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Message from the Director-General

The Research Institute for Humanity and Nature (RIHN) was established in April 2001 to conduct integrated research in the field of global environmental studies. In 2004, the RIHN became one of the original members of the National Institutes for the Humanities (NIHU), as an Inter-University Research Institute Corporation.

Environmental degradation can be understood as an imbalance in interactions between human beings and natural systems. Our mission is therefore to conduct solution-oriented research aimed at exploring how interactions between humanity and nature ought to be. The RIHN conducts interdisciplinary research spanning the natural sciences, humanities, and social sciences, and transdisciplinary research, collaborating with various stakeholders in society.

Fiscal year 2020 marks the fifth year of our Phase III Medium-Term Plan. Under the three Research Programs, and one Core Program, we conducted nine full research projects. The RIHN Center was promoting to organically integrate and support the Research Programs/Projects, including both domestic and international collaboration. As part of RIHN's international activities, the RIHN is hosting the Asian Regional Centre for Future Earth, which is expected to promote the overall research and capacity buildings of Future Earth in Asia. Under the initiative of Director General (with the Council for Research Strategy), the Public Relations Unit, the Institutional Research (IR) Unit and the International Publication Unit (IPU) functioned actively. With the new structure in place, we are pursuing our mission even more vigorously through enhanced collaboration within our institute, across our diverse research community, and with society in general.

This is the final year of my eight-year term as Director General of the RIHN, and I believe and hope that we are gaining a better understanding and appreciation that the RIHN, as a unique research organization in the world, contributing to develop a sustainable future of the global society. Through this annual report, I hope that you will learn about our new activities and that you will continuously support us and give us your guidance.

With best regards,

YASUNARI Tetsuzo
Director-General
Research Institute for Humanity and Nature

Research Activities

●Pre-Research

●Individual Collaboration FS

●Institutional Collaboration FS

●Core FS

●Incubation Studies

Program 1: Societal Transformation under Environmental Change

Program Director: SUGIHARA Kaoru

○ Research Subject and Objectives

The goal of Program 1: societal transformation under environmental change

This program aims at providing realistic perspectives and options to facilitate the transformation towards a society that can flexibly respond to environmental changes caused by human activities such as global warming and air pollution, as well as to natural disasters.

The mission statement

To demonstrate the fundamental significance of global environmental sustainability for human society, we need to make the links between environmental change and natural disasters, and social issues such as livelihood, inequality, social security and conflict, intellectually explicit, and reinforce them in the real world.

The Program follows two lines of inquiry. The first conducts research on Asia's long-term paths of social and economic development in relation to climate change and environmental history. Such studies offer historical understandings of the human-nature interface, and evaluate each region's political and economic conditions and cultural and social potentialities in comparative perspective. For example, post-war development of the industrial complex along the Asia's Pacific coast was made possible by the combination of imported fossil fuels and utilization of rich local resources of land, water and biomass. Industrial development in the region produced both rapid economic growth and at times severe environmental pollution and degradation. It is important to recognize the causes and consequences of these historical processes in their own light, as well as for their significance to future societal change and policy deliberations.

The Program's second line of inquiry examines the kinds of motivations that affect people's livelihood, by working closely with various stakeholders in local society in Asia. Our project based in Sumatra's tropical peat swamp forest, for example, has identified four principal kinds of motivations—local livelihood; profit of local farmers and agricultural and industrial enterprises; local and centrally-based governance; and conservation measures implemented by governments, NGOs and international institutions—and examines how they can best be coordinated to promote sustainability at the village level. Project research also helps implement policies at local, national and international levels. This ongoing project, which cooperates with local universities, companies and officials, has already contributed to the development of regional and national policies to control peatland fires, which became a significant environmental issue in Indonesia and beyond.

This program coordinates a variety of research projects along these lines in order to develop a perspective that helps direct research and social transformation in Asia.

○ Progress and Results in 2020

(1) The first line of enquiry

Asia as a global environmental burden and a source of global sustainability

The first line of enquiry has been pursued mainly at the program itself. In the previous reports I presented preliminary results of my assessment of Asia's significance for the 'Great Acceleration' of human intervention in the nature since around 1950, and suggested the ways in which Asia's high economic growth beginning in Japan in the 1950s to expand to other parts of Asia, including China today, were responsible for the rapid change in global resource use, hence global warming. In many respects Asia was more important than the West in terms of the speed of these changes.

During this academic year the program studied this topic further in various ways, through program seminars (for details see below), interactions with RIHN colleagues, historians and social scientists. We focussed on the issues of how Japanese industries secured water (for industrial use) and energy (electricity) in the post-war period, what kinds of tension were created between such industrial needs on the one hand, and the health of the ecosystem and the needs of agriculture and urban population on the other, and how they were socially and politically dealt with. Some efforts were made to review the recent literature on China's reclamation projects, which we reported in the previous reports. We also tried to visualize the process through which Japan, East Asia and Asia progressively increased its position both in the world economy and a global environmental burden. We argued that, while the Asian path, still heavily coloured with industrialization drive, remains a major source of environmental degradation of the earth and a threat to the livelihood of the people, it could also be a source of global sustainability on the strength of its long-term path dependency, which has fostered the largest population-carrying capacity in the world under the water and air circulation regime of monsoon Asia.

Program seminars

In order to seek interactions between the program, projects and RIHN mission, the program started a seminar series in 2018 on land use, national development plans, energy transition, pollution and the resource nexus, with the participation of key project members. During AY 2019 three seminars were organized around the theme of development paths and their responses to adapt to environmental and locational diversities in Asia. Following these seminars, two more seminars were organized during AY 2020, focussing on national land development plans, resource nexus, development of the bay-centred industrial complex, water supply for industry and water resource management. A broad vision that emerged from these seminars is outlined in Section 3.

In the first meeting Kaoru Sugihara outlined the development of the three bay areas of industrial complex (Tokyo, Osaka and Ise) and how they built deep ports, secured land (through reclamation) and water for industrial use. Dr Masuhara presented research results on changing location of manufacturing industry in relation to water supply since 1955 to the present. Professor Michio Akiyama (University of Shiga Prefecture) usefully commented on these papers. Professor Satoshi Kobori (then Nagoya University) reported on the thought of Aki and Okita, early thinkers in post-war Japanese 'developmentalism', on the issue of domestic resource exploitation.

In the second meeting Professor Shinya Ishizaka (Ehime University) outlined the historical development of water resource management in Uttarakhand, India, in relation to the anti-Tehri-Dam movement and thought of Bahuguna. Professor Takahiro Sato (Hirosaki University) commented on his presentation from the perspective of changes in human-nature interactions and the need to secure the livelihood nexus. Meanwhile, Dr. Masuhara returned to the theme of water resource development and hydroelectricity generation in post-war Japan, focussing on inter-ministerial conflicts and the fate of small and medium-sized generation stations. Professor Kobori commented on the social aspects of hydroelectricity generation with case studies of his own.

In the introductory remarks by Kaoru Sugihara and subsequent discussions, efforts were made to develop a context in which we could understand how resource use was promoted and the resource mix changed over time in Japan, China, Southeast Asia and India.

Response to COVID-19 infections

Some of the Kozan and Hayashida projects members studied the events of the spread of COVID-19, to contribute to an interdisciplinary understanding of the pandemic. Program 1 encouraged this move, and both projects contributed to RIHN special site for COVID-19. Some of us wrote on this topic for the RIHN Newsletter.

We also held a special meeting on 'COVID-19 and Sustainable Development in Asia' in July, to collect the efforts of the projects. The program was as follows: Kaoru Sugihara, "COVID-19 and Asia's Sustainability"; Manabu Yamanaka, "Population Density, Personal Distance and Social Distancing: The Spatial Spread of COVID-19 Infections in Japan and Indonesia"; Prakhar Misra, "Lockdown and Air Quality: Implications of the Blue-sky Experience for Sustainable Development"; Masahiro Kawasaki, "COVID-19 Affects Social Activities in Indonesia"; Sachiko Hayashida, "Comments on Air Pollution and COVID-19".

The follow-up meeting in March 2021 included the following presentations: Manabu Yamanaka, "How Space Matters to COVID-19 Infections: Population Density, Personal Distance and Social Distancing in Asian Archipelagoes"; Kaoru Sugihara, "Population Density in the Socio-historical and Administrative Context: A Review of Recent Literature on COVID-19 Infections".

Individual research

I published a Japanese-language volume The East Asian Miracle in Global History (Nagoya Daigaku Shuppankai, Pp.vii+765), which includes some chapters on Asia's resource and environmental history. I also contributed to an edited volume on the Anthropocene, a RIHN publication, has been published from Kyoto Daigaku Gakujutsu Shuppankai. Dr. Masuhara wrote on the relative strengths and weaknesses of local government and communities in Japan to respond to environmental issues, seen from the localized SDGs indicators in BIOCITY.

(2) The second line of enquiry

The second line of enquiry has been pursued by the three main projects.

Kozan project: FR4

This project is concerned with the environmentally vulnerable societies in tropical peatland. With fully developed academic and political contacts in Indonesia, it conducts broadly three lines of research; the socio-economic, political and historical analysis of the communities, corporations and governance structure; the climate change and peatland development studies focusing on rainfall, water and material cycles; and international comparisons of the Indonesian cases. The project made a good progress, in spite of COVID-19 restrictions, particularly on the socio-economic and political surveys, scientific understanding of soil water retention of tropical peatland, paludiculture and an additional topic of the relationship between COVID-19 infections and population density in Indonesia in comparative perspective. It engages in the identification and implementation of livelihood nexus in relation to the Asian path of development (see 'Contribution to the Program' in Project Report). The project is preparing for the publication of research results in English-language volumes.

Yoshida project: FR 3

This project seeks to establish the methodology for the interdisciplinary evaluation of ecosystem-based disaster risk reduction (Eco-DRR). The three groups made an impressive progress, collecting data and hazard maps, formulating criteria, actually evaluating risks, and assessing them from both local and national perspectives. Research on the three main local sites produced some notable results, while local and traditional knowledge group published relevant historical information. Efforts continue to see the relevance of insurance in identifying economic incentives leading to Eco-DRR.

There is a good prospect that the project will develop a standard methodology capturing the major functions of the ecosystem within the current research framework. By locating the significance of natural disasters for social and population changes, and by examining the history of land use and land ownership from a new perspective, the project intends to uncover some of the unanswered questions about the Asian path of development and sustainability (see 'Contribution to the Program' in Project Report).

Hayashida project: FR1

Hayashida project studies stubble burning in North India, by combining the Punjab-based agricultural studies, the public health approach and the regional impact of stubble burning on air pollution in Delhi and across the Indo-Gangetic Plain. It seeks a more embracing understanding of environmental sustainability than hitherto by taking into account not just water shortage and soil erosion as a result of the introduction of (rice-wheat) double cropping system but also air pollution and health hazard, in order to determine the course of sustainable agriculture and socio-economic development. Inputs of atmospheric science are critical in connecting local issues to regional environmental sustainability concerns.

In spite of the spread of COVID-19 infections, the project made a good progress partly by adapting to the new environment of restricted travel and partly by including COVID-19 related topics in the subject. Attention to varied spatial scales of air pollution remains an inspiration for the multi-scale understanding of the livelihood nexus, and its 'bottom-up' impact on global environmental sustainability.

Other activities

When the program began in AY 2016, it included a partly archaeological and partly contemporary project on resilience under Professor Habu and a very long-term climate history project (estimating temperature and rainfall and relating the new data mainly to Japanese history) under Professor Nakatsuka (The Nakatsuka project published research results in six volumes in Japanese in AY 2020). However, since AY 2019 all three main projects under this program focussed on contemporary Asian topics with clear reference to stakeholder interests from interdisciplinary and transdisciplinary perspective, broadly in line with the second line of enquiry mentioned above. In addition, Professor Habu, currently visiting professor at RIHN, began a new agroecology project under the sponsorship of Sumitomo Foundation (and administered at Program 1).

Now that all three projects are well-versed with the twin aims of Program 1 (long-term path and the stakeholder-based exploration of the livelihood nexus), the main issue for the Program is how to merge the two lines of enquiry at the more conceptual level, so that we could visualize the local, regional and global nexus with the more explicit aim of social transformation in Asia.

【Research directives】

I have written on the concepts of 'resource nexus' and 'livelihood nexus', and suggested that we need to change our focus from the former to the latter, in order to capture the critical issues in Asia's path of economic and social development and sustainability. The EREC committee encouraged me to proceed further with these conceptualizations to help link the substantive linkage between the program and the projects. I describe my current understanding below.

Two stages of resource nexus

Based on the work of Program 1, I present two figures. Fig.1 is an illustration of several types of pollution in Tokyo in the 1960s, with industrial complex developing port facilities for imports of fossil fuels and land reclamation for securing industrial sites reasonably far from urban residential area. But serious air pollution, water pollution, health hazards, and land subsidence as a result of underground water extraction occurred.

Local and municipal governments, as well as citizens' anti-pollution and nature conservation movements, responded. This coincided with the broader ideological change from developmentalism to 'civil minimum' and sustainability. The idea of civil minimum in Japan anticipated the international diffusion of the concepts of 'human development' and 'basic needs'. Most features of pollution were dealt with in a relatively short period. At the same time, this 'painful' experience has been repeated in other Asian countries.

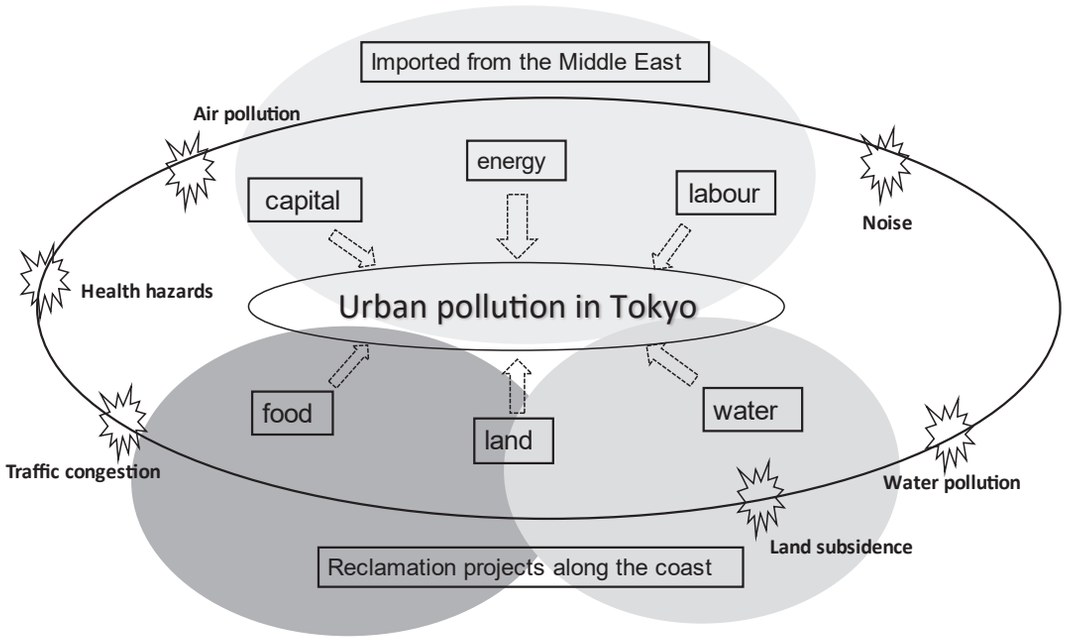

Fig.1 Local environmental burden: the 1960s

By now global environmental problems became more serious and multi-scale. Fig.2 illustrates this tendency. By 2020 it became an important part of national and international politics and governance. The new problems are highlighted in italic. Note that 'local' pollution issues noted in Fig.1 and drawn in normal font in Fig.2 have not gone away, but were rather diffused and deepened (see air pollution in Indonesia, India and China etc., as studied in Kozan and Hayashida projects). The point is that the more global issues were added to local and regional problems.

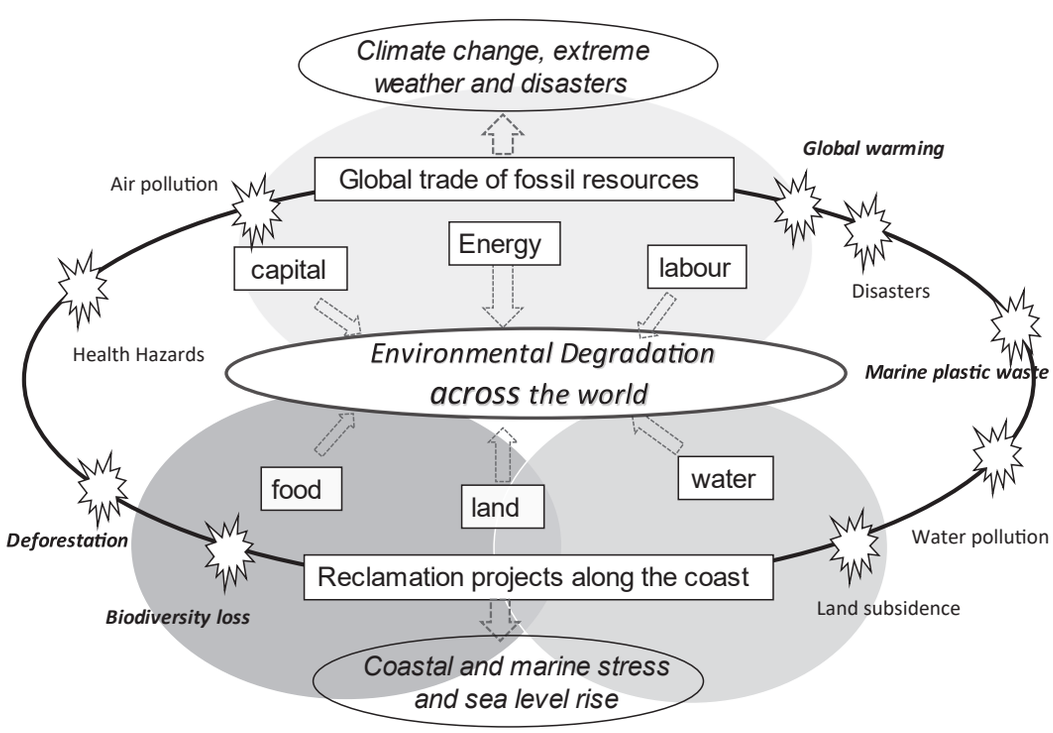

Fig.2 Globalized environmental burden: 2020

The resource nexus and the livelihood nexus

From a global historical perspective, such a two-stage development is hard to recognize, as European expansion, colonialism and the diffusion of industrialization had created a much more complex web of geographical and environmental interface since the nineteenth century. The East Asian path is simpler and clearer, as its post-war process was overwhelmingly resource-nexus-led, though of course expansionism and colonialism were historically present. In particular, the speed of post-war industrialization was an essence for the dramatic change in the relationship between resource needs for industries and the people's livelihood needs. Industrialization dominated resource allocation, human alteration of local nature and landscape, and development of physical infrastructure (railways, roads, water and energy supply and housing in cities). A massive amount of fossil fuels were imported from abroad, while livelihood needs were reorganised to respond to industrial development. Availability of biomass, water for agricultural use, natural coast were affected as a result. The increase of natural disasters was inseparably linked to the human alteration of nature (as implicit in Yoshida project).

