No.74, p299-306.
- Wang, X.-H. and G.-Y. Shi
2002 Effects of Clouds and Surface Albedo on the Direct Radiative Forcing due to Sulfate Aerosols, *Acta Meteorologica Sinica*, Vol.60, No.6, pp758-765.
- Zhang, L.-S. and G.-Y. Shi
2002 The Impact of relative humidity on the radiative property and radiative forcing of sulfate aerosol, *Acta Meteorologica Sinica*, Vol.60, No.2, pp230-237.
- Shi, G.-Y., Y.-B. Bai, Y. Iwasaka and T. Ohashi
2000 Balloon observation of atmospheric ozone over Lahsa, Tibet, *Advances in Geophysical Sciences*, 15, No.5, 522-524.
- Zhang, H. and G.-Y. Shi
2000 A fast and efficient line-by-line calculation method for atmospheric absorption, *Chinese Journal of Atmospheric Sciences*, , 24, 111-121.
- Shi, G.-Y.
2000 Thinking about the Global (Climate) Change – We don't know What we don't know, in *Review of Atmospheric Sciences and the Perspective in 21Century* , China Meteorology Press, Beijing, 2000, p40-45.
- Jin, X. and G.-Y. Shi
1999 Numerical modeling for distribution of carbon and nutrient in the ocean, *Climate and Environmental Research*, 4, 375-387.
- Shi, G.-Y.
1998 On the k-distribution and correlated k-distribution models in the atmospheric radiation calculations, *SCIENTIA ATMOSPHERICA SINICA*, 22, 659-676.

- Hu, R.-M. and G.-Y. Shi
1998 Horizontal two-dimensional distribution of radiative forcing and climate effect due to stratospheric aerosol, *SCIENTIA ATMOSPHERICA SINICA*, Vol.22, No.1, p28-34.
- Shi, G.-Y., J.-D. Guo
1997 One-Dimensional analysis of global carbon cycle, *Chinese Journal of Atmospheric Sciences*, 21, 216-230.
Shi, G.-Y., J.-D. Guo, X.-B. Fan and L.-X. Wang
1997 A physical model for the global mean surface air temperature anomalies over the last century, *Chinese Science Bulletin*, 42, 658-662.
- Wang, B. and G.-Y. Shi
1997 Radiative Transfer Process, in 《Basic Principles and Technology of Climate Models》 edited by M. Dong et al., China Meteorology Press, Beijing, 1997, p85-96.
- Fan X.-B. and G.-Y. Shi
1997 The behaves of atmospheric trace gases and ozone as examined by a two-dimensional model, in 《Atmospheric Ozone Variation and its Impacts on Climate-Environment over China II》 (Ed. X.-J. Zhou) , China Meteorology Press, Beijing, 1997, pp.207-214.
- Shi, G.-Y.
1997 Some issues in the study on global climate change, in 《Studies on Climate Change and Its Influences over China》 (Eds. Y.-H. Ding and G.-Y. Shi) , China Meteorology Press, Beijing, pp.26-35.
- Shi, G.-Y., Y.-H. Ding, P. Zhang, L.-X. Wang, Q.-C. Chao and B.-Z. Wang
1997 An assessment of China forest CO₂ emission and uptake, *ibid*, pp.85-94. Shi, G.-Y. et al.
1996 Balloon observation of atmospheric ozone and aerosols, *Scientia Atmospherica Sinica*, 20, 401-407.
- Fan X.-B. and G.-Y. Shi
1996 A two-dimensional chemical model and its application to simulate the atmospheric composition, in 《Atmospheric Ozone Variation and its Impacts on Climate-Environment over China I》 (Ed. X.-J. Zhou) , China Meteorology Press, Beijing, pp.209-221.
- Wang, L.-X. and G.-Y. Shi
1996 The relation between long-term variation of insolation and the late-Pleistocene climate, *ibid*, pp.17-25.
- Fan, X.-B. and G.-Y. Shi
1996 One dimensional model study on the past and future atmospheric ozone change, *ibid*, pp.26-36.
- Zhao, F.-S. and G.-Y. Shi
1995 Transient Climate Effect induced by Greenhouse Gases, *J. Geograph. Sci.*, Vol.50, No.5, p430-437..
- Zhao, F.-S. and G.-Y. Shi
1994 One Dimentional Model Analysis of Aerosol Climate Effect, *Scientia Atmospherica Sinica*, Vol. 18, Supplementary Issue, 125-132.
- Shi, G.-Y.
1994 Analysis of Global Carbon Dioxide Budget, *Proceedings of the International Symposium on Global Cycles of Atmospheric Greenhouse Gases*, Mar. 7-10, 1994, Sendai, Japan, 265-277.
- Xu, L. and G.-Y. Shi
1994 Preliminary Analysis of CO₂ and CFCs concentrations in the Equatorial Western Pacific Ocean, *ibid*, 175-178.
- Shi, G.-Y.
1993 Climate Change and Its Causes, *Proceedings of International Conference on Regional Environment and Climate Changes in East Asia*, Nov. 30-Dec.3, 1993, Taipei, China, 364-369.
- Shi, G.-Y., X.-B. Fan, J.-D. Guo, L. Xu, L.-M. Hu, J.-P. Chen, B. Wang, M. Tanaka and T. Hayasaka
1993 Measurements of atmospheric aerosols' optical properties in HEIFE area, *Proceedings of International Symposium on HEIFE*, Nov. 8-12, 1993, Kyoto, JAPAN, 642-647.
- Shi, G.-Y., L. Xu, J.-P. Chen, F.-S. Zhao, X.-B. Fan, R.-M. Hu, M. Tanaka and T. Hayasaka
1992 Measurements of Atmospheric Aerosol's Optical Properties over Beijing Area during Spring-Summer Season of 1991, *Proceedings of 4th National Conference on Atmospheric Aerosols*, Sept. 14-20, 1992, Hefei,

Anhui, 33-37.

Shi, G.-Y. and X.-B. Fan

1992 Past, Present and Future Climatic Forcing due to Greenhouse Gases, *Advances in Atmospheric Sciences*, Vol.9, No.3, 279-286.

Shi, G.-Y.

1992 Global Warming Potential due to CFCs and Their Substitutes, *Scientia Atmospherica Sinica*, Vol. 16, 345-352 (1992).

Shi, G.-Y.

1992 Radiative Forcing and Greenhouse Effect due to Atmospheric Trace Gases, *Science in China*, Vol.35, No.2, 217-229.

Shi, G.-Y., F.-S. Zhao and L.-M. Hu

1990 A simple Air-Sea Carbon Exchange Model, in 《Proceedings of National Symposium on Climate Change and Environmental Issues》 edited by China National Science and Technology Society, Beijing, Paper 49, 1990.

Shi, G.-Y. and W.-C. Wang

1990-1989 Radiative Effects due to Change of Polar Ozone and Aerosols, *Proceedings of the International Conference on Global and Regional Environmental Atmospheric Chemistry*, May 3-10.

1989, CONF-890525, August 1990; *Annual Report*, Inst. of Atmos. Phys., Academia Sinica, 9, No.1,

1990, p91-96.

Shi, G.-Y. et al

1987 Balloon Observation of Vertical Distribution of Ozone and Aerosol in Atmosphere From 0 to 33 Km, *KEXUE TONGBAO*, Vol.32, No.16, p1125-1129.

Shi, G.-Y., W.-C. Wang, M.K.W. Ko and M. Tanaka

1986 Radiative Heating Due to Stratospheric Aerosols Over Antarctica, *Geophysical Research Letters*, Vol.13, No.12, p1335-1338.

Shi, G.-Y. and Y.-N. Qu

1986 Effects of Radiation Models on the Calculation of Infrared Cooling Rates, *Advances in Atmospheric Sciences*, Vol.3, No.2, p227-237.

Shi, G.-Y. and Y.-N. Qu

1986 A New Approach to Diffuse Radiation, *KEXUE TONGBAO*, Vol.31, No.21, p1471-1474.

Shi, G.-Y.

1984 The Cooling Rate Due to 9.6 μ m Ozone Band—A New Approximation, *Scientia Sinica (Series B)*, Vol.27, No.9, p947-957.

Shi, G.-Y.

1984 Effect of Atmospheric Overlapping Bands and Their Treatment on the Calculation of Thermal Radiation, *Advances in Atmospheric Sciences*, Vol.1, No.2, p246-255.

Shi, G.-Y.

1981 An Accurate Calculation and Representation of the Infrared Transmission Function of the Atmospheric Constituents, Ph. D Thesis, Tohoku University of Japan.

Awards

1998 Silver Metal of Natural Science of CAS, titled 'k-Distribution Method for Atmospheric Radiation'

Research Activities

Apr. 2004 - present (IAP/CAS)

Impact of Asian Dust on Primary Production of China Sea and its Climate Effects

Beijing Brown Clouds (BBC)

Oct. 2003~March 2004 (RIHN)

- Trend of Atmospheric Aerosol Optical Depth in China over Past 50 Years and its Climate Implication
Physical Model Study on Temperature Anomaly in Vostok, Antarctica over Past 420,000 Years
August, 1997~Sept. 2003 (IAP/CAS)
Effects of clouds, radiation and other forcing factors on Climate
Climate effect of the atmospheric aerosols
Experimental study on the ozone minimum over Qinghai-Xizang Plateau (Cooperated with Prof. Y. Iwasaka, Nagoya University of Japan)
Ground-based observation of atmospheric aerosols (supported by NASDA)
- Mar 1997~July 1997 (NCC/CMA)
Effects of clouds, radiation and other forcing factors on Climate over China
Climate effect of the atmospheric aerosols
- Oct. 1996 - Mar. 1997 (CEReS, Chiba University of Japan)
Surface radiation budget
- May 1995 - Oct 1996 (NCC/CMA)
Development of a coupled AGCM and OGCM climate model (Cooperator: Guo-Xiong Wu and Xue-Hong Zhang)
Atmospheric ozone change and its impact on climate environment over China
Development of a physically-based climate model and its application to explain the surface temperature change over last century and to predict the future global warming
- May 1994 - May 1995 (IAP/CAS)
Development of a coupled AGCM and OGCM climate model (Cooperator: Guo-Xiong Wu and Xue-Hong Zhang)
Atmospheric ozone change and its impact on climate environment over China
Development of a physically-based climate model and its application to explain the surface temperature change over last century and to predict the future global warming
- Nov. 1993 - May 1994 (CCSR, University of Tokyo, Japan)
Improvement of radiative transfer scheme for GCM use
- Feb. 1992 - Oct. 1993 (IAP/CAS)
Greenhouse effect of carbon dioxide and other trace gases
Model study of chemistry-climate interaction
Model study of global carbon cycle
Radiative - climate effects of atmospheric aerosols
Balloon observation of atmospheric trace gases and aerosols
- Nov. 1991 - Jan. 1992 (CSIRO, Sydney, Australia)
Development of 2-D Dynamics-Radiation-Chemistry Model
- June 1991 - Oct. 1991 (ASRC, SUNY at Albany, U. S. A)
Development of wide band radiation scheme for GCM climate model
- Dec. 1988 - May. 1991 (IAP/CAS)
Development of Radiative - convective model and model study of greenhouse effect
Model study of carbon uptake by ocean
Observation of optical property of atmospheric aerosols
- Mar. 1986 - Nov. 1988 (AER, Cambridge, MA 02139, U.S.A)
Development of wide band radiation model for GCM climate modeling
Incorporation of the thermal radiative effect of CH₄, N₂O, CF₂Cl₂ and CFCI₃ into the NCAR Community Climate Model (CCM1)
Coupled RC - PC (Radiative-Convective/PhotoChemistry) model
Radiative aspect on ozone hole
Solar radiation and climate characteristics over desert area of China
- May 1982 - Feb. 1986 (IAP/CAS)

Calculation of atmospheric cooling rate

Comparison of radiation model

Balloon observation of atmospheric ozone, aerosol and longwave radiation

Remote sensing of atmospheric ozone

Oct. 1979 - Apr. 1982 (Tohoku University, Sendai 980, Japan)

Exact calculation and representation of infrared transmission function of atmospheric constituents

Jan. 1970 - Sept. 1979 (IAP/CAS)

Atmospheric remote sensing with Lidar

Studies in Fourier spectroscopy and development of IRIS

Ab initio calculation in quantum chemistry

Social and Public Activities

IAMAS International Radiation Commission Member (2001-Present)

Head of Chinese Working Group for International SOLAS Project and Head of Working Group for SOLAS of CNC-IGBP (China National Committee for IGBP)

Head of Chinese Working Group for ABC/UNEP and a member of international science team of ABC

PI of Sino-Japan Joint Project on Dust Storm (ADEC: Aeolian Dust Experiment and Climate Impact)

PI of the China SOLAS Project, a Key Project supported by the NSFC (National Natural Science Foundation of China)

Lead Author of IPCC TAR, WGI, Chapter 6 (Radiative Forcing of Climate Change) [Contributor of IPCC WG1 (IPCC 1990, 1994)]

Scientist of USA/DOE - PRC/CAS CO₂ - induced climate effect joint project

Committee Member of Academic Degree Committee of IAP/CAS

VON FALKENHAUSEN, Lothar Visiting Professor

Born in 1959, Germany.

Curriculum Vitae

Academic Career

Department of Anthropology, Harvard University, Ph.D. program (1982-1988)

Research Institute for Humanistic Studies, Kyoto University, research fellow (1985-86)

Regional Studies/East Asia, Harvard University, A.M. program (1981-1982)

Archaeology Wing, Department of History, Peking University (1979-81)

Bonn University, Sinology and Art History major (1977-79)

Professional Career

Professor, Art History Department and Associate Director, Cotsen Institute of Archaeology, UCLA, U.S.A. (1997-present)

Visiting Professor, Research Institute for Humanity and Nature, Japan (June 11 – September 15, 2003)

Visiting Professor, Kyoto University, Japan (2002-2003)

Research Fellow, Institute for Advanced Studies, Norwegian Academy of Sciences (2000)

Visiting Professor, École Pratique des Hautes Études, Paris, France (1998)

Visiting Professor, University of Heidelberg, Germany (1997)

Associate Professor, Art History Department and Cotsen Institute of Archaeology, UCLA, U.S.A. (1993-1997)

Assistant Professor, University of California, Riverside, U.S.A. (1990-1993)

Visiting Fellow, Institute of Archaeology, Chinese Academy of Social Sciences, Beijing, China (1990-1991)

Visiting Assistant Professor Stanford University, U.S.A. (1988-1990)

Higher Degrees

Ph. D. (Harvard University, 1988)

A. M. (Harvard University, 1982)

Field of Specialization/Background

East Asian Archaeology, with a focus on the Chinese Bronze Age (2000-250 BC) ; Chinese epigraphy; Archaeology of the Silk Routes

Academic Society Memberships

American Anthropological Association, Society for American Archaeology, Archaeological Institute of America, Association for Asian Studies, Society for East Asian Archaeology, Society for the Study of Early China, Society for the Study of Chinese Religions, Royal Asiatic Society/Korea Branch, Nihon Chūgoku Kōkōgaku kai

Major Publications**Books**

Von Falkenhausen, L.

1993 *Suspended Music: Chime-Bells in the Culture of Bronze Age China*. Berkeley and Los Angeles: University of California Press.

Von Falkenhausen, L.

2003 *Qiyi de tumu: Xifang xuezhè kàn Sanxingdui* 奇異的凸目: 西方學者看三星堆 (Protruding Eyes: Western Scholars' Perspectives on Sanxingdui) (editor and contributor). Chengdu: Ba Shu shushe.

2002 *Japanese Scholarship on Early China, 1987-1991: Summaries from Shigaku Zasshi* Early China Special Monograph Series, vol. 6. Berkeley: Institute for Chinese Studies, University of California, Berkeley. (editor.)

1999-2001 *Festschrift in Honor of K. C. Chang. Journal of East Asian Archaeology* vol. 1.1-4. vol. 2.1-2. vol. 3.3-4. (editor and contributor, with Rokesf E. Murowchick' lot al.) Leiden: Brill.

Articles

Von Falkenhausen, L.

2003 "Lüetan Zhongguo qingtongshidai de renwu biao xian ji qi lishi yiyi" (Brief remarks on human representation during the Chinese Bronze Age and its historical significance.) In *Hua Xia wenming de xingcheng yu fazhan: Henan Sheng Wenwu Kaogu Yanjiusuo wushinian qingzhuhui ji Hua Xia wenming de xingcheng yu fazhan xueshu yantaohui lunwenji*. pp.265-267. Zhengzhou: Daxiang chubanshe.

2003 "The E Jun Qi Metal Tallies: Inscribed Texts and Ritual Contexts." In *Text and Ritual in Early China*, Martin Kern (ed.). Seattle: University of Washington Press, forthcoming.

2003 "Social Ranking in Chu Tombs: The Mortuary Background of the Warring States Manuscript Finds." *Monumenta Serica*. 51: 439-526.

2003 "Mortuary Behavior in Pre-Imperial Qin: A Religious Interpretation." In *Chinese Religion and Society*, John Lagerwey (ed.). Hong Kong: Chinese University Press, pp.109-172.

2003 "The Bronzes from Xiasi and Their Owners." In *Kaoguxue Yanjiu* 5, pt-2: 755-786.

2003 "Architecture and Archaeology: A View from China." In *Archaeology in the Mediterranean: The Present State and Future Scope of a Discipline*, John Papadopoulos (ed.), pp. 247-266. Los Angeles: Cotsen Institute of Archaeology.

2002 "Some Reflections on Sanxingdui." In *Papers from the Third International Conference on Sinology, History Section: Regional Culture, Religion, and Arts Before the Seventh Century*, pp. 59-97. Taipei: Institute of History and Philology, Academia Sinica.

2001 "Shangma. Demography and Social Differentiation in a Bronze Age Community in North China." *Journal of East Asian Archaeology* vol. 3.3/4, 2001, pp. 91-172.

2001 "The Use and Significance of Ritual Bronzes in the Lingnan Region During the Eastern Zhou Period."

- Journal of East Asian Archaeology* vol. 3.1/2 (Festschrift K. C. Chang, part 3, Robert E. Murowchick et al. [eds.]) , 2001, pp. 193-236.
- 2003 "The Chengdu Plain in the Early First Millennium B.C.: Zhuwajie." In *Ancient Sichuan: Treasures from a Lost Civilization*, Robert W. Bagley (ed.) , pp. 177-201. Seattle: Seattle Art Museum and Princeton University Press, 2001.
- 2000 "The Leigudun Finds in the History of Chinese Music." In *Music in the Age of Confucius*, Jenny F. So (ed.) , pp. 101-114. Washington, D.C.: Arthur M. Sackler Gallery of Art, Smithsonian Institution.
- 2000 "Die Seiden mit chinesischen Inschriften." In *Die Textilien aus Palmyra: Neue und alte Funde*, Andreas Schmidt-Colinet, Anne-Marie Stauffer, and Khaled Al As'ad, editors, pp. 58-81. Deutsches Archäologisches Institut, Orient-Abteilung, Damaszener Forschungen, vol. 8. Mainz: Philipp von Zabern.
- 1999 "Late Western Zhou Taste." *Études chinoises* 18.1-2 (1999) (Festschrift Jean-Pierre Dieny) , pp. 143-178.
- 1999 "Su Bingqi (1909-1997) " and "Xia Nai (1910-1985)." In *Encyclopedia of Archaeology: The Great Archaeologists*, Tim Murray, editor. Santa Barbara et al.: ABC-Clío, 1999, pp. 591-600 and 601-614.
- 1999 "Inconsequential *Incomprehensions* Some Instances of Chinese Writing in Alien Contexts." *Res* 35 (1999) , pp. 42-69.
- 1999 "Bronzes from Feng-Hao and Environs, Shaanxi Province," "Chu Tombs at Xiasi, Xichuan, Henan Province," "Bronze E Jun Qi tally from Qiujiahuayuan, Shouxian, Anhui Province," and "The Tomb of King Cuo of Zhongshan at Sanji, Pingshan, Hebei Province" (introductions and catalogue entries) . In Yang Xiaoneng (ed.) , *The Golden Age of Chinese Archaeology*, pp. 228-235, 270-274, 340-344, 352-359. Washington: National Gallery of Art.
- 1999 "A South Chinese Bell in the Shumei Collection." *Bulletin of the Miho Museum* 2 (1999) : 39-66.
- 1999 "The Waning of the Bronze Age: Material Culture and Social Developments, 770-481 BC." In *The Cambridge History of Ancient China*, Edward L. Shaughnessy and Michael Loewe, editors, pp. 450-544. Cambridge: Cambridge University Press.
- 1998 "Archaeology and the Study of Chinese Local Religion: A Discussant's Remarks." *Cahiers d'Extrême-Asie* 10 (1998) , pp. 411-425.
- 1998 "Les Zhou de l'Ouest," "Notices 20 a 39," and (with Alain Thote) "Les inscriptions." In *Rites et festins de la Chine antique: Bronzes du musée de Shanghai*, catalogue of an exhibition held at the Musée Cernuschi from September 23, 1998 to January 10, 1999, pp. 94-130 and 169-177. Paris: Findakly.
- 1998 "East Asian Bells After the Bronze Age: Comparisons and Reflections" (with Thomas D. Rossing) . In *Proceedings of the International Symposium "Chinese Archaeology Enters the Twenty-First Century"*, pp. 407-431, Chinese summary pp. 432-434. Beijing: Kexue, 1998.
- 1997 Youguan Xi Zhou wanqi lizhi gaige ji Zhuangbai qingtongqi niandai de xin jiashuo: Cong shixi mingwen shuoqi" 有關西周晚期禮制改革的新假說 ··從世係銘文說起 (A new Hypothesis Concerning the Late Western Zhou Ritual Reform and the Date of the Bronzes from Zhuangbai: Reflections on the Genealogical Terminology in the Bronze Inscriptions) , translated by Li Ling, revised by the author. In *Zhongguo kaoguxue yu lishixue zhi zhenghe yanjiu* 中國考古學與歷史學之整合研究 (Integrated Studies of Chinese Archaeology and Historiography) , Tsang Cheng-hwa 臧振華 (ed.) , vol. 2, pp. 651-676. Taipei: Academia Sinica, Institute of History and Philology, 1997.
- 1997 "Lun Lingnan diqu chutu de zaoqi qingtong liyueqi" 論嶺南地區出土的早期青銅禮樂器 (On the earliest bronze vessels and bells from the Far Southern region of China) . In *Wu Yue diqu qingtongqi yanjiu lunwenji* 吳越地區青銅器研究論文集 (Studies on Bronzes from the Wu and Yue Area) , pp. 157-176. Hong Kong: Tai Yip, 1997.
- 1996 "The Moutuo Bronzes: New Perspectives on the Late Bronze Age in Sichuan." *Arts Asiatiques* 51 (1996) , pp. 29-59.
- 1996 "The Concept of wen in the Ancient Chinese Ancestral Cult." *Chinese Literature: Essays, Articles, and Reviews*, 18 (1996) : 1-22.