Another aspect of the Asian regional path is the emergence of intra-Asian resource trade and an enhanced division of labour between industrialized economies (such as Japan) and resource-exporting ones (such as Southeast Asia). The size of China (and India) and its rapid rise make it difficult to show this divide in terms of cross-country trade data, but the growth of divide is visible across and inside the border. Intra-regional resource transfer became a major feature of the Asian path. Since the 1960s, East Asia's energy transtion to fossil-fuels affected the local resource economies of Southeast Asia (see Kozan project). At the same time, Asia became the most manufacturing-employment generating region in the world by 2000, and remains so today. Thus the startegy for tackling environemtal problems must address a major tradeoff between the environment and employment for securing the livelihood of the ordinary people.

Fig.3 shows the traditional regime of livelihood nexus, marked white, where land, water and the surrounding ecosystem (forests etc.) provided local people with the main means of livelihood. This was altered at least in two ways, by importing additional or alternative resources, including fossil fuels and their products, and by exporting local resources such as forest resources or local agricultural products such as water-intensive raw cotton. As a result, the stability of the traditional nexus gets threatened, although increased trade also brings economic and welfare benefits. Foreign products embody new technology and scientific knowledge, though not necessarily with an appropriate understanding of how to link them to the 'local knowledge' behind the livelihood nexus.

In this context it is useful to classify resources into two categories, tradable and non-tradable, as the fusion between the two types is most likely to cause normative and institutional disarticulation. In fact, 'tradables' such as energy, materials and capital and 'non-tradables' such as land, water, biomass energy, biomass materials and labour frequently interact with each other through commodity chains. Petrochemical products such as man-made fibre, rubber and plastics have partially replaced timber and steel, to become a major material base (shown in grey in Fig.3). In order to respond to these realities, developing countries need to engage in global governance as well, participating, for example, in the containment of global environmental problems such as global warming and marine plastic waste. The 'livelihood nexus' of developing countries can only be secured through the development of a national and regional ability to build a global governance structure, which pays attention to the protection of all livelihoods.

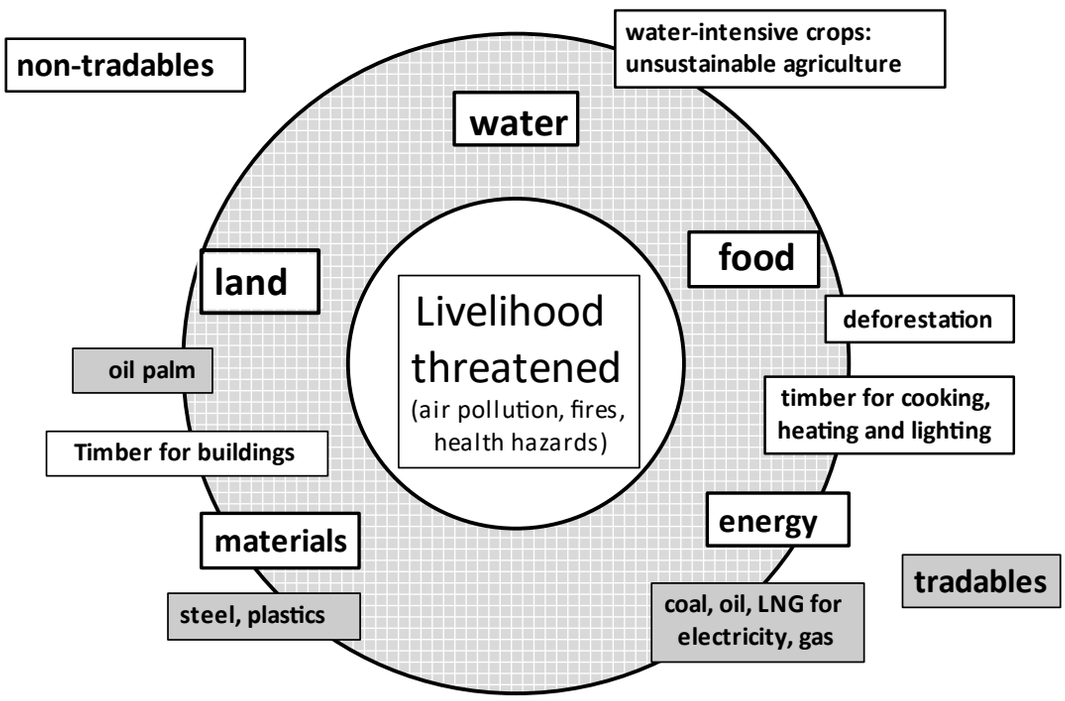

Fig.3 The livelihood nexus threatened

In identifying resources that are relevant to the livelihood nexus, we benefitted from the literature on the water-electricity-food (WEF) nexus and Sustainable Development Goals (SDGs). One of them proposed the number of key resources for the nexus to be increased from three to five factors of 'land-water-energy-food-materials', which we adopted here. While this extension still leaves a large conceptual gap with the classical political economy's factor endowment approach (of land, labour and capital), inclusion of land and materials makes it easier to consider socio-economic and livelihood side of the nexus. The five factor framework takes on the role of land, as distinct from water and food, which is arguably historically most legally and institutionally bound natural resource, but is also heavily dependent on water and nearby ecosystem services for its maintenance. We need to examine the extent to which the institutionalized category of 'land' acts as a social organizer of the use of other resources such as water and forests (often ignoring their characteristics as natural resource in its own right). Meanwhile, inclusion of 'materials', as distinct from energy, highlights the importance of timber, steel and plastics among others as the main material transformer. We need to examine the extent to which the quality of each material (such as durability, disposability and renewability) is used to characterize the quality of traditional resources (mostly from biosphere), often ignoring their cultural, social and ecological values, which has supported local society.

○ **Future Themes**

Asia as a contributor to decarbonization

During AY 2020 the program began to discuss in what ways the history of such connections between economic development and resource use is relevant to the current discussion on decarbonization. The new commitment of Japan to decarbonisation in December 2020 and the policy shift of the United States in January 2021 are likely to accelerate the international change in policy towards cleaner energy, but we are yet to understand how EU, China, Japan and the United States would formulate the strategy of each country and region, in what ways the path dependencies of these regions would underpin their priorities and options, and how they would collectively form a global path to decarbonization. We will develop this theme in AY 2021, with the role of Asia (especially China and Japan) in mind.

The current political target for restraining global warming seeks to reduce the use of fossil fuels, by replacing it with renewable energy, especially in the sphere of electricity generation. The key variable is technology (and enabling institutions). From our point of view, this is part of a larger challenge on human-nature interface, which is to rehabilitate the sustainable relationship between the living environment and biosphere. The key variable for us is the pattern of human intervention in nature in general. The historical specificity of the nature-intervening path (e.g. the dependence on grey infrastructure) must be identified, and an alternative architecture must be found.

Social transformation

Program 1 ultimately aims to provide perspectives and options to facilitate social transformation in an integrated way. We have made various attempts to contribute to this aim during AY 2020.

In Nishi project (FS, which did not make a PR stage), we studied the literature on care ecology, and learnt how various brain-related diseases (HIV and epilepsy in Africa as well as autism and dementia in Japan) were 'embedded' in local societies and the environment (especially biosphere), and in what ways both human and natural agencies play a role in this relationship. This is also related to the study of COVID-19. It opens up one of the ways of studying how human-nature interface acts in everyday life, and enables the society to live with the disease, beyond the realms of medical and care institutions. In Kozan and Yoshida projects, keen attention was paid to the old issue of land rights (or their lack), from the perspective of land use as part of the ecosystem and its sustainability. Here norms and institutions (e.g. religious norms and political boundaries) have been influencing human behaviour, which sometimes prevents us from considering all options for human-nature interface. In Kozan and especially Hayashida projects, the importance of 'air' as a transmitter of pollution and diseases, and as an aggravator of disasters is forcefully brought in, claiming air as an important part of the 'environment'. In particular, it is seen as an essential factor for sustainable agriculture, a topic usually associated with the quality of land and the shortage of water. Finally, the current global 'movements' towards the greener earth should be accompanied by a more comprehensive norm change and restructuring of institutional design at various scales. They include (1) Dr. Masuhara's attention to norm and policy changes of local government and NGO, in which he discusses the creation, evaluation and assessment of 'local SDGs', (2) the national value change from grey to green infrastructure by creating a comprehensive hazard map and visualising the multiplicity of ecosystem services (as in Yoshida project), and (3) the regional norm change from the industrialization-driven path of economic development to the sustainability-driven path (as in Sugihara study), of which decarbonisation is an important part.

We will continue these efforts and try to synthesize them in AY 2021.

○Project Members

SUGIHARA Kaoru (Research Institute for Humanity and Nature・Professor)
MASUHARA Naoki (Research Institute for Humanity and Nature・Senior Researcher)

●Achievements

○Books etc

- Sugihara, Kaoru, 2020, Single work, Sekaishi no Nakano Higashi Ajia no Kiseki (The East Asian Miracle in Global History), Nagoya Daigaku Shuppankai, Nagoya

○Published Papers

- Sugihara, Kaoru, Mar. 2021, "Jinshinsei ni Okeru Fukusu Hatten Keiro: Monsun Ajia no Shigen to Seizon Kiban o Megutte (Multiple Development Paths in the Anthropocene: Resources and Livelihood in Monsoon Asia)" (with the assistance of Masahiro Terada), in Masahiro Terada and Daniel Niles (eds),Jinshinsei o Tou: Kankyo, Jinbun, Ajia no Shiten (Anthropocene and Asia: Investigation, Critique, and Contribution from the Environmental Humanities Perspective), Kyoto Daigaku Gakujyutsu Shuppankai, Kyoto, 93-140
- Masuhara, Naoki, Kenshi, Baba, 2021, "Mizu Enerugi Nekusasu ni Taisuru Gakusai Cho-Gakusai teki Apurochi no Seika to Kadai: Beppu-shi ni Okeru Onsen Kanko to Chinetsu Hatsuden ni Kansuru Shinario Puranningu no Jirei (Achievements and Challenges of Interdisciplinary and Transdisciplinary Approaches to Water and Energy Nexus: Case Study of Scenario Planning for Hot Spring/Tourism and Geothermal Issues in Beppu City)", Kankyo Kagaku Kaishi, 34 (2) 66-79
- Sugihara, Kaoru, 2020, "'Yoroppa no Kiseki' Saiko: Dai Bunki Ronso to Sono-go (Reassessing 'The European Miracle': The Great Divergence Debate and Its Impact)", Tokushu: Keizaishi Kenkyu no Shin Choryu (Special Feature: New Trends in the Study of Economic History), Keizai Seminar, (Kindle edition).

○MISC

- Sugihara, Kaoru, Mar. 2021, "Sekaishi no Nakano Higashi Ajia no Kiseki: Keizaishi・Kankyoshi kara 'Rekishi Sogo' o Kangaeru (The East Asian Miracle in Global History: 'Modern and Contemporary History' from the Perspective of Economic and Environmental History)", Sekaishi Kyoiku Kenkyu, (7) 117-124

・Sugihara, Kaoru, 03 Nov. 2020, “Iwai Shigeki ‘Choko・Kaikin・Goshi: Kinsei Higashi Ajia no Boeki to Chitsujo (‘Tribute, Trade Restriction and Official Border Commodity Exchange: Trade and Order in Early Modern East Asia’ by Shigeki Iwai)” , Dai 63 Kai Nikkei・Keizai Tosho Bunkasho Senpyo, (Review on behalf of the Committee for the Nikkei Prize for Excellent Books in Economic Science), Nihon Keizai Shinbun.

・Sugihara, Kaoru, 2020, “Ajia no Toshika to Shingata Korona Uirusu Kansensho (Asia’s Urbanization and the COVID-19 Infections)”, Humanity and Nature Newsletter (82) 3-5

・Masuhara, Naoki, 2020, "Rokaru SDGs kara Mieru Chiiki no Tsuyomi: Fuji Sanroku Jichitai o Jirei toshite (Local Advantages from Viewpoint of Local SDGs Indicators: Case Study of Local Governments around Mt. Fuji)", BIOCITY, 84, 94-99

○**Presentations**

・Sugihara, Kaoru, “Sekaishi no Nakano Higashi Ajia no Kiseki: Keizaishi・Kankyoshi kara ‘Rekishi Sougou’ o Kangaeru (The East Asian Miracle in Global History: ‘Modern and Contemporary History’ from the Perspective of Economic and Environmental History)”, Dai 71 Kai Aichi-ken Sekaishi Kyoiku Kenkyukai (The 71st Aichi-ken Sekaishi Kyoiku Kenkyukai), Online., 27 Mar. 2021, Invited

・Masuhara, Naoki, "Chiho Toshi ni Okeru SDGs no Igi to Torikumi Doko (Importance and Trend of Action regarding SDGs at Local Level)", Reiwa 3 Nen Dai 1 Kai Machidukuri Shokuin Toku (The 1st City Officer’s Workshop on City Planning at Joetsu City), Joetsu Shiyakusho (Joetsu City Office), Niigata, 26 Mar. 2021, Invited

・Sugihara, Kaoru, "Population Density in the Socio-historical and Administrative Context: A Review of Recent Literature on COVID-19 Infections", Jissen Puroguramu 1: ‘Kankyo Hendo ni Junan ni Taioushiuru Shakai eno Tenkan’ (Research Program 1 Workshop on ‘Societal Transformation under Environmental Change’), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 08 Mar. 2021

・Sugihara, Kaoru, "Another Asian Drama Growth, Resource Use and the Responsibility for Global Sustainability", Sogo Chikyu Kankyogaku Kenkyusho Tokubetsu Seminar (Research Institute for Humanity and Nature Special Seminar), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 11 Dec. 2020, Invited

・Masuhara, Naoki; Makoto Taniguchi; Kaoru Sugihara, "Shigen Kanri ni Kakawaru SDGs no Shinaji to Toredoofu Bunseki (Synergy and Tradeoff Analysis on SDGs regarding Resource Management)", Dai 17 Kai Kankyo Joho Kagaku Posuta Sesshon (The 17th Poster Session of Environmental Information Science), Online, 11 Dec. 2020

・Sugihara, Kaoru, “Sekai Jinko no Rekishiteki Susei to Sengo Ajia no Toshika: COVID-19 no Kansen Kakudai kara Kangaeru (Historical Trends of World Population and Urbanization of Post-war Asia: A Perspective from the Spread of COVID-19 Infection)”, Kansai Daigaku Keizai Gakubu Koenkai (Faculty of Economics Seminar, Kansai University), Kansai University, Suita, 30 Nov. 2020, Invited

・Masuhara, Naoki, "Dai Toshi ni Okeru Paburikku Komento: Kyoto-shi o Jirei to Shite (Public Comments of Big Cities: Case Study of Kyoto City)", Dai 43 Kai Nihon Keikaku Gyosei Gakkai Zenkoku Taikai (The 43rd National Conference of Japanese Planning Administration Association), Online, 27 Nov. 2020

・Sugihara, Kaoru, “Kaihatsu-shugi kara Jizokuteki Hatten e: Sengo Nihon no Kogyo-ka no Keiken kara (From Developmentalism to Sustainable Development: A Perspective from the Industrialization Experience of Post-war Japan)", Chikyuken Open House ‘Kankyo to Kaihatsu no Rekishi o SDGs kara Yomitokou!’ (Research Institute for Humanity and Nature Open House ‘Let’s Understand the History of Environment and Economic Development from the Perspective of SDGs’), Online, 15 Nov. 2020

・Sugihara, Kaoru, “Shigen Kankyoshi no Ni-ruikei (Two Types of Resource and Environmental History)”, Jissen Puroguramu 1: ‘Kankyo Hendo ni Junan ni Taioushiuru Shakai eno Tenkan’ -Ajia no Tayousei ni Taioushita Shosou: Mizu Shigen Kaihatsu to Suiryoku Hatsuden ni Kansuru Jirei Kenkyu (Indo to Nihon)- (Research Program 1 Workshop on ‘Societal Transformation under Environmental Change’: Patterns of Development Seen in the Context of Asia’s Diversity - Case Studies on Water Resources Development and Hydroelectric Power in India and Japan -), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 09 Nov. 2020

・Masuhara, Naoki, "SDGs Mirai Toshi ni Okeru Gurin Infura no Kanousei (Possibility for Green Infrastructure in SDGs Future Cities in Japan)", Gurin Infura Nettowaku Japan Zenkoku Taikai (National Conference of Green Infrastructure Network Japan), Online, 07 Nov. 2020

・Sugihara, Kaoru, “COVID-19 and Asia’s Sustainability: An Introduction”, Jissen Puroguramu 1: ‘Kankyou Hendo ni Jyunan ni Taioushiuru Shakai heno Tenkan’: Tokubetsu Session ‘COVID-19 to Ajia no Jizoku-teki Hatten’ o Tema to shite (Research Program 1 Workshop on ‘Societal Transformation under Environmental Change’, Special Session on COVID-19 and Sustainable Development in Asia), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 17 Jul. 2020

- Sugihara, Kaoru, “Sengo Nihon no Rinkai Kogyo Chitai ni Okeru Tochi to Mizu no Kakuho ni tsuite (Provision of Land and Water in the Seafront Industrial Complex in Post-war Japan)”, Jissen Puroguramu 1: ‘Kankyo Hendo ni Junan ni Taioushiuru Shakai eno Tenkan’: Sengo Nihon no Kogyou Ricchi ni okeru Kogyou Yosui no Yakuwari (Research Program 1 Workshop on ‘Societal Transformation under Environmental Change’: The Role of Industrial Water in Industrial Areas of Post-war Japan), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 01 Jun. 2020
- Masuhara, Naoki, "Kogyo Yosui kara Mita Seizogyo no Ricchi to Henyo: Shouwa 30 Nenndai kara no Kokudokaihatsu to Ciiki eno Eikyo (Location and Transformation of Manufacturing Industry from Industrial Water Perspective: National Land Development and Its Local Impact from 1955)", Jissen Puroguramu 1: ‘Kankyo Hendo ni Junan ni Taioushiuru Shakai eno Tenkan’: Sengo Nihon no Kogyo Ricchi ni okeru Kogyo Yosui no Yakuwari (Research Program 1 Workshop on ‘Societal Transformation under Environmental Change’: The Role of Industrial Water in Industrial Areas of Post-war Japan), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 01 Jun. 2020

Stage: Full research (FR)

Project Name: Toward the Regeneration of Tropical Peatland Societies: Building International Research Network on Paludiculture and Sustainable Peatland Management

Abbreviated Title: Tropical Peatland Societies Project

Project Leader: KOZAN Osamu

Program 1: Societal Transformation under Environmental Change

URL: http://www.chikyu.ac.jp/peatlands/

Key Words: Peatland, Tropical peatland societies, Rehabilitation, Environmental vulnerability, Transformability

○ Research Subject and Objectives

1)RESEARCH SUBJECT AND OBJECTIVES

A study summarizing the relationship between ENSO and fires in tropical peatland is an attempt to clarify how global environmental change will affect regional and specific disasters. This is very important as a basis for considering the relationship between environmental change and society, which is a major framework of Program 1. Attempts to analyse the impact of peat fires on society and its response to social fires that occurred frequently in 2019 were based on elucidating both the “Asian development path” and “Motivation for survival” listed in Program 1.

Structuring the program around the relationship between the three central themes of the History of Development, Peat Environment and Climate Change enables us to discuss the sustainable development of peatland societies. Namely, in integrating processes between studies on climate change, especially rainfall patterns/changes, and the characteristics of peatland exploitation, we can identify the characteristics of vulnerability and the processes of transformability at play. Vulnerable peat swamp forests cannot be restored and the degradation of peatlands has led to catastrophes, but now people aim to restore the peatlands, albeit not to their original state as peat swamp forests but instead as vegetated rewetted peatlands through social and political means within local societies, allowing for the sustainable integration of peatland environments within the scope of their livelihoods. Such discussions have led to engagement with administrators aimed at negotiating effective peatland restoration programs in which people can positively participate. The subject matter of transformability thus contributes to mapping Asia’s paths of socio-economic development in relation to climate change and environmental history and allows for the examination of the motivations that affect people’s livelihoods, as noted in the Program 1 statement.

In addition, some research activities can respectively contribute to the aim of the Program 1. Some members in the Community, Corporate and Governance group and Material Cycling group began implementing a social forestry program in the village of Tanjung Leban. This is following new government policies which legitimize the community’s ownership of forests that were hitherto designated as state forest. Such policies are facilitated by the community practice of social forestry. It has been broadly observed in other Asian countries that, once the state government claims the state-ownership of most areas of land, the government gradually guarantees the people land rights over time. Through the implementation and observation of the social forestry program, we intend to maintain a process of socio-political development reliant upon land rights throughout the rapid transformation of peatland environments.

○ Progress and Results in 2020

2)PROJECT PROGRESS

During the period of Full Research, the project formulated research organization, structure and network holding a number of seminars and workshops. For example, following the MOU signed by RIHN, Kyoto and Hokkaido universities and Peatland Restoration Agency (BRG: Badan Restorasi Gambut) in Augustus 2016, we invited the Indonesian Minister of Environment and Forestry, the Chief of Presidential Exclusive Office, and the Director and Deputies of BRG to Japan and held some seminars in April 2017. In February 2018, RIHN, BRG and JICA held an international seminar in Jakarta for exchanging the tentative results of peatland restoration activities and research. In July 2018 and March 2019, RIHN and Kyoto University in collaboration with JICA held a conference with key local government officials in Bengkalis district and organized a social forestry workshop together with local people at the village of Tanjung Leban in Bengkalis district. In March 2019, the 3rd Anniversary of Indonesia-Kyoto Collaborative Agreements for Peatland Restoration in Indonesia organized by RIHN, Kyoto University, the government of Indonesia was held. The research networks established through these seminars/workshops can enormously contribute to the progress of our project as trans-disciplinary study, and we will continuously try to hold them.

In FR1 (April 2017- March 2018), each of three work groups also made the progress of their respective research topics and collaborated with local peoples. The Community, Corporate and Governance Group suggested to central and local officials that the government should give local people living around peat environment the property rights to the land that they have cultivated. As a result, the policies of social forestry, which allow people the right to use the land for 35 years, have made progress in Riau at

present. The Material Cycling group made the preparation of collecting systematic basic data in order to create the model of peatland restoration based on rewetting, reforestation and assessing the impact of haze caused by the peatland fires. As a result, for example, a team of the group started a collaboration with JICA program and implementing paludiculture through social forestry adopting the scientific knowledge obtained from research.

In FR2 (April 2018- March 2019), we have tried to integrate the studies taking place within History of Development, Peat Environment and Climate Change, with the driving concepts of Vulnerability and Transformability being at the centre of our research. Vulnerability is the degree to which a system, or part of a system, may react adversely during the occurrence of a hazardous event (Posey 2009), on the other hand transformability is the capacity to create a fundamentally new system when ecological, economic, or social (including political) conditions render the existing system untenable. (Walker, et al 2004).

In FR3 (April 2019–March 2020), as for the progress of the research project in its entirety, we elaborated on the research concept and reinforced the PR activities. Each group has individually contributed to an integrated map of the peatland and land surface conditions. Owing to El Niño (Modoki) and the dipole mode, many peat fires occurred in both Sumatra and Kalimantan Islands since July 2020. Air pollution data concerning these fires have been obtained.

Following these concepts and approaches, the Community, Corporate and Governance Group explored the history of the peatland's exploitation at the hands of companies and local people for the purpose of studying vulnerability. Through these studies, we found out the vulnerability of the governance and trade related to peatland exploitation. The Material Cycling Group started the data collection of health hazard caused by haze in cooperation with hospitals in the Riau and Central Kalimantan provinces. The network of monitoring air pollutant during peatland fires has expanded over time, with some of the findings being published in an international journal. The group also published a thesis, in which they showed the dynamics of CO2 and CH4. The group studied from the locus of material cycling, recording vegetation, water and soil changes affected by processes that contribute to peatland degradation, especially fire.

In terms of the studies on transformability, we began promoting the peatland restoration program. This approach would entail higher participation amongst locals with the peatland restoration program as it would lead to the improvement of their land rights. So far, the implementation of the peat restoration programs have enabled land disputes to be negotiated. We refer to this approach as the "entitlement approach", as the improvement of legislation concerning land rights improves issues surrounding entitlement. In securing land titles, we can in turn secure the active participation of local people in the peatland rehabilitation program. The transformability process does not only entail a change in the landscape, but also an improvement to people's livelihood and entitlement. The improvements of peatland societies supported by innovations in paludiculture technology, organization and agrarian structures consist of the factors that form the new model of peatland society that can potentially spread to other areas.

Our idea of transformability is not limited to the local society. A member of the Community, Corporate and Governance Group has found that, as a result of the rapid expansion of palm-oil production (which includes the pervasive planting activity on the peatland) and the export of crude palm oil, that the production of tradable goods has been stagnant in Indonesia while consumption and the production of non-tradable goods grew. This resource intensive development, or primary commodity intensive development that sacrifices industrialization, or the development of tradable goods industry, displays a contrast with East Asia's export-oriented industrial activity. Both patterns of development contain bias, so we intend to establish a peatland society that is not biased towards primary commodity intensive development. We intend to develop a society that does not sacrifice the environment, industry and agriculture. One of the solutions is to curb the expansion of oil palm planting on the peatland, with the preferred alternative being to develop the oleo-chemical industry and paludiculture that involves the development of the processing industry.

Rewetting and reforestation in Tanjung Leban Village, Bengkalis District, Indonesia was established in 2017 in cooperation with the JICA grassroots project. Results are steadily being obtained owing to the active participation of more than 20 households and the water management of 200 ha, which is more than 10% of the object sub-village. In Rantau Baru Village, questionnaires were distributed in January 2020 and the responses are currently being analyzed, while peat-project newsletter No. 8 has been published. The results of each group are as follows:

The Community, Corporate, and Governance Group has made substantial progress especially on water management and mapping of land use/ownership in the village communities. Satellite and drone imagery vividly showed that the largest portion of the peatland is utilized for oil palm plantations and large tracts of land utilized for this purpose are owned by non-locals.

At the village level, resource utilization and fish ecology are being continuously monitored, while questionnaires are still being carried out in Rantau Baru Village. At the governmental level in Indonesia, we evaluated the Twitter usage of political parties during the 2019 presidential election. The enterprise research group held a panel on the oil palm business trend during the "Indonesia Study Conference" (KAPAL) held in November 2020.

The Material Cycling Group reconstructed 22 years of historical monthly rainfall data at 24 colonial observation stations in Sumatra, Indonesia during the Dutch colonial era 1879–1900. Regional and interannual variations at the western and eastern sides of Sumatra were analyzed using monthly and daily rainfall data from 1879–1900 and 1971–2014, respectively (see Fig. 8). An underground peatland fire detection method was developed using a drone in Riau Province, Indonesia, in September 2019.

Tropical peat dating using radioactive carbon isotopes revealed that, contrary to natural forests, in drained peat forests and burnt sites, surface carbon was depleted and only older carbon remained. The assessment of soil water retention of tropical peat revealed that decomposed peat could, to some extent, retain water; however, the maximum water-retention capacity was low. The investigations also revealed that this water-retention capacity of the surface layer peat was lower than those of the layers that experienced fire.

As for paludiculture, the local communities agreed to participate in land restoration, and the residents of Tanjung Leban Village, Bengkalis District, Indonesia held a focus group discussion. Eventually, more than 30 households located on about 200 ha of private land decided to join the paludiculture program. Local communities planted vanilla and indigenous trees, thereby rewetting the dried peatlands.

The International Research Group investigated the spatial distribution and transmission pattern of COVID-19. A parameter called ‘mean personal distance’ (MPD), defined as the inverse square root of population density, was proposed as a measure of the effect of human distribution on the transmission pattern. The ‘infected cases total’ in the environmentally and socially diverse districts of Japan and Indonesia is proportional to the population density, or the inverse square of MPD, and the proportionality factor is given in each case by the infection ratio times the area. We demonstrated that everyone residing in areas of the order of one square kilometer is likely to get infected eventually, and suggested that this scale or 1 km interval should be recognized as a parameter indicating the ‘social distance between towns’ necessary to prevent transmission.

○ Future Themes

3) EXPECTED RESULTS

Through our research activities based around peatland restoration in the main research villages, we will draw an integrated map of the peatland ecosystem and establish a reliable management guideline that can be applied to peatland restoration in other areas. In addition, by comparing the situations of peatlands in various areas, we will explore the characteristics of peat environment and societies in the world and address the transformability of environmentally vulnerable societies.

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●Achievements

○Books etc

・林田秀樹, Mar. 2021, 180−202, Contributor, 岡本正明, アブラヤシ農園問題の研究ーグローバル編, 318, 晃洋書房, Japanese, ISBN: 9784771034334

・ Mar. 2021, Single work, Business and Politics in Emerging Economy: Dynamics of Economic Power of Indonesia's Bakrie Family, 京都大学学術出版会, ISBN: 9784814003358

・佐藤百合, Oct. 2020, 229-258, Contributor, 2019 年インドネシアの選挙 : 深まる社会の分断とジョコウィの再選, アジア経済研究所, Japanese, ISBN: 978-4-258-30033-4

・水野広祐, Sep. 2020, Single work, 民主化と労使関係 : インドネシアのムシャワラー労使紛争処理と行動主義の源流, 544, 京都大学学術出版会, Japanese, ISBN: 9784814002641

・岡本正明, 2020, 119-142, Contributor, 田村克己・土佐桂子, 転換期のミャンマーを生きる:「統制」と公共性の人類学, 334, 風響社, Japanese, ISBN: 9784894892675

・Siti Nurbaya, Nur Masripatin, Soeryo Adiwibowo, Yulia Sugandi, Thomas Reuter ed., 2020, 20-44, Contributor, San Afri Awang, Kosuke Mizuno, Hanni Adiati, Trilogi Indonesia Menghadapi Perubahan Iklim―Krisis Sosial –Ekologi & Keadaan Iklim, Kompas, Indonesian

・Dianto Bachriadi, 2020, Manifesto Penataan Ulang Penguasaan Tanah ‘Kawasan Hutan’, ARC-Books, Indonesian

○Published Papers

・Tetsu Konishi, Mar. 2021, Investors’ Network in Indonesian Stock Market Difficulties of Financial Regulation on Appropriation of Minority Shareholders’ Interests, Studies of International Society, (10), 27-35, Japanese, Refereed, Scientific journal

・Muhammad Arif Rahman; Devis Styo Nugroho; Manabu D. Yamanaka; Masahiro Kawasaki; Osamu Kozan; Masafumi Ohashi; Hiroyuki Hashiguchi; Shuichi Mori, Jan. 2021, Weather radar detection of planetary boundary layer and smoke layer top of peatland fire in Central Kalimantan, Indonesia, Scientific Reports, 11 (1), Springer Science and Business Media LLC, English, Refereed, Scientific journal DOI:10.1038/s41598-020-79486-6

・Hiroki Iwata; Kotomi Nakazawa; Himeka Sato; Masayuki Itoh; Yuichi Miyabara; Ryuichi Hirata; Yoshiyuki Takahashi; Takeshi Tokida; Ryosuke Endo, 15 Dec. 2020, Temporal and spatial variations in methane emissions from the littoral zone of a shallow mid-latitude lake with steady methane bubble emission areas, Agricultural and Forest Meteorology, 295, Refereed, Scientific journal DOI:10.1016/j.agrformet.2020.108184

・Ali,M. R; M. R. Islam; M. H. Islam; O. Kozan; K. Mizuno, Dec. 2020, Potential of peatlands in Bangladesh and sustainable management strategy, Agricultural Engineering International: CIGR Journal, 22 (4), 65-74, English, Refereed, Scientific journal

・Taishin Kameoka; Osamu Kozan; Sunawiruddin Hadi; Asnawi, Hasrullah, Nov. 2020, Mapping Peatland Fires Using a Drone Equipped with a Thermal Camera, Japan Society of Photogrammetry and Remote Sensing, 59 (5), 214-220, English, Refereed, Scientific journal

・T. Taoka; H. Iwata; R. Hirata; Y. Takahashi; Y. Miyabara; M. Itoh, 01 Sep. 2020, Environmental Controls of Diffusive and Ebullitive Methane Emissions at a Subdaily Time Scale in the Littoral Zone of a Midlatitude Shallow Lake, Journal of Geophysical Research: Biogeosciences, 125 (9), Refereed, Scientific journal DOI:10.1029/2020JG005753

・Nina Yulianti; Kitso Kusin; Daisuke Naito; Masahiro Kawasaki; Osamu Kozan; Kurniawan Eko Susatyo, 13 Jul. 2020, The Linkage of El Niño-induced Peat Fires and Its Relation to Current Haze Condition in Central Kalimantan, Journal of Wetlands Environmental Management, 8 (2), 100-100, Center for Journal Management and Publication, Lambung Mangkurat University, English, Refereed, International conference proceedings DOI:10.20527/jwem.v8i2.221

・Nina Yulianti; Kitso Kusin; Elvi Murni; Betrixia Barbara; Daisuke Naito; Osamu Kozan; Yusurum Jagau; Ici Piter Kulu; Fengky Florante Adji; Kurniawan Eko Susetyo, 30 Jun. 2020, PRELEMINARY ANALYSIS OF CAUSE-EFFECT ON FOREST-PEATLAND FIRES PRIOR TO 2020 IN CENTRAL KALIMANTAN, ECOTROPHIC : Jurnal Ilmu Lingkungan (Journal of Environmental Science), 14 (1), 62-62, Universitas Udayana, English, Refereed, Scientific journal DOI:10.24843/ejes.2020.v14.i01.p06

・Masayuki Itoh; Takashi Matsubara; Satomi Shiodera; Kotaro Iizuka; Ken Sakurai; Yoko Nakajima; Hiroki Ohashi; Ivan Manalu, 03 Jun. 2020, Application of electrical resistivity to assess subsurface geological and hydrological conditions at post-tin mining sites in Indonesia, Land Degradation & Development, Wiley, Refereed, Scientific journal DOI:10.1002/ldr.3527

・塩寺 さとみ; 伊藤 雅之; 甲山 治, May 2020, 熱帯泥炭湿地林の人為的攪乱とその回復可能性, 日本生態学会誌, 70 (1), 15-29, Japanese, Refereed, Scientific journal

・Okamoto Masaaki, 2020, Anatomy of the Islam Nusantara Program and the Necessity for a “Critical” Islam Nusantara Study, Journal for Study of Islamic History and Culture, 1 (1), 13-40, English

・Amith Phetsada, Kosuke Mizuno, 2020, Hydropower Development and its Impact on Local Communities in Laos: A Case Study of the Nam Ou 2 Project, Journal of Lao Studies (JLS), 7 (1), 99-120, English

・Nanik Ambar Suharyanti1 , Kosuke Mizuno , and Ahyahudin Sodri, 2020, The effect of water deficit on inflorescence period at palm oil productivity on peatland, E3S Web of Conferences, 211 (05005), English, Refereed DOI:https://doi.org/10.1051/e3sconf/202021105005

・W Asrofan, H S Hasibuan and K Mizuno, 2020, Valuation of Coastal Ecosystem Services: A Case of Tangerang Regency, Indonesia, IOP Conf. Series: Earth and Environmental Science, 448 (012097), English DOI:doi:10.1088/1755-1315/448/1/012097

○**MISC**

・Yuri Sato, 2021, Book Review: The Indonesian Economy in Transition: Policy Challenges in the Jokowi Era and Beyond edited by Hal Hill and Siwage Dharma Negara, International Journal of Asian Studies, 18 (1), 141-144, English, Refereed

・山中大学, 12 Nov. 2020, JpGU-AGU2020（バーチャル）緊急特別第三セッションの報告:「新型コロナウイルス感染症と地球の環境・災害」, Humanity and Nature, (82), 21-23, Japanese, Invited, Introduction research institution

・Osawa, Takamasa; Nakao, Seiji, May 2020, Anthropologists at the interfaces of knowledge: Possibilities of anthropology in environmental issues, Scientific Program of Vienna Anthropology Days 2020, English, Refereed, Summary international conference, Session_Schedule___Abstracts_Session_8(4).pdf

○**Presentations**

・Dianto Bachriadi, Sakit Menimpa, Sesal Terlambat: Reforma Agraria Dipandu Hutang, Prisma No. 4/2020, Indonesian

・山中大学, インドネシア海大陸の観測気象学: JEPP, SATREPS と今後（改訂版）, 日本気象学会 2021 年度春季大会, May 2021, 18 May 2021 21 May - 2021, Invited, Japanese, Invited oral presentation

・Mizuno Kosuke, Restorasi Gambut Permanen dan Rehabilitasi Mangrove Untuk Kebangkitan Ekonomi dan Perlindungan Lingkungan Kawasan Pesisir Riau, Restorasi Gambut Permanen dan Rehabilitasi Mangrove Untuk Kebangkitan Ekonomi dan Perlindungan Lingkungan Kawasan Pesisir Riau, Tanjung leban, Riau, Tanjung leban, Riau, Indonesia, 27 Mar. 2021, Indonesian

・Tetsu Konishi, Pengawasan Keuangan Indonesia: Sejarah dan Pandemi, Seminar “Meujudkan Indonesia Bebas Pengangguran”, by Takeastand Indonesia Institute, 27 Mar. 2021, Invited, Indonesian, Public discourse

・大澤隆将, Online interview, land recognition and Local knowledge, International workshop of the governance group, Peatland Society Project, 18 Mar. 2021, Invited, English, Nominated symposium

・Mizuno, Kosuke, Ekonimi Masyarakat Gambut: Melawan Resiko, Seminar Water Sharing, BRGM, BRGM, Indonesia, 15 Mar. 2021, Indonesian

・山中大学, How Space Matters in COVID-19 Infections: Population Density, Personal Distance, and Social Distancing in Asian Archipelagos, 総合地球環境学研究所プログラム 1 特別セッション研究会, 08 Mar. 2021, Japanese

・佐藤百合, インドネシア経済の展望と ASEAN における役割, 経団連 ASEAN 勉強会, 経団連 ASEAN 勉強会, Japan, 05 Mar. 2021, Japanese

・Akhwan Binawan; Takamasa Osawa, Collaborative Research in a Fishing Village around Tropical Peatland in Riau, Indonesia, ASEAN Research Platform Annual Meeting FY 2020/21, 19 Feb. 2021, 19 Feb. 2021 19 Feb. - 2021, Invited, English, Nominated symposium

・Mizuno, Kosuke, Alternative Development of Indonesia toward A Sustainable Future: The Role of Small-Medium Scale Industries, Webinar SILUI-APEX International Seminar on Appropriate Technology Choice for Alternative Development of Indonesia － Toward A Sustainable Post-Pandemic Society, SILUI, 27 Jan. 2021, English

・Mizuno, Kosuke, Agrarian Reform and Peatland Restoration for Achieving Sustainable Development in Indonesia, International Virtual Conference on Business, Science, and Technology for Sustainable Development in Zoom Webinar, INDEF, Jakarta, Indonesia, 09 Dec. 2020, English, Oral presentation

・Arifudin; O. Kozan, Small is Beautiful: Lesson Learned of Implementing Peatland Restoration Program with the Villagers, Kyoto University International ONLINE Symposium 2020 on Education and Research in Global Environmental Studies in Asia, 01 Dec. 2020, Invited, English, Nominated symposium