- 1996 "Inscribed and Decorated Objects" (with Roberta S. Greenwood) . In Roberta S. Greenwood, *Down by the Station: The Los Angeles Chinatown, 1850-1933*. Los Angeles: UCLA Institute of Archaeology, 1996, pp. 147-163.
- 1996 "Notes on Calligraphy Displayed in a Physician's Office" (with Ronald C. Egan) . In Greenwood, *Down by the Station*, pp. 189-192.
- 1995 "Reflections on the Political Role of Spirit Mediums in Early China: The wu Officials in the Zhou li." *Early China* 20 (1995) (Festschrift for David N. Keightley) , pp. 279-300.
- 1995 "The Regionalist Paradigm in Chinese Archaeology." In *Nationalism, Politics, and the Practice of Archaeology*, Philip Kohl and Clare Fawcett, editors. Cambridge: Cambridge University Press, 1995, pp. 198-217.
- 1995 "Acoustical and Musical Studies on the Sackler Bells" (with Thomas D. Rossing) . In *Eastern Zhou Bronzes from the Arthur M. Sackler Collections*, Jenny F. So, editor. *Ritual Bronzes from the Arthur M. Sackler Collections*, vol. 3. New York: Abrams, 1995, pp. 431-84.
- 1994 "Sources of Taoism: Reflections on Archaeological Indicators of Religious Change in Eastern Zhou China." *Taoist Resources* 5.2 (1994) , pp. 1-12.
- 1994 "The Effect of Geometry on the Tone Separation in Chinese Two-Tone Bells" (principal author: Thomas D. Rossing) . In *SMAC 93: Proceedings of the Stockholm Music Acoustics Conference July 28-August 1, 1993* , Anders Friberg et al., editors. Stockholm: Publications issued by the Royal Swedish Academy of Music, No. 79, 1994, pp. 331-37.
- 1995 "On the Historiographical Orientation of Chinese Archaeology." *Antiquity* 67.257 (1993) , pp. 839-49. Japanese translation by Anazawa Wakō 穴沢和光, "Chūgoku kōkogaku-no bunken shigaku shikō," 中国考古学の文献史学志向 Kobunka dansō 古文化談叢 35 (1995) , pp. 179-95. [Unauthorized, fault-ridden Chinese translation by Chen Chun 陳淳, "Lun Zhongguo kaoguxue de bianshi qingxiang," 論中國考古學的變史傾向 *Wenwu jikan* 文物季刊 1995.2: 83-89.]
- 1992 "On the Early Development of Chinese Musical Theory: The Rise of Pitch Standards." *Journal of the American Oriental Society* 112.3 (1992) , pp. 433-39.
- 1992 "Zeng Hou Yi yiqian de Zhongguo gudai yuelun - cong Nangong Hu-zhong de yongbu mingwen shuoqi" 曾侯乙以前的中國古代樂論 ·· 從南宮呼鐘的甬部銘文說起 (Ancient Chinese musical theory in the time before Marquis Yi of Zeng - a discussion of the inscription on the shank of the Nangong Hu bell) . *Kaogu* 考古 1992.9, pp. 854-58.
- 1991 "Lun Jiangxi Xin'gan Dayangzhou chutu de qingtong yueqi" 論江西新淦大洋洲出土的青銅樂器 (The bells excavated at Dayangzhou, Xin'gan [Jiangxi]) . *Jiangxi Wenwu* 江西文物 1991.3, pp. 15-20, 6.
- 1991 "Chu Ritual Music." In *New Perspectives on Chu Culture During the Eastern Zhou Period*, Thomas Lawton, editor. Washington, D. C.: Smithsonian Institution, Arthur M. Sackler Gallery, and Princeton University Press, 1991, pp. 47-106. [Unauthorized, fault-ridden Chinese translation by Gu Jiuxing 顧久幸, "Chu Liyue" 楚禮樂 *Jiang Han kaogu* 江漢考古 2001.3: 71-82 and 2003.4: 84-90.]
- 1990 "Ahnenkult und Grabkult im vordynastischen Qin: Der religiöse Hintergrund der Terracotta-Armee." In *Jenseits der Grossen Mauer: Der Erste Kaiser von Qin und seine Terracotta-Armee*, Lothar Ledderose and Adele Schlombs, editors. Dortmund 1990 (München: Bertelsmann Lexikonverlag, 1990) , pp. 35-48.
- 1989 "'Shikin-no Onsei,' Tō-Shū jidai-no shun, taku, dô, taku nado ni tsuite" 四金之音聲 ·· 東周時代鐃鐃鐃鐃の等について (Some Eastern Zhou Bells Used for Signal-Giving in Warfare) . *Sen'oku Hakkokan Kiyô* 泉屋博古館紀要 (Bulletin of the Sen'oku Hakkokan [Sumitomo Collection]) 6 (1989) , pp. 3-26.
- 1989 "Niuzhong Chime-Bells of Eastern Zhou China." *Arts Asiatiques* 44 (1989) , pp. 68-83.
- 1986n "Architecture" (full title: "Early Classic Architecture of the Maya Lowlands, with a Note on the Comparison between Maya and Chinese Architecture") . In *A Consideration of the Early Classic Period in the Maya Lowlands*, Gordon R. Willey and Peter Mathews, editors. Institute for Mesoamerican Studies, State University of New York at Albany, Publication No.10 (1986) , pp. 111-33.

And numerous review articles

Activities in Academic Societies

(since 1999)

- 2002 "Chūgoku seidōjikai no gakki to sono ongaku." Lecture to the Kansai Branch of the Nihon Chūgoku kōkogakkai, Tōkyō, November 18, 2002.
- 2002 "Gendai kōkogaku ni yoru Chūgoku kodaishi saikō." Keynote lecture delivered at the conference "Gendai rekishigaku wo tou," Kyōto University, November 30, 2002.
- 2002 "Qucun mudi ji qi qingtongqiqun de shehuikaoguxue fenxi: yu Shangma mudi de bijiao." Paper delivered at the International Conference in Celebration of the Fiftieth Anniversary of the Shanghai Museum, Shanghai, August 1, 2002.
- 2002 "Zhongguo qingtongqi shang de renwu biaoqian ji qi meishushi yiyi." Paper delivered at the International Conference in Celebration of the Fiftieth Anniversary of the Henan Institute of Cultural Relics and Archaeology, Zhengzhou, July 26, 2002.
- 2002 "Opportunities for Creative Self-Expression Through Ritual as Viewed Through Some Zhou Bronze Assemblages." Paper delivered at the International Conference "Creativity and the Arts of East Asia and the West: In Celebration of Professor Lothar Ledderose's Sixtieth Birthday," University of Heidelberg, July 12-13, 2002
- 2001 "The Role of the 'Peripheries' in Ancient Production Systems in Bronze Age China." Invited paper at the Annual Meeting of the American Anthropological Association, Washington, D.C., November 30, 2001.
- 2001 "Some Curious Phenomena in Early Chinese Art History." Paper delivered at the Annual Meeting of the Western Branch of the American Oriental Society, Los Angeles, October 13, 2001.
- 2001 "From Action to Image: Narrative Depiction in Early China and its Cultural Background." Paper delivered at the European and North American Exchanges in East Asian Studies Conference "From Image to Action: The Dynamics of Visual Representation in Chinese Intellectual and Religious Culture", Paris, September 3-5, 2001.
- 2001 "Ornaments as Markers of Ethnic Identity in the Art of Qin." Paper delivered at the ICAS conference, Berlin, August 9-11, 2001.
- 2001 "The External Connections of Sanxingdui." Paper delivered at a symposium on the archaeology of Sichuan at the Seattle Art Museum, August 3-4, 2001.
- 2001 "The Archaeology of Salt Production in Sichuan, China." Lecture delivered to the Salem (OR) Chapter of the American Archaeological Association, September 20, 2000, and at Carleton College, Northfield (MN) , February 22, 2001.
- 2000 "A Study of the E Jun Qi jie Inscription." Paper delivered at the Conference conference "Text and Ritual in Early China," Princeton, October 20-22, 2000; also read at the conference on "Writing and Visuality in Traditional Chinese Art," UCLA, December 8-9.
- 2000 "The Mortuary Context of Warring States Manuscript Finds." Paper delivered at the "Tomb Text Workshop" at the University of Hamburg, July 19-21, 2000.
- 2000 "Archaeological Perspectives on Salt Production in East Asia" (with Li Shuicheng) , and "Shangma: Reflections on Demography and Social Differentiation in a Late Bronze Age Cemetery in Shanxi." Papers delivered at the Second Worldwide SEAA Conference, Durham (England) , July 6-9, 2000.
- 2000 "Mortuary Behavior in Pre-Imperial Qin: A Religious Interpretation." Paper to be delivered at the International Conference on Religion in Chinese Society, Hong Kong, May 29, 2000.
- 2000 "New Perspectives on Sanxingdui." Invited lecture to The Smithsonian Associates, Washington DC, February 10, 2000; other versions presented at the Museum for East Asian Antiquities, Stockholm, April 15, 2000; at the Third International Conference on Sinology, Taipei, June 28, 2000; and at the symposium on "The Golden Age of Chinese Archaeology" at the University of San Francisco, August 26, 2000.
- 1999 "How Status Distinctions Were Expressed in Tombs in Ancient China," paper delivered at the symposium "Ringing Thunder: Art and Science in Ancient Chu," University of California, San Diego, August 6, 1999.

- 1999 "Archaeological Perspectives on Qin religion," paper at the conference on "Religion and Authority in Early China," Harvard University, April 22-25, 1999.

Awards

- 1995 Philip E. Lilienthal Prize of the University of California Press for Suspended Music: Chime-Bells in the Culture of Bronze Age China.
- 1995 Honorable Mention for the 1995 Shimada Prize for the best book on East Asian Art for Suspended Music.

Research Activities

Field Research in Japan

- 2003 While a Visiting Professor at RIHN, visited various salt-producing sites in Japan

Field Research in Foreign Countries

- 1999-2003 Co-Director of Sino-American Collaborative Project on the archaeological study of ancient salt production in the Upper Yangzi River Basin
- 2003 Participated in Research Trip of the Oasis Project (RIHN) to sites in Gansu and Inner Mongolia

Social Activities and Public Lectures

Public Lectures

(since 1999)

- 2003 "Chûgoku engyô no kôkogaku wo megutte." Lecture at the Research Institute for Humanity and Nature, Kyoto, July 13, 2003.
- 2003 "Salt Production and Early Social Developments in the Upper Yangzi River System: Some Remarks from the Field." Lecture to the Department of Anthropology, University of California, Santa Barbara, April 18, 2003.
- 2003 "UCLA/Pekin Daigaku engyô kôkogaku kyôdô kenkyû no shohoteki shôkai." Lecture to the Shionokai (Association for Salt Archaeology in Japan) , Kyôto University, January 25, 2003.
- 2003 "Lishu ziliao yu kaoguxue ziliao de duibi: Dong Han zhushi de zuoyong he lishi yiyi." Cai Jiemin (Yuanpei) Memorial Lecture, Department of Chinese Literature, Peking University, January 7, 2003.
- 2002 "Youguan Zhongguo zaoqi 'chengzhi' de jige wenti." Lecture to the Department of Archaeology, Peking University, December 20, 2002.
- 2002 "Twenty Theses Concerning the Archaeology of 'Cities' in Pre-Imperial China." Paper presented at the International Symposium "Urban Morphology and the History of Civilization in East Asia." Kyoto: International Research Institute for Japanese Culture, Dec. 9, 2002.
- 2002 "Engyô kara mita kodai Chûgoku chihôbunka: Shisen shô saishin koko jijô." Lecture at the Sen'oku Hakkokan (Sumitomo Collection) , Kyôto, November 9, 2002; also given at Gakushûin University, Tôkyô, November 20, 2002, and at Kyûshû University, March 8,
- 2002 "Archaeological Research on Salt Production in the Upper Yangzi River Basin." Lecture jointly sponsored by the Istituto Italiano di Studi Orientali and the École Française d'Extrême-Orient, Kyôto, October 25, 2002.
- 2002 "The Debate on the Origins of Qin: Historical and Archaeological Perspectives." Invited paper to be delivered at the International Conference "Cultural Differences and General Laws of the Social Sciences: A Conference in Honor of Professor K.C. Chang," Academia Sinica, Taipei, March 1-2, 2002.
- 2002 "The Western Zhou Ritual Reform: Reconstructing Intellectual Trends from the Visual Record." Eleventh Annual Patricia McCarron McGinn Lecture, UCLA, February 11,
- 2001 "The Bronzes from Zhuwajie and Moutuo." Lecture delivered to the Smithsonian Associates, Washington, D. C., Dec. 1, 2001.
- 2000 "Early Korean Capitals." Pizza Talk (Cotsen Institute of Archaeology) , October 17,

- 2000 "Ancient Chinese Music." Lecture given to the Harvard Club of Los Angeles County, October 31, 2000.
- 2000 "Searching for Salt in Southwest China" (with Li Shuicheng) . Public lecture at the Cotsen Institute of Archaeology at UCLA. February 2, 2000.
- 2000 "Yanye kaogu zuijin de jinzhhan he fangfa." Invited lecture at the Chongqing Museum, January 17, 2000. Also presented at the Institute of History and Philology, Academia Sinica, Taipei, July 2, 2000.
- 1999 "The Archaeology of Salt Production in Southwest China: Notes From a Collaborative Field Project," lecture to the Ventura County Archaeological Society, November 3, 1999.
- 1999 "Ritual and Music in Bronze Age China," lecture at the San Diego Museum of Art, July 27,
- 1999 "The Warring States Period: Historical and Archaeological Perspectives," lecture at the San Diego Museum of Art, July 6, 1999
- 1999 "Chu Civilization: Reification and Archaeological Reality," invited lecture to the Department of Asian Languages, Stanford University, May 17, 1999.
- 1999 "Demography and Social Status in Bronze Age China," lecture to the Department of Anthropology, University of California, San Diego, May 10, 1999.
- 1999 "Jianqiao Zhongguo yuanguoshi yu Zhongwai xueshu de guanjian," lecture to the Department of Chinese Literature, Peking University, Beijing, March 31, 1999.
- 1999 "Haiwai xian Qin shi yu Zhongguo kaoguxue yanjiu jinkuang shuping," lecture to the Department of History, Sichuan University, Chengdu, March 9, 1999.

ICHIKAWA, Masahiro

Associate Professor

Born in 1962.

Curriculum Vitae

Academic Career

Graduate School of Human and Environmental Studies, Kyoto University, D. Course (2002)
 Graduate School of Human and Environmental Studies, Kyoto University, M. Course (1997)
 Environmental Studies for Open Space, Faculty of Horticulture, Chiba University (1984)

Professional Career

Associate Professor, Research Institute for Humanity and Nature (2003)
 Environmental Department, Pacific Consultants Co. Ltd. (1989)
 Japan Overseas Cooperation Volunteers in Dominican Rep. (1987)
 Development and Planning Department, Pacific Consultants Co. Ltd. (1984)

Higher Degrees

D. Human and Environmental Studies. (Kyoto University, 2002)
 M. Human and Environmental Studies. (Kyoto University, 1997)

Fields of Specialization / Background

Area Studies in Insular Southeast Asia

Academic Society Memberships

The Japan Society of Tropical Ecology, Japanese Society for Tropical Agriculture

Major Publications

Articles

Ichikawa, Masahiro

- 2003 Shifting swamp rice cultivation with broadcast seeding in Insular Southeast Asia: a survey of its distribution and the natural and social factors influencing its use. 2003. *Southeast Asian Studies* vol. 41, No 2, pp.239-261.
 Choice of livelihood activities by Iban household members in Sarawak, East Malaysia *TROPICS* 12 (2) : 201-219. [in Japanese]

- One hundred years of land – use changes : Political, social, and economic influences on an Iban village in Bakong River basin, Sarawak, East Malaysia. 2003. In *The Political ecology of tropical forests in Southeast Asia: Historical roots of modern problems*. De Jong, W. Tuck Po, L., and Abe, K. (eds.). Kyoto University Press.
- Transformation of shifting swamp-rice cultivation in an Iban village of Sarawak, Malaysia. 2000. *Southeast Asia Studies* 38 (2) : 226-248. [in Japanese]
- Swamp rice cultivation in an Iban village of Sarawak; planting methods as an adaptation strategy. 2000. *Southeast Asia Studies* 38 (1) : 74-94. [in Japanese]
- Sarawaku iban no sinrin riyo: tsuyoi mori to sokoni ikiru hitobitono inasaku (Forest uses by the Iban of Sarawak: Paddy cultivation by the people living around vigorous forests) .
- 1999 Mori to hito no ajia (Relationship between forests and people in Asia) . Ed. by Isamu Yamada. 46-73. Shouwadou: Kyoto. [in Japanese]

Activities in Academic Societies

January, 2002

Jimoto no hitobito no sizen riyo: Tounan ajia tousebu, sosite karibu kai tousebu (Natural resources use by local people in islands in Southeast Asia and Caribbean region) . Human activities and environment. Organized by Toyota Foundation.

November, 2000

Historical Change of Forest Resource Uses of the Iban in Bakong River Basin of Sarawak under the Influence of Development". *Political Ecology of Tropical Forests in Southeast Asia : Historical Perspective* (National Museum of Ethnology, Osaka).

November, 1999

Shifting Cultivation and Reforestation of an Iban Village. In *Workshop on Forest Ecosystem Rehabilitation* (At Forestry Department Sarawak, Kuching).

June, 1999

Sarawaku Iban nitotteno nijirinn no Yakuwari: Miri kinko sonraku deno kesu sutadei (The roles of secondary forests for the Iban of Sarawak: a case study in a village located near Miri) . In conference of the Japan society of tropical ecology.

Research Activities

Field Research in Foreign Countries

- April, 1999 Sarawak, East Malaysia (Research on the natural resources uses by the people living around forests)
- July, 2002 Dominican Rep. (Deforestation and Land uses by the people living in mountainous regions)

KANAE, Shinjiro

Associate Professor

Born in 1971.

Curriculum Vitae

Academic Career

Department of Civil Engineering, University of Tokyo, D. Course (1999)

Department of Civil Engineering, University of Tokyo, M. Course. (1996)

Department of Civil Engineering, University of Tokyo (1994)

Professional Career

Associate Professor, Research Institute for Humanity and Nature (2003)

Associate Professor, Institute of Industrial Science, University of Tokyo. (2003)

Lecturer, Institute of Industrial Science, University of Tokyo. (2003)
 Research Associate, Institute of Industrial Science, University of Tokyo. (1999)
 PD Research Fellow, Japan Society for the Promotion of Science (1999)
 DC Research Fellow, Japan Society for the Promotion of Science (1996)

Higher Degrees

Ph. D. (University of Tokyo, 1999)
 M. Eng. (University of Tokyo, 1996)

Fields of Specialization / Background

Civil Engineering, Hydrology, Meteorology

Academic Society Memberships

International Association of Hydrological Sciences, Japan Society of Civil Engineers, Japan Society of Hydrology & Water Resources, Meteorological Society of Japan

Major Publications

Books

Shokusei to Taiki no Yonokunen, Beerling and Woodwar, Takehisa Oikawa, Kyoto University Press, 54page, 2003 (Co-translation of "Vegetation and the Terrestrial Carbon Cycle") [in Japanese]

Articles

Kanae, S., T. Oki, A. Kashida (2004) : Changes in hourly heavy precipitation at Tokyo from 1890 to 1999, *J. Meteor. Soc. Japan*, 82 (1) : 241-247.

Yoshimura, K., T. Oki, N. Ohte, S. Kanae (2003) : A quantitative analysis of short-term 18O variability with a Rayleigh-type isotope circulation model, *J. Geophys. Res.* 108 (D20) , 4647, doi:10.1029/2003JD003477

Hanasaki, N., S. Kanae, T. Oki, K. Musiake (2003) : Simulating the discharge of Chao Phraya River considering reservoir operation, *IAHS Publ.* 280: 124-133.

Oki T., Y. Agata, S. Kanae, T. Saruhashi, D. Yang, K. Musiake (2003) : Global water resources assessment under climatic change in 2050 using TRIP, *IAHS Publ.* 280: 124-133.

Oki T., M. Sato, A. Kawamura, M. Miyake, S. Kanae, and K. Musiake (2003) : Virtual water trade to Japan and in the world, *Virtual Water Trade*, Edited by A.Y. Hoekstra, Value of Water Research Report Series No.12, pp. 221-235

Hirabayashi, Y., T. Oki, S. Kanae, K. Musiake (2003) : Application of satellite-based surface soil moisture data to simulating seasonal precipitation, *J. Hydrometeor.* 4 (5) : 929-943.

Yang, D., S. Kanae, T. Oki, T. Koike, K. Musiake (2003) : Global Potential Soil Erosion with reference to Land Use and Climate Changes, *Hydrol. Process.* 17 (14) : 2913-2928.

Kanae S., T. Oki, K. Musiake (2002) : Principal condition for the earliest Asian summer monsoon onset, *Geophys. Res. Lett.* 29 (15) , no.-1746, 10.1029/2002GL015346.

Kim W., Y. Agata, S. Kanae, T. Oki, and K. Musiake (2001) : Hydrological simulation by SiB2-Paddy in ChaoPhraya river basin, Thailand, *IAHS Publ.* no.270, pp.19-26.

Yang D., S. Kanae, T. Oki, K. Musiake (2001) : Expanding the distributed hydrological modeling to continental scale, *IAHS Publ.* 270, : 125-134.

Oki T., Y. Agata, S. Kanae, T. Saruhashi, D. Yang, K. Musiake (2001) : Global Assessment of Current Water Resources using the Total Runoff Integrating Pathways, *Hydro. Sci. Journal*, Vol.46, Dec., pp.983-996

Pham, T.N., D. Yang, S. Kanae, T. Oki, K. Musiake (2001) : Application of RUSLE Model on Global Soil Erosion Estimates, *Annual Journal of Hydraulic Engineering* 45: 811-816.

Kim W., T. Arai, S. Kanae, T. Oki, K. 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 (1B) : 387-400

Kanae S., T. Oki, K. Musiake (2001) : Impact of Deforestation on Regional Precipitation over the Indochina Peninsula, *J. Hydrometeor.* 2: 51-70

Activities in Academic Societies

A committee member, hydrological section, JSCE

A committee member, GEWEX Asian Monsoon Experiment

A committee member of Second International Symposium on NEW TECHNOLOGIES FOR URBAN SAFETY OF MEGA CITIES IN ASIA, September 2003, Tokyo, Japan

Organizer of 2003 Workshop on GAME-T and hydrometeorological studies in Thailand and Southeast Asia, November 2003, Khon Kaen, Thailand

Organizer of 2002 Workshop on GAME-T and hydrometeorological studies in Thailand and Southeast Asia, 29-31 October 2002, Chiang Rai, Thailand

Organizer of 2001 Workshop on GAME-Tropics in Thailand, 5-7 March 2001, Phuket, Thailand

Organizer of 2000 Workshop on GAME-Tropics in Thailand, 8-9 March 1999, Cha-am, Thailand

Awards

Tison Award, International Association of Hydrological Sciences (2003)

Young Researcher Paper Award from Japan Society of Hydrology and Water Resources. (1999)

Research Activities**Field Research in Japan**

Aug., 2003 Technical survey of water supply system of Fukuoka City

May, 2002 Technical survey of Kitakami River

May, 2001 Technical survey of Toyo and Yahagi Rivers

Sep., 2000 Flood survey of Nagoya City

Aug., 2000 Technical survey of Yoshino River

Jan., 2000 Flood survey of Kurokura River

Sep., 1999 Technical survey of Edo River

Field Research in Foreign Countries

Aug., 2003 Technical survey of irrigation in lower Chao Phraya basin

Jun., 2002 Technical survey of water resources in the Takramakan region

Sep., 2001 Technical survey of middle and lower reaches of Yellow River

Feb., 2000 Flood and debris disaster survey of Venezuela

Jun., 1999 Technical survey of Yangtze (Chanjian) River

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

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

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 (1997)

Assistant Professor, Faculty of Agriculture, Tokyo University of Agriculture and Technology (1989)

Assistant Professor, Faculty of Agriculture, Kyoto University (1987)

Higher Degrees

D. Agr. (Kyoto University, 1987)

M. Agr. (Kyoto University, 1983)

Fields of Specialization/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**Articles**

- 2004 Jumpei Kubota: Shinnrin to mizu. (Forest and Water) . *Kagaku*, Iwanami Syoten, 74-3, 311-316. [in Japanese]
- 2004 Akiko SAKAI, Koji Fujita and Jumpei Kubota: Evaporation and percolation effect on melting at debris-covered Lirung Glacier, Nepal Himalayas, 1996. *Bulletin of Glaciological Research* 21: 9-15.
- 2003 Kazuyoshi Suzuki, Jumpei Kubota, Yinsheng Zhang, Tsutomu Kadota, Tetsuo Ohata and Varelly Vuglinsky: Snow ablation processes in the southern mountainous taiga of eastern Siberia. *Proceedings of APHW2003*, 535-538.
- 2003 A. Sugimoto, D. Naito, N. Yanagisawa, K. Ichianagi, N. Kurita, J. Kubota, T. Kotake, T. Ohata, T. C. Maximov, A. N. Fedorov: Characteristics of soil moisture in permafrost observed in East Siberian taiga with stable isotopes of water. *Hydrological Processes*, 17-6; 1073-1092.

Activities in Academic Societies

Oral presentations in international scientific meetings

March, 2004 Water Budget on a Small Forested Watershed in the Southern Mountainous Region of Eastern Siberia. International Workshop on Water Balances in the Northern Research Basins, Victoria, Canada.