・大澤隆将, スク・アスリの先住民性と宗教選択, インドネシア研究懇話会(KAPAL)第二回研究大会（東洋大学：オンライン開催）, 30 Nov. 2020, 29 Nov. 2020 30 Nov. - 2020, Japanese, Oral presentation

・山中大学, COVID-19 感染の人口密度依存性に基く尼日両島嶼国家のサステナビリティ, 第 2 回インドネシア研究懇話会(KAPAL), 29 Nov. 2020, 28 Nov. 2020 29 Nov. - 2020, Japanese, Oral presentation

・佐藤百合, 経済的影響と今後の展望, シンポジウム『新型コロナウイルスとインドネシア』インドネシア研究懇話会第 2 回研究大会, インドネシア研究懇話会, Japan, 29 Nov. 2020, Japanese, Invited oral presentation

・小西鉄, インドネシアにおける国有企業に対する金融監督の実効性：国有保険会社ジワスラヤ社事件からの一考察, インドネシア研究懇話会[再編]第 2 回, 29 Nov. 2020, 28 Nov. 2020 29 Nov. - 2020, Oral presentation

・梶田諒介, 1879–1900 年の植民地期スマトラ島における 24 観測地点の降雨観測記録の復元, インドネシア研究懇話会第 2 回研究大会, 28 Nov. 2020, Japanese, Oral presentation

・インドネシア泥炭地と地球の気候, 第 2 回日立京大ラボワークショップ, 21 Nov. 2020, 21 Nov. 2020 21 Nov. - 2020, Invited, Japanese, Invited oral presentation

・Okamoto Masaaki, Emerging Digital Politics in Indonesia, Webinar Kuliah Umum Jurusan Ilmu Pemerintahan, Fakultas Ilmu Sosial dan Politik. Universitas Riau, Fakultas Ilmu Sosial dan Politik. Universitas Riau, Indonesia, 09 Nov. 2020, English, Invited oral presentation

・Okamoto Masaaki, Politics of Decentralization in Indonesia and beyond: Dynasty, Bureaucracy and Perception, the International Conference on Social Politics and Humanities (ICoSoPH), The Faculty of Social and Political Science, Bangka-Belitung University., The Faculty of Social and Political Science, Bangka-Belitung University., Indonesia, 31 Oct. 2020, Invited, English, Keynote oral presentation

・山中大学, 甲山治, 杉原薫, 人間活動の偏在による災害・環境諸問題の深刻化, 日本気象学会 2020 年度秋季大会, 29 Oct. 2020, 25 Oct. 2020 31 Oct. - 2020, Japanese, Oral presentation

・山中大学; 荻野慎也, 熱帯沿岸起源重力波の成層圏準二年周期振動への寄与, 日本気象学 2020 年度秋季大会, 28 Oct. 2020, 25 Oct. 2020 31 Oct. - 2020, Japanese

・水野広祐, 熱帯泥炭湿地林保全と気候変動の抑制, 地球・人間環境フォーラム連続セミナー「森林減少と地球温暖化・生物多様性」, Japan, 27 Oct. 2020, Invited, Japanese, Invited oral presentation

・岡本正明, インドネシアの大統領選挙、ローカル・ガバナンスに関するツイッター分析, 国立大学附置研究所センター会議第 3 部会（人文・社会科学系）シンポジウム「データからみる地域研究」, 国立大学附置研究所, 国立大学附置研究所, Japan, 23 Oct. 2020, Japanese, Oral presentation

・長谷川拓也, 地方発の政策革新とその波及―インドネシア公務員報酬制度の変化―, 日本国際政治学会 2020 年度研究大会, 日本国際政治学会, 日本国際政治学会, Japan, 23 Oct. 2020, Japanese, Oral presentation

・Seiji Nakao; Takamasa Osawa, Introduction, Vienna Anthropology Days 2020, 01 Oct. 2020, 28 Sep. 2020 01 Oct. - 2020, English, Public symposium

・Osamu KOZAN, Hydrological Science and the Dynamics of Rewetting in Peat Sites Towards Permanent Restoration of Tropical Peatland Ecosystem Landscapes, Webinar Series V: Online Focused Scientific Discussion, BRG Indonesia, 29 Sep. 2020, Invited, English, Public discourse

・Mizuno, Kosuke, Land Title and Peatland Restoration, The 1st JESSD Symposium, Universitas Indonesia, Universitas Indonesia, Indonesia, 28 Sep. 2020, English

・Almasdi Syahza, Robin, Suwondo and Michiko Hosobuchi, Innovation for the Development of Environmentally Friendly Oil Palm Plantation in Indonesia, JESSD Symposium International Symposium of Earth, Energy, Environmental Science, and Sustainable Development, JESSD Symposium, Indonesia, 28 Sep. 2020, English

・Michiko Hosobuchi, Sejarah Perkembangan Neraca Sumberdaya Alam di Riau, Workshop: Peatland Research Group, Indonesia, 25 Sep. 2020, Indonesian, Oral presentation

・Mizuno, Kosuke, Agrarian Changes and Environment- The Case of Peatland Restoration in Indonesia, 1st International Conference on Contemporary Sociology and Educational Transformation (ICCSET 2020), Universitas Negeri Malang, Universitas Negeri Malang, Indonesia, 23 Sep. 2020, Invited, English, Keynote oral presentation

・75. Mizuno, Kosuke, Bioenergy, oil palm and people's initiative for the renewal energy in Indonesia, Workshop on Bioenergy toward the Climate 1.5C target and the SDGs in Indonesia, Universitas Indonesia, Universitas Indonesia, Indonesia, 23 Sep. 2020, English

・Takamasa Osawa, Political communication between "indigenous people" and the government in Bengkalis, Webinah Kuliah Umum Jurusan Pemerintahan FISIP UNRI, Riau University (Online), Pekanbaru, 21 Sep. 2020, Invited, Indonesian, Public discourse

・小川まり子・山中大学・Awaluddin・A. Darmawan・A. Sulaiman・甲山治, スマトラ東部沿岸部における降雨日変化: 泥炭地域レーダー観測結果, MU レーダー;赤道レーダーシンポジウム, 14 Sep. 2020, Japanese, Public symposium

・Michiko Hosobuchi, How can Science and Technology be Returned to Local Communities as Measure against Complex Disasters in Peatlands Society, Universitas Riau International Conference on Science and Environmental 2020 (URICSE 2020), Universitas Riau, Universitas Riau, Indonesia, 11 Sep. 2020, Invited, English, Invited oral presentation

・Mizuno, Kosuke, Masyrakat Gambut, Sejarah dan Pembang, Diskusi Ilmilah Terfokus, Series Daring BRG, BRG, BRG, Indonesia, 01 Sep. 2020, Invited, Indonesian, Invited oral presentation

・山中大学, COVID-19-visualized disaster-environment risks by human activity concentration, 第 33 回 AF-Forum: ポストコロナの暮らしと仕事、住まいと都市, Archi-Neering Design Forum (A-Forum), online, 21 Aug. 2020, 21 Aug. 2020 21 Aug. - 2020, Invited, Japanese, Invited oral presentation

・Michiko Hosobuchi, Kegiatan Kelompok Masyarakat Sipil di Desa Tanjung Leban, Berbagi Pengalaman Berkelanjutan Berbasis Mawsyarakat Tema, Mencari Solusi Melestarasikan Hutan, Tidak Merusakkan Hutan di Rawa Gambut Series II,, Indonesia, 04 Aug. 2020, Indonesian, Oral presentation

・Manabu D. Yamanaka, Population density, personal distance and social distancing: The Spatial Spread of COVID-19 Infections in Japan and Indonesia, 総合地球環境学研究所プログラム 1 特別セッション研究会「COVID-19 とアジアの発展」, 17 Jul. 2020, 17 Jul. 2020 17 Jul. - 2020, Japanese

・Manabu D. Yamanaka, Parametrization of tropical coastal nonstationary gravity waves robustizing QBO, JPGU-AGU 2020, 14 Jul. 2020, 14 Jul. 2020 14 Jul. - 2020, English

・Yamanaka, M. D; O. Kozan; K. Sugihara, Population density, personal distance and social distancing in the anthroposphere: Implications from the COVID-19 disaster, JpGU-AGU 2020, 13 Jul. 2020, Invited, English, Invited oral presentation

・Manabu D. Yamanaka; Osamu Kozan; Kaoru Sugihara, Population density, personal distance and social distancing in the anthroposphere: Implications from the COVID-19 disaster., JPGU-AGU 2020, 13 Jul. 2020, 13 Jul. 2020 13 Jul. - 2020, Invited, Japanese, Invited oral presentation

・Okamoto Masaaki, Islam Nusantara Study and beyond. The International Class on Asian Community 2020, The Faculty of Social and Political Sciences, Bangka-Belitung University, Bangka-Belitung University, Indonesia, 09 Jul. 2020, Invited, English, Invited oral presentation

・Abe Ryuichiro, Individualization of Risks, International Webinar "Ecology, Pandemic, and Ethics", Perkumpulan Peneliti Eutenika, Perkumpulan Peneliti Eutenika, Indonesia, 06 Jul. 2020, English, Oral presentation

・山中大学, インドネシア海大陸と地球の気候, 奈良女子大学大気グループ特別セミナー, 29 Jun. 2020, 29 Jun. 2020 29 Jun. - 2020, Japanese

・Manabu D. Yamanaka, Tropical coastal climate modifications in Mekong delta and Indonesian peatlands., Abstracts, AOGS 2020, 28 Jun. 2020, 28 Jun. 2020 28 Jun. - 2020, English

・Manabu D. Yamanaka, Maritime continent coasts emitting omni-azimuthal gravity waves, Abstracts, AOGS 2020, 28 Jun. 2020, 28 Jun. 2020 28 Jun. - 2020

・岡本正明, インフォーマルな暴力の「政治参加」の常態化―インドネシアの事例から―, 日本比較政治学会 2020 年度研究大会, 日本比較政治学会, 日本比較政治学会, Japan, 28 Jun. 2020, Japanese, Oral presentation

・Mizuno, Kosuke, Politik Agraria di Pedesaan Gambut, Kuliah Umum Daring, BRG, BRG, Indonesia, 18 Jun. 2020, Invited, Indonesian, Invited oral presentation

・Michiko Hosobuchi, Disaster Management in Indonesia: Peatland Forest Fire and Covid-19 Crisis, Workshop: Peatland Sociology Research Group2, 08 Jun. 2020, English

・Michiko Hosobuchi, Local ‘participation’ and ‘empowerment’ in Riau, Workshop: Fundamental Study on Aid and Community Organization in Peat Degraded Land, Peatland Sociology Research Group 1, Indonesia, 08 Jun. 2020, Indonesian, Oral presentation

・Mizuno, Kosuke, Dampak COVID-19 Terhadap Perekonomian dan Dunia Usaha di Jepang, Member Gathering dan Halal Bi Halal APINDO DKI Jakarta Time, Indonesia, 06 Jun. 2020, Invited, Indonesian, Invited oral presentation

・Michiko Hosobuchi, Disaster Risk Management, Social Impact Assessment and Hydro-meteorological Information Management System in Tropical Peatland. Berbagi Pengalaman Berkelanjutan Berbasis Mawsyarakat Tema, Mencari Solusi Melestarasikan Hutan, Tidak Merusakkan Hutan di Rawa Gambut Series I, Mencari Solusi Melestarasikan Hutan, Tidak Merusakkan Hutan di Rawa Gambut Series I,, Indonesia, 21 May 2020, English

・Dianto Bachriadi, Reforma Agraria dan Transisi Agraria: Tinjauan Teoritis, Working Paper ARC No. 03/KTAGS/2020, Agrarian Resources Center, Bandung, Indonesia, 2020

○Academic Contribution

・Late Breaking Session "COVID-19, the Earth's Environment and Disaster", Co-Convenors: Jun Matsumoto, Yukihiro Takahashi, Akira Wada, Manabu D. Yamanaka, Competition etc, JpGU-AGU Joint Meeting 2020, 13 Jul. 2020

・Organizing a Panel Session in an International Conference: 'Anthropologists at the interfaces of knowledge: Possibilities of anthropology in environmental issues.', Takamasa Osawa, Competition etc, Vienna Anthropology Days 2020, 30 Oct. 2020

・地球研環境教育コメンテーター：洛北高校課題探究 II 環境ゼミアドバンスセミナー中間発表会, 梶田諒介, Review, 地球研-洛北高校, 22 Oct. 2020

・地球研環境教育コメンテーター：洛北高校課題探求 II 課題アイディア発表会, 梶田諒介, Review, 地球研-洛北高校, 04 Jun. 2020

○Social Contribution

・Meteorological Radar meeting, RIHN, STAIN Bengkalis, 25 Jun. 2020, Seminar

・Meteorological Radar meeting, RIHN, STAIN Bengkalis, 22 Jul. 2020, Seminar

・Meteorological Radar meeting, 09 Aug. 2020, Seminar

・Meteorological Radar meeting, RIHN, STAIN Bengkalis, 08 Sep. 2020, Seminar

・Meteorological Radar meeting, RIHN, STAIN Bengkalis, 19 Oct. 2020, Seminar

・Meteorological Radar meeting, RIHN, STAIN Bengkalis, 19 Nov. 2020, Seminar

○**Media Coverage**

・Soal Lockdown di Jepang dan Efek Ekonomi, Myself, CNBC Indonesia, Closing Bell, 11 Jan. 2021, Media report

Stage: Full research (FR)

Project Name: Research and Social Implementation of Ecosystem-based Disaster Risk Reduction as Climate Change Adaptation in Shrinking Societies

Abbreviated Title: Eco-DRR Project

Project Leader: YOSHIDA Takehito

Program 1: Societal Transformation under Environmental Change

URL: https://www.facebook.com/EcoDRR2018/

Key Words: Ecosystem-based Disaster Risk Reduction

○ Research Subject and Objectives Problem, background, and objectives

Climate change is ongoing and projected to intensify in the future, and its impacts expand to various natural and human systems (IPCC 2014). Among the impacts, this project focuses on natural disasters, and it aims to contribute to the adaptation strategy of reducing and managing the risks of natural disasters. The risk of climate change or natural disaster results from the interaction among climate-related hazards, exposure, and vulnerability of human activities (IPCC 2012, 2014), so that adaptation to the natural disaster risk can be realized by diminishing exposure (by improving land use) and vulnerability to hazard. Our project mainly focuses on land use to lower the disaster risk.

Existing hard-engineering countermeasures against natural disasters have target safety levels, below which natural disasters can be prevented. Although these countermeasures are effective if the hazard level of natural disaster is below the target safety level, we are increasingly being faced with the situation, in which the hazard level goes well beyond the safety level, resulting in a devastating natural disaster. Also, conventional countermeasures are sometimes criticized for negatively affecting the natural environment and biodiversity that supply multiple ecosystem services supporting our livelihood. Eco-DRR (Ecosystem-based Disaster Risk Reduction) approaches focus on lowering the exposure of human activities to the hazard of natural disasters, by which the losses and damages of natural disasters can be reduced, if not prevented. Eco-DRR approaches take advantage of the multi-functionality of ecosystems, including their capacity to mitigate disasters while providing multiple ecosystem services (e.g. Convention on Biological Diversity 2015, UN Office for Disaster Risk Reduction 2015, Ministry of the Environment (MOE) Japan 2016). Thus, Eco-DRR approaches complement the existing conventional approaches against natural disasters, although the effectiveness and multi-functionality of Eco-DRR are not yet clearly and quantitatively understood (Science Council of Japan 2014, The Royal Society 2014).

Japan is facing an aging and shrinking population, and it is leading to the abandonment of farmlands, houses, and other intensive land use, providing an opportunity for improving land use (e.g. Ministry of Land, Infrastructure, Transport and Tourism (MLIT) Japan 2015). The population of Japan increased substantially over the last century, making the risk of natural disasters larger and spreading wider. Evaluating the past change of natural disaster risks provides valuable information when considering the adaptation not only in Japan but also in other countries.

Given the above background, this project sets the two main goals.

Goal 1. Developing the methodology of evaluating the multi-functionality of Eco-DRR in terms of reducing natural disaster risks and other ecosystem services, and assessing Eco-DRR by comparing the multi-functionality between the past, the present, and the future.

Goal 2. Supporting the implementation of Eco-DRR through transdisciplinary approaches in collaboration with local communities, governments, the insurance industry, and other stakeholders.

Methodology, structure, and schedule

Three research components (described below) contribute to achieving the above two goals with the spatial scales of research.

Research component 1) Visualizing the risks of natural disasters in the present and the past

The risk components of hazards, exposure, and vulnerability for different natural disasters will be analyzed on the GIS, and then the risks of natural disasters in terms of monetary loss and the number of victims will be evaluated and visualized as the risk maps for the present and the past. By comparing the maps between the present and the past, temporal changes of the natural disaster risks will be examined, and modeling the risk for the different scenarios of exposure will contribute to assessing Eco-DRR.

Research component 2) Evaluating and modeling multi-functionality of Eco-DRR

Provisioning, regulating, and cultural ecosystem services will be evaluated on the GIS, and their spatial distribution will be modeled concerning population distribution and land use patterns. The model will be used for evaluating the ecosystem services for different land-use scenarios to assess the potential of Eco-DRR.

Research component 3) Transdisciplinary approaches for implementing Eco-DRR in the society

Together with local stakeholders, transdisciplinary platforms will be formed at each of the local research sites by taking advantage of existing platforms. This transdisciplinary platform will function to deepen the understanding, discuss future options, and build a consensus on the use of Eco-DRR. The multi-functionality of Eco-DRR at each local site will be evaluated and the research outcomes will be shared with local stakeholders using the transdisciplinary platform. In addition, traditional and local knowledge of Eco-DRR will be inventoried and evaluated for the multi-functionality to be shared with the general public.

In collaboration with the insurance industry, a research forum will be formed to discuss the possibility and feasibility of what the insurance industry can contribute to developing economic incentives of Eco-DRR. Also, various laws and institutions in national and local governments related to disaster risk reduction and land use will be assessed in the research forum as well.

Expected results

Visualization of the present status, historical changes and future scenarios of natural disaster risks and utilization of Eco-DRR will help us understand what and where natural disaster risks exist concerning land use, how we happened to have the risks historically, and what options we have in the future. Our project also contributes to consensus building and developing social and economic incentives to promote and conserve Eco-DRR approaches by collaborating with diverse stakeholders in local communities, governments, and the insurance industry.

Project organization and membership

The research components 1 to 3 will be conducted by the groups and sub-groups. The total number of project members now counts about 120.

Contribution to the program

Our project is affiliated with Program 1 “Societal Transformation under Environmental Change” which aims at providing realistic perspectives and options to facilitate the transformation towards a society that can flexibly respond to environmental changes and natural disasters.

Even in highly developed countries such as Japan, natural disasters frequently occur and cause devastating losses and damages in human society, and there is a continuing trend of natural disasters caused by storms and typhoons, and heavy rain under the ongoing climate change. Eco-DRR approaches focus on lowering the exposure of human activities to the hazard of natural disasters, by which the losses and damages of natural disasters can be reduced, if not prevented. Eco-DRR approaches take advantage of the multi-functionality of ecosystems, including their capacity to mitigate disasters while providing multiple ecosystem services. Thus, Eco-DRR approaches complement the existing conventional approaches against natural disasters, although the effectiveness and multi-functionality of Eco-DRR are not yet clearly and quantitatively understood. Our project aims at deepening the understanding of Eco-DRR in an interdisciplinary way combining natural and social sciences and contributes to Program 1 by addressing the links between natural disasters and social issues including the declining population.

Land use and land ownership are the key issues for the social implementation of Eco-DRR, and they are the most challenging issue when we discuss the future options and build the consensus of Eco-DRR at each local research site. Our project aims at understanding the history of land-use change and examining the future scenarios of land use under the conditions of climate change and shrinking population, concerning the laws and institutions associated with land use and land ownership. Land ownership right in conformity with public welfare is described in the current constitution of Japan (Article 29) as well as in the former Meiji constitution, but the actual relationship between land ownership rights and public welfare on the ground should be reviewed and assessed in light of disaster risk reduction and multi-functionality of land. Social transformation concerning land use and land ownership will be considered in our project, which suggests the strong link between our project and Program 1. Program 1 has been having discussions with seminar talks by internal and external researchers on land use and land ownership, and we would like to continue contributing to it.

○ Progress and Results in 2020 Research component 1) Visualizing the risks of natural disasters in the present and the past

The methodology for evaluating and visualizing the risks of natural disasters in the present and the future was developed by examining the existing and new data sets of hazards, exposure, and vulnerability. As a trial case, we evaluated the risk of flood in terms of potential economic losses and the number of potential victims at a prefecture scale of Shiga (Figure S4, S5, S6), as we will eventually evaluate and visualize the risks of natural disasters at a country-wide scale in Japan. Multiple data sets of flood hazard, exposure information including population, land use and buildings (micro-geodata), and vulnerability estimates based on the standard manual by the MLIT are combined on the GIS to estimate the potential socio-economic loss of river flood. Future challenges exist in estimating the river flood at a country-wide scale, applying the method to different types of natural disasters (landslide and coastal flood), etc.

Research component 2) Evaluating and modeling multi-functionality of Eco-DRR

The existing methodologies for evaluating and modeling ecosystem services were assessed to decide which methodology can be used for this project. Parameters and land use data sets have been reviewed and collected to be used for our analysis. As a trial case, we evaluated several ecosystem services (regulating services) at a country-wide scale of Japan (Figure S7). In addition, for the scenario analysis that will be conducted at the next step, we examined the methodology of land-use change modeling at a prefecture scale of Shiga and examined the BAU (Business As Usual) and several land-use policies cases (Figure S8) and their relationship with flood risk.

To visualize the multi-functionality of the current land use, we have to integrate the research outcomes of Research components 1 & 2. To facilitate the data integration, we developed a new working group (Scenario WG) in the late FR2 period.

Research component 3) Transdisciplinary approaches for implementing Eco-DRR in society

We conducted research and actions for the implementation of Eco-DRR at three local research sites of Shiga, Fukui, and Chiba and the country-wide scale of Japan.

At the Fukui site, our research and actions have been linked to the existing ecological restoration actions by collaborating with the Mikatagoko Nature Restoration Committee (in which diverse local stakeholders participate) and the Fukui Prefecture government, and by adding disaster risk reduction components we have been trying to implement Eco-DRR at this site. We evaluated the ecological impacts of a trial measure of shoreline restoration using traditional techniques, and the research outcomes were used to incorporate the traditional measure into the guideline of future shoreline restoration by the Mikatagoko Nature Restoration Committee (Figure S9). Other ongoing research includes evaluating the relationship among the current land use, disaster risks and biodiversity, analyzing the historic relationship between natural disasters and natural resource use, inventory of residents' experiences of natural disasters.

At the Shiga site, our research and actions have been linked to the existing disaster risk reduction actions by collaborating with the local communities in the Hira mountain area and the Shiga Prefecture government, and by adding ecological components we have been trying to implement Eco-DRR at this site. We have been evaluating the effectiveness of traditional measures of disaster risk reduction (open levees, forest reserves, and stone fences), local biodiversity and natural resource use, and their linkages (Figure S10). Other ongoing research includes the historical relationship between land use and disaster risks, the relationship between urban planning of municipalities and flood risk, etc.

At the Chiba site, our research and actions have been linked to the existing watershed management actions by collaborating with the local stakeholders including those of the Lake Inbanuma Watershed Management Committee, and we have been trying to implement Eco-DRR within the framework of watershed management at this site. Functions of flood mitigating, nutrient removal, and habitat formation for diverse organisms of "yatsu" wetlands (developed at the bottom of the small valley) have been studied, and the research outcomes are used for the guideline of management and restoration of "yatsu" functions (to be released soon) (Figure S11). Other ongoing research includes examining functions of grasslands developed on upland areas, environmental economic analysis of the values of flood mitigation, water quality improvement, and environmental education.

At these sites and others in Saga, Toyama, and Tohoku areas, the traditional and local knowledge of Eco-DRR including the history of land use management, flood and landslide control measures built during the Edo period, management of shelter woods around houses, etc. have been collected (Figure S9). These traditional and local knowledge of Eco-DRR will be made accessible to the general public by publishing a series of booklets to facilitate the understanding of these knowledge. The first book of the series was published in the summer of 2019 as the forms of printed book and e-book available at the RIHN site (Figure S12).

As for the economic incentives, we examined the feasibility of natural disaster insurance to stimulate the implementation of Eco-DRR by comparing the insurance systems of different countries and found that the current insurance system of Japan is not likely to be a good incentive in this case, although those of other countries also have different difficulties. Financial schemes (parametric insurance and resilience bond) to secure the investment for Eco-DRR were also studied by analyzing the leading examples in Mexico and California. Various laws and institutions of the Japanese government have also been examined.

General activities

We had a general meeting of the project in October 2019 and about 50 project members joined to share the research results and discuss the future research plans. In advance of the general meeting, we had a meeting for the core group, with which leaders and sub-leaders of research groups are affiliated. Another meeting of the core group will be held in March 2020.

The international affairs sub-group contributed to discussions and negotiations relating to Eco-DRR and publications including guidelines in various international organizations such as UN Global Platform on DRR, G20 Climate Sustainability Working Group, Risk KAN of Future Earth, Partnership for Environment and Disaster Risk Reduction, IUCN, the Ramsar Convention, the Convention on Biological Diversity, Japan International Cooperation Agency, etc.

○ Future ThemesResearch component 1) Visualizing the risks of natural disasters in the present and the past

The risk components of hazards, exposure, and vulnerability for different natural disasters (river flood, coastal flood, and rainfall-induced landslides) will be analyzed on the GIS by digitizing and integrating different source data (existing GIS data, various paper maps, government statistics, our own observation data, etc.). Then, the risks of different natural disasters in terms of monetary loss (according to the government manual, MLIT 2005) and the number of victims will be evaluated as the product of the components and visualized as the natural disaster risk maps. The risk maps for the present will cover all areas of Japan including. The future disaster risks will also be modeled as a function of land use and population distribution, and the future risks will be examined for different scenarios that will be constructed together with the research component 2.

Research component 2) Evaluating and modeling multi-functionality of Eco-DRR

Provisioning, regulating, and cultural ecosystem services will be evaluated on the GIS by the existing and currently developing methods using the existing data and statistics, and our own observation data. Then, the spatial distribution of these ecosystem services will be analyzed and modeled in relation to the spatial distribution of population and land use. The model will be used for evaluating the change of ecosystem services for the different scenarios of land use to assess the potential multi-functionality of Eco-DRR together with the research component 1. The spatial range of this research covers all areas of Japan.

Research component 3) Transdisciplinary approaches for implementing Eco-DRR in society

Together with local stakeholders including residents, farmers, fishermen, NGOs, and local government officials, transdisciplinary platforms are formed at each of the local research sites by taking advantage of existing platforms such as a nature restoration committee, a regional association, and a watershed management committee. These transdisciplinary platforms are functioning to deepen the understanding, discuss the future options, and build the consensus of using Eco-DRR among local stakeholders. Research outcomes of the project are also shared in the platform. Depending on the consensus-building in the platform, we will support the actual implementation of Eco-DRR by making policy recommendations, contributing to land use planning, etc.

We continue the inventory of traditional and local knowledge of Eco-DRR, and we will evaluate the multi-functionality using the methodology of the research components 1 and 2. We will publish the second and possibly third books of the series that will make the traditional and local knowledge of Eco-DRR accessible to the general public.

As for the economic incentives, we will continue the analysis of natural disaster insurance and some financial schemes in terms of the role of stimulating the implementation of Eco-DRR. Also, various laws and institutions of the national and local governments related to disaster risk reduction and land use will be further assessed to examine the possibility of using existing legal frameworks for the promotion of Eco-DRR and to find the gaps that the existing laws and institutions do not secure.

Integration of the research outcomes

As research outcomes of each group and sub-group accumulate, we started and continue discussions toward the integration into a single, common conceptual scheme in order to simulate further discussions on better research directions and to identify the research gaps that the present research plan is not covering. As a part of the integration, we developed a new working group focusing on the integration of outcomes of research components 1 & 2 and conducting scenario analysis in consideration of climate change and population decline.

○Project Members

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●Achievements

○Books etc

- 上原三知・新井雄喜, 18 Jan. 2021, 第 7 章 環境のイメージと減災意識をともに高めるキャパシティ・ディベロップメント の可能性, Joint work, 「生態系減災：自然を活かした防災・減災～地球温暖化・人口減少時代の持続可能なまちづくり～」, 慶応義塾大学出版会
- Sadahisa Kato, 2021, pp. 353-371, Contributor, Green Infrastructure Planning for Asian Cities: The Planning Strategies, Guidelines, and Recommendations. In: Ito, Keitaro (Ed.), Urban Biodiversity and Ecological Design for Sustainable Cities, Springer Japan
- 吉田丈人, 2021, Contributor, 生態系減災 Eco-DRR 自然を賢く活かした防災・減災, 慶應義塾大学出版会, Japanese
- 上原三知, 新井雄喜, 2021, Contributor, 生態系減災 Eco-DRR 自然を賢く活かした防災・減災, 慶應義塾大学出版会, Japanese
- 上原三知, 2021, Contributor, 生態系減災 Eco-DRR 自然を賢く活かした防災・減災, 慶應義塾大学出版会, Japanese
- 上原三知, 2021, Contributor, 生態系減災 Eco-DRR 自然を賢く活かした防災・減災, 慶應義塾大学出版会, Japanese
- 朝波史香, 鎌田磨人, 2021, Contributor, 生態系減災 Eco-DRR 自然を賢く活かした防災・減災, 慶應義塾大学出版会, Japanese
- 中村太士, 2021, Contributor, 生態系減災 Eco-DRR 自然を賢く活かした防災・減災, 慶應義塾大学出版会, Japanese
- Ochiai Chiho; Osawa Sotaro, Aug. 2020, p.74-79, Contributor, Shishigaki and disaster response at the foot of Mt. Hira, Traditional and Local knowledge of Eco-DRR at the foot of Hira Mountains, Research Institute for Humanity and Nature
- Narita Mayu; Ochiai Chiho, Aug. 2020, p.70-73, Contributor, Tracing memories of flooding in Minami-komatsu, Traditional and Local Knowlege of Eco-DRR at the foot of Hira Mountains, Research Institute for Humanity and Nature

・Osawa Sotaro; Ochiai Chiho, Aug. 2020, p.52-55, Contributor, The Stone culture and village of Minami-komatsu, Traditional and Local Knowlege of Eco-DRR at the foot of Hira Mountains, Research Institute for Humanity and Nature
・一ノ瀬友博, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・菊地直樹, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・黄琬惠, 橋本禅, 吉田丈人, 齊藤修, 瀧健太郎, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・西廣淳, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・西廣淳, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・黄琬惠, 橋本禅, 吉田丈人, 齊藤修, 瀧健太郎, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・古田尚也, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・大正大学地域創生学部, 2020, Contributor, 地域創生への招待 : 日本の明るい未来を切り拓く人材を養成, 大正大学出版会, Japanese, ISBN: 978-4-909099-41-9
・黄琬惠, 橋本禅, 吉田丈人, 齊藤修, 瀧健太郎, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・吉田丈人, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・吉田丈人, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・武藤裕則，今井洋太，鎌田磨人，2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・鎌田磨人, 朝波史香, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・武藤裕則，今井洋太，鎌田磨人，2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・瀧健太郎, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・黄琬惠, 橋本禅, 吉田丈人, 齊藤修, 瀧健太郎, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・瀧健太郎, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・瀧健太郎, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・柘植隆宏, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・中村太士, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・中村太士, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・中村太士, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・2020, Contributor, 武藤裕則，今井洋太，鎌田磨人，実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・遠香尚史, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・吉原哲, 岡崎修司, 杉村佳寿, 桑江朝比呂, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2
・古田尚也, 2021, Editor, NbS 自然に根ざした解決策 生物多様性の新たな地平, 128, 株式会社ブックエンド, Japanese, ISBN: 978-4-907083-69-4 C0040
・グリーンインフラ研究会; 三菱 UFJ リサーチ&コンサルティング; 日経コンストラクション, Jul. 2020, Editor, 実践版!グリーンインフラ, 520p, 日経 BP, Japanese, ISBN: 9784296106752
・深町加津枝, 大崎理沙, 2020, Joint editor, 自然に寄り添う暮らしの実現に向けて, 人間文化研究機構広領域連携型基幹プロジェクト「日本列島における地域社会の変貌・災害からの地域文化の再構築」, Japanese, ISBN: 978-4-906888-64-1
・計彬嫻, 深町加津枝, 2020, Joint editor, 気仙沼の森・里・海をつなぐ木質バイオマス事業の展開, 人間文化研究機構広領域連携型基幹プロジェクト「日本列島における地域社会の変貌・災害からの地域文化の再構築」, Japanese, ISBN: 978-4-906888-64-1
・Saito O., 2020, Editor, Sharing Ecosystem Services, VI, 265, Springer, English DOI:10.1007/978-981-13-8067-9
・東海林太郎, 小笠原奨悟, 佐竹康孝, 鈴木広美, 西廣淳, 2020, Joint editor, 自然とかかわり豊かに暮らす〜北総地域における里山グリーンインフラの手引き【谷津編】, 20, 総合地球環境学研究所, Japanese, ISBN: 978-4-906888-72-6

・島田和久, 2020, Joint editor, 自然に寄り添う暮らしの実現に向けて, 139, 人間文化研究機構広領域連携型基幹プロジェクト「日本列島における地域社会の変貌・災害からの地域文化の再構築」, Japanese, ISBN: 978-4-906888-64-1

・島田和久, 2020, Joint editor, 自然に寄り添う暮らしの実現に向けて, 人間文化研究機構広領域連携型基幹プロジェクト「日本列島における地域社会の変貌・災害からの地域文化の再構築」, Japanese, ISBN: 978-4-906888-64-1

・東海林太郎, 小笠原奨悟, 佐竹康孝, 鈴木広美, 西廣淳, 2020, Editor, 自然とかかわり豊かに暮らす〜北総地域における里山グリーンインフラの手引き【谷津編】, 20, 総合地球環境学研究所, Japanese, ISBN: 978-4-906888-72-6

・東海林太郎, 小笠原奨悟, 佐竹康孝, 鈴木広美, 西廣淳, 2020, Editor, 自然とかかわり豊かに暮らす〜北総地域における里山グリーンインフラの手引き【谷津編】, 20, 総合地球環境学研究所, Japanese, ISBN: 978-4-906888-72-6

・東海林太郎, 小笠原奨悟, 佐竹康孝, 鈴木広美, 西廣淳, 2020, Editor, 自然とかかわり豊かに暮らす〜北総地域における里山グリーンインフラの手引き【谷津編】, 20, 総合地球環境学研究所, Japanese, ISBN: 978-4-906888-72-6

・古田尚也, 文蔵沙樹, 2020, Joint translation, IUCN, Guidance for using the IUCN Global Standard for Nature-based Solutions : first edition, 76, International Union for Conservation of Nature (IUCN), Japanese, ISBN: 978-2-8317-2100-2 DOI:10.2305/IUCN.CH.2020.09.ja

・西廣淳, 瀧健太郎, 原田守啓, 2021, 人と生態系のダイナミクス 5 河川の歴史と未来, 140, 朝倉書店, Japanese, ISBN: 978-4254185454

・古田尚也, 文蔵沙樹, 2021, IUCN, IUCN Global Standard for Nature-based Solutions : first edition, 30, International Union for Conservation of Nature (IUCN), Japanese, ISBN: 978-2-8317-2099-9 DOI:10.2305/IUCN.CH.2020.08.ja

・西田貴明, 大上彗太, 塚本文, 2021, フラワー・グリーンビジネスの最新動向と市場, 163, シーエムシー出版, Japanese, ISBN: 978-4-7813-1620-8

○**Published Papers**

・Junko Morimoto; Masahiro Aiba; Flavio Furukawa; Yoshio Mishima; Nobuhiko Yoshimura; Sridhara Nayak; Tetsuya Takemi; Haga Chihiro; Takanori Matsui; Futoshi Nakamura, Jan. 2021, Risk assessment of forest disturbance by typhoons with heavy precipitation in northern Japan, Forest Ecology and Management, 479, 118521-118521, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.foreco.2020.118521

・Youjia Liang; Shizuka Hashimoto; Lijun Liu, Jan. 2021, Integrated assessment of land-use/land-cover dynamics on carbon storage services in the Loess Plateau of China from 1995 to 2050, ECOLOGICAL INDICATORS, 120, ELSEVIER, English, Scientific journal DOI:10.1016/j.ecolind.2020.106939

・Junko Morimoto, Masahiro Aiba, Flavio Furukawa, Yoshio Mishima, Nobuhiko Yoshimura, Sridhara Nayak, Tetsuya Takemi, Chihiro Haga, Takanori Matsui, Futoshi Nakamura, Jan. 2021, Risk assessment of forest disturbance by typhoons with heavy precipitation in northern Japan, Forest Ecology and Management, 479, 118521, Elsevier, English, Refereed DOI:10.1016/j.foreco.2020.118521

・Junko Morimoto; Masahiro Aiba; Flavio Furukawa; Yoshio Mishima; Nobuhiko Yoshimura; Sridhara Nayak; Tetsuya Takemi; Haga Chihiro; Takanori Matsui; Futoshi Nakamura, Jan. 2021, Risk assessment of forest disturbance by typhoons with heavy precipitation in northern Japan, Forest Ecology and Management, 479, 118521-118521, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.foreco.2020.118521

・Junya Kumagai, Mihoko Wakamatsu, Shizuka Hashimoto, Osamu Saito, Takehito Yoshida, Takehisa Yamakita, Keiko Hori, Takanori Matsui, Michio Oguro, Masahiro Aiba, Rei Shibata, Tohru Nakashizuka, Shunsuke Managi, 2021, Natural capital for nature's contributions to people: the case of Japan, Sustainability Science, the Springer Nature, English, Refereed DOI:10.1007/s11625-020-00891-x

・一ノ瀬友博, 2021, 東日本大震災からの復興に生態系減災は実装できたのか, 農村計画学会誌, 39 (4), 362-365, 農村計画学会, Japanese

・一ノ瀬友博, 2021, 生態系減災―自然を賢く活かした防災・減災, 公園緑地, 82 (3), 32-35, 一般社団法人　日本公園緑地協会, Japanese

・Tomohiro Ichinose, Jun Ishii, Ikuko Imoto, 2021, The Watarase Retarding Basin—A Historical Example of Ecosystem-Based Disaster Risk Reduction in Japan, Ecosystem-Based Disaster and Climate Resilience, 441-464, Springer, Singapore, English DOI:10.1007/978-981-16-4815-1_20

・Sadahisa Kato, Wanhui Huang, 2021, Land use management recommendations for reducing the risk of downstream flooding based on a land use change analysis and the concept of ecosystem-based disaster risk reduction, Journal of Environmental Management, 287, 112341, Elsevier Ltd, English, Refereed DOI:10.1016/j.jenvman.2021.112341