November, 2003 Water and Energy Budget in the Southern Mountainous Region of Eastern Siberia. ACSYS Final Scientific Meeting. St. Peteruburg, Russia.

July, 2003 Water and Energy Budget in the Southern Mountainous Region, Eastern Siberia. IUGG General Conference, Sapporo.

July, 2003 Changes in the Hydrological Cycle and Its Effects on the Environment in an Inland River Basin of Western China. IUGG General Conference, Sapporo.

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)

July, 2003 China (Research on the Hydrological Cycle in the Yellow River Basin)

August, 2003 China (Research on the Hydrological Cycle in the Heihe River Basin)

September, 2003 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

NARITA, Hideki

Associate Professor

Born in 1942.

Curriculum Vitae**Academic Career**

Department of humanities and Sciences, Hirosaki University (1964)

Professional Career

Associate Professor, Research Institute for Humanity and Nature (2003)

Associate Professor, Institute of Low Temperature Science, Hokkaido University (1992)

Lecturer, Institute of Low Temperature Science, Hokkaido University (1987)

Assistant Professor, Institute of Low Temperature Science, Hokkaido University (1964)

Higher Degrees

D. Sc. (Hokkaido University, 1977)

Fields of Specialization / Background

Polar Glaciology, Snow and Ice Physics

Academic Society Member

Japanese Society of Snow and Ice, International Glaciological Society

Major Publications**Articles**

- 2003 H.Narita, N. Azuma, T. Hondoh, A. Hori, T. Hiramatsu, K. Satwo H. Shoji and O. Watanabe: Estimation of annual layer thickness from stratigraphical analysis at Antarctic Dome Fuji deep core, *Mem. Nathl Inst. Polar Res., Spec. Issue* 56.
- 2003 J. Okuyama, H. Narita, T. Hondoh and R. M. Koerner: Physical properties of the P96 ice core from Penny Ice Cap, Baffin Island, Cannada, and derived climatic records, *J of Geophy. Res.* 108, B2, 2090, doi: 10.1029/2001JB001707.
- 2002 S. Matoba, H. Narita, H. Motoyama, K. Kamiyama and O. Watanabe: Ice core chemistry of Vestfonna Ice Cap in Svalbard, Norway, *J. of Geophy. Res.* 107, D23, 4721, doi: 10.1029/2002JD00205.
- 2002 S. Hashimoto, Z. Shiqiao, M. Nakawo, A. Sakai, Y. Ageta, N. Ishikawa and H. Narita: Isotope studies of inner snow layers in a temperate region, *Hydrological Processes* 16, 2209-2220.
- 2002 S. Fujita, N. Azuma, Y. Fujii, T. Kameda, K. Kamiyama, H. Motoyama, H. Narita, H. Shoji and O. Watanabe: Ice core processing at Dome Fuji Station, Antarctica, *Mem. Nathl Inst. Polar Res., Spec. Issue (ICE DRILLING TECHNOLOGY 2000)* 56, 265-275.
- 2002 S. Fujita, N. Azuma, H. Motoyama, T. Kameda, H. Narita, Y. Fujii and O. Watanabe: Electrical measurements on the 2503-m Dome F Antarctic ice core, *Annals of Glaciology* 35: 313-320.
- 2002 S. Fujita, N. Azuma, H. Motoyama, T. Kameda, H. Narita, S. Matoba, M. Igarashi, M. Kohno, Y. Fujii and O. Watanabe: Linear and nonlinear relations between the high-frequency-limit conductivity, AC-ECM signals and ECM signals of Dome F Antarctic ice core from a laboratory experiment, *Annals of Glaciology* 35 (3) : 321-328.
- 2001 H. Motoyama, O. Watanabe, K. Kamiyama, M. Igarashi, K. Goto-Azuma, Y. Fujii, Y. Iizuka, S. Matoba, H. Narita and T. Kameda: Regional characteristics of chemical constituents in surface snow, *Arctic cryosphere, Polar Meteorol. Glaciol.* 15. 55-66.

- 2001 H. O. Kirchner, G. Michot, H. Narita and T. Suzuki
Snow as a foam of ice: plasticity, fracture and brittle-to-ductile transition, *Philosophical Magazine A*, 81, 9, 2161-2181.
- 2001 Fujii, K. Kamiyama, H. Shoji, H. Narita, F. Nishio, T. Kameda and O. Watanabe
210-year ice core records of dust storms, volcanic eruptions and acidification at Site-J Greenland, *Mem. Nathl Inst. Polar Res., Spec. Issue 54*: 209-220.
- 2001 O. Watanabe H. Motoyama, M.Igarashi, K. Kamiyama, S. Matoba, K. Goto-Azuma, H. Narita and T.Kameda
Studies on climatic and environmental changes during the last few hundred years using ice cores from various sites in the Nordaustlandet, Svalbard. *Mem. Nathl Inst. Polar Res., Spec. Issue 54*: 227-242.
- 2001 S. Zhou, M. Nakawo, S. Hashimoto, A. Sakai, H. Narita and N. Ishikawa
Isotopic fractionation and profile evolution of melting snowcover, *Science in China 44 (Supp.)* : 35-40.
- 1999 H. Narita, N. Azuma, T. Hondoh, M. Fujii, M. Kawaguchi, S. Mae, H. Shoji, T. Kameda and O. Watanabe
Characteristics of air bubbles and hydrates in the Dome Fuji ice core, Antarctica. *Annals of Glaciology 29*: 207-210.
- 1999 N. Azuma, Y. Wang, H. Narita, T. Hondoh, H. Shoji and O. Watanabe
Textures and fabrics in the Dome F (Antarctica) ice core. *Annals of Glaciology 29*: 163-168.
- 1999 A. Miyamoto, H. Narita, T. Hondoh, H. Shoji, K. Kawada, O. Watanabe, D. Dahl-Jensen, N.S. Niels, H.B. Clausen and P. Duval
Ice-sheet flow conditions deduced from mechanical tests of ice core, *Annals of Glaciology 29*: 179-183.
- 1999 A. Hori, K. Tayuki, H. Narita, T. Hondoh, S. Fujita, T. Kameda, H. Shoji, N. Azuma, K. Kamiyama, Y. Fujii, H. Motoyama and O. Watanabe
A detailed density profile of the Dome Fuji (Antarctica) shallow ice core by X-ray transmission method. *Annals of Glaciology 29*: 211-214.
- 1999 N. Ishikawa, H. Narita and Y. Kajiya
Contributions of heat from traffic vehicles to snow melting on roads. *In Transportation Research Record 1672, TBR*, National Research Council, Washinton, D. C., 28-33.
- 1999 T. Hondoh, H. Narita, A. Hori, M. Fujii, H. Shoji, T. Kameda, S. Mae, S. Fujita, T. Ikeda, H. Fukazawa, T. Fukumura, N. Azuma, Y. Wong, K. Kawada, O. Watanabe and H. Motoyama
Basic analyses of Dome Fuji ice core, Part 2: Physical properties. NIPR Symp. *Polar Meteorol. Glaciol.* 13: 90-98.

Activities in Academic Societies

- October 2003 "A role of Glaciology on problem of global environment". Japanese Society of snow and ice, Hokusinnetsu-branch.
- 2003 Member of inspector of sectional committee of the Japanese Society of Snow and Ice.

Awards

Kanchi-gijyutsu-Shō (Scientific division) in 2001: (Award for Cold Region Technology Conference by corporation of Hokkaido Development Engineering Center in 2001)

Research Activity

August – September, 2003 Hami Province, China (Glaciological research on Miyarego-glacier) .

Social Activity

2002-2003 Member of Ice Core Committee of National Institute of Polar Research, Tokyo.

NONAKA, Kenichi

Associate Professor

Born in 1964.

Curriculum Vitae**Academic Career**

Department of Geography, Faculty of Literature, Nagoya University, D. Course (1991)

Department of Geography, Faculty of Literature, Nagoya University, M. Course (1989)

Department of Geography, Faculty of Literature, Nagoya University (1987)

Professional Career

Associate Professor, Research Institute for Humanity and Nature (2003)

Associate Professor, Faculty of Humanities and Social Sciences, Mie University (1996)

Lecturer, Faculty of Humanities and Social Sciences, Mie University (1994)

Research Fellow, Faculty of Literature, Nagoya University (1993)

Research Fellow, Faculty of Literature, Hokkaido University (1991)

Higher Degrees

D. Sc. (Kyoto University, 1999)

M.A. (Nagoya University, 1989)

Fields of Specialization / Background

Geography, Ecological Anthropology

Academic Society Memberships

The Association of Japanese Geographers, The Human Geographical Society of Japan, The Society of Bio-Sophia Studies, The Society for the Human Animal Relations, The Society of Ecological Anthropology

Major Publications**Books**

Paku, Keishuku and Kenichi Nonaka

2003 *Kankyo chirigaku - <ningen to shizen> kankeigaku wo mezashite* (Environmental Geography) Showado.[in Japanese]**Articles**

Nonaka, Kenichi

2004 Karahari shuryosaisyumin no nichijo seikatsu (Dairy life in Kalahari hunter-gatherers. Tanaka, Jiro et al. eds. *Nomaddo (Nomads)* Showado:188-205. [in Japanese]2002 Tonan-ajia·afurika·nihon no shokuzai kara kangaeru seimei no bunkaka to seimei no nettowaku (Acculturation of lives and network of lives through food in Southeast Asia, Africa and Japan). Isida, Masaaki ed. *shoku to no (Food and Agriculture)* Mie University Press : 89-98. [in Japanese]2002 Ikimono kara Miru Monsun Ajia no Ningen-Kankyo Kankei (The Human-Environment Relationships in Monsoon Asia: A Geographical Perspective). *Jinbun Ronso* 19 : 191-216 (Ikeguchi Akiko). [in Japanese]2001 Bushuman hyakuchuhu (1) - seikatsu no nakano mushi tonon kakawari - (Relationship between Bushmen and Insects. Tanaka Jiro ed. *Karahari shuryosaishumin (Kalahari Hunter-gatherers)* Kyoto Daigaku Shuppankai : 116-138. [in Japanese]2000 Vetonamuhokubu ni okeru higata no suisan-shodobutu riyo (Zoobenthos Resource-use in Northern Vietnam) *Dobutsukoko* 14 : 55-68. [in Japanese]

1999 Kawa wa darenomonoka - nagaragawa gyogyo no 1 seiki (Ownerships of River - A Century of Nagara River Fishery) In Akimichi, Tomoya Shizen wa darenomonoka : (Ownerships and Nature) Showado. 89-109 [in Japanese]

1999 Tatakau kabutomushi - kita tai no kabutomushi resuringu (Beetle-fight - Beetle Wrestling in Northern Thailand) *Insectarium* 36-3 : 10-13. [in Japanese]

1999 Indonesia, surawesi·maruku chiho no sagoyashi no osazomushisyoku kanko (Entomophagy of Sago

Weevil (*Rhynchophorus ferrugineus*) in Sulawesi and Maluku District in Eastern Indonesia) *SAGO PALM* 7-1 : 8-14. [in Japanese]

Nonaka, Kenichi, Ishikawa Nao and Miyamura Haruna

2003 Hito to ikimono ga tsukuridasu kankei no shosokumen – Firipin, kaohaganto no jirei (Various Aspects of the Relationships between Human and Living Things) . *Jinbun Ronso* 20: 133-143. [in Japanese]

Nonaka, Kenichi and Akimichi Tomoya

2000 Kokkyo wo koeru cho -Chugoku unnan chino-zoku no jirei kara- (Butterflies crossing the Border - a case of Jino, Yunnan Province-) . *Insectarium* : 10-13. [in Japanese]

Nonaka, Kenichi, Miyagawa Shuichi, Mizutani Reiko, Takenaka Chisato and Michiyama Hiroyasu

1999 Raosu no nogyo to nomin seikatsu (Agriculture and Village Life in Laos) . *Nettai Nogyo* 43-2 : 115-121. [in Japanese]

Activities in Academic Societies

- February, 2004 Saru ni idomu (Challenge against Monkeys) (Jinbun chiri gakkai) [in Japanese]
- November, 2003 Tonanajia no konchyusyoku (Edible Insects in Southeast Asia) (Hito to dobutsu no kankei gakkai) [in Japanese]
- April, 2003 Wildlife Protection in Rural Japan (International Conference for Grassroots environmental movement) .
- March, 2003 Engai taisaku ni muketa kukanjoho shisutemu kouchiku (GIS for Damages Caused by Monkeys) (Nihon chiri gakkai) . [in Japanese]
- July, 2002 Koroshite kuu – gui bushuman no dobutsu ninshiki to jissenchi (Kill and Eat – Cognition and Practice Knowledge of Gui Bushmen) (Nihon reichorui gakkai) . [in Japanese]
- March, 2002 Hito to inu no tayo na tsunagari (Various Relationships between Humans and Dogs – Perspective from Cases of Africa, Southeast Asia and Japan –) (Hito to dobutsu no kankei gakkai) . [in Japanese]
- March, 2002 Kodomo no shizen ninshiki – afurika, tonanajia, nihon no jirei (Children's Cognition of Nature – Cases of Africa, Southeast Asia and Japan-) (Nihon chiri gakkai)
- July, 2001 Chirigaku ni okeru indijiniyasu noreiji kenkyu no kadai to jissen – Nanbuafurika chiiki ni okeru minzokushizensiteki kenkyu wo jirei ni (Perspective and Practice of indigenous knowledge study in geography – a Case of Ethnobiogeography in Southern Africa (Jinbun chiri gakkai) . [in Japanese]
- August, 2002 Human-Insect Relationship in South Africa (International Geographical Conference)
- May, 2001 Minamiafurika, hautensyu ni okeru ishi no shokuyo to yakuyo (Edible and medical uses of stone in Gauteng, South Africa) (Nihon afurika gakkai) [in Japanese]
- March, 2001 Inu no sanpo to chiiki shakai (Dog walks and Regional Communities) (Hito to dobutsu no kankei gakkai) . [in Japanese]
- May, 2000 Fixing the Bugs: Transformation of a Natural History Display Hall on Invertebrates (The 64th The South African Museums Association Conference)

Research Activities

Field Research in Foreign Countries

- March, 2004 Lao P. D. R (Ethno-Biological Research in Tropical Monsoon Asia)
- December, 2003 Lao P. D. R (Ethno-Biological Research in Tropical Monsoon Asia)
- August, 2003 Lao P. D. R ((Ethno-Biological Research in Tropical Monsoon Asia)

OKI, Taikan

Associate Professor

Born in 1964.

Curriculum Vitae**Academic Career**

The University of Tokyo, D. Course (1993)

Department of Civil Engineering, University of Tokyo, M. Course (1989)

Department of Civil Engineering, University of Tokyo (1987)

Professional Career

Associate Professor, Institute of Industrial Science, University of Tokyo (2003)

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 resource 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**Articles**

- 2004 T. Oki and S. Kanae, Virtual water trade and world water resources, *Water Science & Technology*, 49 (7) : 203-209.
- 2004 K. Dairaku, S. Emori, and T. Oki
Rainfall amount, intensity, duration, and frequency relationships in the Mae Chaem watershed in Southeast Asia, *J. Hydrometeor.* 5 (3) : 458-470.
- 2004 S. Kanae, T. Oki, and A. Kashida
Changes in Hourly Heavy Precipitation at Tokyo from 1890 to 1999, *J. Meteor. Soc. Japan* 82 (1) : 241-247, February.
- 2003 Kim, W., Kim, H., J., Agata, Y., Miyazaki, S., Oki, T.
Real Time Monitoring and Simulation System (RTMASS) for Talk Flux Measurement Site, Thailsnd, *Korean Journal of Agricultural and Forest Meteorology* 5 (2) : 116-127.
- 2003 M. Sivapalan, K. Takeuchi, S. W. Franks, V. K. Gupta, H. Karambiri, V. Lakshmi, X. Liang, J. J. McDonnell, E. M. Mendiondo, P. E. O'Connell, T. Oki, J. W. Pomeroy, D. Schertzer, S. Uhlenbrook, and E. Zehe
IAHS Decade on Predictions in Ungauged Basins (PUB) , 2003-2012: Shaping an exciting future for the hydrological sciences, *Hydrological Sciences Journal*, 48 (6) , 857-880, December.
- 2003 K. Okumura, T. Satomura, T. Oki, and Khantayanan
Warawut, Diurnal variation of precipitation by moving mesoscale systems: Radar observations in northern Thailand, *Geophys. Res. Lett.*, 30 (20) : 10.1029/2003GL018302.
- 2003 Dawen Yang, Shinjiro Kanae, Taikan Oki, Toshio Koike, and Katumi Musiake
Global potential soil erosion with reference to land use and climate changes, *Hydrol. Process.* 17: 2913-2928.
- 2003 K. Yoshimura, T. Oki, N. Ohte, and S. Kanae

- A Quantitative Analysis of Short-term ^{18}O Variability with a Rayleigh-type Isotope Circulation Model, *J. Geophys. Res.* 108 (D20) , 4647, doi:10.1029/2003JD003477.
- 2003 Taikan Oki, Yasushi Agata, Shinjiro Kanae, Takao Saruhashi, and Katumi Musiake
Global Water Resources Assessment under Climatic Change in 2050 using TRIP, (Proceedings of a symposium held during the Seventh IAHS Scientific Assembly at Sapporo, Japan) , IAHS Publ. no. 280: 124-133, July.
- 2003 Naota Hanasaki, Shinjiro Kanae, Taikan Oki and Katumi Musiake
Simulating the discharge of the Chao Phraya River taking into account reservoir operation, *Water Resources Systems - Hydrological Risk, Management and Development* (Proceedings of a symposium held during the Seventh IAHS Scientific Assembly at Sapporo, Japan) , Guenter Bloeschl, Stewart Franks, Michio Kumagai, Katumi Musiake & Dan Rosbjerg Eds., IAHS Publ. no.281: 215-223, July.
- 2003 Yukiko Hirabayashi, Taikan Oki, Shinjiro Kanae, and Katumi Musiake
Application of satellite-based surface soil moisture data to simulating seasonal precipitation, *J. Hydrometeor.* 4: 929-943.

Activities in Academic Societies

- 2001.4 - Japan society of civil engineers, a chief secretary of global environmental commission
- 2002 - International association of hydrological sciences, a chair of the Hydrology 2020 Working Group
- 2003.4 - Japan society of civil engineers, a council member of global environment commission
- 2003.7 - Japan society of civil engineers, a council member of department of hydrology at water engineering commission

Awards

- 2003 IAHS Tison Award

Research Activities

Field Research in Japan

- 2004 February, Okinawa, visiting to the waterworks and water resources in Okinawa main island and Miyako Island.
- 2003 July, Sapporo, IUGG workshop/IAHS Hydrology 2020 international workshop
- 2003 April, Okinawa, a research meeting at the Management and Coordination Agency research institute of correspondence

Field Research in Foreign Countries

- 2004 February, Perth, Australia (PUB Workshop)
- 2004 January, Seattle, USA (AMS Workshop)
- 2003 October, Bangkok, Thailand (Symposium for water environment in southwest Asia, the Ministry of Education and Science.
- 2003 June, Thailand (conference for the observation)
- 2003 June, Nederland (the Third GMS Workshop)
- 2003 April, Nice, France (EGU/AGU/EGS joint workshop)

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

Chief of faculty adviser (14)

Social Activities and Public Lectures

Commission member

Researcher at Frontier Research System for Global Change/ Hydrological Cycle Research Program. 1998/9~

Associate Professor at University of Tokyo, Institute of Industrial Science 2002/4~2003/11

Advanced Earth Science and Technology Organization' commission member of Earth Science & Technology new forum 2002/8~

Senior Specialist for Scientific Technology and Academic Council, Ministry of Education, Culture, Sports, Science and Technology 2003/3~March 2004.

A member of editing committee, Japan River Society 2002/4~

A visiting researcher, National Institute for Environmental Studies. 1998~

OKUMIYA, Kiyohito

Associate Professor

Born in 1961.

Curriculum Vitae

Academic Career

Kochi Medical School (Kochi) (1986)

Professional Career

Associate professor, Research Institute for Humanity and Nature (2004)

Visiting clinical and research fellow, Division of Geriatrics, Department of Medicine, University of British Columbia, Canada (2002-2003)

Assistant professor (Lecturer), Department of Medicine and Geriatrics, Kochi Medical School (1999)

Assistant professor, Department of Medicine and Geriatrics, Kochi Medical School (1992)

Research resident, Department of Anatomy, Shiga University of Medical Science (1992)

Medical Staff, Department of Neurology in Sumitomo Hospital (1990)

Resident, Department of Circulatory Medicine, Tokyo Metropolitan Geriatric Hospital (1988)

Resident in Department of Medicine and Geriatrics, Kochi Medical School Hospital (1986)

Higher Degrees

Ph. D. (Kochi Medical School, 1996)

M.D. (Kochi Medical School, 1986) Japanese Medical License Registration (No. 299199)

Fields of Specialization / Background

Field Medicine, Geriatrics and Gerontology, Neurology, Internal Medicine

Academic Society Memberships

Japanese Society of Neurology, Japanese Society of Geriatrics, Japanese Society of Internal Medicine, Japanese Society of Public Health, Japanese Society of Hypertension

Major Publications

Articles

Takahashi T, Ishida K, Hirose D, Nagano Y, Okumiya K, Nishinaga M, Doi Y, Yamamoto. H.

2004 Vertical ground reaction force shape is associated with gait parameters, timed up and go, and functional reach in elderly females. *J Rehabil Med* 36 (1) :42-5.

Nagano Y, Takahashi T, Ishida K, Hirose D, Okumiya K, Mastubayashi K, Doi Y, Yamamoto H.

2003 Knee pain in people aged 80 years and older is not associated with gait parameter and functional performance. *Int J Rehabil Res* 26 (2) :131-6.

Okumiya K, Morita Y, Nishinaga M, Doi Y, Matsubayashi K, Ozawa T.

2002 Tihou zaiju koureisha no kaigo nitijouseikatukinou ha dou kawattaka: Kochi-ken Kahoku-cho no tyousa kara (Change of comprehensive geriatric function and QOL of community-dwelling elderly in Japan by the implementation of long-term care insurance) *Nippon Ronen Igakkai Zasshi* 39; 1: 22-24 [in Japanese]

Wada T, Matsubayashi K, Okumiya K, Garcia del Saz E, Kita T.

2002 Health status and subjective economic satisfaction in West Papua. *Lancet* 360 (9337) :951.

Fujisawa M, Matsubayashi K, Wada T, Okumiya K, Doi Y, Shimokata H.

- 2000 Chiiki zaiju Koreisha no ketuatuchi no hikak, Okinawa-ken Ie-mura to Ehime-ken Omogo-mura. Nichirouisi. (The comparison of blood pressure of community-dwelling elderly subjects in Okinawa and Shikoku) *Nippon Ronen Igakkai Zasshi* 37:28-33. [in Japanese]
- Okumiya K, Matsubayashi K, Wada T, Fujisawa M, Osaki Y, Doi Y, Yasuda N, Ozawa T.
1999 U-shaped association between home systolic blood pressure and four-year mortality in community-dwelling older men. *J Am Geriatr Soc.* 47 (12) :1415-21.
- Okumiya K, Matsubayashi K, Nakamura T, Fujisawa M, Osaki Y, Doi Y, Ozawa T.
1999 The timed "Up & Go" test and manual button score are useful predictors of functional decline in basic and instrumental ADL in community-dwelling older people. *J Am Geriatr Soc.* 47 (4) : 497-8.
- Okumiya K, Fujimiya M.
1999 Immunoelectron microscopic study of the luminal release of chromogranin A from rat enterochromaffin cells. *Histochem Cell Biol.* 111 (4) : 253-7.
- Matsubayashi K, Okumiya K, Osaki Y, Fujisawa M, Doi Y.
1999 Frailty in elderly Japanese. *Lancet* 24:353 (9162) : 1445.
- Yu PL, Fujimura M, Okumiya K, Kinoshita M, Hasegawa H, Fujimiya M.
1999 Immunohistochemical localization of tryptophan hydroxylase in the human and rat gastrointestinal tracts. *J Comp Neurol.* 6:411 (4) :654-65.

Activities in Academic Societies

- May 2002 Prognosis of community-dwelling demented elderly people -Kahoku Longitudinal Aging Study - . 26th International Congress of Internal Medicine
- May 2002 Increase of enterochromaffin cells in human duodenal epithelium by dysfunction of sympathetic postganglionic neurons. 26th International Congress of Internal Medicine
- June 2002 Tiikizaijuyoukaigokoureisha no yogo ni kansuru judantekikentou. Dai 44 kai Nihon Rounengakkai Soukai. (Longitudinal study on the prognosis of frail elderly. The 44th Japanese Geriatrics Society.) [in Japanese]
- May 2001 Tiikizaijusha no rennzoku 14 niti sokutei no katei-ketsuatsu hendou to kishou tonon kanren. Dai 42 kai Nihon Shinkei Gakkai Soukai. (Association between fluctuation of home blood pressure and weather. The 42nd Japanese Congress of Neurology) [in Japanese]
- May 2000 Jkkoukinoukensa niyoru nintikinou no hyouka, tiikizaijurounensha no kouji ADL ya shinkeikoudoukinou tonon kankei. Dai 41 kai Nihon Shinkei Gakkai Soukai. (Evaluation of cognitive function by executive function, association of advanced ADL and neuro-behavioral function. The 41st Japanese Congress of Neurology) [in Japanese]
- May 2000 Immuno-electron microscopic study of guanylin and uroguanylin positive cells in human and rat duodenum. 13th International Symposium on Regulatory Peptide
- May 1999 EC saibou ni okeru serotonin no gaibunpitsu to Guanirin, Uroguanirin no saiboounaikyokuzai. Dai 40 kai Nihonshinkeigakkai. (Exocytosis of serotonin in EC cell and cellular localization of Guanilin and Uroguanilin. The 40th Japanese Congress of Neurology) [in Japanese]
- June 1999 Predictors of functional decline in basic and instrumental ADL in community dwelling older people. 6th Asia/ Oceania Regional Congress of Gerontology
- September 1999 Tiikijumin 1036 nin no kateiketsuatsu no 2 shukanrennzokusokutei niyoru nissahennou no kentou Kahoku-kenkyu. Dai 21 kai Nihonkouketsuatsu Gakkai (Evaluation of diurnal fluctuation of home-blood pressure in 1036 community-dwelling people in Kahoku Study. The 21st Japanese Congress of Hypertension) [in Japanese]

Awards

- Academic Award of the Japanese Society of Geriatrics and Novartis Foundation for Gerontological Research (2002)

Research Activities**Field Research in Japan**

1999-2003 Kahoku in Kochi (Longitudinal cohort study on health and comprehensive geriatric assessment in community-dwelling elderly)

Field Research in Foreign Countries

November, 2000 Korea (Research on the health and comprehensive geriatric assessment in Hongchon)

August, 2001 Singapore (Research on the health and comprehensive geriatric assessment in Choa Chu Kang)

February, March, 2002 Indonesia (Research on the health in Irianjaya)

May, 2002 Korea (Research on the health and comprehensive geriatric assessment in Hongchon)

February, March, 2003 Indonesia (Research on the health and comprehensive geriatric assessment in West Java)

November, 2003 Vietnam (Research on the health and comprehensive geriatric assessment in Doan Hung)

February, 2004 Lao P. D. R. (Research on the health and comprehensive geriatric assessment in Savannakhet)

Social Activities and Public Lectures**Public Lectures**

November, 1999 Kaigohoken to Kahokutyō tyōjukeikaku. Kahokutyō Kominkan. (Long term care insurance and Kahoku Longitudinal Aging Study. Kahoku town office.) [in Japanese]

July, 2001 Tihou zaiju koureisha no kaigo nitijouseikatukinō ha dou kawattaka: Kochi-ken Kahoku-cho no tyōsa kara. Dai 43 kai Nihonrounenigakkai Soukai Shiminkoukai Sinpoziumu. (Change of comprehensive geriatric function and QOL of community-dwelling elderly in Japan by the implementation of long-term care insurance. Public Symposium in the 43rd Japanese Geriatrics Congress) [in Japanese]

September, 2001 Zaitakukaigo to QOL. Kahoku cho Hoken Hukushi senta. (Long-term home care and QOL. Kahoku town office) [in Japanese]

September, 2002 Nyuginia no oshietekuretamonō. Kahoku cho Hoken Hukushi senta. (What we were taught by New Guinea. Kahoku town office) [in Japanese]

Professional and Society Membership

1991 Certification of Japanese Board of Neurology

1992 Fellowship in Japanese Society of Internal Medicine

1996 Certification of Japanese Board of Geriatric Medicine

2002 Board member of the Japanese Society of Geriatrics

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**

Nakanishi, O., Ishida, Y., Hirao, S., Tsuge, S., Ohtani, H., Urabe, J., Sekino, T., Nakanishi, M. and Kimoto, T.

2003 Highly sensitive determination of lipid components including polyunsaturated fatty acids in individual zooplankters by one-step thermally assisted hydrolysis and methylation-gas chromatography in the presence of trimethylsulfonium hydroxide. *J. Anal. Appl. Pyrolysis* 68-69: 187-195.

Hayakawa, K., Sekino, T., Yoshioka, T., Murao, M. and Kumagai, M.

2003 Dissolved organic carbon and fluorescence in Lake Hovsgol: factors reducing humic content of the lake water. *Limnology* 4: 25-33.

Yoshida, T., Sekino, T., Genkai-Kato, M., Logacheva, N.P., Bondarenko, N.A., Kawabata, Z., Khodzher, T.V., Melnik, N.G., Hino, S., Nozaki, K., Nishimura, Y., Nagata, T., Higashi, M. and Nakanishi, M.

2003 Seasonal dynamics of primary production in the pelagic zone of southern Lake Baikal. *Limnology* 4:53-62.

Ishida, Y., Nakanishi, O., Hirao, S., Tsuge, S., Urabe, J., Sekino, T., Nakanishi, M., Kimoto, T. and Ohtani, H.

2003 Direct analysis of lipids in single zooplankter individuals by matrix-assisted laser desorption/ionization mass spectrometry. *Anal. Chem.* 75: 4514-4518.

Tsujimura, S., Kumagai, M., Urabe, J., Sekino, T., Hayami, Y. and Maruo, M.

2003 Effect of temperature and light on growth of planktonic green algae isolated from Lake Hovsgol, Mongolia. *Algological Studies* 110: 81-89.

Activities in Academic Societies

September, 2003

Monitoring data arrangement method in interdisciplinary studies: The 67th Annual meeting of the Japanese Society of Limnology, Okayama University of Science [in Japanese]

Research Activities**Field Research in Japan**

April 2003 Iriomote Island (Research on constructing a database of literature about Iriomote Island)

Social Activities and Public Lectures**Public Lectures**

August 2003 Ecology of plankton and its study, Rokko high school.

March 2004 Planning for Lake Monitoring, 14th Group Training Course in Lake Water Quality Management, Osaka International Centre, Japan International Corporation Agency (OSIC JICA) and International Lake Environmental Committee Foundation (ILEC).

Collaborative Studies

November 2003 – March 2003

Construction of the World Lake Database, International Lake Environmental Committee Foundation (ILEC).

TANIGUCHI, Makoto

Associate Professor

Born in 1959.

Curriculum Vitae**Academic Career**

Institute of Earth Sciences, The University of Tsukuba, D. Course (1987)

Institute of Earth Sciences, The University of Tsukuba, M. Course (1984)

Department of Natural Sciences, Faculty of Science, The University of Tsukuba (1982)

Professional Career

Associate Professor; 2003, Research Institute for Humanity and Nature

Professor, 2000 Department of Earth Sciences, Nara University of Education,

Associate Professor, 1993 Department of Earth Sciences, Nara University of Education,

Assistant Professor 1990 Department of Earth Sciences, Nara University of Education

Researcher 1988 Environmental Research Center, University of Tsukuba, Japan, Researcher

Researcher 1987 Division of Water Resources, CSIRO, Australia

Higher Degrees

D. Sc. (The University of Tsukuba, 1987)

M. Sc. (The University of Tsukuba, 1982)

Fields Specialization / Background

Hydrology, Geophysics, Natural Geography

Fields of Specialization / Background

Hydrology, Geophysics, Hydrogeology

Natural geography

Academic Society Memberships

American Geophysical Union

National Ground Water Association

IASPEI/IUGG IAHS/IUGG

Japanese Association of Groundwater Hydrology

The Japanese Association of Hydrological Sciences

Japan Society of Hydrology and Water Resources

International Association of Hydrogeologists

The Japanese Society of Limnology

Japanese Society of Snow and Ice

The Association of Japanese Geographers

Major Publications**Books**

Taniguchi, Makoto, Wang, Kelin, Gamo, and Toshitaka eds.

2003 *Land and Marine Hydrogeology*. Elsevier.**Articles**

Taniguchi Makoto

2003 Spatial and temporal distributions of submarine groundwater discharge rates obtained from various types of seepage meters at a site in the Northeastern Gulf of Mexico. Taniguchi, M., W.C. Burnett, C.F. Smith, R.J. Paulsen, D. O'Rourke, S.L. Krupa, and J.L. Christoff, *Biogeochemistry* 66: 35-53.

2003 Evaluations of groundwater discharge rates from subsurface temperature in Cockburn Sound, Western Australia. Taniguchi, M., J.V. Turner, and A. Smith, *Biogeochemistry* 66: 111-124.

2003 Seepage rate variability in Frolida Bay driven by Atlantic tidal height. Chanton, J.P., W.C. Burnett, H. Dulaiova, D.R. Corbett, and M. Taniguchi, *Biogeochemistry* 66: 187-202.

2003 Groundwater and pore water inputs to the coastal zone. Burnett, W.C., H. Bokuniewicz, M. Huettle, W.S.

- Moore, and M. Taniguchi, *Biogeochemistry* 66: 3-33.
- 2003 Periodical changes of submarine fluid discharge from deep seafloor, Suiyo Sea Mountain, Japan, Taniguchi, M., S. Uchida, and M. Kinoshita, *Geophys. Res. Lett.*, 30 (18) , doi:10.1029/2003GL017924. .
- 2002 Tidal effects on submarine groundwater discharge. Into the ocean, Taniguchi, M., *Geophys. Res. Lett.* 29, (12) , 10.1029/2002GL014987.
- 2002 Investigation of submarine groundwater discharge, Taniguchi, M., Burnett, W.C., Cable, J.E. and Turner, J.V., *Hydrol. Process.*, 16: 2115-2129.
- 2002 Estimates of surface climate change and groundwater paleo-recharge rates from deep borehole temperature data. Makoto Taniguchi, *CATENA*.
- 2001 Measurement and significance of the direct discharge of groundwater into the coastal zone. William C. Burnett, Makoto Taniguchi and June Oberdorfer , *J. Sea Research* 46 (2) : 109-116.
- 2001 Measurements of submarine groundwater discharge rates by a continuous heat – type automated seepage meter in Osaka Bay, Japan, Makoto Taniguchi, and Hiroteru Iwakawa, *J. Groundwater Hydrol.* 43 (4) : 271 – 277.
- 2001 Evaluation of groundwater capture zone for modeling of nutrient discharge. Makoto Taniguchi, *Hydrol. Process.* 15: 1939-1949.
- 2001 Effects of urbanization, land use changes and groundwater flow on subsurface temperature in Japan, Makoto Taniguchi, Yasuo Sakura and Yohei Uchida, *IAHS Publication* 269: 143-145.
- 2000 Stable isotope studies of precipitation and river water in the Lae Biwa basin, Japan, Makoto Taniguchi, T. Nakayama, N. Tase and J. Shimada , *Hydrol. Process.* 14: 539-556.
- 2000 Evaluations of the saltwater-groundwater interface from borehole temperature in a coastal region. Makoto Taniguchi, *Geophysical Research Letter* 27 (5) : 713-716.
- 2000 Evaluation of groundwater capture zone for modeling of nutrient discharge. Taniguchi, M. *Hydrol. Process.* 15: 1939-1949.
- 2000 Groundwater flow and subsurface thermal regime, Yasuo Sakura, Makoto Taniguchi, Clauser, C. and Ji-Yang, W. "Groundwater Updates" edited by K. Sato and Y. Iwasa, Springer, Tokyo, pp. 485-488.
- 2000 Change of subsurface temperature caused by climate change in Japan, Yasuo Sakura, Yohei Uchida, Makoto Taniguchi, Isamu Kayane, and Anderson, M.P., "Groundwater: Past Achievements and Future Challenges" edited by Oliver Sililo *et al.*, A.A. Balkema, Rotterdam, Brookfield, pp. 131-134.
- 1999 Nutrient discharge by groundwater and river waters into lake Biwa, Japan. Makoto Taniguchi, N. Tase, *IAHS Publication*, 257: 67-73.
- 1999 Combination of tracer techniques and numerical simulations to evaluate the groundwater capture zone. Makoto Taniguchi, K. Inouchi, N. Tase and J. Shimada, *IAHS Publication*, 258: 207-213.
- 1999 Disturbances of temperature-depth profiles due to surface climate-change and subsurface water flow; (1) An effect of linear increase in surface temperature caused by global warming and urbanization in Tokyo metropolitan area, Japan, Makoto Taniguchi, J. Shimada, T. Tanaka, I. Kayane, Y. Sakura, Y. Shimano, S. Dapaah-Siakwan and S. Kawashima, *Water Resources Research* 35: 1507-1517.
- 1999 Disturbances of temperature-depth profiles due to surface climate-change and subsurface water flow; (2) An effect of step increase in surface temperature caused by forest clearing in southwest of Western Australia. Makoto Taniguchi, D.R. Williamson and A.J. Peck, *Water Resources Research*, 35: 1519-1529.

Activities in Academic Societies

- *Session Convener of Inter-Association Workshop (IASPEI, IAVCEI, IAGA, IAPSO, IAMAS, IAHS) of IUGG, "Subsurface Thermal Signatures of Tectonics, Hydrogeology and Palaeoclimate" Sapporo, July, 2003.
- *Session Convener of IAPSO/IAHS Joint Workshop of IUGG, "Groundwater Inputs into the Ocean", Sapporo, July, 2003.
- *Invited talk at Gordon Research Conference on "Permeable Sediments", "Interactions Between, Groundwater and Seawater in Permeable Sediments", Lewiston, ME, June 2003.

- *Invited talk at UNESCO session of 3rd World Water Forum, "Integrated Water Management in the Coastal Zone - Groundwater-Seawater Interactions", Kyoto, Mar. 2003.
- *Invited talk at CRP meeting on "Nuclear and Isotopic techniques for the characterization of submarine groundwater discharge" organized by IAEA, "Measurements of SGD by seepage meters", Vienna, Dec. 2002.
- *Invited talk at "Low-Lying Coastal Area - Hydrology and Integrated Coastal Zone Management" organized by IHP of UNESCO, "Temporal variation of submarine groundwater discharge and freshwater / saltwater interaction in the coastal zone", Bremerhaven, Sep., 2002.
- *Session Convener of the 2002 Japan Earth and Planetary Science Joint Meeting, "Seawater – groundwater Interactions" Tokyo, May, 2002.
- *Session Chair of Kostelec meeting organized by IHFC of IASPEI "Climate reconstructions using borehole temperature" Prague, June, 2001
- *Invited talk at SCOR/LOICZ meeting organized by IAEA/SCOR/LOICZ, "Evaluations of submarine groundwater discharge using seepage meters and subsurface temperature in Cockburn Sound, Austlaria" Sicily, June, 2001
- *Invited talk at Department of Oceanography, Florida State University, "Comparisons of submarine groundwater discharge using various seepage meters-Analyses of SGD in time and space - " Tallahassee, April, 2001
- *Organizer of symposium at Ocean Research Institute, Tokyo University , "Submarine groundwater discharge", Tokyo, Feb. 2001.
- *Organizer and session convener of Hayashibara International Forum on "Water in Deep Earth", Okayama, Sep. 2000.
- *Session Convener of Western Pacific Geophysics Meeting (AGU) on "Subsurface thermal studies in environmental groundwater hydrology and geothermics" Tokyo, Jun 2000.
- *Session Convener of Western Pacific Geophysics Meeting (AGU) on "Hydrological features in Monsoon Asia", Tokyo, Jun 2000.
- *Invited talk at US-Japan Joint Seminar on the Hydrology and Biogeochemistry of Forested Catchments. East-West Center, University of Hawaii, "Evaluation of the groundwater capture zone for modeling of nutrient discharge" Honolulu, Feb. 2000.
- *Invited talk at Department of Geology, Florida State University, "Global Groundwater Hydrology – the effect of climate change and submarine groundwater discharge –", Tallahassee, Jan. 2000
- *Invited talk at Department of Oceanography and Coastal Studies, Louisiana State University. "Submarine Groundwater Discharge – global and local perspectives" Baton Rouge, Jan. 2000
- *Invited talk at SOEST Dean's seminar series at University of Hawaii "Global Groundwater Hydrology", Honolulu, Oct. 1999.
- *Session Chair of the International Symposium on "Groundwater in Environmental Problems", Chiba, Japan, Dec. 1999.

Awards

Research award for academic achievement from the Association of Japanese Geographers (1988)

Research Activities

Field Research in Japan

June, August 2003, September 2002 Groundwater survey at Shiranui

November 2002, December 2001 Groundwater survey at Kurobe

August 2001, August 2002, February, May 2003 Study interaction between groundwater and seawater at Suruga bay

July 2001 Study on subsurface thermal environments at Kumamoto Plain

October 1999, November 2003 Study on groundwater temperature at Osaka Plain

February 1999, August, October 2000 Interaction between lake water and groundwater in Lake Biwa
Field Research in Foreign Countries
 January 2004, July 2003 Thailand (Field survey on Land-Ocean interactions))
 November 2003 Brazil (Study on submarine groundwater discharge and its dissolved material transports (IAEA))
 September 2003, August 2002 China (Interaction between groundwater, river water and seawater in the Yellow River Delta)
 July 2002 Philippines (Interaction between groundwater and seawater)
 April , June 2002, December 1999 to January 2000 USA (Groundwater survey at coastal zones)
 March 2002, June 2001 Italy (Survey of coastal groundwater (IAEA))
 December 2000 Australia (Groundwater survey)

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

Research Assistant (2001 and 2002) from Chiba University (1)
 JSPS Short-term invitation fellowship for research in Japan (NSF, 2003) (1)

Social Activities and Public Lectures

Public Lectures

March, 2003 "Integrated Water Management in the Coastal Zone - Groundwater-Seawater Interactions", 3rd World Water Forum, Kokusai-Kaigijou, Kyoto
 August, 2002 "Look at the world of 'Water'" Open University, Nara University of Education, Nara
 January, 2000 "Groundwater" Open University, Florida State University, Tallahassee, Florida

UCHIYAMA, Junzo

Associate Professor

Born in 1967.

Curriculum Vitae

Academic Career

Graduate School of Human and Environmental Studies, University of Kyoto, D. Course (1997)
 Department of Archaeology, University of Durham, M. Course (1996)
 Graduate School of Human and Environmental Studies, University of Kyoto, M. Course (1993)
 Department of Archaeology, Faculty of Literature, The University of Tokyo (1991)

Professional Career

Associate Professor, Research Institute for Human and Nature (2003)
 Associate Professor, Faculty of Humanities, Toyama University (2001)
 Lecturer, Faculty of Humanities, Toyama University (1998)

Higher Degrees

Ph. D. (The Graduate University for Advanced Studies, 2002)
 M. A. (University of Durham, 1996)
 M. A. (University of Kyoto, 1993)

Fields of Specialization / Background

Zooarchaeology, Cultural Anthropology

Academic Society Memberships

The Society of Bio-Sophia Studies, The Society of Korean Culture Studies

Major Publications

Books

Uchiyama, Junzo

2004 *Nihonkai: Higashi Ajia no Chichukai* (Japan Sea: The Mediterranean of East Asia) .
Toyama: Katsura Shobou. [in Japanese] Uchiyama, Junzo, Sei'ichi Nakai and Koji Takahashi (eds.)

Articles

Uchiyama, Junzo

2003 Syakaikukan riyoukouzou no kaimei to chirijouhousisutemu no kanousei: senshijinruigaku no shitenkara (Investigation of land use structure of prehistoric societies and possibilities of geographic information system: archaeological perspectives) . In The Society of the study of GIS, Faculty of Humanities, Toyama University (ed.) *Jinbunkagaku to GIS (Humanities and GIS)* : pp.2-9.

(in Japanese)

2002 Torihama kaizuka ni okeru Jomon jidai zenki syuryousaisyusyakai no seigyokouzou ni kansuru tenbou: Nihonjika to inoshishi izontai no kisetuseisatei wo chushin to shite (Prospects on subsistence activities of the foraging group in Torihama shellmound in the Early Jomon: based on the assessment of hunting seasons of deer and wild boar) . In Shiro Sasaki (ed.) *Kokuritsu minzokugaku hakubutukan chousahoukoku 33: Senshi syuryousaishubunka kenkyu no atarashi'i shiya (Senri Ethnological Reports 33: New Perspectives on the Study of Prehistoric Hunter-Gatherer Cultures)* : 185-238. (in Japanese)

2001 Dai 6 shou: Funa to koi no Jomon bunka (Chapter6 Jomon culture based on carp family fish) . *Gekkan Chikyū (Chikyū Monthly)* , 23-6, Kaiyou shuppan: 405-412. (in Japanese)

2000 Torihama kaizuka ni okeru shika/inoshishi mondai: 1984nen shutsudo nihonjika to inoshishi izontai ni miru isekikinou (Prospects on the so-called 'deer-wild boar mystery' in Torihama shellmound: the site function analysis based on the deer and wild boar remains in the 1984 excavation) . *Torihama kaizuka kenkyū (Torihama Shellmound Studies)* , 2: 1-22. (in Japanese)

1999 Seasonality and Age Structure in an Archaeological Assemblage of Sika Deer (*Cervus Nippon*) , *International Journal of Osteoarchaeology*, 9-4, John Wiley & Sons, Ltd.: 209-218.

Activities in Academic Societies

May, 2004

Hitsuji no Chichukai, inoshishi no Nihonkai. Dai 2 kai ikimonobunkashi gakkai gakujuutsu taikai. (Sheep of the Mediterranean, Wild boar of the Japan Sea. The Society for biosophia studies 2nd Conference) (Lake Biwa Museum, Shiga Prefecture) (in Japanese)

May, 2004

Executive committee, The Society for biosophia studies 2nd Conference (Lake Biwa Museum, Shiga Prefecture)

November, 2003

Nishinohon no kisoubunka to koika gyoruisou: funa to koi no Jomon bunka. Dai 1 kai ikimonobunkashi gakkai gakujuutsu taikai. (Substratum culture of the western part of Japan and carp family fish: Jomon culture based on carp family fish. The Society for biosophia studies 2nd Conference) (Toba City Hall, Mie Prefecture) (in Japanese)

August, 2002

Residential base as a hunting camp: subsistence complex at Torihama Jomon shellmidden (International Council of Archaeozoology 9th Conference) (Durham University, UK)

August, 2002

Session Organizer, International Council of Archaeozoology 9th Conference. (Durham University, UK)

October, 2001

Jomon iseki kara mita Am-sa-dong iseki no keizai katsudou (Economic activities at Am-sa-dong site: Jomon perspectives) . International Symposium on the Am-sa-dong Korean neolithic site. (Am-sa-dong Prehistoric Culture Museum, Seoul, Korean Republic) (in Japanese)

March, 2001

Koi to funa no Jomon bunka: koika gyorui ken no sensisyuryousaiyu syakai ni miru seigyō kouzou (Jomon culture based on carp family fish: prehistoric subsistence structures in the area of carp family fish)

distribution) . International Symposium: New perspectives on the study of foraging cultures in East Asia and North Pacific Rim. (National Museum of Ethnology, Osaka) (in Japanese)

Research Activities

Field Research in Japan

March, 2004 Toyama and Nagano Prefectures (Research on the trading activities in the Jomon era)

Field Research in Foreign Countries

April, 2001 – January, 2002 Korean Republic (Zooarchaeological research on the Korean Neolithic culture)

Social Activities and Public Lectures

Public Lectures

October, 2002 Syakai sinkaron wo koete: senshijinruigaku to kankyō no shiten (Beyond Social Evolutionism: Perspectives of Environmental Archaeology) . Toyamaken koutō gakkō kyōikukenkyūkai rekishibukai (Toyama Prefecture Highschool Teachers' Association for Educational Studies: History Section) . [in Japanese]
 October, 2001 Ningen to kankyō no bunmeishi (History of Human-Nature Relationships) .