・堀啓子, 松井孝典, 神山千穂, 齊藤修, 芳賀智宏, 熊谷惇也, 若松美保子, 馬奈木俊介, 2021, 新型コロナウィルス流行後の移住意向の変化～全国調査による比較分析～, 環境システム研究論文発表会講演集, 49, 145-152, 土木学会, Japanese

・Junya Kumagai, Mihoko Wakamatsu, Shizuka Hashimoto, Osamu Saito, Takehito Yoshida, Takehisa Yamakita, Keiko Hori, Takanori Matsui, Michio Oguro, Masahiro Aiba, Rei Shibata, Tohru Nakashizuka, Shunsuke Managi, 2021, Natural capital for nature's contributions to people: the case of Japan, Sustainability Science, the Springer Nature, English, Refereed DOI:10.1007/s11625-020-00891-x

・Wanhui Huang, Shizuka Hashimoto, Takehito Yoshida, Osamu Saito, Kentaro Taki, 2021, A nature-based approach to mitigate flood risk and improve ecosystem services in Shiga, Japan, Ecosystem Services, 50, 101309, Elsevier B.V., English, Refereed DOI:10.1016/j.ecoser.2021.101309

・Md. Mustafizur Rahman, Ram Avtar, Sohail Ahmad, Luis Inostroza, Prakhar Misra, Pankaj Kumar, Wataru Takeuchi, Akhilesh Surjan, Osamu Saito, 2021, Does building development in Dhaka comply with land use zoning? An analysis using nighttime light and digital building heights, Sustainability Science, 16, 1323-1340, Springer, English, Refereed DOI:10.1007/s11625-021-00923-0

・Marcin Pawel Jarzebski, Thomas Elmqvist, Alexandros Gasparatos, Kensuke Fukushi, Sofia Eckersten, Dagmar Haase, Julie Goodness, Sara Khoshkar, Osamu Saito, Kazuhiko Takeuchi, Töres Theorell, Nannan Dong, Fumiko Kasuga, Ryugo Watanabe, Giles Bruno Sioen, Makoto Yokohari, Jian Pu, 2021, Ageing and population shrinking: implications for sustainability in the urban century, npj Urban Sustainability, 1, 17, Springer Nature Limited, English, Refereed DOI:10.1038/s42949-021-00023-z

・Fernando Ortiz-Moya, Yatsuka Kataoka, Osamu Saito, Bijon Kumer Mitra, Kazuhiko Takeuchi, 2021, Sustainable transitions towards a resilient and decentralised future: Japan's Circulating and Ecological Sphere (CES), Sustainability Science, 16, 1717-1729, Springer, English, Refereed DOI:10.1007/s11625-021-00941-y

・Herlin Chien, Osamu Saito, 2021, Evaluating social–ecological fit in urban stream management: The role of governing institutions in sustainable urban ecosystem service provision, Ecosystem Services, 49, 101285, Elsevier B.V., English, Refereed DOI:10.1016/j.ecoser.2021.101285

・西廣淳, 2021, 生物多様性～グリーンインフラ時代の資源～, 電気ガラス, 62, 7-10, 電気硝子工業会, Japanese

・中村太士, 島谷幸宏, 大槻順朗, 関根秀明, 瀧健太郎, 西廣淳, 原田守啓, 2021, 2019 年台風 19 号（令和元年東日本台風）災害を踏まえた治水・環境への提言, 応用生態工学, 21-00014, Japanese DOI:10.3825/ece.21-00014

・西廣淳, 2021, 自然保護から持続的利用へ　ー里山グリーンインフラの取り組み, 都市計画, (349), 日本都市計画学会, Japanese

・西廣淳, 2021, 水循環健全化とグリーンインフラ推進のための体制 ー印旛沼流域を例にー, 国づくりと研修, (146), 18-21, 一般財団法人　全国建設研修センター, Japanese

・Ji Yoon Kim, Dai Koide, Fumiko Ishihama, Taku Kadoya, Jun Nishihiro, 2021, Current site planning of medium to large solar power systems accelerates the loss of the remaining semi-natural and agricultural habitats, Science of The Total Environment, 779, 146475, Elsevier B.V., English, Refereed DOI:10.1016/j.scitotenv.2021.146475

・Junya Kumagai, Mihoko Wakamatsu, Shizuka Hashimoto, Osamu Saito, Takehito Yoshida, Takehisa Yamakita, Keiko Hori, Takanori Matsui, Michio Oguro, Masahiro Aiba, Rei Shibata, Tohru Nakashizuka, Shunsuke Managi, 2021, Natural capital for nature's contributions to people: the case of Japan, Sustainability Science, the Springer Nature, English, Refereed DOI:10.1007/s11625-020-00891-x

・Wanhui Huang, Shizuka Hashimoto, Takehito Yoshida, Osamu Saito, Kentaro Taki, 2021, A nature-based approach to mitigate flood risk and improve ecosystem services in Shiga, Japan, Ecosystem Services, 50, 101309, Elsevier B.V., English, Refereed DOI:10.1016/j.ecoser.2021.101309

・古田尚也, 2021, Nbs ―生物多様性と気候変動の危機へのソリューション, グリーン・エージ, 48 (9), 22-26, 一般財団法人日本緑化センター, Japanese

・堀啓子, 松井孝典, 神山千穂, 齊藤修, 芳賀智宏, 熊谷惇也, 若松美保子, 馬奈木俊介, 2021, 新型コロナウィルス流行後の移住意向の変化～全国調査による比較分析～, 環境システム研究論文発表会講演集, 49, 145-152, 土木学会, Japanese

・Junya Kumagai, Mihoko Wakamatsu, Shizuka Hashimoto, Osamu Saito, Takehito Yoshida, Takehisa Yamakita, Keiko Hori, Takanori Matsui, Michio Oguro, Masahiro Aiba, Rei Shibata, Tohru Nakashizuka, Shunsuke Managi, 2021, Natural capital for nature's contributions to people: the case of Japan, Sustainability Science, the Springer Nature, English, Refereed DOI:10.1007/s11625-020-00891-x

・皆川明子, 2021, 伝統的な水田水域と整備済みの水田水域における魚類の繁殖と保全, 応用生態工学, 24 (1), 111-126, Japanese DOI:10.3825/ece.20-00039
・村上暁信, 2021, ICT が実現する公園の未来, 公園緑地, 82 (2), 21-24, 一般社団法人　日本公園緑地協会, Japanese
・Kaori Okui, Yoshihiro Sawada, Takehito Yoshida, 2021, “Wisdom of the Elders” or “Loss of Experience” as a Mechanism to Explain the Decline in Traditional Ecological Knowledge: A Case Study on Awaji Island, Japan, Human Ecology, 49, 353-362, the Springer Nature SharedIt, English, Refereed DOI:10.1007/s10745-021-00237-w
・Junya Kumagai, Mihoko Wakamatsu, Shizuka Hashimoto, Osamu Saito, Takehito Yoshida, Takehisa Yamakita, Keiko Hori, Takanori Matsui, Michio Oguro, Masahiro Aiba, Rei Shibata, Tohru Nakashizuka, Shunsuke Managi, 2021, Natural capital for nature’s contributions to people: the case of Japan, Sustainability Science, the Springer Nature, English, Refereed DOI:10.1007/s11625-020-00891-x
・Mifuyu Ogawa, Masashi Soga, Takehito Yoshida, 2021, Participation of diverse actors and usage of traditional and local knowledge in local biodiversity strategies and action plans of Japanese municipalities, Ecology and Society, 26 (3), 26, The Resilience Alliance, English, Refereed DOI:10.5751/ES-12612-260326
・Wanhui Huang, Shizuka Hashimoto, Takehito Yoshida, Osamu Saito, Kentaro Taki, 2021, A nature-based approach to mitigate flood risk and improve ecosystem services in Shiga, Japan, Ecosystem Services, 50, 101309, Elsevier B.V., English, Refereed DOI:10.1016/j.ecoser.2021.101309
・Naoto Shinohara, Takehito Yoshida, 2021, Temporal changes of local and regional processes in the assembly of herbivorous insect communities, Oikos, 130 (10), 1626-1635, Nordic Society Oikos, English, Refereed DOI:10.1111/oik.08350
・Yasushi Miyamoto, Gen Kanaya, Masanori Taru, Takehito Yoshida, 2021, Spatial changes in a macrozoobenthic community depend on restoration methods in historically squeezed coasts in a brackish lagoon, Ecological Research, The Ecological Society of Japan., English, Refereed DOI:10.1111/1440-1703.12268
・上原三知, 2021, 民有林と新旧住民をつなぐフットパスの設置による田園地域のローカル・グリーンインフラ, グリーン・エージ, 48 (10), 28-30, 一般財団法人　日本緑化センター, Japanese
・藤原未奈, 早崎水彩, 北村美香, 上原三知, 瀧健太郎, 牧野厚史, 嘉田由紀子, 2021, 球磨川周辺における令和 2 年 7 月豪雨犠牲者の被災要因に関する聴き取り調査, 環境社会学研究, 27, Japanese, Refereed
・平岡透, 上原三知, 小林一樹, 2021, 新型コロナウイルスによる外出自粛期のストレス増減量の推定, 産業応用工学会論文誌, 9 (2), 53-58, Japanese, Refereed DOI:10.12792/jjiiae.9.2.53
・Yu Gao, Tong Zhang, Kunihiro Sasaki, Misato Uehara, Yu Jin, Lu Qin, 2021, The spatial cognition of a forest landscape and its relationship with tourist viewing intention in different walking passage stages, Urban Forestry & Urban Greening, 58, 126975, Elsevier GmbH., English, Refereed DOI:10.1016/j.ufug.2020.126975
・中村太士, 島谷幸宏, 大槻順朗, 関根秀明, 瀧健太郎, 西廣淳, 原田守啓, 2021, 2019 年台風 19 号（令和元年東日本台風）災害を踏まえた治水・環境への提言, 応用生態工学, 21-00014, Japanese DOI:10.3825/ece.21-00014
・瀧健太郎, 中村亮太, 原田守啓, 田中耕司, 2021, 霞堤の治水機能の評価方法および流域治水計画における位置付けに関する一考察, 河川技術論文集, 27, 557-562, Japanese, Refereed DOI:10.11532/river.27.0_557
・藤原未奈, 早崎水彩, 北村美香, 上原三知, 瀧健太郎, 牧野厚史, 嘉田由紀子, 2021, 球磨川周辺における令和 2 年 7 月豪雨犠牲者の被災要因に関する聴き取り調査., 環境社会学研究, Japanese, Refereed
・Wanhui Huang, Shizuka Hashimoto, Takehito Yoshida, Osamu Saito, Kentaro Taki, 2021, A nature-based approach to mitigate flood risk and improve ecosystem services in Shiga, Japan, Ecosystem Services, 50, 101309, Elsevier B.V., English, Refereed DOI:10.1016/j.ecoser.2021.101309
・中村太士, 島谷幸宏, 大槻順朗, 関根秀明, 瀧健太郎, 西廣淳, 原田守啓, 2021, 2019 年台風 19 号（令和元年東日本台風）災害を踏まえた治水・環境への提言, 応用生態工学, 21-00014, Japanese DOI:10.3825/ece.21-00014
・中村太士, 2021, グリーンインフラ推進の意義と効果, 国づくりと研修, (146), 6-9, 一般財団法人　全国建設研修センター, Japanese
・西田貴明, 福岡孝則, 2021, 第 1 回グリーンインフラ大賞の概要, 新 都 市, 75 (5), 83-84, 公益財団法人都市計画協会, Japanese
・堀啓子, 松井孝典, 神山千穂, 齊藤修, 芳賀智宏, 熊谷惇也, 若松美保子, 馬奈木俊介, 2021, 新型コロナウィルス流行後の移住意向の変化～全国調査による比較分析～, 環境システム研究論文発表会講演集, 49, 145-152, 土木学会, Japanese

・Junya Kumagai, Mihoko Wakamatsu, Shizuka Hashimoto, Osamu Saito, Takehito Yoshida, Takehisa Yamakita, Keiko Hori, Takanori Matsui, Michio Oguro, Masahiro Aiba, Rei Shibata, Tohru Nakashizuka, Shunsuke Managi, 2021, Natural capital for nature's contributions to people: the case of Japan, Sustainability Science, the Springer Nature, English, Refereed DOI:10.1007/s11625-020-00891-x

・Yasushi Miyamoto, Gen Kanaya, Masanori Taru, Takehito Yoshida, 2021, Spatial changes in a macrozoobenthic community depend on restoration methods in historically squeezed coasts in a brackish lagoon, Ecological Research, The Ecological Society of Japan, English, Refereed DOI:10.1111/1440-1703.12268

・堀啓子, 松井孝典, 神山千穂, 齊藤修, 芳賀智宏, 熊谷惇也, 若松美保子, 馬奈木俊介, 2021, 新型コロナウィルス流行後の移住意向の変化～全国調査による比較分析～, 環境システム研究論文発表会講演集, 49, 145-152, 土木学会, Japanese

・Junya Kumagai, Mihoko Wakamatsu, Shizuka Hashimoto, Osamu Saito, Takehito Yoshida, Takehisa Yamakita, Keiko Hori, Takanori Matsui, Michio Oguro, Masahiro Aiba, Rei Shibata, Tohru Nakashizuka, Shunsuke Managi, 2021, Natural capital for nature's contributions to people: the case of Japan, Sustainability Science, the Springer Nature, English, Refereed DOI:10.1007/s11625-020-00891-x

・幸福智, 2021, グリーンインフラの実装に向けた課題と方策 ～公共性と私的性の間から生まれる課題～, 国づくりと研修, (146), 14-17, 一般社団法人　全国建設研修センター, Japanese

・北川淳子, 瀬戸浩二, 篠塚良嗣, et al., 2020, 福井県三方五湖の堆積物に記録される洪水と花粉分析から推測される植生への影響, 環境考古学と富士山, (4), 11-19, Japanese

・安藤滉一, 深町加津枝, 高橋大樹, 東幸代., 2020, 大津市南小松の絵図に基づく江戸期から明治初期までの土地利用と災害対応, ランドスケープ研究, 83 (5), 485-490, Japanese DOI:10.5632/jila.83.485

・王閏, 深町加津枝, 柴田昌三, 2020, 富山県五箇山地域における和紙産業の変遷と文化的景観, ランドスケープ研究, 83 (5), 709-714, Japanese DOI:10.5632/jila.83.709

・一ノ瀬友博, 2020, 広がるグリーンインフラ・ビジネスの可能性―従来のインフラによりグリーンの要素を組み込むアプローチ, りそなーれ, 18 (11), 7-10, りそな総合研究所, Japanese

・Kohsaka R, Tashiro A, Rogel M, Uchiyama Y., 2020, Sustaining Diverse Knowledge Systems in SEPLs: Sharing Tacit Knowledge of Apiculture and Mushroom Production with Future Generations, Sharing Ecosystem Services, 117-136, Springer, English DOI:10.1007/978-981-13-8067-9_6

・浦嶋裕子, 2020, リスクを共有する社会システムとしてのグリーンインフラを考える, 新都市, 74 (5), 66-70, Japanese

・Kohsaka R, Tashiro A, Rogel M, Uchiyama Y., 2020, Sustaining Diverse Knowledge Systems in SEPLs: Sharing Tacit Knowledge of Apiculture and Mushroom Production with Future Generations, Sharing Ecosystem Services, 117-136, Springer, English DOI:10.1007/978-981-13-8067-9_6

・Kamiyama C, Hashimoto S, Saito O., 2020, Home-Based Food Provision and Social Capital in Japan, Sharing Ecosystem Services, Springer DOI:10.1007/978-981-13-8067-9_2

・Saito O, Tatebayashi K, Kamiyama C, Matsui T., 2020, Non-market Food Provisioning Services on Hachijo Island, Japan, and Its Implications for Building a Resilient Island, Sharing Ecosystem Services, 55-86, Springer, English DOI:10.1007/978-981-13-8067-9_4

・Basu M, Saito O, Hashimoto S, Dasgupta R., 2020, Sharing Place: A Case Study on the Loss of Peri-urban Landscape to Urbanization in India, Sharing Ecosystem Services, 197-213, Springer, English DOI:10.1007/978-981-13-8067-9_10

・Saito O, Boafo YA, Abe M., 2020, Synthesis: Can Sharing Enhance the Sustainability and Resilience of Our Society?, Sharing Ecosystem Services, 233-265, Springer, English DOI:10.1007/978-981-13-8067-9_12

・西廣淳, 2020, 里山グリーンインフラ ―地形と水循環を生かした気候変動適応の試み―, 用水と廃水, 62 (7), 49-55, 株式会社　産業用水調査会, Japanese

・諏訪夢人, 西廣淳, 2020, 日本における遊水地の分布と立地特性, 応用生態工学, 23 (1), 85-97, Japanese, Refereed DOI:10.3825/ece.23.85

・Ji Yoon Kim, Yuna Hirano, Hiroki Kato, Akira Noda, Ran-Young Im & Jun Nishihiro, 2020, Land-cover changes and distribution of wetland species in small valley habitats that developed in a Late Pleistocene middle terrace region, Wetlands Ecology and Management, 28, 217-228, Springer, English DOI:10.1007/s11273-020-09707-2

・Hirano Y, Kidera N, Kondo NI, Nishihiro J., 2020, Habitat characteristics and size structure in a population of an endangered lamprey, Lethenteron sp. N, in an urbanized area of Japan, Ichthyological Research DOI:10.1007/s10228-020-00747-5

・西廣淳, 大槻順朗, 高津文人, et al., 2020, 「里山グリーンインフラ」による気候変動適応：印旛沼流域における谷津の耕作放棄田の多面的活用の可能性, 応用生態工学, 22 (2), 175-185, Japanese DOI:10.3825/ece.22.175

・Kamiyama C, Hashimoto S, Saito O., 2020, Home-Based Food Provision and Social Capital in Japan, Sharing Ecosystem Services, Springer, English DOI:10.1007/978-981-13-8067-9_2

・Monty F, Murti R, Furuta N, Ruiz R., 2020, Helping biodiversity help us: towards integrated approaches for biodiversity conservation and disaster risk reduction, Technical Paper, International Union for Conservation of Nature, English

・Iida A, Hama Y, Kitalong C., 2020, Can New and Traditional Sharing Practices Be Integrated? The Case of Use of Natural Resources in Palau, Micronesia, Sharing Ecosystem Services, 137-157, Springer, English DOI:10.1007/978-981-13-8067-9_7

・瀧健太郎, 2020, 流域治水とグリーンインフラ, 新都市, 74 (5), 61-65, Japanese

・中村太士, 2020, グリーンインフラとはなにか, 用水と廃水, 62 (7), 33-36, 株式会社　産業用水調査会, Japanese

・Saito O, Tatebayashi K, Kamiyama C, Matsui T., 2020, Non-market Food Provisioning Services on Hachijo Island, Japan, and Its Implications for Building a Resilient Island, Sharing Ecosystem Services, 55-86, Springer, English DOI:10.1007/978-981-13-8067-9_4

○**MISC**

・一ノ瀬 友博, Nov. 2020, 広がるグリーンインフラ・ビジネスの可能性 : 従来のインフラによりグリーンの要素を組み込むアプローチ (特集 実践! 中小企業のグリーンインフラ), りそなーれ, 18 (11), 7-10, りそな総合研究所, Japanese

・西廣淳, 吉田丈人, 島谷幸宏, 2020, 多様性 を受容し、自然を活用した災害に強い社会へ, 情報誌「地域人」, (58), 18-27, Japanese