Toyamakenmin syōgai gakusyū kareiji kouiki kyanpasu kouza shizenkagaku kōsu: kankyō eno apurouchi (Toyama Prefectural Lifelong Learning Course: Approach to the Environmental Issues) . [in Japanese]

September, 2001 Ningen to kankyō no bunmeishi: Jomon jidai no shiten kara (History of Human-Nature Relationships: Jomon Perspectives) . Toyama daigaku kōkai kouza (Public Lecture Course of Toyama University) .

UMETSU, Chieko ————— Associate Professor

Curriculum Vitae

Academic Career

Department of Agricultural and Resource Economics, University of Hawaii at Manoa, Honolulu, U.S.A, Ph. D. (1995)

School of International Relations, International University of Japan, Niigata, 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, Japan (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, 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 (EAEA) , Agricultural Economics Society of Japan, Society for Environmental Economics and Policy Studies (SEEPS) ,

Japan Society for International Development (JASID) .

Major Publications

Articles

Ujjayant Chakravorty, Eithan Hochman, Chieko Umetsu and David Zilberman

2004 "Privatizing Water Distribution," Working Paper #04-03.

Department of Economics, Emory University, Atlanta GA, U.S.A., March 2004.

http://userwww.service.emory.edu/~skrause/wp/chakravo_04_03_cover.html

Umetsu, Chieko, Thamana Lekprichakul and Ujjayant Chakravorty

2003 "Efficiency and Technical Change in the Philippine Rice Sector: A Malmquist Total

Factor Productivity Analysis," American Journal of Agricultural Economics 85 (4) : 943-963.

Activities in Academic Societies

- July 2003 "Spatial Water Management Under Alternative Institutional Arrangements," presented at the International Conference on Policy Modeling -EcoMod2003-, July 3-5, 2003, Istanbul, Turkey.
- October 2003 "Spatial Water Management Under Alternative Institutional Arrangements," presented at the TEA (Theoretical Economics of Agriculture) Fall Meeting, 25 October 2003, Policy Research Institute, Ministry of Agriculture, Forestry and Fisheries, Tokyo.

Awards

Best Article Award from the Agricultural Economics Society of Japan (2003)

Research Activities

Field Research in Foreign Countries

- January 2004 India ("The Role of Farmers' Collective Action for Mitigating Water Scarcity: The Case of Tamil Nadu, India." Co-researcher of subgroup "Spatial Ownership: Territoriality and Commons", subgroup leader: Tomoya Akimici. "Distribution and Sharing of Resources in Symbolic and Ecological Systems: Integrative Model-Building in Anthology", project leader: Motomitsu Uchibori. Grant-in-Aid for Scientific Research of Priority Areas, Ministry of Education, Culture, Sports, Science and Technology, Japanese Government.)
- June-July 2003 Turkey (Project 1-1: Research on Water Users' Association in Seyhan River Basin)

Social Activities and Public Lectures

Public Lectures

- May, 2003 "People and Nature in South India", Kasuga Health Seminar, Kasuga Daycare Center.

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, Kyoto 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 Supérieure and Université 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

Articles

Yachi, S.

2003 "Seitaikei-kinou to Seibututayousei (Ecosystem functioning and biodiversity) " 317-318. "Sigunaru no Sinka (Evolution of signaling) " 202. In: Yoh Iwasa, Tadao Matsumoto, Kihatiro Kikuzawa, Ecological Society of Japan (eds.) *Seitaikeigaku Jiten (Encyclopedia of Ecology)*. Kyouritsu Syuppan. (in Japanese)

Yachi, S.

2003 "Tikiyuken de no ryuukikannri purojekuto (A watershed management project at RIHN) " Newsletter of the Japanese Association for Mathematical Biology No. 40, 16-17. (in Japanese)

Yachi, S.

2004 "Biwako-yodogawa suikei niokeru ryuukikannri moderu no koutiku (P3-1) ga mezasu mono-zentaikousou- (What the Project 3-1 aims to attain) " *Purojekuto 3-1 Wākingu Pēpā (Project 3-1 Working Paper Series) vol.9* (in Japanese)

Toda, M., Asaeda, C., Tsubaki, Y., Yachi, S. & Yumoto, T.

2003 "Sougou touron-hito to sizenn no kyousei ekoroji- no tyousenn (Discussion) " In: 17th Open Symposium of the University and Science on Biodiversity "Seibututayousei no sekai". 139-147pp. (in Japanese)

Activities in Academic Societies

Oral presentation

2004 January

"How can we use the watershed diagnosis to watershed management?" Open Symposium on "Conservation of ecosystems in Asia", Tokyo. (in Japanese)

2003 September

"Evaluation of environmental capacity and modeling of a lake ecosystem based on dissolved oxygen concentration". 13th Mathematical Symposium, Nara (in Japanese)

2003 December

"Multi-disciplinary research for understanding interactions between humans and nature in the Lake Biwa-Yodo River watershed -hierarchical watershed management concept-". International workshop on "Seeking an effective watershed management system through interdisciplinary approach-considering multiple spatial scales and stakeholders-". Kyoto

2003 December

"Multi-disciplinary research for understanding interactions between humans and nature in the Lake

Biwa-Yodo River watershed -hierarchical watershed management concept-. RIHN Project presentation, Kyoto (in Japanese)

Lecturer

2003 September

Workshop "Regional ecosystem conservation planning using GIS". Sanda

Chairperson

2004 March

RIHN special seminar by Nakabou Kouhei "Ikirukoto, Manabukoto – Kin deha naku Tetsu to site". Kyoto

2003 June

2nd RIHN Forum "Global Warming – Nature and Culture-". Kyoto

Research Activities

Field Research in Japan

2004 March

Workshop for a future of waterfront in Inasato town (Inasato town community hall)

2004 February

Workshop for a future of waterfront in Shingai-Tazuke town (Shingai town community hall)

2003 May

Shiga Prefecture (Field survey of biodiversity in the eastern areas of the Lake Biwa)

2002 May

Shiga Prefecture (RIHN P1-1/3-1/4-1 joint field study of agricultural water infrastructure system in the eastern areas of the Lake Biwa)

Field Research in Foreign Countries

2004 March

France (Theoretical study on biodiversity and ecosystem functioning relationship)

2003 October

France (Theoretical study on biodiversity and ecosystem functioning relationship)

2002 August-September

Cambodia and Thailand (Research on Watershed Management in South-East Asia)

Organizer of Seminar and Workshop

2004 February

RIHN Project 3-1 GIS Workshop "Seeking a methodology for consensus building between hierarchies by using GIS". Kyoto

2003 December

International workshop on "Seeking an effective watershed management system through interdisciplinary approach-considering multiple spatial scales and stakeholders-", Kyoto

2003 May, June & November, 2004 January & February

RIHN Project 3-1 & CER joint Human Impact Seminar (five times) . Otsu and Kyoto

Social Activities and Public Lectures

Collaborative researcher at Center for Ecological Research, Kyoto University.

Editorial board of the Japanese Association for Mathematical Biology Newsletter.

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.

2003 Humane environmentology. In Y. Iwasa, T. Matsumoto, K. Kikuzawa and Japanese Society of Ecology (eds.) *Encyclopedia of Ecology*, Kyoritsu, p.280.

Articles

Anawar, H. M., Akai, J., Komaki, K., Terao, H., Yoshioka, T., T. Ishizuka, T., Safiullah, S., Kato, K.

2003 Geochemical occurrence of arsenic in groundwater of Bangladesh: sources and mobilization processes. *Journal of Geochemical Exploration*, 77: 109-131.

Hayakawa, K., T. Sekino, T. Yoshioka, M. Maruo, and M. Kumagai

2003 Dissolved organic carbon and fluorescence in Lake Hovsgol: factors reducing humic content of the lake water. *Limnology*, 4: 25-33.

Yoh, M., T. Yoshioka and others

2003 Biogeochemistry in watersheds: implications and perspectives. *Japanese Journal of Limnology*, 64: 49-79.

Yoshioka, T.

2003 Watershed studies on the effects of global environmental changes. *Japanese Journal of Limnology*, 64: 203-207.

Activities in Academic Societies

February, 2004 Rikuiki seitaikei no chikyu kannkyo henka ni taisuru outo no kenkyu (Studies on the response of terrestrial ecosystems to global environmental changes). Dai 12 kai Kankyokagaku tokubetu semina · 21 seiki COE tokubetu semina (The 12th special seminar on the environmental sciences and 21st century COE) (Ehime University, Matsuyama, Ehime) (in Japanese)

October, 2003 Kankyoshitsu to kankyoishiki no kannkei (Relationship between environmental qualities and

people's environmental consciousness) Sogochikyukankyogakukenkkyujo · Kokudogijutsuseisakusogokennkyujo godo wakushoppu (Joint workshop between Research Institute for Humanity and Nature and National Institute for Land and Infrastructure Management)

(Shiran-kaikan, Kyoto, Kyoto) (in Japanese)

October, 2003 Shinrin – kasen – kosyo seitaikei niokeru busshitujunnkann no kasukedo (Cascade of material cyclings in the forest-river-lake ecosystem) Oyoseitaikogakukai sinpojumu Kawa to kawabe no rinkeji: Kennzenna kasenseitaikei wo syuhuku suru (Symposium on the riparian and river linkages: Opportunities for restoring aquatic ecosystem health at the Ecology and Civil Engineer Society) (Kyushu International University, Kitakyusyu, Fukuoka) (in Japanese)

September, 2003 Gakusai kenkyu niokeru kansoku deta no seiriho (Organization of observed data in the interdisciplinary studies) Dai 68 kai nihon rikusuigakukai (the 68th annual meeting of the Japanese Society of Limnology) (Okayama University of Science, Okayama, Okayama) (in Japanese)

April, 2003 Editor-in-chief of Limnology

Research Activities

Field Research in Japan

August, 2003 the Lake Shumarinai watershed (Surveys on the material cycling in the lake and its watershed)

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

July, 2002 Kankyo 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)

November, 2002 Mijikana kankyo tooku no kannkyo (Familiar environments and alienated environments) . Seiro-cho kankyo sinpojiumu (Symposium on the environments in Seiro-cho) Seiro-cho, Niigata. (in Japanese)

February, 2003 Mijikana kankyo tooku no kannkyo (Familiar environments and alienated environments) . Kamisato-cho kankyo sinpojiumu (Symposium on the environments in Kamisato-cho) Kamisato-cho, Saitama. (in Japanese)

ZHENG, Yuejun

Associate Professor

Born in 1962.

Curriculum Vitae

Academic Career

Graduate School of Agricultural and Life Science, The University of Tokyo, D. Course (1995)

Graduate School of Forest Resources, and Environment Beijing Forestry University, M. Course (1987)

Department of Forest Science, Inner Mongolia Agricultural University (1984)

Professional Career

Associate Professor, Research Institute for Humanity and Nature (2003)

Assistant Professor, The Graduate University for Advanced Studies (2001)

Visiting Scholar, Department of Natural Resources, University of New Hampshire (1998)

Assistant Professor, The Institute of Statistical Mathematics (1995)

Lecturer, College of Forest Resources and Environment, Beijing Forestry University (1988)

Assistant Professor, College of Forest Resources Environment, Beijing Forestry University (1987)

Higher Degrees

D. Sc. (The University of Tokyo, 1995)

M. Sc. (Beijing Forestry University, 1987)

Fields of Specialization / Background

Environmental Statistics, Environmental Economics, Social Survey Research

Academic Society Memberships

The Behaviormetric Society of Japan, Japan Statistical Society, Society for Environmental Economics and Policy Studies, Japanese Society of Forest Planning, International Institute of Sociology.

Major Publications**Books**

Yoshino R. Eds

2004 Higashi ajia kachikan kokusai hikaku chousa – [Shinlaikan] no toukeikagaku teki kaiseki – (A Cross-national Comparison on East Asia People's Values – Statistical Analysis on "Trust" –). ISM Research Report No.91, 337pp., The Institute of Statistical Mathematics (In Japanese).

Zheng Y. Eds

2003 Nihon to Chugoku no kokuminsei hikaku no tame no kiso kenkyu (2) – Chugoku Shanhai shi ni okeru ishiki chousa (Research on the National Character of Chinese and Japanese (2) – A Sampling Survey in Shanghai, China). ISM Research Report No.90, 247pp., The Institute of Statistical Mathematics (In Japanese).

Zheng Y. Eds

2003 Nihon to Chugoku no kokuminsei hikaku no tame no kiso kenkyu – Chugoku Peikin shi ni okeru ishiki chousa – (Research on the National Character of Chinese and Japanese – A Sampling Survey in Beijing, China). ISM Research Report No. 89, 263pp., The Institute of Statistical Mathematics (In Japanese).

Zheng Y. Eds

2002 Kasou hyoukahu (CVM) no biasu mondai ni kansuru chousa – Tokyo wan chuou bouhatei uchigawa umetatechi no kankyo hyouka wo reitoshite – (Researches on the Bias Issues of Contingent Valuation Method (CVM) – A Survey on Environmental Value of the Surface Forest Park in the Reclaimed Land of Tokyo Gulf –). ISM Research Report No. 88, 104pp., The Institute of Statistical Mathematics (In Japanese).

Yoshino R. Eds

2001 Bunka no dempan henyou no toukei kagaku teki kaiseki – Hawaii nikkeijin·hi nikkeijin chousa (A Statistical Analysis on Acculturation – Hawaii American and Japanese American Survey). ISM Research Report No. 86, 236pp., The Institute of Statistical Mathematics (In Japanese).

Hirata K. Eds

2001 Kagaku·gijutsu ni kansuru kokusai hikaku (Cross-national Comparison of Attitudes toward Science and Technology). In *Science and Society 2000*: 121-141, The Graduate University of Advanced Studies (In Japanese).

Articles

Zheng Y.

2004 A Vision for International Comparative Survey Research. Proceedings of the Use of Cross-National Comparative Surveys, Kawasei University Eds, pp.123-138.

Zheng Y.

2004 Ishiki chousa deita kara mita Chugokujin to Nihonjin no zentaizou (An Overall View on the Character of Chinese and Japanese Derived from Sample Survey Data). *Yoron* (Journal of Japanese Association of Poll Opinion Research) 93: 4-10. (in Japanese)

Guo Z., Xiao X., Gan Y., and Zheng Y.

2003 Landscape Planning for A Rural Ecosystem: Case Study of A Resettlement Area for Residents from

- Land Submerged by the Three Gorges Reservoir, China. *Landscape Ecology*, 18: 503-512.
- Kuboyama H., Zheng Y., and Oka H.
- 2003 Omona shinrin kishou saigai no rinrei betsu higairitsu no suitei to kousatsu (Study about Damage Probabilities on Major Forest Climatic Risks According to Age-classes) . *Nihon Ringakkai Shi* (Journal of Japanese Forest Society) 85 (3) : 191-198. (in Japanese)
- Zheng Y. and Yoshino R.
- 2003 Higashi Aajia kachikan chousa ni mukete -Chugoku ni okeru ishiki chousa no tame no hyouhon chushutsu no jisen teki kenntou (Toward East Asian Value Survey - A Practical Discussion on Sampling for Social Survey in China) . *Yoron* (Journal of Japanese Association of Poll Opinion Research) 91: 16-21. (in Japanese)
- Yoshino R. Zheng Y., and Park C.
- 2003 Ajia shokoku no hitobito no nihongo kan (Asian Peoples' View on Japanese) . *Nihon Koudou Keiryoku Gaku* (The Japanese Journal of Behaviormetrics) 30 (1) : 31-52 (in Japanese) .
- Zheng Y.
- 2003 Kankyo ishiki chousa no keisoku houhou niyoru hi hyouhon gosa -Kaso hyoukahou (CVM) no shiharai shudan baiasu wo reitoshite - (Nonsampling Errors from Measurement Instruments in the Environmental Valuation Survey - On Payment Vehicle Biases in the Contingent Valuation Method (CVM) -) . *Nihon Koudou Keiryoku Gaku* (The Japanese Journal of Behaviormetrics) 30 (1) : 135-148 (in Japanese) .
- Zheng Y. and Yoshino R.
- 2003 Diversity Patterns of Attitudes toward Nature and Environment in Japan, USA, and European Nations. *Behaviormetrika* 30 (1) : 21-37.
- Zheng Y.
- 2002 NOAA/AVHRR deita no kaiseki ni yoru tochi riyou to hifuku bumpu ni kansuru kousatsu (Study on Distribution of Land Use/Land Cover Based on Analysis of NOAA/AVHRR Data) . *Ohyoh Toukei Gaku* (Journal of Japan Applied Statistics) , 32 (1) : 1-14. (in Japanese)
- Zheng Y. and Yoshino R.
- 2001 Kagaku to gijutsu ni taisuru shin -Nichibeioh no nanakakoku deita ni mirareru shinraikan no arikata - (Trust toward Science and Technology - Statistical Analysis of Trust Sense Based on the Seven Country Survey -) . *ISM Research Memorandum*, 22pp. (in Japanese)
- Guo Z., Xiao X., and Zheng Y.
- 2001 Ecosystem Functions, Services and Their Values - A Case Study in Xingshan County of China. *Ecological Economics* 38: 141-154.
- Zheng Y., Xiao X., Guo Z., and Howard E. T.
- 2001 A County-level Analysis of the Spatial Distribution of Forest Resources in China. *Journal of Forest Planning* 7 (2) : 69-78.
- Zheng Y. and Yoshino R.
- 2000 A Cross-national Analysis of the Natural and Environmental Consciousness Based on the Survey Data in Seven Countries. *Proc. of the Seven Japan-China Symposium on Statistics*: 231-234.
- Zheng Y.
- 1999 Shinrin keiei keikaku shisutemu no kaihatu ni kansuru kenkyu (Studies on the Development of A Forest Management Planning System) . *Tokyo Daigaku Nougakubu Enshyurin Houkoku* (The Bulletin of the Tokyo University Forests) 101: 11-106. (in Japanese)
- Zheng Y. and Amano M.
- 1999 Jutaku raifu saikuru ni okeru tanso kotei kinou ni kansuru bunseki (An Analysis of Carbon Sequestration Potentialities through the Life Cycle of House) . *Kankyoku Jouhou Kagaku* (Environmental Information Science) , 28 (2) , 45-55. (in Japanese)

Activities in Academic Societies

Oral Presentation

- Jan., 2004 Essential Factors in Cross-National Survey Research. The International Symposium on the Use of Social Survey, Kwansei Gakuin University, Nishinomiya, Japan.
- Jan., 2004 Cross-national Comparison on Character of Chinese and Japanese. The International Symposium on Statistical Methods in Social and Human Science, Center for Applied Statistics in Renmin University of China, Beijing, China.
- Dec., 2003 An Analysis on Structure of Chinese and Japanese Consciousness. The International Symposium on Media in Japan and China, Tokyo, Japan.
- Dec., 2003 Introduction to Research on Cross-national Comparison of Chinese and Japanese. Tsai Yuan-Pei Research Center for Humanity and Social Science, Academia Sinica, Taiwan.
- Nov., 2003 *Ishiki chousa deita kara mirareru Chugokujin to Nihonjin no zentaizou* (An Overall View on the Character of Chinese and Japanese Derived from Sample Survey Data). *Yoron Chousa Kyoukai 2002 nendo Kenkyu Taikai* (The 2003 Symposium of Japanese Association of Poll Opinion Research), Tokyo, Japan. (in Japanese)
- Sept., 2003 *Kankyo ishiki keisei no youin bunseki - Chugoku to Nihon no kankyo ishiki haiku wo reitoshite* - (Analysis on Formation of Environmental Consciousness - Cross-national Comparison on Attitudes toward Nature and Environmental Issues in China and Japan). *Kankyo Keizai · Seisaku Gakkai 2003 nen Taikai* (The 2003 Symposium of Society for Environmental Economics and Policy Studies), Tokyo, Japan. (in Japanese)
- Sept., 2003 *Chugokujin to Nihonjin no kokuminsei no tokucho (1) - Fuankan · manzokukan, kazoku · kateikan to dentoutekina kachikan wo chushin ni* - (Peculiarity on Character of Japanese and Chinese (1) - Focusing on Attitudes toward Anxiety, Satisfaction, Family, Home and Traditional Values). *Dai 31 kai Nihon Koudou Keiryō Gakkai Taikai* (The 31st Symposium of the Behaviormetric Society of Japan), Nagoya, Japan. (in Japanese)
- Nov., 2002 *Higashi Ajia kachikan chousa ni mukete - Chugoku ni okeru ishiki chousa no tame no hyouhon chushutsu no jisen teki kenntou* (Toward East Asian Value Survey - A Practical Discussion on Sampling for Social Survey in China). *Yoron Chousa Kyoukai 2002 nendo Kenkyu Taikai* (The 2002 Symposium of Japanese Association of Poll Opinion Research), Osaka, Japan. (in Japanese)
- Oct., 2002 *Chugoku to nihon ni okeru kokumin no kankyo ishiki ni kansuru kenkyu* (Comparative Studies on Attitudes toward Environmental Issues in China and Japan). *Kankyo Keizai · Seisaku Gakkai 2002 nen Taikai* (The 2002 Symposium of Society for Environmental Economics and Policy Studies), Sapporo, Japan. (in Japanese)
- Sept., 2002 *Kenkoukan to shiraikan* (Attitudes toward health and trust). *Dai 30 kai Nihon Koudou Keiryō Gakkai Taikai* (The 30th Symposium of the Behaviormetric Society of Japan), Tokyo, Japan. (in Japanese)
- Sept., 2002 *Hyouhon chushutsu meibo ga nai baai no kojīn hyouhon chushutsu- Peikin to Shanghai ni okeru ishiki chousa* - (Sampling Method for Individuals When the Frame List Can Not Be Used - Sample Surveys in Beijing and Shanghai -). *Dai 30 kai Nihon Koudou Keiryō Gakkai Taikai* (The 30th Symposium of the Behaviormetric Society of Japan), Tokyo, Japan. (in Japanese)
- Sept., 2002 *Chushutsu daichou ga riyō dekinai baai no kakuritsu hyouhon hou - Ishiki chousa niokeru hi hyouhon gousa* (Probability Sample When the Frame List Can Not Be Used - Nonsampling Errors in Social Survey). *Dai 70 kai Nihon Toukei Gakkai Taikai* (The 70th Symposium of the Japan Society of Statistics), Tokyo, Japan. (in Japanese)
- Oct., 2001 *Daburu bando nikou sentaku houshiki CVM no hyouka biasu mondai* (On Biases in Double-bound Dichotomous Choice Contingent Valuation). *Kankyo Keizai · Seisaku*

- Sept., 2001 *Gakkai 2001 Nen Taikai* (The 2001 Symposium of Society for Environmental Economics and Policy Studies), Kyoto, Japan. (in Japanese)
- Sept., 2001 *Kankyo shigen no kasou hyoukahu no baiasu mondai nitsuite* (On Bias Problems of CVM for Valuing Environmental Resources). *Dai 69 Kai Nihon Toukei Gakkai Taikai* (The 69th Symposium of the Japan Society of Statistics), Fukuoka, Japan (in Japanese).
- Sept., 2001 *Kenkou kan no kokusai hikaku* (Cross-national Comparison of Attitudes toward health). *Dai 29 kai nihon koudou keiryuu gakkai taikai* (The 29th Symposium of the Behaviormetric Society of Japan), Takaratsuka, Japan. (in Japanese)
- Sept., 2001 *Nichibeioh ni okeru kagaku bunmei kan no hikaku bunseki* (Comparison of Attitudes toward Science and Technology in Japan, America and European Countries). *Dai 29 kai nihon koudou keiryuu gakkai taikai* (The 29th Symposium of the Behaviormetric Society of Japan), Takaratsuka, Japan. (in Japanese)
- Aug., 2001 Cross-national Comparison on Consciousness of Science, Nature and Environment. 35th International Institute of Sociology Congress, Krakow, Poland.
- May., 2001 Analysis on China's Actual Situation of Land Use and Preservation of Ecological Environment. The International Symposium on Eco-Environmental Conservation and 21st Century's Forestry Management, Xian, China.
- Dec., 2000 China's Actual Situation of LU/LC and Problems for Improvement Based on the County-level Data. The International Youth Symposium on the Ecosystem Management, Beijing, China.
- Oct., 2000 A Cross-national Analysis of the Natural and Environmental Consciousness Based on the Survey Data in Seven Countries. The 7th Japan-China Symposium on Statistics, Tokyo, Japan.
- Sept., 2000 *Nana kakoku ni okeru shizenkan to kankyokan no hikaku bunseki* (Comparison Analysis on Attitudes toward Nature and Environment in Seven Countries). *Dai 28 kai nihon koudou keiryuu gakkai taikai* (The 28th Symposium of the Behaviormetric Society of Japan), Tokyo. (in Japanese)

Honors & Awards

The Excellent prize for "A County-level Analysis of the Spatial Distribution of Forest Resources in China" in the Symposium on New Scientific and Technological Prospective in the 21 Century, 1999, Tokyo, Japan.

Research Activities

Field Research in Japan

- Nov., 2002 The East Asian Value Survey – Sample survey in Japan
- Nov., 2003 The Japanese character survey

Field Research in Foreign Countries

- Oct., 2001 Sample survey on the character of Chinese in Beijing and Shanghai (Beijing and Shanghai, China)
- Oct., 2002 The East Asian Value Survey – Sample survey in Hong Kong (Hong Kong, China)
- Nov., 2002 The East Asian Value Survey – Sample survey in Beijing and Shanghai (Beijing and Shanghai, China)
- Jan., 2003 The East Asian Value Survey – Sample survey in Hangzhou (Hangzhou, China)
- Feb., 2003 The East Asian Value Survey – Sample survey in Kunming (Kunming, China)
- Oct., 2003 The East Asian Value Survey – Sample survey in Taiwan (Taiwan)
- Oct., 2003 The East Asian Value Survey – Sample survey in South Korea (South Korea)

Social Activities and Public Lectures

Public Lectures

- Mar., 2001 *Kagaku gijutsu ni taisuru taido no kokusai hikaku* (Cross-national Comparison of Attitudes toward Science and Technology) . The Symposium on Science and Society, The Graduate University of Advanced Studies, Atami, Japan (in Japanese) .
- Nov., 2001 *Kankyo zai hyouka to toukei* (Valuation on Environmental Good and Statistics) . *Koukai kouza "Shigen kanri no tame no toukei bunseki"* (Open Lecture "Statistical Analysis for Resource Management") , The Institute of Statistical Mathematics, Tokyo, Japan (in Japanese) .
- Nov., 2001 *Shinrin seitaikei no hagai ga tsuzuikeiru chikyuu ha hontouni kikini hin shiteiru?* (Is the Earth with Continuous Forest Destruction Facing Crisis?) . *Dai 1 kai Yoshikawa Kankyo Foramu* (The first Yoshikawa shi environmental forum) , Yoshikawa, Japan (in Japanese) .
- Nov., 2003 *Kokusai hikaku chousa no kiso kenkyu - Chugoku chousa wo reitoshite -* (Bases of Cross-national Comparison - A Cse of China's Survey) . The Symposium of Frontiers of Gender Studies, The 21st Century Center of Excellence Program, Ochanomizu University, Tokyo, Japan (in Japanese) .

Others

- Dec., 1996 - Adjunct Professor with Beijing Forestry University
- Dec., 2002 - Adjunct Professor with Renmin University of China
- Dec., 2002 - Adjunct Professor with Zhejiang Forestry University
- April, 2004 - COE Adjunct Scholar with Ochanomizu University
- April, 2004 - Visiting Assoc. Prof. with the Institute of Statistical Mathematics
- April, 2004 - Part-time lecturer with Doshisha University

Organization Committee

- April, 2002 -March 2004 Editorial Board Member of Proceedings of the Institute of Statistical Mathematics
- April, 2002 - Editorial Board Member of Journal of Forest Planning

ABE, Hiroshi

Assistant Professor

Born in 1971.

Curriculum Vitae

Academic Career

Department of Human and Environmental Studies, Graduate School of Human and Environmental Studies, Kyoto University, D. Course (1999)

Department of Human and Environmental Studies, Graduate School of Human and Environmental Studies, Kyoto University, M. Course (1995)

Department of Philosophy, Faculty of letters, Kyoto University (1993)

Professional Career

Assistant Professor, Research Institute for Humanity and Nature (2003)

Assistant Professor, Graduate School of Human and Environmental Studies, Kyoto University (2000)

Research Fellow, Japan Society for the Promotion of Science (1996)

Higher Degrees

D. Human and Envrionmented Studies (Kyoto University, 1999)

M. Human and Envrionmented Studies (Kyoto University, 1995)

Specialized Fields/Background

Philosophy, Ecological thought, Ethics, and Comparative philosophy

Academic Society Memberships

The Japanese Society of Philosophy, The Japanese Society of Ethics, The Japanese Society of Phenomenology, The Society of Philosophy Kansai, The Society of Ethics Kansai, and The Society of Comparative philosophy

Major Publications**Books**

ABE, H.

2002 *Gen, sono rogosu to ētosu* (The Da. Its Logos and Ethos) . Kōyōshobo. (in Japanese)

2000 *Shizen tono kyosei wo kangaeru* (Rethinking Symbiosis between Human and Nature) . In Ishizaki, Y, Ishida M, and Yamauchi H (eds.) *Chi no nijyuisseikiteki kadai* (The intellectual problems in the 21st Century) . Nakanishiyashuppan (in Japanese)

Articles

ABE, H.

2003 Honraiteki jikozonzai towa ikanarumonoka (On the Concept of Self in *Sein und Zeit*) . *Ningensonzairon* 9: 361-373. (in Japanese)

2001 Tetsugaku kyōiku no shōrai ni tsuite (On the Future of Philosophical Education) . *Arche* 9: 121-131. (in Japanese)

2001 Genshōgaku to kibun (Phenomenology and mood) . *Risō* 667: 79-91. (in Japanese)

2001 Gen eno Ankibasiē (The Philosophy of Young Heidegger in terms of the *Da*) . *Ryukoku-tetsugaku-ronshu* 15: 1-31. (in Japanese)

1999 Haideggā no tasharon (Heidegger's concept of the Other) . *Kinsei-tetsugaku-kenkyu* 5: 47-63. (in Japanese)

1999 Shishite ikiru toiu koto (On the Mortal Life) . *Aurora* 17: 73-81. (in Japanese)

Review

ABE, H.

2000 Sumio Takeda, *Seimei no tetsugaku* (Philosophy of Life) . *Genshogaku-nenpo* 16: 253-259. (in Japanese)

Activities in Academic Societies**Council in Academic Societies**

April 2000- March 2002 Member of Secretary of the Society of Ethics Kansai

December 2002 - Member of Secretary of the Society of Philosophy Kansai

Oral Presentations

October 2000 *Tetsugaku kyōiku no shōrai ni tsuite* (On the Future of Philosophical Education) , Symposium in the 53rd annual meeting of the Society of Philosophy Kansai, Nishinomiya (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 Fellows, Institute for Research in Humanities, Kyoto University (2001)

Research Associates, Graduate School of Law, Kyoto University (2000)

Higher Degrees

Master of Laws (LL. M.) . (Kyoto University, 1996)

Field of Specialization / Background

Chinese Legal History

Academic Society Memberships

Japan Legal History Association, Comparative Law History Association

Major Publications

Books

YANG, Yifan (ed.)

2003 *Zhongguo Fazhishi Kaozheng Bingbian Di4juan* (Studies on Chinese Legal History, Book Bing, vol.4) .
Zhongguo Shehui Kexue Chubanshe. (in Chinese)

Articles

KATO, Yuzo

2003 *Suiri wo Meguru Hunsō Jirei eno Rekishi karano Apurōchi* (Report on Water Supply Conflicts of
Wuwei, Gansu Province) . *Ningen-Kankyōkei Nyūzu Retā*5:1-9. (in Japanese)

Review

2003 NAKAJIMA, Gakusho, *Mindai Kyoson no Funsō to Chitsujo* (Disputes and Order in Rural Society
during the Ming Period) . *Tōyōshi Kenkyū* 62- 1 :137-142

Activities in Academic Societies

- Nov., 2003 Chūgoku Kanshuku Ko-Oasisu Chōsa-ki (Tōkyo Daigaku Tōyō Bunka Kenkyūjo Seminā)
(Report on Old Oasis in Gansu Province, China : IOC Seminar) (Institute of Oriental
Culture, University of Tokyo) (in Japanese)
- Oct., 2003 Chūgoku Hōseishi Kanren no Dejitaru Jōhō (Hōseishi Gakkai Dai51kai Kenkyū Taikai
Mini Shinpojiumu, IT Jidai no Hōshigaku) (Digital Data on Chinese Legal History : Mini
Symposium " Legal Historical Studies on the Time of Information Technology ". Japan
Legal History Association 51st Meeting) (Meijo University) (in Japanese)
- July, 2003 Tōa Kenkyujo Dai6 Chōsa Iinkai Tokubetsu Chōsabu Dai4bu "Shina Toshi Fudōsan
Kankō Chōsa Hōkokusyo" ni tsuite (Tōkyō Daigaku Tōyō Bunka Kenkyūjo Semina)
(The Reports on Real Estate's Customs in Chinese City done by Research Committee
No.6, Special Section No.4 of the East Asia Institute : IOC Seminar) (Institute of
Oriental Culture, University of Tokyo) (in Japanese)

Research Activities

Field Research in Foreign Countries

- Feb., 2004 Taiwan (Research on Historical Documents of Gansu Environment)
- Oct., 2003 China (Research on Old Oasis in Gansu Province)
- Aug.-Sep., 2003 China (Research on Ruins in the Heihe River Basin)

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, Atmospheric Sciences, NASA Langley Research Center) (1999)

Higher Degrees

Ph. D. (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

Referred original papers

2004 Kawamoto, K. and T. Hayasaka,

'Low cloud optical properties viewed from satellites over East Asia',

Proc. 3rd International Symposium on Geophysics, Tanta, Egypt, 558-563 (2004)

Kawamoto, K., T. Hayasaka, T. Nakajima, D. Streets and J-H. Woo,

'Examining the aerosol indirect effect over China using an SO₂ emission inventory'

Atmos. Res. In press. (2004) .

Kawamoto, K. and T. Nakajima,

'Seasonal variation of cloud particle size as derived from AVHRR remote sensing',

2003 *Geophys. Res. Lett.*, Vol.30, No.15, 1810,10.1029/2003GL017437 (2003)

Referred review paper

Kazuaki Kawamoto,

'Detection of aerosol indirect effects with remote sensing' (in Japanese)

Aerosol Research, 18 (4) : 247-252 (2003)

Activities in Academic Societies

Oral presentations

2003

Kawamoto, K., T. Hayasaka, T. Nakajima, D. Streets and J. Woo,

'Cloud properties derived from satellite remote sensing and their relationships with other factors in East Asia' ,

EGS (European Geophysical Society) -AGU (American Geophysical Union) -EUG (European Union of Geosciences) Joint Assembly, Apr. 6-11, 2003, Nice, France.

Kawamoto, K.,

'Signals of the aerosol indirect effect over China detected from satellites' , The 6th APEX (Asian Particulate Environment change eXperiment) International Meeting, Jun. 26th, Awaji-shima, Japan.

Kawamoto, K., T. Hayasaka, T. Nakajima, D. Streets and J. Woo,

'Implication of human activity in low-level clouds over China via long-term monitoring from satellites',

International Union of Geodesy and Geophysics (IUGG) general assembly, Jun. 30-Jul. 11, Sapporo, Japan.

Kawamoto, K., T. Hayasaka, T. Nakajima, D. Streets and J. Woo,

'Behaviors of low cloud properties to anthropogenic SO₂ emission over China' ,

The 1st Asia-Pacific Radiation Symposium (APRS) , Xian, China. Aug. 25-27, (2003)

Kawamoto, K., T. Nakajima and T. Hayasaka,

'Long-term analysis of the cloud parameters derived from AVHRR data'

International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences, Vol. XXXIV, Part 7/W14, J4, pp1-4, International Workshop on Monitoring and Modeling of Global Environmental Change, 21-22 October 2003, Kyoto, Japan (2003)

Poster presentations

Kawamoto, K., T. Hayasaka, T. Nakajima, D. Streets and J. Woo,

'Implications of the anthropogenic SO₂ emission in low-level clouds over China'

Gordon Research Conference on 'Solar Radiation and Climate', New London, NH, USA July 13-17, (2003)

Kawamoto, K., T. Hayasaka, T. Nakajima, D. Streets and J-H. Woo,

'Possible effects on low-level cloud properties by anthropogenic SO₂ emission', International Symposium on Tropospheric Profiling, Leipzig, Germany, Sep. 14-19. (2003).

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. Course (1998)

Department of Geography, Faculty of Science, Ritsumeikan University (1996)

Professional Career

Assistant Professor, Research Institute for Humanity and Nature (2003)

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

Activities in Academic Societies

March, 2003

Tansui seitaikei niokeru kemikarukomyunikeisyon wo kaisita kansetsukouka - hisessyokusigeki ha daisansya karano hosyokuatsu 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. (in Japanese)

September, 2003

Kisetsusei kara mita biwakono gyorui to gyogyo 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. (in Japanese)

August, 2004

Tansuiiki ni okeru kemikarukomyunikesyon ga motarasu hisyokusya 2syu no seizonritsu no seizonritu koudou keitaihenka no hikaku (Survival, behavior, and shape responses on two prey species mediated by chemical communication in freshwater) Dai 51 kai nihon seitaigakkai taikai (The 51st Annual Meeting of the Ecological Society of Japan) , Kushiro. (in Japanese)

Social Activities and Public Lectures**Social Activities**

February, 2003

Kokoku no Aji to Biwako no Konjyaku (Changes of Fisheries and Lake Biwa) . Kasuga iki iki soudan (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**

Daisuke Fujita, Misa Ishizawa, Shamil Maksyutov, Peter E. Thornton, Tazu Saeki and Takakiyo Nakazawa
2003 Inter-annual Variability of the Atmospheric Carbon Dioxide Concentrations as Simulated with Global
Terrestrial Biosphere Models and an Atmospheric Transport Model. *Tellu* 55B: 530-546.

Research Activities

July-December 2003, Visiting Scientist at Meteorological Service of Canada, Environment Canada (supported
by Research Institute of Innovative Technology for the Earth (RITE))

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 Bioscience and Biotechnology, Tokyo Institute of Technology.

M. Course (1996)

Department of Bioscience, Faculty 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. (Tokyo Institute of Technology, 1999)

M. Sc. (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., and Koshima, S.

2004 A snow algal community on a Patagonian glacier, Tyndall glacier in the Southern Patagonia Icefield. *Arctic, Antarctic, and Alpine Research*, 36 (1) : 91-98.

Fujita, K., Takeuchi, N., Aizen, V., and Nikitin, S.

2004 Glaciological observations on the plateau of Belukha Glacier in the Altai Mountains, Russia from 2001 to 2003, *Bulletin of Glaciological Research*, 21: 57-64

Activities in Academic Societies**Council in Academic Societies**

Member of an event committee of the Japanese Society of Snow and Ice

Member of a steering committee of the Data Center for Glaciological Research of the Japanese Society of Snow and Ice

Oral Presentations

November, 2003 Preliminary report of 171m deep ice core drilling on Belukha Glacier in the Russian Altai Mountains in 2003, National Institute of Polar Research, Symposium on Polar Meteorology and Glaciology, Tokyo, Japan

October 2003 Characteristics of surface albedo and surface dust on the July 1st Glacier in Qilian Mountains, China. Annual meeting of Japanese Society of Snow and Ice, Jyoetsu city, Japan

July, 2003 Distribution of cryoconite on the surface of a glacier derived from a Landsat TM image, IUGG, Sapporo, Japan

Poster Presentation

December, 2003 Seasonal variation of a snow algal community on an Alaska glacier. American Geophysical Union Fall meeting San Francisco, U.S.A.

Awards

Ukichiro Nakaya Science Promotion Award 2004.2

Research Activities**Field Research in Foreign Countries**

September, 2003 Xinjiang, China (Glaciological Research on a glacier in the Tenshang Mountains)

July-August, 2003 Altai, Russia (Ice core drilling on a glacier in the Altai Mountains)

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. Course (1994)

Faculty of Science, Kyoto University (1992)

Professional Career

Associate Professor, Center for Ecological Research, Kyoto University (2003)

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**Articles**

Hasegawa, S., Koba, K., Tayasu, I., Takeda, H. and Haga, H.

2003

Carbon autonomy of reproductive shoots of Siberian alder (*Alnus hirsuta* var. *sibirica*). *Journal of Plant Research* 116: 183-188

Yamada, A., Inoue, T., Sugimoto, A., Takematsu, Y., Kumai, T., Hyodo, F., Fujita, A., Tayasu, I., Klangkeaw, C., Kirtibutr, N., Kudo, T. and Abe, T.

2003

Abundance and biomass of termites (Insecta: Isoptera) in dead wood in a dry evergreen forest in Thailand. *Sociobiology* 42: 569-585.

Folgarait, P. J., Thomas, F., Desjardins, T., Grimaldi, M., Tayasu, I., Curmi, P., and Lavelle, P.M.

2003

Soil properties and macrofauna community in recently abandoned irrigated rice fields in northeastern Argentina. *Biology and Fertility of Soils* 38: 349 - 357.**Activities in Academic Societies**

International scientific committee, The XIVth International Colloquium of Soil Zoology and Ecology in Rouen, France 2004.

Research Activities**Field Research in Japan**

April 2003 - October 2003 Lake Biwa watershed (Material cycling and biology)

Field Research in Foreign Countries

July 2003 China (Hydrological research on Yellow River)

August 2003 Thailand and Cambodia (Watershed management in Asian countries: comparison with Biwa-Yodo River watershed)

October 2003 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) -present

Lecturer (temporary) , Meiji University (2003) -present

COE Research Fellow, Disaster Prevention Research Institute, Kyoto University (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. Sc. (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

YATAGAI, 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.

Masuda, K., Yatagai, A

2004 Consistency of meteorological reanalysis data sets with respect to long-term mean water balance, *Geophysical Research Letters* (in press) .

Activities in Academic Societies

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.

July, 2003 "A comparative study of the surface fluxes derived from 4DDA products (GAME reanalysis) with Asian Automatic Weather station Network (AAN) observations", International Union of Geophysics and Geodesy, (IUGG) , Sapporo.

Research Activities

Field Research in Foreign Countries

- February, 2004 USA, England, Syria (Collecting information on the drought monitor system)
- 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, PhD in Regional Environmental Science (2003)
- Department of Hydrology, Institute of Geography, Chinese Academy of Sciences (CAS), PhD 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, in 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, IAHS

Main Publications

Articles

- 2003 Chen JY, Tang CY, Shen YJ, Kondoh A, Sakura S, Shimada J. 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.
- 2003 Chen JY, Tang CY, Sakura S, Shen YJ. 2003. Nitrate pollution in groundwater in the lower reach of the Yellow River, case study in Shandong Province, China. In *Groundwater Engineering – Recent Advances*, Kono, Nishigaki & Komatsu (eds), Swets & Zeitlinger: Lisse, 279-283.
- 2003 Chen JY, Tang CY, Fukushima Y, Taniguchi M. 2003. Water environmental problems associated with natural processes and human activities in the lower reach of the Yellow River, In *1st International*

Yellow River Forum on River Basin Management, Volume IV, Shang H (ed) . The Yellow River Conservancy Publishing House, Zhengzhou: 263-274.

- 2003 Chen JY, Fukushima Y, Tang CY, Taniguchi M, 2004 Water environmental problems occurred in the lower reach of the Yellow River. *Journal of Japan Society of Hydrology & Water Resources*, 17 (5) : 555-564

Activities in Academic Societies

- 2003 Chen JY, Tang CY, Shen YJ, 2003. Nitrate pollution in groundwater in the lower reach of the Yellow River, case study in Shandong Province, China. IS-OKAYAMA 2003, *GROUNDWATER PROBLEMS RELATED TO GEO-ENVIRONMENT*, Poster presentation, Okayama University, Japan.
- 2003 Chen JY, Tang CY, Fukushima Y, Taniguchi M, 2003. Water environmental problems associated with natural processes and human activities in the lower reach of the Yellow River. *1st International Yellow River Forum on River Basin Management, Volume IV*, Keynote presentation, Zhengzhou, China.
- 2003 Chen JY, Tang CY, Shen YJ, Sakura Y, Fukushima Y. 2003. Nitrate pollution of groundwater in a wastewater irrigated field in Hebei Province, China. Oral presentation, IUGG Symposium, Sapporo, Japan.
- 2002 Chen JY, Tang CY, Fukushima Y, Makoto T. 2003. Water diversion and its environmental impacts in the lower reaches of the Yellow River. Oral presentation, IUGG Workshop, Sapporo, Japan.

Research Activities

Field Research in Foreign Countries

Field survey and water sampling in the delta of the Yellow River, China, in Sept., 2003.

Data collection related to the Yellow River Project in Beijing, China, Feb., 2004..

FUJITA, Yayoi

Research Fellow

Born in 1972.

Curriculum Vitae

Academic Career

Department of Development Policy Studies, Graduate School of International Cooperation, Kobe University, D. Course (2004)

Department of Development Policy Studies, Graduate School of International Cooperation, Kobe University, M. Course (1996)

Department of Political Science, Faculty of Law, Doshisha University (1994)

Professional Career

Project Advisor, Faculty of Forestry, National University of Laos (1999)

Visiting scholar, Institute of Cultural Research (1998)

Translator, Bayer Cooperation (1998)

Project assistant, Japan International Volunteer Center (1996)

Higher Degrees

Ph. D. (Kobe University, 2004)

M. A. (Kobe University, 1996)

Fields of Specialization / Background

Agricultural Development, Natural Resource Management

Academic Society Memberships

Japan Society for International Development, International Association for the Study of Common Property

Major Publications

Articles

2003 Vandergeest, P., Khamla Phanvilay, Yayoi Fujita et al. Flexible Networking in Research Capacity Building at National University of Laos. *Canadian Journal of Development Studies*. 1: 119-135

Activities in Academic Societies

August, 2003

Overlapping Resource Tenure and Resource Conflict in Conservation Forest of Lao People's Democratic Republic. (International Conference on the Politics of the Commons: Articulating Development and Strengthening Local Practice, Chiang Mai, Thailand)

December, 2002

Reconciling Forest Policy and Migrant Populations in Northwest Vientiane, Lao PDR. (Symposium on Demographic Movement and Logging Roads at Japan Centre for Area Studies, Osaka, Japan)

August, 2002

Resource Use Changes in National Conservation Forest Area: Case Study of Ang Nhay Village. (Mountainous Mainland Southeast Asia III Conference at Lijiang, Yunnan Province, China)

December, 2001

Perceptions and Problems of Forest Boundaries in Northwest Vientiane. (Symposium on Questioning the Resource Boundaries at Japan Centre for Area Studies, Osaka, Japan)

October, 2001

Conflicts and Resource Boundaries in Laos. (Symposium on Extreme Conflicts and Tropical Forest at Japan Centre for Area Studies, Osaka, Japan)

February, 2001

Agricultural Land Use and Resource Management Institution in the Phou Phanang Protected Area in Lao P.D.R. (the Global Change and Sustainable Development Conference, Chiang Mai, Thailand)

Research Activities

Field Research in Foreign Countries

Dec, 2003 Laos (Research on Land Use Change in Laos)

May, 2003 Laos (Research on the Eco-History of Environmental Use in Laos)

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, B.E. (hons) (1990)

Professional Career

JSPS Postdoctoral Fellow, Research Institute for Humanity and Nature (2003)

Research officer, Climate Impact Group, CSIRO Atmospheric Research, Australia (2002)

Tutor, School of Civil and Environmental Engineering, UNSW (1998)

Hydrologist, New South Wales Department of Land and Water Conservation (1994)

Research assistant, Centre for Water Policy Research, UNE (1994)

Tutor, School of Natural Resources, UNE (1992)

Higher Degrees

Ph. D. (UNSW, 2002)

M.Nat.Res. (UNE, 1993)

B.E. (hons) (U. Newcastle, 1990)

Fields of Specialization/Background

Stochastic hydrology, climate change impacts

Publications

Articles

Harrold, T.I., A. Sharma and S.J. Sheather

2003 A Nonparametric Model for Stochastic Generation of Daily Rainfall Occurrence. *Water Resources Research* 39 (10) , 1300, doi:10.1029/2003WR002182.