・古田尚也, 2020, ポストコロナ時代の防災・減災を考える, 情報誌「地域人」, (58), 14-17, Japanese

○**Presentations**

・西田貴明, コーディネーター, グリーンインフラ官民連携プラットフォーム　オンラインセミナー#７都市のレジリエンスを強化するグリーンインフラの活用手法 ～みどりをベースとしたコミュニティ醸成～, オンライン, 09 Feb. 2021

・西廣淳, ファシリテーター, フォーラム「気候変動時代の自然環境保全と水防災」, オンライン, 20 Jan. 2021

・瀧健太郎, 流域治水対策の評価 －EcoDRR の視点からー, フォーラム「気候変動時代の自然環境保全と水防災」, オンライン, 20 Jan. 2021, Japanese

・中村太士, 災いを恵みに変えるグリーンインフラ, フォーラム「気候変動時代の自然環境保全と水防災」, オンライン, 20 Jan. 2021, Japanese

・瀧健太郎, グリーンインフラの観点から流域治水を考える, グリーンインフラ官民連携プラットフォーム 2020 公開セミナー, オンライン, 17 Dec. 2020, Japanese

・江戸時代の百間堤, 令和 2 年度大物地区文化祭, 23 Nov. 2020, Invited

・西田貴明, コーディネーター, #5 金沢 SDGs とグリーンインフラ/金沢の景観特性を踏まえた「景観×緑」のまちづくり/持続可能な都市自然プロジェクトー市民全員が庭師になろうー, オンライン, 17 Nov. 2020, Japanese

・小沢晴司, コメンテーター, ふくしまグリーン復興 推進シンポジウム～福島の自然環境を生かした『グリーン復興』の進め方～, 福島県会津若松市, 10 Nov. 2020, Japanese

・内山愉太, Access and use of green areas during the spread of COVID-19, グリーンインフラ・都市農業国際ワークショップ, オンライン, 04 Nov. 2020, English

・Ryo Kohsaka, Status and trends of green infrastructure, Green Infrastructure and urban agriculture international workshop, 04 Nov. 2020, English, Nominated symposium

・岡野隆宏, 五感の風景を取り戻すためにー小さな土木から環境との共生を考えるー, 気候変動×防災×環境教育を考える勉強会#2　～五感の風景を取り戻すためにー小さな土木から環境との共生を考える～, オンライン, 26 Oct. 2020, Japanese

・中村太士, 河川のスペシャリスト, 北海道湿地フォーラム~シッチ・スイッチ 2020~, 札幌市民交流プラザ, 24 Oct. 2020 - 25 Oct. 2020, Japanese

・岡野隆宏, 生態系を活用した防災・減災の基礎知識, 気候変動×防災×環境教育を考える勉強会#1　～Eco-DRR の基礎知識と海外事例の紹介～, オンライン, 10 Oct. 2020, Japanese

・西田貴明, with コロナ時代の自然資本を生かした地域振興のあり方, 日経地方創生フォーラム　地方創生 ～アフターコロナの新しい形～, オンライン, 05 Oct. 2020, Japanese

・西廣淳, 西田貴明, #２グリーンインフラと里山, グリーンインフラ官民連携プラットフォーム　オンラインセミナー, オンライン, 28 Sep. 2020, Japanese

・西廣淳, 西田貴明, #２グリーンインフラと里山, グリーンインフラ官民連携プラットフォーム　オンラインセミナー, オンライン, 28 Sep. 2020, Japanese

・西田貴明, #１ 横浜市におけるグリーンインフラの活用事例, グリーンインフラ官民連携プラットフォーム　オンラインセミナー, オンライン, 24 Sep. 2020, Japanese

・西田貴明, アイディアを提供してくれる人, SDGs カフェ#13 「市民全員が庭師になろう！金沢 SDGs をグリーンインフラから考える」, 国連大学　サステイナビリティ高等研究所, 08 Sep. 2020, Japanese

・一ノ瀬友博, 基調講演「過去の自然災害からグリーンインフラを考える」, 日本緑化工学会 51 回大会 岩手 Web 大会, オンライン, 05 Sep. 2020, Invited, Japanese

・Chiho Ochiai, Stone Culture and Conservation of Traditional Stone-Defense for flood: A study from Shiga prefecture, Japan, 26th Conference International Association People-Environment Studies, 23 Jun. 2020, English, Oral presentation

○**Media Coverage**

・専門家コメンテーター, 瀧健太郎, ＮＨＫ, ＮＨＫスペシャル「“最強”台風接近　どう守る　命と暮らし」, 05 Sep. 2020, Media report

Stage: Full research (FR)

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

Abbreviated Title: Aakash Project

Project Leader: HAYASHIDA Sachiko

Program 1: Societal Transformation under Environmental Change

URL: https://aakash-rihn.org/

○ Research Subject and Objectives

1. Research subject and objectives

The Indian Punjab region is situated in a semi-arid zone with low precipitation, where traditional agriculture used to consist of mixed farming: combined cultivation of wheat and raising livestock (cattle). However, the development of irrigation canals under the rule of the British government and the widespread use of tube wells provided ample water resources and changed the region into a granary. After the Green Revolution, the establishment of a double cropping system of rice and wheat supported by a purchase system at minimum support prices (MSP) fixed by the central government highlighted this region as the key to supporting India's explosive population growth.

However, excessive cultivation is causing serious environmental problems, such as deterioration in soil fertility and a decline in groundwater reserves. In a double cropping system of rice and wheat, the period between rice harvesting and wheat sowing is very short, with no time to spare, which has led to a push for the mechanization of rice harvesting. Since the 1990s, with the widespread use of combine harvesters, there has been an increase in rice straw burning because long rice stubble cut by the harvesters remains in the field after harvesting. As a result, there have been further air pollution problems caused by rice straw burning. Recently, rice straw burning was linked with worsening air quality in the densely populated National Capital Region of Delhi (Delhi-NCR).

For several years, this issue has been attracting attention as a global environmental problem of international importance, both in terms of air quality in South Asia and the health of the region's inhabitants. Also, black carbon deposits resulting from rice straw burning promote the melting of snow and ice in the Himalayas (Future Earth 2014). Furthermore, this issue has also been found to be closely related to declining groundwater levels, which has been attracting attention from the perspective of securing water resources. Currently, new policies to avoid rice straw burning are being promoted with financial support from the central government, but they have not yet led to a decrease in rice straw burning.

This study explores pathways for changing people's behaviors in order to shift to sustainable agriculture in this region. In particular, the study assesses the impact of PM2.5 emitted from rice straw burning on people's health by identifying its distribution over a wide area and arousing interest in self health among locals. We also aim to create a new business model by examining various options for the effective use of straw.

○ Progress and Results in 2020

2. Progress and results in 2020

To cope with the changing circumstances associated with the coronavirus disease 2019 (COVID-19) pandemic, the research plan was amended as follows:

(1) Instead of field research carried out by Japanese researchers, emphasis will be placed on collaboration with local members. This includes the provision of funds to research institutes and outsourcing work to contractors.

(2) To determine changes in air pollution concentration in Delhi associated with the nationwide lockdown due to the COVID-19 pandemic, a new mission called “Detection of Emission change due to Lockdown: Human Impact Studies” (DELHIS) was launched to examine anthropogenic air pollution emissions around Delhi-NCR.

(3) The initial plan was to install at least 30 compact useful particulate instrument (CUPI) sensors in the Punjab region; however, because of the abovementioned restrictions, local collaborators will be asked to carry out installation.

(4) An additional researcher will be hired by the Research Institute for Humanity and Nature (RIHN) to investigate and analyze the ongoing transformation of Indian society.

Details of these changes to the research plan are as follows.

2.1 Questionnaire survey in all districts in the state of Punjab

In June 2020, a contract was made with the Center for International Projects Trust (CIPT), a non-profit organization in India, in order to conduct a questionnaire survey in all 22 districts of the state of Punjab. Two villages per district and 50 households per village were selected, for a total of 2,200 households. Questions covered information such as the financial status of each household, their agricultural practices, and their health awareness. Amid the COVID-19 pandemic, CIPT was able to conduct surveys with more than half of the households by the end of October 2020, with the aim of collecting data from all 2,200 households by the end of February 2021. Several online meetings were also held among RIHN staff and project members in both Japan and Punjab to discuss the situation in each of these Punjab villages.

The questionnaire also included information on rice straw burning in 2019; however, because individual farmers often fear punishment over certain agricultural practices, village representatives were interviewed anonymously.

2.2 Survey of farmer behaviors and analysis of fires detected in 2020

Two assistants working with Prof. Vatta at Punjab Agricultural University (PAU) in Ludhiana were hired to conduct a survey with surrounding farming villages. An interim report was subsequently obtained as a result of online meetings between RIHN and PAU. In terms of transformation into agricultural activities, particularly noteworthy was that lockdown, which placed restrictions on the movement of people, caused a decrease in the number of migrant workers. Although agricultural work in Punjab is now largely mechanized, rice planting is still carried out manually, and the labor shortage resulted in dispersed rather than concentrated timing of rice planting, as well as an increase in the cultivation of early maturing varieties and Basmati. As a result, the timing of rice harvest in the fall of 2020 is also expected to be dispersed, as is that of rice straw burning. Compared with the period through 2019, satellite observation of fires detected between September and November 2020 suggest that (1) the timing of detected fires was earlier, with more fires in September than in previous years; (2) the burning period was prolonged; and (3) the overall number of fires was higher in Punjab, but not in Haryana. Based on these findings, we are preparing an interdisciplinary paper that integrates the salient features of the fire detection results and the questionnaire survey results.

2.3 Temporary improvements in air pollution in Delhi as a result of lockdown (mission DELHIS)

On March 23, 2020, a nationwide lockdown was implemented in India. As a result, in Delhi-NCR, which has been cited as the most heavily polluted city in the world, the skies turned blue. Urgent and intensive research under the DELHIS mission was therefore initiated on April 1, 2020 with the help of Working Group 2 (WG2) in order to investigate this abrupt change in air pollution. Semi-weekly meetings were held for 4 months, resulting in the publication of four peer-reviewed papers, and one additional papers that were under review as of May 2021. An abrupt decrease in PM2.5 levels in Delhi was also reported, and this finding was reported nationwide. Consideration was also given to the resulting air quality following these abrupt changes. Anthropogenic nitric dioxide (NO2) emissions were also quantitatively estimated by comparing NO2 concentrations before and after lockdown (Misra et al., 2021), and the findings were also published in Aakash newsletters (https://aakash-rihn.org/en/newsletter/) and in articles on the RIHN website (https://www.chikyu.ac.jp/rihn_e/covid-19/).

2.4 Installation of CUPI sensors

According to the original research plan, the Japanese researchers involved in developing the CUPI sensors were to install the devices onsite. However, because of lockdown restrictions, local collaborators have been asked to complete this work instead. CUPI sensors are now being sent to each research group on a priority basis. One group belongs to Aryabhatta Research Institute of Observational Sciences (ARIES) in Nainital, where the plan is to investigate the transport of particulate matter based on differences in elevation of different monitoring sites located on the slopes of the Himalayan foothills. Air pollutants resulting from rice straw burning, notably black carbon, are attracting considerable attention because they are depositing on snow in the Himalayas, thereby promoting melting. This is an important effect of rice straw burning on climate change, and significant results are therefore expected.

○ Future Themes

3. Future subject

Owing to the spread of COVID-19 infection, travel from Japan has been restricted. As a result, it has been impossible to conduct field surveys in India. It is expected that travel to India will also not be possible in FY2021. In addition, as of May 2021, there are more than 400,000 new daily cases of COVID-19 infection in India, and our local research collaborators are unable to conduct any on-site activities. Frequent changes in the infection situation in India make it difficult for us to formulate a research plan. However, we intend to make the best use of literature review, data analysis, and simulations to carry out our research.

WG1 will analyze the questionnaires conducted in 2020 to find out the causes of rice straw burning by farmers; WG2 will improve anthropogenic emissions estimates and conduct air pollution simulations in Delhi as a continuation of the 2020 research; WG3 will collaborate with WG2 to install 30 CUPIs in Punjab in order to observe PM2.5 and chemical species. WG3 will collaborate with WG2 to set up 30 CUPI units in Punjab to observe PM2.5 and chemical species. The distribution of air pollutants will be estimated based on these simulations and observations, and health risks will be assessed based on these estimates.

○Project Members

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	NISHIMURA Yuichiro	(Nara Women's University・Associate Professor・Survey of behavioral modification of farmers)
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REKHA Yadav	(Guru Nanak Dev University・Graduate Student・Ambient Air Quality Monitoring)

●Achievements

○Books etc

・林田佐智子, Mar. 2021, Single work, シリーズ三角点 ウィズコロナの時代の地球観測～衛星から人間活動が見える時代に～, 月刊測量、日本測量協会

○Published Papers

・Trang Thi Quynh Nguyen; Wataru Takeuchi; Prakhar Misra; Sachiko Hayashida, 24 Feb. 2021, Technical note: Emission mapping of key sectors in Ho Chi Minh City, Vietnam, using satellite-derived urban land use data, Atmospheric Chemistry and Physics, 21 (4), 2795-2818, Copernicus GmbH, English, Refereed, Scientific journal DOI:10.5194/acp-21-2795-2021

・Prakhar Misra; Ryoichi Imasu; Sachiko Hayashida; Ardhi Adhary Arbain; Ram Avtar; Wataru Takeuchi, 11 Sep. 2020, Mapping Brick Kilns to Support Environmental Impact Studies around Delhi Using Sentinel-2, ISPRS International Journal of Geo-Information, 9 (9), 544-544, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/ijgi9090544

・Surendra K. Dhaka; Chetna; Vinay Kumar; Vivek Panwar; A. P. Dimri; Narendra Singh; Prabir K. Patra; Yutaka Matsumi; Masayuki Takigawa; Tomoki Nakayama; Kazuyo Yamaji; Mizuo Kajino; Prakhar Misra; Sachiko Hayashida, Aug. 2020, PM2.5 diminution and haze events over Delhi during the COVID-19 lockdown period: an interplay between the baseline pollution and meteorology, Scientific Reports, 10 (1), Springer Science and Business Media LLC, English, Refereed, Scientific journal DOI:10.1038/s41598-020-70179-8

・Joseph Ching and Mizuo Kajino, Jul. 2020, Rethinking Air Quality and Climate Change after COVID-19, International Journal of Environmental Research and Public Health, 17 (14), E5167, English, Refereed DOI:doi: 10.3390/ijerph17145167

・Masayuki Takigawa; Prabir K. Patra; Yutaka Matsumi; Surendra K. Dhaka; Tomoki Nakayama; Kazuyo Yamaji; Mizuo Kajino; Sachiko Hayashida, Apr. 2020, Can Delhi's Pollution be Affected by Crop Fires in the Punjab Region?, SOLA, 16, 86-91, METEOROLOGICAL SOC JAPAN, English, Refereed, Scientific journal DOI:10.2151/sola.2020-015

○MISC

・犬伏 和之, Jan. 2021, 土壌の視点から見る一酸化二窒素(N2O)発生のプロセスと実現可能な緩和, 地球環境研究センターニュース, 31 (10), 9-12, Japanese

・Joseph Ching and Mizuo Kajino, Aug. 2020, Rethinking Air Quality and Climate Change after COVID-19, Newsletter Aakash, 3

・Sachiko Hayashida and Prakhar Misra, Jun. 2020, How might the unexpected change in air quality caused by the lockdown in India change people's future behaviour?, Newsletter Aakash, 2

・Prakhar Misra, Apr. 2020, Clean Air and Imagined Sustainability:The case of India, Newsletter Aakash, 1

○**Presentations**

・Prakhar Misra, COVID-19 lockdown impacts on NOx emission: top-down estimation over North India, 29th IIS forum "Earth observation, disaster monitoring and risk assessment from space", 12 Mar. 2021, 11 Mar. 2021 12 Mar. - 2021, English, Oral presentation

・Sachiko Hayashida, Detection of air pollution reduction due to a change of anthropogenic activities after COVID-19 pandemic over south Asia, 29th IIS forum "Earth observation, disaster monitoring and risk assessment from space", 12 Mar. 2021, 11 Mar. 2021 12 Mar. - 2021, English, Oral presentation

・Tomoki Nakayama, Panel discussion for future collaboration on planetary health, Kickoff symposium NIES/NU/RIHN on planetary health, Online, 19 Feb. 2021, 18 Feb. 2021 19 Feb. - 2021, English, Nominated symposium

・Sachiko Hayashida, A pathway of social transformation toward clean air, public health and sustainable agriculture - a case in North India., Kick-off Symposium NIES/NU/RIHN on Planetary Health, 18 Feb. 2021, 18 Feb. 2021 19 Feb. - 2021, Invited, Japanese, Nominated symposium

・Tomoki Nakayama, Atmospheric environmental research using small PM2.5 and gas sensors in Nagasaki and developing countries, Kickoff symposium NIES/NU/RIHN on planetary health, Online, 18 Feb. 2021, 18 Feb. 2021 19 Feb. - 2021, Japanese, Oral presentation

・Kaho Nitta; Sachiko Hayashida, Intercomparison of TROPOMI and OMI tropospheric NO2 over South Asia, The 69th Conference (2020 Autumn Conference) of the Remote Sensing Society of Japan, 22 Dec. 2020, 21 Dec. 2020 22 Dec. - 2020, Japanese, Oral presentation

・Misra, P; M. Takigawa; P. Khatri; S. K. Dhaka; A. P. Dimri; K. Yamaji; M. Kajino; W. Takeuchi; R. Imasu; P. K. Patra; S. Hayashida, Detection of significant change in nitrogen oxides concentration and emission during COVID-19 lockdown in North India, AGU Fall Meeting 2020 (Online), 15 Dec. 2020, Dec. 2020 Dec. - 2020, English, Poster presentation

・Nguyen, T. H; S. Hayashida; P. Misra; P. Khatri; Y. Matsumi; T. Nakayama; S. K. Dhaka; A. P. Dimri, Detection of Change in the Aerosol distribution over North-West India during the Covid-19 Lockdown period, AGU Fall Meeting 2020 (Online), 07 Dec. 2020, Dec. 2020 Dec. - 2020, English, Poster presentation

・Hayashida, S; P. Misra; K. Nitta; T. H. Nguyen; P. K. Patra; M. Takigawa; P. Khatri; S. K. Dhaka; A. P. Dimri; K. Yamaji; M. Kajino; W. Takeuchi, Reduction of air pollutants over North-West India observed from space during the Covid-19 lockdown period, AGU fall meeting 2020, 07 Dec. 2020, Dec. 2020 Dec. - 2020, English, Poster presentation

・Hayashida, S, “Aakash: An interdisciplinary study toward clean air, public health and sustainable agriculture: The case of crop residue burning in North India.” Earth Observations of Crop Burning and Air Pollution over India, A Community Response Forum, NASA, 12 Nov. 2020, Nov. 2020 Nov. - 2020, Invited, English, Invited oral presentation

・松見豊、林田佐智子, 中山智喜, 荒木晶, 上田佳代, Prabir Patra, 須藤重人及び総合地球環境学研究所 Aakash プロジェクトの日本・インドのチームメンバー, 小型で安価な大気計測装置の開発とインド北部の稲藁燃焼が現地やデリーの大気質・健康へ及ぼす影響解明の計画, 第 25 回大気化学討論会, Online, 12 Nov. 2020, 11 Nov. 2020 13 Nov. - 2020, Japanese, Oral presentation