2003 A Nonparametric Model for Stochastic Generation of Daily Rainfall Amounts. *Water Resources Research* 39 (12) , 1343, doi:10.1029/2003WR002570.

Harrold, T.I., and R.N. Jones.

2003 Generation of Rainfall Scenarios Using Daily Patterns of Change from GCMs. In S. Franks, G. Blöschl, M. Kumagai, K. Musiak 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.

HOSHIKAWA, Keisuke

Research Fellow

Born in 1975.

Curriculum Vitae

Academic Career

Department of Regional Environment, Kyoto University, D. Course (2003)

Department of Regional Environment, Kyoto University, M. Course (2000)

Department of Agricultural Engineering, Kyoto University (1998)

Professional Career

Research Fellow, Research Institute for Humanity and Nature

Higher Degrees

D. Agr. (Kyoto University, 2004)

M. Agr. (Kyoto University, 2000)

Fields of Specialization / Background

Irrigation, Drainage and Reclamation Engineering, Regional planning

Academic Society Memberships

The Japanese Society of Irrigation, Drainage and Reclamation Engineering, The Japan Society of Hydrology and Water Resources

Major Publications**Articles**

2003 Earthen Bund Irrigation in Northeast Thailand, In Proc. of First International Conference on Hydrology and Water Resources in Asia Pacific Region

2003 Study on structure and function of an earthen bund irrigation system in Northeast Thailand. *Paddy and Water Environment* 1 (3)

2000 Evolution of Rain-fed Rice Cultivation in Northeast Thailand : Increased Production with Decreased Stability. *Global Environmental Research* 3 (2)

Activities in Academic Societies

August, 2000 "Touhoku-Tai ni okeru dentou-teki kangai to suden inasaku (Traditional irrigation and rice cultivation in Northeast Thailand) " [in Japanese] The Japanese Society of Irrigation, Drainage and Reclamation Engineering Annually Meeting 2000

November 2003 "A traditional irrigation system in Northeast Thailand" 2003 International Symposium on the Climate System of Asian Monsoon and its Interaction with Society

Research Activities**Field Research in Foreign Countries**

August, 2003 China (Research on the Environment, Irrigation and Agriculture in the upper Yellow River basin)

HYODO, Fujio

JSPS Research Fellow

Born in 1974.

Curriculum Vitae**Academic Career**

Graduate School of Science, Kyoto University, D. Course (2002)

Graduate School of Science, Kyoto University, M. Course (1999)

Faculty of Agriculture, Kyoto University (1997)

Professional Career

Technical Assitant, Research Institute for Humanity and Nature (2002)

JSPS Postdoctoral Research Fellow (PD) , Research Institute for Humanity and Nature (2003)

Higher Degrees

D.Sc. (Kyoto University, 2002)

M.Sc. (Kyoto University, 1999)

Fields of Specialization/Background

Animal Ecology, Soil Ecology

Academic Society Memberships

The Ecological Society of Japan

Major Publications**Articles**

Hyodo, F. Azuma, J-L, and Abe, T.

1999 Estimation of Effect of Passage Through the Gut of a Lower Termite, *Coptotermes formosanus* Shiraki, on Lignin by Solid-State CP/MAS ¹³C NMR. *Holzforschung*. 53: 244-246.

- 1999 A new pattern of lignin degradation in fungus comb of *Macrotermes carbonarius*. *Sociobiology* 34:591-596
- Hyodo, F., Inoue, T., Azuma, J.-I., and Abe, T.
- 2000 Role of the mutualistic fungus in lignin degradation in the fungus growing termite, *Macrotermes gilvus* (Isoptera: Macrotermitinae). *Soil Biology and Biochemistry* 32:563-568.
- Tayasu, I., Hyodo, F., Takematsu, Y., Inoue, T., Kirtibutr, N. and Abe, T.
- 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.
- Inoue, T., Takematsu, Y., Hyodo, F., Sugimoto, A., Yamada, A., Klangkaew, C., Kirtibutr, N. and Abe, T.
- 2001 The abundance and biomass of subterranean termites (Isoptera) in a dry evergreen forest of Northeast Thailand. *Sociobiology* 37: 41-52.
- Hyodo, F., Tayasu, I., Azuma, J.-I., Kirtibutr, N. and Abe, T.
- 2001 Effect of the soil-feeding termite, *Dicuspiditermes makhamensis*, on soil carbon structure in a seasonal tropical forest as revealed by CP/MAS ¹³C NMR. *Sociobiology* 38:487-493.
- Tayasu, I., Hyodo, F., Abe, T., Inoue, T., Spain, A.V.
- 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., Nakamura, T., Oda, H., Hyodo, F., Takematsu, Y. and Abe, T.
- 2002 Termite ecology in a dry evergreen forest in Thailand in terms of stable- (^{d13}C and ^{d15}N) and radio- (¹⁴C, ¹³⁷Cs and ²¹⁰Pb) isotopes. *Ecological Research* 17:195-206.
- Tayasu, I., Hyodo, F. and Abe, T.
- 2002 Caste specific N and C isotope ratios in fungus growing termites in special reference to uric acid preservation and their nutritional meaning. *Ecological Entomology* 27: 355-361.
- Hyodo, F., Tayasu, I., Inoue, T., Kudo, T., Azuma, J.-I. and Abe, T.
- 2003 Differential role of the symbiotic fungi in lignin degradation and food provision in fungus-growing termites (Isoptera: Macrotermitinae). *Functional Ecology* 17: 186-193.
- Wada, E., Tayasu, I. and Hyodo, F.
- 2003 Bussitujunkan to Mizushigen-suikei wo chushin to shite (Material cycling and water resources with emphasis on a watershed) *Enerugi to Shigen* (Energy and Resource) 24:27-33. (In Japanese)
- Yamada, A., Inoue, T., Sugimoto, A., Takematsu, Y., Kumai, T., Hyodo, F., Fujita, A., Tayasu, I., Klangkaew, C., Kirtibutr, N., Kudo, T. and Abe, T.
- 2003 Abundance and biomass of termites (Insecta: Isoptera) in dead wood in a dry evergreen forest in Thailand. *Sociobiology* 42: 569-585.
- Takematsu Y., Inoue, T., Hyodo, F., Sugimoto, A., Kirtibutr, N. and Abe, T.
- 2003 Diversity of nest types in *Microcerotermite crassus* (Termitinae, Termitidae, Isoptera) in a dry evergreen forest in Thailand. *Sociobiology* 42: 587-596.
- Osada, N., Tateno, R., Hyodo, F. and Takeda H.
- 2004 Changes in crown architecture with tree height in two deciduous tree species: developmental constraints or plastic response to the competition for light? *Forest Ecology and Management* 188: 337-347.

Activities in Academic Societies

- January 1999 "The symbiotic relationships between basidiomycetous fungi *Termitomyces* and two fungus-cultivating termites, *Macrotermes gilvus* and *M. carbonarius*" Hyodo, F., Tetsushi Inoue, Jun-ichi Azuma, Ichiro Tayasu, Takuya Abe. 13th Congress of the International Union for the Study of Social Insects IUSSI, Adelaide, Australia.
- August 2002 "Differential role of the symbiotic fungi in lignin degradation and provision of nutritious food in fungus-growing termites (Macrotermitinae: Isoptera)" Hyodo F, Tayasu I.

Inoue T., Kudo T., Azuma, J.-I. and Abe T. 7th Congress of the International Union for the Study of Social Insects IUSSI. Hokkaido Japan.

Research Activities

Field Research in Japan

April 2003-March 2003 Lake Biwa watershed (Material cyclings)

Field Research in Foreign Countries

October 2003 Thailand (Ethno-biological research of the use of natural resources in a Maekong River watershed)

January 2004 Thailand (Ecological Studies on soil invertebrates)

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. (2000)

M. Socio. (1993)

Fields of Specialization/Background

Sociology, Educational Sociology

Major Publications

Articles

2003 Ethnic Minority Immigrants Under the Western Region Development.

2003 A Report from the Sunan Yugur Autonomous County. *Chyugoku 21* (Aichi University) . Vol. 18.

Research activities

Field Research in Foreign Countries

September 2003: (Ethnological research in the oasis project) along the basin of the Heihe river, Gansu Province, China

INOUE, Mitsuyuki

————— Research Fellow

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. D. (Kyoto University, 2004)

Litt. M. (Kyoto University, 1998)

Fields of Specialization / Background

Oriental History

Academic Society Memberships

Tōyōshi Kenkyūkai (The Society of Oriental History) , Shigaku Kenkyūkai (The Society of Historical Research)

Major Publications

Books

Inoue, Mitsuyuki, and Nakawo, Masayoshi (eds.)

2003 Kankai Sōbō: Yūrasia Rekisigaku no Kōchiku wo Mezashite (Han hai cang mang: Aiming at Construction of Eurasian History) . *Oasisu Chiiki Kenkyūkaihō* (Project Report on an Oases-region, a special volume, March 2003) . The Oasis Project. (in Japanese, Chinese and Korean)

Articles

Inoue, Mitsuyuki

2004 The Development of the Map of Yang Ziqi in East Asia. In Fujii, Jyōji, Sugiyama, Masaaki and Kinda, Akihiro (eds.) *Ezu Chizu kara mita Sekaizō* (Maps and Visions of the World) , Kyōto Daigaku Daigakuin Bungaku Kenkyūka 21seiki COE Puroguramu "Gurōbaruka Jidai no Tagenteki Jinbungaku no Kyoten Keisei" "15, 16, 17seiki Seiritu no Ezu Chizu to Sekaikan" Chūkan Hōkokusyo (The interim report document of Faculty of Letters, Kyoto University, the 21st Century COE Program "Towards a Center of Excellence for the Study of Humanities in the Age of Globalization" "The Creation of Fifteenth, Sixteenth and Seventeenth Century Maps: Maps and Visions of the World") : pp.190-219. Faculty of Letters, Kyoto University.

2003 Tyūgoku no syokumotsusi ni tuite (On the History of Foods in China) . *Oasisu Chiiki Kenkyūkaihō* (Project Report on an Oases-region) 3 (1) : 69-94. [in Japanese]

Activities in Academic Societies

March, 2003

Tyūgoku, Tyōsen, Nippon ni okeru You Siki kei "Kon'itu Kyōrizu" no tenkai (The Development of Yang Ziqi's "The Map of the Harmoniously Unified Domains" in China, Korea and Japan) , Kyōto Daigaku Daigakuin Bungaku Kenkyūka 21seiki COE Puroguramu "Gurōbaruka Jidai no Tagenteki Jinbungaku no Kyoten Keisei" "15, 16, 17seiki Seiritu no Ezu Chizu to Sekaikan". Dai 3 kai kenkyūkai (Kokusai Sinpojiumu) (Faculty of Letters, Kyoto University, the 21st Century COE Program "Towards a Center of Excellence for the Study of Humanities in the Age of Globalization" "The Creation of Fifteenth, Sixteenth and Seventeenth Century Maps: Maps and Visions of the World". The 3rd society (International Symposium)) , Faculty of Letters, Kyoto University. [in Japanese]

June, 2002

Yanagawa hanju Andō Seian "Shinzō Rekidai Teiōzu" ni tuite (On the Confucian scholar of the domain of Yanagawa Andō Seian and his "The Chart of Imperial Progeny") , 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]

Research Activities**Field Research in Japan**

October, 2003 Kumamoto City and Shimabara City (Research of old maps)

Field Research in Foreign Countries

August-September, 2003 China (Research on ruins in Gansu, Neimenggu and Ningxia Districts)

KIKUCHI, Nobuyuki

Research Fellow

Born in 1966.

Curriculum Vitae**Academic Career**

Department of Geophysics, Graduate School of Science, Tohoku University, D. Course (1998)

Department of Geophysics, Graduate School of Science, Tohoku University, M. Course (1993)

Department of Geophysics, Faculty of Science, Tohoku University (1991)

Professional Career

Japan Aerospace Exploration Agency (2004)

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 / Background

Meteorology, Atmospheric Radiation

Academic Society Memberships

Meteorological Society of Japan

Major Publications**Articles**

2001 Kuji, M., N. Kikuchi, N. Hirasawa, and T. Yamanouchi

A method of cloud field detection over Antarctica during the polar night using AVHRR data, *Polar Meteorol. Glaciol.*, 15, 114-123.

2000 Hayasaka, T., N. Kikuchi,

Eisei ni yoru Kumo no Bibutsuritokusei no Kansoku (Cloud Microphysics Measurements using Satellite), *Gekkan Kaiyou (Monthly Ocean)*, Vol.32, No.5 [in Japanese]

2001 Kuji, M., N. Kikuchi,

Shouwakichi Jushin NOAA Eisei HRPT Deita no Yomidasi Tsuuru no Kaihatsu (Development of a tool to read out HRPT data of NOAA polar orbiter received at Syowa Station), *Nankyoku Shiryou (Antarctic Record)* Vol.45, No.3, National Institute of Polar Research, Tokyo [in Japanese]

2000 Kuju, M., T. Hayasaka, N. Kikuchi, T. Nakajima and M. Tanaka,

The Retrieval of Effective Particle Radius and Liquid Water Path of Low-Level Marine Clouds from NOAA AVHRR Data. *J. Appl. Meteorol.*, 39, 999-1016.

Activities in Academic Societies

2003 Kikuchi, N.

Determination of the optical properties of inhomogeneous clouds and the sensor resolution sensitivity. IUGG, Sapporo, Japan

2003 Kikuchi, N.,

Radiative horizontal transport in inhomogeneous clouds. APRS (Asia Pacific Radiation Symposium) , Xian, China

2003 Kikuchi, N., T. Hayasaka, S. Ohta, N. Sugimoto. Radiation and Aerosol Measurements in Fukue Island. GAME-T Skynet Symposium, Khon Kean,

Thailand

2002 Kikuchi, N., T. Hayasaka,

Tahachou Sensa wo Mochiita Kumo Butsuriryō to Kumo Fukinshitsu Parameta no Doushutsu (The retrieval of the parameter of cloud microphysics and cloud inhomogeneity using a multiwavelength sensor) , Nihon Kishou Gakkai, 23 May.

2002 Kikuchi, N., H. Ishida, S. Asano, H. Kuroiwa,

San Hachou Kumo Bunkou Houshakei wo Mochiita Kumo Butsuriryō to Kumo Fukinshitsu no Suitei (Estimation of the parameters of cloud microphysics and cloud inhomogeneity using a three channel cloud spectroradiometer) , Nihon Kishou Gakkai, 10 Oct.

2001 Kikuchi, N., H. Iwabuchi and T. Hayasaka,

Retrieval of the optical thickness of inhomogeneous clouds from multispectral satellite measurements. CEReS International Symposium on "Remote Sensing of the Atmosphere and Validation of Satellite Data", Center for Environmental Remote Sensing, Chiba Univ., Chiba,

Japan.

2001 Kikuchi, N.

Kanki no Fukidashi ni Tomonau Kumo no Kougakuteki Atsusa to Unryō no Suitei (Estimation of the optical thickness and amount of clouds in the cold air mass) , Nihon Kishou Gakkai, 11 October.

2000 Kikuchi, N., H. Iwabuchi, T. Hayasaka,

Fukinshitsu Kumo no Housha Tokusei wo Arawasu Effective Gradient no Dounyuu to LANDSAT Eisei Kou Kaizoudo Deita wo Mochiita Kougakuteki Atsusa no Suitei (A new parameter of cloud inhomogeneity of Effective Gradient and estimation of cloud optical thickness using height resolution data of LANDSAT Satellite) , Nihon Kishou Gakkai, 20 October.

1998 Kikuchi, N., T. Hayasaka, M. Tanaka,

NOAA AVHRR to GMS VISSR de suiteishita Kumo no Kougakuteki Atsusa no Hikaku (Comparison of NOAA AVHRR and GMS VISSR for estimated cloud optical thickness) , Nihon Kishou Gakkai, 29 May. [in Japanese]

Research Activities

Field Research in Japan

2002 Once a month from July 2002, Fukuejima Taiki Kankyō Kansoku Shisetsu (Observatory of Atmospheric Environment in Fukue Island) , Miiraku-cho Minamimatsuura-gun Nagasaki, Observation of radiation and aerosol.

Kokuritsu Kyokuchi Kankyūujo Ippan Kyōdou Kankyū (Ordinary Joint Study in National Institute of Polar Research)

Rimoto Senshingu Deita wo Mochiita Nankyokuiki ni Okeru Kumo, Suijōuki Hendou no Kenkyū (A study of variation of cloud and water vapor in Antarctica using remote sensing data) , representative Kuji, M., collaborator Kikuchi, N., 2000-2002., 2003-2005

KOMATSU, Hikaru

Research Fellow

Born in 1975.

Curriculum Vitae

Academic Career

Department of Forest Science, Graduate School of Agricultural and Life Sciences, The University of Tokyo, D. Course (2003)

Department of Global Agricultural Sciences, Graduate School of Agricultural and Life Sciences, The University of Tokyo, M. Course (2000)

Department of Forest Science, Faculty of Agriculture, The University of Tokyo (1998)

Professional Career

PhD Research Fellow, Japan Society for the Promotion of Science (2004)

Research Fellow, Research Institute for Humanity and Nature (2003)

Higher Degrees

D. Agr. (The University of Tokyo, 2003)

M. Agr. (The University of Tokyo, 2000)

Fields of Specialization / Background

Forest Hydrology

Academic Society Memberships

The Japan Society of Forestry, The Japan Society of Hydrology and Water Resources

Major Publications

Articles

Hikaru Komatsu

2003 Values of the decoupling factor observed on forest canopy. *Journal of Japan Society of Hydrology and Water Resources* 16: 423-438. [in Japanese]

2003 Relationship between canopy height and the reference value of surface conductance for closed coniferous stands. *Hydrological Processes* 17: 2503-2512.

Hikaru Komatsu, Tomo'omi Kumagai

2002 A method for stably using K-theory-based multilayer models. *Journal of Japan Society of Hydrology and Water Resources* 15: 302-308. [in Japanese]

Hikaru Komatsu, Shoji Hashimoto

2002 Process-Based Models, useful tools to investigate water, carbon, and nitrogen cycles in forest ecosystems. *Journal of Japan Forestry Society* 84: 54-62. [in Japanese]

Hikaru Komatsu, Narimasa Yoshida, Hideki Takizawa, Izumi Kosaka, Chatchai Tantasirin, and Masakazu Suzuki

2003 Seasonal trend in the occurrence of nocturnal drainage flow on a forested slope under a tropical monsoon climate. *Boundary-Layer Meteorology* 106: 573-592.

Activities in Academic Societies

March, 2000

Syokubutu gunnaku no kouzouto gunnarakunai kion purofairu no kannkei (Relationships between canopy structures and in-canopy air temperature profiles) (Hiroshima University) [in Japanese]

April, 2001

Fusoku bunnpu kara mita teichi nettairin takuetsuboku no gourisei (Are emergents in lowland tropical forests reasonable from viewpoints of vertical wind speed profiles) (Gifu University) [in Japanese]

Research Activities

Field Research in Foreign Countries

November, 2003 Thailand (Meteorological measurements on a montane forest)

MATSUOKA, Kenichi ————— JSPS Research Fellow

Born in 1971.

Curriculum Vitae**Academic Career**

Graduate School of Earth Environmental Sciences, Hokkaido University, Doctor Course
(1997-2002)

Graduate School of Earth Environmental Sciences, Hokkaido University, Master Course
(1995-1997)

Department of Applied Physics, Faculty of Engineering, Hokkaido University (1991-1995)

Professional Career

JSPS Research Fellow, Research Institute for Humanity and Nature (2002-2004)

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.

Fujita, S., K. Matsuoka, H. Maeno, and T. Furukawa
2003 Scattering of VHF radio waves from within an ice sheet containing the
vertical-girdle-type ice fabric and anisotropic reflection boundaries. *Annals of Glaciology*
37, 305-316.

Activities in Academic Societies

September, 2003 Vertical gradient of radar echo strength from within ice: spatial variation and
polarization dependence, 10th workshop on West Antarctic Ice Sheet, Virginia, USA.

November, 2003 Ice-flow induced scattering zone within the Antarctic ice sheet revealed by
high-frequency airborne radar, symposium on polar meteorology and glaciology, Tokyo.

Research Activities**Field Research in Foreign Countries**

April 2003 Iceland (Radar investigations on internal and basal structures of glaciers)

December 2003 - February 2004 West Antarctica (investigations on ice flow)

MATSUOKA, Masayuki

Research fellow

Born in 1970.

Curriculum Vitae**Academic Career**

Graduate School of Science and Technology, Chiba University, D. Course (1998)

Graduate School of Science and Technology, Chiba University, M. Course (1995)

Faculty of Engineering, Chiba University (1993)

Professional Career

Research fellow, Research Institute for Humanity and Nature (2003)

Post-doctoral researcher, National Space Development Agency of Japan (2000)

Post-doctoral researcher, Japan Science and Technology Agency (1998)

Higher Degrees

Doctor (Engineering) (Chiba University, 1998)

Master of Engineering (Chiba University, 1995)

Specialized Fields/Background

Remote sensing

Academic Society Memberships

Japan Society of Photogrammetry and Remote Sensing, Remote Sensing Society of Japan

Major Publications**Articles**

2003 "Research plan of Land-use Change Analysis in Yellow River Basin using Satellite Data", International Workshop on The Yellow River Studies.

2003 "Land cover analysis over Yellow River basin using satellite data in RR2002 project", International Workshop on Monitoring/Modeling Global Environmental Change.

2003 "Land cover classification over Yellow River basin using Terra/MODIS in RR2002 project", Asian Conference on Remote Sensing.

Research Activities**Field Research in Foreign Countries**

July, 2003 China (Hydrological research in Yellow River Basin)

MIYAKE, Takayuki

Research Fellow

Born in 1971.

Curriculum Vitae**Academic Career**

Graduate School of Biosphere Sciences, Hiroshima University, D. Course (2000)

Graduate School of Biosphere Sciences, Hiroshima University, M. Course (1997)

Division of Environmental Sciences, Faculty of Integrated Arts and Sciences, Hiroshima University (1995)

Professional Career

Research Fellow, Research Institute for Humanity and Nature (2003)

Research Fellow, Hydrospheric Atmospheric Research Center, Nagoya University (2001)

Higher Degrees

Ph. D. (Hiroshima University, 2000)

M. Ph. (Hiroshima University, 1997)

Fields of Specialization / Background

Environmental Chemistry, Atmospheric Chemistry

Academic Society Memberships

The Chemical Society of Japan, Japan Society for Atmospheric Environment, The Japan Society for Analytical Chemistry

Major Publications**Articles**

Arakaki, T., Miyake, T., Shibata, M., Sakugawa, H.

1999 Usui-Tsuyumizuchi niokeru OH Rajikaru no Hikorikagakutekiseisei oyobi Syoshitsuhanoukikou (Photochemical Formation and Scavenging of Hydroxyl Radical in Rain and Dew Waters) , *Nippon Kagaku Kaishi* , No.5: 335-340. [in Japanese]

Arakaki, T., Miyake, T., Hirakawa, T., Sakugawa, H.

1999 pH Dependent Photoformation of Hydroxyl Radical and Absorbance of Aqueous-Phase N (III) (HNO_2 and NO_2^-) , *Environmental Science and Technology* 33:2561-2565.

Miyake, T., Takeda, K., Fujiwara, K., Sakugawa, H.

2000 Higashi-Hiroshima niokeru Kousuichu Yukisan no Noudo, Chinchakuryou oyobi Hasseigen (Concentrations, Deposition Rates and Sources of Organic Acids in Precipitation Collected in Higashi-Hiroshima, Japan) , *Nippon Kagaku Kaishi*, No.5: 357-366. [in Japanese]

Kobayashi, T., Nakatani, N., Suzuki, M., Miyake, T., Kim, D.-H., Hirakawa, T., Kume, A., Nakane, K., Sakugawa, H.

2001 Akamatsu-naegi no Gasukoukan to Kurorohyiru-Keikou no Nichihenka (Diurnal Patterns of Needle Gas Exchange and Chlorophyll Fluorescence in Japanese Red Pine (*Pinus densiflora* Sieb. et Zucc.) Seedlings) , *Nippon Ryokuka Kougaku Kaishi* 26: 343-348. [in Japanese]

Nakatani, N., Miyake, T., Chiwa, M., Hashimoto, N., Arakaki, T., Sakugawa, H.

2001 Photochemical formation of OH radicals in dew formed on the pine needles at Mt. Gokurakuji, *Water, Air, and Soil Pollution* 130:397-402.

Kobayashi, T., Nakatani, N., Hirakawa, T., Suzuki, M., Miyake, T., Chiwa, M., Yuhara, T., Hashimoto, N., Inoue, K., Yamamura, K., Agus, N., Sinogaya, J. R., Nakane, K., Kume, A., Arakaki, T., Sakugawa, H.

2002 Variation in CO_2 assimilation rate induced by simulated dew waters with different sources of hydroxyl radical ($\cdot\text{OH}$) on the needle surfaces of Japanese red pine (*Pinus densiflora* Sieb. et Zucc.) . *Environmental Pollution* 118:383-391.

Chiwa, M., Oshiro, N., Miyake, T., Nakatani, N., Kimura, N., Yuhara, T., Hashimoto, N., Sakugawa, H.

2003 Dry deposition washoff and dew on the surfaces of pine foliage on the urban- and mountain-facing sides of Mt. Gokurakuji, western Japan, *Atmospheric Environment* 37:327-337.

Activities in Academic Societies**Oral Presentation**

September, 1999

Higashi-Hiroshima niokeru Kousuichu Yukisan no Sokutei to sono Kyodou. Dai 40 kai Taikikankyou Gakkai Nenkai (Measurements and behaviors of organic acids in precipitation collected in Higashi-Hiroshima, Japan. The 40th Annual Meeting of the Japan Society for Atmospheric Environment, Tsu) [in Japanese]

September, 2000

Hiroshima-ken Gokurakuji-yama niokeru Akamatsu-youjou-tsuyu no Kenkyu - Kagaku Seibun-. Dai 41 kai Taikikankyou Gakkai Nenkai (Study of the dew on the pine needles at Mt. Gokurakuji, Hiroshima Prefecture, Japan - Chemical component-, The 41st Annual Meeting of the Japan Society for Atmospheric Environment, Urawa) [in Japanese]

October, 2001

Jidousya-haigasu karano Hidorokishirurajikaru no Ekisoh-hikarigakakuteki-Seisei. Dai 42 kai Taikikankyou

Gakkai Nenkai (Liquid-phase photochemical formation of hydroxyl radical from automobile exhaust gas, The 42nd Annual Meeting of the Japan Society for Atmospheric Environment, Kitakyusyu) [in Japanese]
November, 2002

Arutai-sanmyaku Sofisuki-hyouga niokeru Tankasuisorui. Dai 25 kai Kyokuiki-kisuiken shinpojiumu (Hydrocarbons in Sofiyskiy Glacier, Russian Altai Mountains, The twenty-fifth Symposium on Polar Meteorology and Glaciology, Itabashi-ku) [in Japanese]
November, 2003

Arutai-sanmyaku Beruha-hyouga niokeru Arukanrui. Dai 26 kai Kyokuiki-kisuiken shinpojiumu (Alkanes in Mt. Belukha Glacier, Russian Altai Mountains, The twenty-sixth Symposium on Polar Meteorology and Glaciology, Itabashi-ku) [in Japanese]

Poster Presentation

November, 1999

Measurement of Acidic Substances in Dew in Suburb and Forest Areas in Hiroshima, Japan. International Symposium on Oxidants/Acidic Species and Forest Decline in East Asia, Nagoya, Japan.

March, 2003

Arutai-sanmyaku Sofisuki-hyouga niokeru Tankasuisorui. Nippon Kagakukai Dai 83 Syunki Nenkai (Hydrocarbons in Sofiyskiy Glacier, Russian Altai Mountains, 83rd National Meeting of the Chemical Society of Japan, Shinjuku-ku) [in Japanese]

November, 2003

Arutai-sanmyaku Beruha-hyouga niokeru Kasankasuiso to OH rajikaru no Sokutei. Dai 26 kai Kyokuiki-kisuiken shinpojiumu (Measurements of Hydrogen Peroxide and OH radical in Belukha Glacier, Russian Altai Mountains, The twenty-sixth Symposium on Polar Meteorology and Glaciology, Itabashi-ku) [in Japanese]

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. Course (2002)

Division of Science and Technology on Regional Environment, Graduate School of Agriculture, Kyoto University, M. Course (1997)

Department of Agricultural Engineering, Faculty of Agriculture, Kyoto University (1995)

Professional Carrier

Research Fellow, Research Institute for Humanity and Nature (2001)

Degrees

D. Agr. (Kyoto University, 2002)

M. Agr. (Kyoto University, 1997)

Fields of Specialization/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., Horino H., Mitsuno T. and Kimura M. (2003) : Nijeru nanseibu ni okeru shamen miretto nouchi no seiiku kankyo to toukousen keihan no hozen kouka (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, No. (71) 2, 53-64 (In Japanese)

Kume T., Nagano T., Watanabe T. and Mitsuno T. (2003) : Denjiyudoho ni yoru kinshitstudojou no enbunsokuteihou (Salinity measurement of homogenous soil using electromagnetic induction method) . Transactions of The Japanese Society of Irrigation, Drainage and Reclamation Engineering, No. (71) 5, 105-112 (In Japanese)

Activities in Academic Societies

Kume T., Nagano T., Watanabe T. and Mitsuno T. (2003) : Denjiyudoho ni yoru dojou enbun bunpu bunseki (Salinity measurement using Electromagnetic Induction Method.) Annual meeting of The Japanese Society of Irrigation, Drainage and Reclamation Engineering, 936-937

Kume T., Nagano T., Watanabe T. and Mitsuno T. (2003) : Taten kansoku ni yoru dojou enbun noudo bunpu kaiseki. (Multiple point measurement of soil salinity pattern analysis) Regional meeting of The Japanese Society of Irrigation, Drainage and Reclamation Engineering

Nagano.T (2004) : Nij_ru nanseibu no miretto saibai to nouchi hozen (Millet cultivation in southwestern Niger and land conservation) Divisional meeting of the Japanese association for Arid Land Studies, Invited speaker

Research Activities

Field Research in Foreign Countries

- | | |
|--------------|---|
| June, 2003 | Turkey (Impact of Climate Changes on Agricultural Production System in the Arid Areas) |
| August, 2003 | China (Historical Evolution of the Adaptability in an Oasis Region to Water Resource Changes) |
| March, 2004 | Turkey (Impact of Climate Changes on Agricultural Production System in the Arid Areas) |

NISHIMURA, Yuichiro

Research Fellow

Born in 1970.

Curriculum Vitae

Academic Career

Department of Geography, Faculty of Letters, Nagoya University, D. Course (2003)

Department of Geography, Faculty of Letters, Nagoya University, M. Course (1997)

Professional Career

Research Fellow, Research Institute for Humanity and Nature (2003)

Higher Degrees

D. Geography. (Nagoya University, 2003)

M. Geography. (Nagoya University, 1997)

Fields of Specialization / Background

Socio-Economic Geography, Time Geography

Academic Society Memberships

The Association of Japanese Geographers, The Human Geographical Society of Japan, The Japan Association of Economic Geographers, Association of American Geographers

Major Publications

Books

Hiroo Kamiya, Makoto Kajita, Sachiho Arai, Yoko Ijima, Yuichiro Nishimura, Jun Tsuchiya and Shinichiro

Sugiura

2001 *Fukushi no Sekai* (World of welfare) , Kokonsyoin Chijinsyobo [in Japanese translation]

Yoko Yoshida, Honami Kageyama, Yuichiro Nishimura, Hirokazu Niwa, Tamami Fukuda, Tomoko Yamada and Yusuke Yoshida

2001 *Feminizumu to chirigaku* (*Feminism and Geography*) . Chijinsyobo. [in Japanese translation]

Articles

Yuichiro Nishimura

2004 *Kokusai sinpojiumu "jendā medhia toshi kukan" dai2 sessyon: gendai toshi kūkan no mujun komento* (International symposium on Gender, media urban space, 2nd session: Contradictions in modern urban space comments) Tokyo Keizai daigaku kenkyu senta nenpo (4:191-195). [in Japanese]

2003 *Chūgoku toshi no syokuba katei ni okeru jendā yakuwari to seikatsu jikan haibun* (Gender role in the workplace and the home in Chinese cities: By using the time-budget analysis) Tokyo daigaku jinbun chirigaku kenkyu 16 : 105-119.

2003 *Hajimeteno fīrudo chosa genba de manabu fīrudo chosa no gijutsudai 3 kai : toshi ni okeru shakai chōsa* (Field survey by beginners : On the field trainings for the survey techniques 3. Social survey in the city) . Chiri 48-6: pp. 70-73. [in Japanese]

2002 *Syokuba ni okeru jendā no chirigaku: Nihon deno tenkai ni mukete* (Geography of gender in the workplace: Toward a more comprehensive approach to gender studies in Japan) . Geographical review of Japan 75-9 : 571-590. [in Japanese]

1999 *Toshi chirigaku ni okeru shokujū kankei no sai gainenn ka* (*Reconceptualizing the links between home and work in urban geography*) . Kukan, Shakai, Chiri-siso, 1999, 4, pp.74-93. [in Japanese translation]

1998 *Shinya / Kōtaikinmu to kazoku seikatsu* (Late night / shift working and family life) . Chiri 43-12, pp. 60-66. [in Japanese]

1998 *Jidōsha Seizō Jūjisha no seikatsu no jikūkan henka – seisan purojekuto kazoku purojekuto gainen niyoru bunseki* (The time-space transformation of automobile manufacturing workers: an analysis based on the concepts of production project and family project.) . Jinbunchiri 50-3: 22-45. [in Japanese]

Yuichiro Nishimura and Kohei Okamoto

2001 Yesterday and Today – Changes in Workers' Lives in Toyota City, Japan. In P. P. Karan (ed) Japan in the bluegrass, pp98-122. The University Press of Kentucky.

Kenji Ito, Yuichiro Nishimura, Kohei Okamoto and Kenkichi Nagao

2000 *Gassyūkoku ishoku kairō ni okeru seisan katsudō to jūgyōin seikatsu* (autobobile production and workers life on the US. Transplants corridor) . The Journal of the Faculty of Letters, Nagoya University History 46: pp.67-82. [in Japanese]

Activities in Academic Societies

August, 2004 Is new gender order emerging? Changes of everyday life in 1990' s restructuring. (The 30th Congress of the International Geographical Union) Glasgow, Scotland

March, 2004 Kokusai sinpojiumu "jendā medhia toshi kūkan" dai2 sessyon: gendai toshi kūkan no mujun komento (International symposium on Gender, media urban space, 2nd session: Contradictions in modern urban space comments) Tokyo Keizai University.

April, 2000 Changes of Production System and Employment of Female Labor. (The Association of American Geographers 96th Annual Meeting) Pittsburgh, Pennsylvania.

April, 1999 Toyota City, Japan: Social Impact of Toyota Motor Manufacturing Company on Local Communities of Japan. (Conference "Japan in the bluegrass") UNIVERSITY OF KENTUCKY.

Research Activities

Field Research in Japan

September, 2003 Sado island (survey about the economical, societal and cultural changes in the local area)

- August, 2003 Tanegashima island (survey about the economical, societal and cultural changes in the local area)
- 2002 Nagoya city (survey about the underground shopping area, shopping street and consuming culture)
- 2000 Toyota city (survey about the change of gender order in the auto production workplace)

Field Research in Foreign Countries

- December, 2003 Lao P. D. R. (Eco-history and eco-geographical study on wetland)
- September, 2002 China P. R. (Gender role in the workplace and the home in Chinese cities)
- September, 2001 China P. R. (time-budget analysis in Chinese cities)

ONISHI, 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.Course (1995)
- Department of history, Faculty of Literature, Meiji University (1993)

Professional Career

- JSPS Research Fellow DC2 (1997-1999)
- JSPS Research Fellow PD (2002)

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

Onishi, Hideyuki

- 2003 Shakaiteki-jissen toshitenou Kougei-gijyutu no Henyou: Philippine Luzon Sanchimin-shakai niokeru Hataorino Sangyouka 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 Genngo-Bunka Kenkyu (Journal of Asian and African Studies)*, 65: 67-88.
- 2003 Tuka no Kioku: Mokka niokeru Ainu no Hitobito no Shintaigihou 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 Kyoukai no Mura no Kyojyusha: "Tobinitai-bunka" Shuraku niokeru Kyojyusha no Shutsuji to Setaikousei (Residents of Cultural Boundary Area: Lineage and Household Composition of the Tobinitai Culture in Northern Japan). *Nihon Kokogaku (Journal of The Japanese Archaeological Association)*, 16: 157-177
- 2003 Shijoukeizai ni yoru "Dento-Kougei" no Saisei: Luzon-tou Hokubu-Sanchimin no Hataori wo Jireitoshite (Traditional Handicraft Reproduced by Market Economy: A Study on Philippine Highlanders' Weaving in Northern Luzon). *Nanpo-Bunka*, 30: 1-23

Research Activities**Field Research in Japan**

August, 2003 Tokunoshima and Amami-ohshima (Ethnographical Research on "Traditional" Handicraft and Common-use Property)

Field Research in Foreign Countries

October, 2003 Thailand (Ethnographical Research on Common-use Property in Ing River Area, Northern part of Thailand)

TAKAHASHI, Atsuhiko

Research Fellow

Born in 1971.

Curriculum Vitae**Academic Career**

Department of Earth and Planetary Science, Graduate school of Science, Nagoya University, D. Course (2003)

Department of Earth and Planetary Science, Graduate school of Science, Nagoya University, M. Course (1999)

Department of Geophysics, Faculty of Science, Tohoku University (1997)

Professional Career

Research Fellow, Research Institute for Humanity and Nature (2003)

Higher Degrees

M. Sc. (Nagoya University, 1999)

Fields of Specialization/Background

Meteorology, Soil physics

Academic Society Memberships

The Japan Society of Hydrology and Water Resources

Major Publications**Articles**

Hamada, Shuko, Takeshi Ohta, Tetsuya Hiyama, Takashi Kuwada, Atsuhiko Takahashi, and Trofim C. Maximov

2004 Hydrometeorological Behaviors of Pine and Larch Forests in Eastern Siberia. *Hydrological Processes*, 18 (1), 23-39.

Sirisampan, Satiraporn, Tetsuya Hiyama, Atsuhiko Takahashi, Tetsu Hashimoto, and Yoshihiro Fukushima
2003 Rakuyō-Jōryoku-Kōyōju kara kōsē sareru Nijirin no Kikō-Kondakutansu no Nichi-Henka to Kiseitsu-Henka (Diurnal and Seasonal Variations of Stomatal Conductance in a Secondary Temperate Forest). *Journal of Japan Society of Hydrology and Water Resources*, 16 (2), 113-130.

[in Japanese]

Takahashi, Hiroshi A., Tetsuya Hiyama, Ei-ichi Konohira, Atsuhiko Takahashi, Naohiro Yoshida, and Toshio Nakamura

2001 Balance and Behavior of Carbon Dioxide at an Urban Forest Inferred from the Isotopic and Meteorological Approaches. *Radiocarbon*, 43 (2B), 659-669.

Activities in Academic Societies

December, 2003

Analytical Estimation of the Vertical Distribution of CO₂ Production within Soil: Application to a Japanese Temperate Forest. (International Workshop on Flux Observation and Research in Asia)

(Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences)

Research Activities**Field Research in Foreign Countries**

- August, 2004 China (Observations of the Land Surface and Atmospheric Boundary Layer Processes in Loess Plateau, China)
- June, 2004 China (Observations of the Land Surface and Atmospheric Boundary Layer Processes in Loess Plateau, China)
- May, 2004 China (Observations of the Land Surface and Atmospheric Boundary Layer Processes in Loess Plateau, China)

TANAKA, Takuya

Research Fellow

Born in 1966.

Curriculum Vitae**Academic Career**

Division of Environmental Science & 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

Technical Assistants, Research Institute for Humanity and Nature (2004)

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**Project 3-1 Working Paper Series**

Tanaka, Takuya

2004 Tōnan Ajia Ryūiki Stadei tuā Hōkoku (Report of the study tour on environmental management of river basins in Cambodia and North Thailand) *Purojekuto 3-1 Wākingu Pēpā (Project 3-1 Working Paper Series)* vol.7 [in Japanese]

Tanaka, Takuya

2004 Biwako-Yodogawa Suikei ni okeru Ryūikikanri moderu no kōchiku no gurando dezain – purojekuto o susumeru rōdo mappu no shian toshite- (Draft proposal of a grand design to advance the RIHN Project 3-1: Multi-Disciplinary Research for Understanding Interactions between Humans and Nature in the Lake Biwa-Yodo River Watershed) *Purojekuto 3-1 Wākingu Pēpā (Project 3-1 Working Paper Series)* vol.10 [in Japanese]

Activities in Academic Societies

December, 2003

Biwako-Yodogawa Suikei ni okeru Ryūikikanri moderu no kōchiku: Ryūikikanri no kadai settei to Kaisō kan no chōsei o shien suru gamba kara "Kokusai wākushoppu Bunya ōdan ni yoru aratana Ryūikikanri sisutemu no kōchiku ni mukete – Ryūiki no kūkan sukēru to sutēkuhorudā no kaisō no chigai o fumaete-" (Multi-disciplinary research for understanding interactions between humans and nature in the Lake Biwa-Yodo River watershed: Support to find resident's required vision of a river basin and adjustment between classes "International Workshop on Seeking an effective watershed management system through interdisciplinary

approach: considering multiple spatial scales and stakeholders-"). Research Institute for Humanity and Nature. [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)

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

Host research Graduate student from School of Global Environmental Studies of Kyoto University (1) (Internship program)

Social Activities and Public Lectures

January, 2004 Workshop for a future of waterfront in Satsuma town (Satsuma town community hall) [in Japanese]

February, 2004 Workshop for a future of waterfront in Shingai-Tazuke town (Shingai town community hall) [in Japanese]

March, 2004 Workshop for a future of waterfront in Inasato town (Inasato town community hall) [in Japanese]

USHIMARU, Atsushi

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: Ry_sei shokubutsu ni okeru jika wag_sei to jid_teki 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 haikai 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 k_z_ wo motsu buna-rin no d_tai 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*. 18:103-106.
- 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*. 46:245-249.
- 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 argenteoalba*. *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]

Budget 2003

Expenditures (Fiscal Year 2003)

Category	Amount (Yen in thousands)
Personnel Expenses	506,639
Non-Personnel Expenses	1,196,427
Total	1,703,066

External Sources of Funding (Fiscal Year 2003)

Category	Amount (Yen in thousands)
Fund for Promotion of Academic and Industrial Collaboration	63,934
Grants-in-Aid for Scientific Research	52,346
Donation for Research	2,500

Research fields of project members

(As of July 11,2003)

Project	The number of project members			Research background of project members
	Humanities and Social Science	Natural Science	Interdisciplinary	
P1-1 Impact of climate changes on agricultural production system in the arid areas	9	47	1	(Humanities and Social Sciences) Developmental Economics, Agricultural economics (Natural Sciences) Micro Climatology, Marine Ecology, Soil hydrology, Biology, Climatology, Soil Science, Micro-climatology, etc. (Interdisciplinary) Irrigation and drainage engineering , Demography
P1-2FS Recent rapid change of water circulation in the Yellow River and its effects on the environment	4	21	15	(Humanities and Social Sciences) Statistics economics (Natural Sciences)Climatology, Environmental geology, Ground water, Forest hydrology, Hydrological climatology, etc. (Interdisciplinary) Water quality environment, Agricultural hydrology, Water resources, Marine environment, etc.
P2-1 Emissions of greenhouse gases and aerosols, and human activities	6	31	3	(Humanities and Social Sciences) Economics, Politics, Social engineering, etc. (Natural Sciences) Oceano Chemistry, Maritime physics, Climate Change, etc. (Interdisciplinary) Space Informatics, Social Engineering
P2-2 Sustainability and biodiversity assessment on forest utilization options	15	73	3	(Humanities and Social Sciences) Forest management, Forest policy, Forest economics (Natural Sciences)Fungi ecology, Entomological ecology, Plant ecology, Forest ecology, Mathematical ecology (Interdisciplinary) Forest economics, Environmental information, Forest policy
P2-3FS Human activities in Northeastern Asia and their impact on the biological productivity in North Pacific Ocean	3	18	2	(Humanities and Social Sciences) Anthropology, Fareastern Asia economics, Russian and Fareastern Asia economics (Natural Sciences) Marine chemistry, Physical Pceanography, Climate change, Plant biology, Biogeochemistry (Interdisciplinary) Forest environmental conservation, Giography
P3-1 Multi-disciplinary research for understanding interactions between humans and nature in the Lake Biwa-Yodo River watershed	4	13	4	(Humanities and Social Sciences) Environmental sociology, Sociology, Cultural anthropology (Natural Sciences) Applied ecology, Environmental Engineering, Plant biology, Biology, Isotope Biogeochemistry (Interdisciplinary) Environmental System Engineering, Information Giography, Mathematical ecology, Watershed assessment
P3-2 Interactions between the natural environment and human social systems on subtropical islands	3	23	11	(Humanities and Social Sciences) Sociology, Ethnology, Ethno-sociology, Social history, Anthropology, Chinese Legal History, etc. (Natural Sciences) Hydrology, Glacial biology, Geography, Glacial chemistry, Satellite climatology, Organic chemistry, Glacioclimatology, Social environment, Glacial biology, Soil hydrology, etc. (Interdisciplinary) Global Environment
P4-1 Historical evolution of the adaptability in an Oasis region to water resource changes	18	29	8	(Humanities and Social Sciences) Sociology, Ethnology, Social history, Anthropology, Chinese Legal History, etc. (Natural Sciences) Hydrology, Glacial biology, Geography, Glacial chemistry, Satellite climatology, Organic chemistry, Glacioclimatology, Social environment, Glacial biology, Soil hydrology, etc. (Interdisciplinary) Global Environment
P4-2 A trans-disciplinary study on the regional eco-history in tropical monsoon Asia	11	21	33	(Humanities and Social Sciences) Geography, History (Natural Sciences)Theoretical ecology, Biology, Earth chemistry, Hydrological physics, Geology, etc. (Interdisciplinary) Informatics
P5-1 Global water cycle variations and the current world water resources issues and their perspectives	3	45	35	(Humanities and Social Sciences) Politics, etc. (Natural 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
P5-2 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	16	4	(Humanities and Social Sciences) Environmental economics, Environmental sociology, Administration law, etc. (Natural Sciences)Forest ecology, Plant morphology, Plant taxonomy, Animal biology, Entomology, Microbiology Forest resources, Forest system engineering, Tropical plant production, Forestry
Total	82	337	119	

The number of project members

○ Analysis Sheet by organizations

(As of July 11, 2003)

Title of the project	Sub total	University / College			Inter-University Research Institute	Public Institution	Private Institution	Post doctoral / Graduate student	Others	Overseas institution
		National	Public	Private						
P1-1 Impact of climate changes on agricultural production system in the arid areas	57	19	2	1	5	1		3		26
P2-1 Recent rapid change of water circulation in the Yellow River and its effects on the environment	40	19			8	2			1	10
P2-1 Emissions of greenhouse gases and aerosols, and human activities	40	19		2	9	8				2
P2-2 Sustainability and biodiversity assessment on forest utilization options	91	21	1	4	6	22	2	29	4	2
P2-3FS Human activities in Northeastern Asia and their impact on the biological productivity in North Pacific Ocean	23	15		1	5	1		1		
P3-1 Multi-disciplinary research for understanding interactions between humans and nature in the lake Biwa-Yodo river watershed	21	7	2		7	1	1	1	2	
P3-2 Interactions between natural environment and human social systems in subtropical islands	37	22	1	4	5	1			2	2
P4-1 Historical evolution of the adaptability in an Oasis region to water resource changes	55	19	2	7	13	2		12		
P4-2 Trans-disciplinary study on the regional eco-history in tropical monsoon asia	65	24	1	7	12	6	1	12	2	
P5-1 Global water cycle variations and the current world water resources issues and their perspectives	83	40	1	5	4	6		20		7
P5-2 Interactions between the environmental quality of a watershed and the environmental consciousness: with reference to environmental changes caused by the human use of and water resources	26	13	2	1	4	4	2			
Total	538	218	12	32	78	54	6	78	11	49

Study Area Location Map