・Pradeep Khatri, Facts learned from COVID-19 lockdown; which pollution sector is affected the most?, 5th International conference on mountains in the changing world, Kathmandu, Nepal, (Online), 08 Oct. 2020, 08 Oct. 2020 09 Oct. - 2020, Invited, English

・Pradeep Khatri, Studies of aerosols, ozone, and clouds from sky radiometer: Algorithms and observation results, Aerosol air quality, climate change and impact on water resources and livelihoods in greater Himalayas, Naintal, India (Online), 14 Sep. 2020, 14 Sep. 2020 16 Sep. - 2020, Invited, English, Invited oral presentation

・Sachiko Hayashida, Concept of mission DELHIS: why we want to estimate the anthropogenic emission of air pollutants in Delhi and how, Northern India Air Pollution Meeting, 23 Aug. 2020, 23 Aug. 2020 24 Aug. - 2020, Invited, English, Nominated symposium

・Inubushi, K., Recent Rice Research and Future Climate Change, International Webinar on Advances in Rice Researches for Food Security and Environmental Sustainability, International Webinar on Advances in Rice Researches for Food Security and Environmental Sustainability, Online, 13 Aug. 2020, English

○**Social Contribution**

・Soil perspective – Processes & mitigation, 国立環境研究所地球環境研究センター, Global NitrousOxide Budget 2020and our food system, GCP Tsukuba and NIES Public Forum, 29 Oct. 2020, Lecture

・PM2.5 で捉える地球環境問題, 中山智喜, 対馬グローカル大学, 03 Dec. 2020, Online

○**Media Coverage**

・GNDU to install portable ambient air quality sensor, The Tribune, Dec. 2020, Paper

・Study tries to assess brick kilns' impact on air, Times of India, Dec. 2020, Paper

・Lockdown slashed air pollution. Can we sustain the gains?, The Federal, Oct. 2020, Paper

・Delhi air clean in lockdown but high pollution seen for few hours after dawn - JNU-DU study, The Print, Aug. 2020, Paper

Program 2: Fair Use and Management of Diverse Resources

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●Achievements

○Books etc

・脇田, 健一; 谷内, 茂雄; 奥田, 昇, Dec. 2020, ラグナ湖流域における人口の急速な増加と開発――流域管理の課題（4-1）, Contributor, 流域ガバナンス：地域の「しあわせ」と流域の「健全性」, xi, 454p, 図版[4]p, 京都大学学術出版会, Japanese, ISBN: 9784814003037

○Published Papers

・Tamura Norie, Hein Mallee, Dec. 2020, Japan's Fishery Forest Movement as a Sustainability Transition, Asia Pacific Society for Agricultural and Food Ethics Conference 2020 Proceedings, APSAFE, English, Refereed

・Hein Mallee, Oct. 2020, A Time for Transdisciplinarity, Current Opinion in Environmental Sustainability, 46, 16-17

・Kunihiko Kobayashi; Eiji Domon; Kazuo Watanabe, Aug. 2020, Interaction of scientific knowledge and implementation of the Multilateral Environment Agreements in relation to digital sequence information on genetic resources, Frontiers in Genetics: ELSI in Science and Genetics, 1-11, English, Refereed, Scientific journal

・Kobayashi Kunihiko, Jun. 2020, Balance of the public interest between conservation and utilization of resources, Japanese journal of tropical agriculture, 13 (1), 1-7, Japanese, Refereed, Scientific journal

・Boone, Christopher G., Steward T. A. Pickett, Gabriele Bammer, Kamal Bawa, Jennifer A. Dunne, Iain J. Gordon, David Hart, Jessica Hellmann, Alison Miller, Mark New, Jean P. Ometto, Ken Taylor, Gabriel, 31 May 2020, Preparing interdisciplinary leadership for a sustainable future, Sustainability Science, Springer DOI:https://doi.org/10.1007/s11625-020-00823-9

○MISC

・Kunihiko Kobayashi, May 2020, The legal system concerning seeds through discussions on the revision of the Plant Variety Protection and Seed Act (Written in Japanese), Global Net, (354 号), Japanese, Invited, Introduction commerce magazine

○Presentations

・小林邦彦, Comment and Question to presentation by Amber, 生物遺伝資源 国際ワークショップ【第２部】「生物多様性条約におけるデジタル配列情報(DSI)の課題」, 09 Dec. 2020, 09 Dec. 2020 09 Dec. - 2020, Invited, Japanese, Nominated symposium

・Kunihiko Kobayashi, Changes in the "public interest" regarding exceptions to plant variety protection, 4 th Asia Pacific Society for Agricultural and Food Ethics Conference, 03 Dec. 2020 16 Dec. - 2020, English, Oral presentation

・Kunihiko Kobayashi, Current status of negotiations on DSI in the multilateral agreement, 第 7 回 アジア植物遺伝資源(PGRAsia) シンポジウム, 農研機構遺伝資源センター PGRAsia 事務局, 17 Nov. 2020, 17 Nov. 2020 17 Nov. - 2020, Invited, Japanese, Nominated symposium

・Kunihiko Kobayashi, digital sequence information and sharing system, Regional Expert Consultation on Agriculturally Important Microorganisms – Virtual, Asia-Pacific Association of Agricultural Research Institutions, 28 Oct. 2020, 28 Oct. 2020 28 Oct. - 2020, Invited, English

・小林邦彦; 西川芳昭; 松島憲一, Agricultural strategy of sub-national governments from the viewpoint of variety registration based on the PVP Law, The 70th Annual Meeting of the Association of Regional Agriculture and Forestry Economics, 11 Oct. 2020, 10 Oct. 2020 10 Oct. - 2020, Japanese, Oral presentation

Stage: Full research (FR)

Project Name: Mapping the environmental impact footprint of cities, companies, and households

Abbreviated Title: Supply Chain Project

Project Leader: KANEMOTO Keiichiro

Program 2: Fair Use and Management of Diverse Resources

Key Words: Supply chain, MRIO, environmental impacts

○ Research Subject and Objectives

A recent study in Nature showed that up to a third of biodiversity loss is driven by trade, and a body of other studies have identified the same pattern for GHG emissions, air pollution, and other environmental ills. Many environmental impacts worldwide are ultimately driven by consumption in developed countries. Considerations of remote responsibility, ecological footprint, and scope 3 emissions are now a standard part of the environmental policy discussion at many levels, from the UNFCC to individual businesses and households.

Providing better information to buyers and decisionmakers can be a powerful way to reduce environmental pressures worldwide. The life-cycle analysis (LCA) and supply chain analysis tools (multi-regional input-output (MRIO) models) used to analyze these remote effects in detail have benefited from significant advances in the past years, with improving models and, more recently, the link of economic models to spatial (GIS) maps that locate more precisely how global supply chains link to particular emissions and biodiversity hotspots.

However, while existing work sketches out the broad picture, it still falls short of being detailed enough to help with many specific decisions. Existing supply chain analyses operate at the resolution of countries and broad economic sectors. In practice decision-makers at these levels often only have limited effective economic and judicial power. Many individuals, businesses, and local governments are seeking to reduce their total environmental footprint, but existing models are either too coarse resolution to be truly useful or require expensive and time-consuming modifications to be useful for

informing specific decisions.

Unlike most studies, which focus on environmental emissions and international trade, this is the first study to clarify the effect of global supply chains on environmental impacts. Further, in addition to countries and regions, we will estimate the environmental footprint of cities, companies, and households. The proposed project would be a major contribution and can be expected to be of high interest to businesses, policymakers, NGOs, sustainability consultants, and researchers around the world. The project team has deep experience in supply chain analysis and environmental impact assessment.

○ Progress and Results in 2020

In 2020, we estimated carbon footprint of Japanese and Indian cities. In Indian study, we show the eradication of extreme poverty does not conflict with ambitious climate change mitigation in India. However, our analysis suggests CF reduction policies within India need to target high-expenditure households which are responsible for nearly seven times the carbon emissions than low-expenditure households (living on $1.9 consumption a day). In Japanese study, we construct household CF inventories for 1172 Japanese cities using detailed consumer expenditure data and a Japanese domestic multi-regional input-output (MRIO) model. We identify the consumption activities which city policymakers can target to reduce CF. We observe a strong concentration of household CF in a few cities in Japan: 40% of the total Japanese CF is driven by 143 cities.

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●Achievements

○Awards

・Highly Cited Researcher in the field of Cross-Field, Keiichiro Kanemoto, Clarivate Analytics, 2020

・Young Researcher’s Award, Keiichiro Kanemoto, The Institute of Life Cycle Assessment, Japan, 2020

○Published Papers

・Jemyung Lee; Oliver Taherzadeh; Keiichiro Kanemoto, 2021, The scale and drivers of carbon footprints in households, cities and regions across India, Global Environmental Change, 66, 102205-102205, Elsevier BV, English, Refereed, Scientific journal DOI:10.1016/j.gloenvcha.2020.102205

・Keiichiro Kanemoto; Yosuke Shigetomi; Nguyen Tien Hoang; Keijiro Okuoka; Daniel Moran, 2020, Spatial Variation in Household Consumption-Based Carbon Emission Inventories for 1,200 Japanese Cities, Environmental Research Letters, 15 (11), 114053, IOP Publishing, English, Refereed, Scientific journal DOI:10.1088/1748-9326/abc045

○Presentations

・重富陽介; 金本圭一朗; 山本裕基; 近藤康之, 日本のマイクロ消費データを用いた家計カーボンフットプリントの推定, 日本 LCA 学会, Mar. 2021, Japanese, Oral presentation

・金本圭一朗; 重富陽介; Nguyen Tien Hoang; 奥岡桂次郎; Daniel Moran, 日本の 1,200 都市の消費ベースの排出量の推計, 日本 LCA 学会, Mar. 2021, Japanese, Oral presentation

・Nguyen Tien Hoang; Keiichiro Kanemoto, Spatio-temporal changes in global deforestation footprints over 15 years, The 14th EcoBalance, Mar. 2021, English, Oral presentation

・Jemyung Lee; Oliver Taherzadeh; Keiichiro Kanemoto, The scale and drivers of carbon footprints in households, cities and regions across India, The 14th EcoBalance, Mar. 2021, English, Oral presentation

Program 3: Designing Lifeworlds of Sustainability and Wellbeing

Program Director: SAIJO Tatsuyoshi

○ Research Subject and Objectives

Our “lifeworlds” are composed of the physical spaces and socio-cultural spheres of our everyday lives. They are continually reproduced, reimagined, and evolving through an interactive and reflexive relationship with society, culture, and nature. Program 3 proposes research aimed at illuminating reciprocal linkages between diverse rural and urban lifeworlds and contributing to the solution of sustainability problems by working with various societal partners such as governments, companies, and citizen groups. Special emphasis is placed on envisioning sustainable futures that improve wellbeing and gauging their feasibility.

Missions

More than 60% of the world’s population resides in Asia and the regions surrounding it. Over a third of global environmental activity occurs there. Within these places lies an incredible diversity of cultures, histories, societies, economies, livelihoods, and ecologies. It is also affected by myriad global and local environmental issues such as population increase, air, water, soil, and coastal pollution, increasing greenhouse gas emissions, and biodiversity loss. At the same time, growing wealth disparity, social isolation, rising levels of poverty, and the disappearance of traditional culture and knowledges are emerging.

Within these processes, the combination of migration between the countryside and cities, and rural depopulation with urban concentration is accompanied by rapid socio-cultural change, resource over-use, and the deterioration of the natural environment. Both urban and rural lifeworlds are disintegrating rapidly. Consequently, through the reconstruction of the lifeworld concept and by highlighting the reciprocal linkages between rural and urban spaces, Program 3 designs lifeworlds of sustainability and wellbeing and co-creates concrete pathways for their realization.

In these same places, diverse world-views and experiences related to the ways in which humanity and nature can exist have accumulated. Pre-existing, yet latent, diverse socio-cultural elements, such as livelihood styles, lay knowledge, conflict resolution strategies, and the vitality of the people themselves can be called upon to address problems and help to chart a course toward possible future societies. Program 3 builds upon these experiences and knowledges of human-nature interaction to propose concrete changes needed to achieve a sustainable society.

Through the transformations and frameworks leading to sustainable urban and rural lifeworld design, the existing economic systems, markets, and political decision making systems will also require fundamental shifts in the way they are conceived. However, Program 3 will not investigate top-down approaches to system change, but will work with local residents, government officials, companies, citizen groups and other various stakeholders to propose sustainable alternatives and gauge their feasibility.

In order not to run the risk of developing proposals that are only applicable to specific regions or sites, Program 3 will aim for research results that are generalizable, but retain their diversity.

○Project Members

SAIJO Tatsuyoshi (Research Institute for Humanity and Nature・Specially Appointed Professor)
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●Achievements

○Published Papers

・Arpana Pandit; Yoshinori Nakagawa; Raja Rajendra Timilsina; Koji Kotani; Tatsuyoshi Saijo, 23 Mar. 2021, Taking the Perspectives of Future Generations as an Effective Method for Achieving Sustainable Waste Management, Sustainable Production and Consumption, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.spc.2021.03.019

・Yukako Inoue; Toshiyuki Himichi; Nobuhiro Mifune; Tatsuyoshi Saijo, 08 Mar. 2021, People prefer joint outcome prosocial resource distribution towards future others, Scientific Reports, 11 (1), Springer Science and Business Media LLC, Refereed, Scientific journal DOI:10.1038/s41598-021-84796-4

・Keishiro Hara; Yoko Kitakaji; Hiroaki Sugino; Ritsuji Yoshioka; Hiroyuki Takeda; Yoichi Hizen; Tatsuyoshi Saijo, 18 Feb. 2021, Effects of experiencing the role of imaginary future generations in decision-making: a case study of participatory deliberation in a Japanese town, Sustainability Science, Springer Science and Business Media LLC, Refereed, Scientific journal DOI:10.1007/s11625-021-00918-x

・Yoshinori Nakagawa; Tatsuyoshi Saijo, 13 Feb. 2021, A visual narrative for taking future generations' perspectives, Sustainability Science, Springer Science and Business Media LLC, Refereed, Scientific journal DOI:10.1007/s11625-021-00916-z

・Mostafa E. Shahen; Koji Kotani; Tatsuyoshi Saijo, 28 Jan. 2021, Intergenerational sustainability is enhanced by taking the perspective of future generations, Scientific Reports, 11 (1), Springer Science and Business Media LLC, Refereed, Scientific journal DOI:10.1038/s41598-021-81835-y

・Zhang Jingchao; Koji Kotani; Tatsuyoshi Saijo, 05 Jan. 2021, Are societies becoming proself? A topographical difference under fast urbanization in China, Environment, Development and Sustainability, Springer Science and Business Media LLC, Refereed, Scientific journal DOI:10.1007/s10668-020-01195-x

・Yoshinori Nakagawa; Tatsuyoshi Saijo, Dec. 2020, Can individuals caring little about future generations serve as their representatives?, Futures, 124, 102626-102626, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.futures.2020.102626

・Raja R. Timilsina; Koji Kotani; Yoshinori Nakagawa; Tatsuyoshi Saijo, Oct. 2020, Concerns for future generations in societies: A deliberative analysis of the intergenerational sustainability dilemma, Journal of Behaviral and Experimental Economics, Refereed

・Yoshinori Nakagawa; Tatsuyoshi Saijo, Sep. 2020, Future Design as a Metacognitive Intervention for Presentism, Sustainability, 12 (18), 7552, English, Refereed, Scientific journal

・Mostafa E. Shahen; Wada Masaya; Koji Kotani; Tatsuyoshi Saijo, 30 Aug. 2020, Motivational factors in intergenerational sustainability dilemma: A post-interview analysis, Sustainability, 12 (17), 7078-7078, MDPI AG, Refereed, Scientific journal DOI:10.3390/su12177078

・Tatsuyoshi Saijo, 11 Aug. 2020, Future Design: Bequeathing Sustainable Natural Environments and Sustainable Societies to Future Generations, Sustainability, 12 (16), 6467-6467, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/su12166467

・Tatsuyoshi Saijo, 2020, Future Design: An Introduction, Future Design: Incorporating Preferences of Future Generations for Sustainability Editors: Saijo, Tatsuyoshi (Ed.), English

・中川善典; 西條辰義, 2020, ポスト・コロナのフューチャー・デザイン, 小林慶一郎・森川正之編『コロナ危機の経済学』, 日本経済新聞社, Japanese, Invited

・Yayan Hernuryadin; Koji Kotani; Tatsuyoshi Saijo, 2020, Time Preferences of Food Producers: Does 'Cultivate and Grow' Matter?, Land Economics, 96 (1), 132-148, English, Refereed, Scientific journal

・J. Konow; T. Saijo; K. Akai, 2020, Equity versus Equality: Spectators, Stakeholders and Groups, Journal of Economic Psychology, 77, 102071, English, Refereed, Scientific journal

Stage: Full research (FR)

Project Name: Lifeworlds of Sustainable Food Consumption and Production: Agrifood Systems in Transition

Abbreviated Title: FEAST Project

Project Leader: Steven R. McGreevy

Program 3: Designing Lifeworlds of Sustainability and Wellbeing

URL: http://feastproject.org/

Key Words: agrifood transition, sustainable food consumption and production, foodshed mapping, participatory backcasting, Asian food ethics, social change, social practice

○ Research Subject and Objectives

a) Problem, background, and objectives

Agrifood systems in Asia face a myriad of sustainability challenges related to declining environmental health (GHG, resource overuse, pollution, soil fertility), loss of diversity (biological, cultural, knowledge), and the deterioration of small-scale farming due to globalizing market forces. On the consumption side, over-reliance on globalized food flows limit consumer agency and decrease food security and sovereignty, while diets shift to more processed food, creating public health impacts (rise in diabetes, obesity).

Research on food system sustainability presents two broad approaches: 1) maintaining existing food systems but increasing the efficiency of production and maintenance of agricultural natural resources, eliminating loss/waste from the system, and eliminating meat from our diets (see Springmann et al. 2018); 2) complete system transformation to distributed, regional/local, short supply chains centered around agroecological production, limited international trade, sufficiency, and absolute reductions in energy and material throughput. Many mainstream discussions on food system sustainability call for the maintenance option, which, if acted on seriously, has the potential to cut carbon emissions in half (see Exponential Roadmap in Falk et al. 2019, EAT-Lancet in Willet et al. 2019) in a short amount of time. FEAST argues that such approaches, whilst moving in the right direction, don't do enough to change the underlying structures of production, distribution, consumption, and food governance to reach the 1.5 degree climate change goals and will ultimately be unviable in a highly unpredictable climate and post-carbon world. FEAST research aligns with complete food system transformation and aims for reimagining and re-creating regional, small-scale food systems designed for a post-growth world and food lifeworlds that re-value food as a commons.

In recognition of this urgent need for transition to post-growth food systems, FEAST research seeks to understand how agrifood transitions emerge and take root, and the role of existing and alternative institutions, social practices, and economic arrangements in advancing sustainable food transitions.

The FEAST Project takes a transdisciplinary approach to explore the realities and potential for sustainable agrifood transition at sites in Japan, Thailand, Bhutan, and China with significance for the entire region. We analyze patterns of food consumption, food-related social practices and their sociocultural meanings, and consumer-based agency to change deeply-held cultural dimensions. We map and evaluate food systems specific to national, regional, and local production, distribution, and consumption contexts. Building upon that work, we engage in action research to partner with stakeholders to vision desirable and plausible futures and to initiate food citizenship-oriented experiments and actions. FEAST co-designs and co-produces socially-robust knowledge and mechanisms that challenge mainstream economic thinking on consumption and growth, work to redefine the notion of long term food security at the regional level, and engage society in a public debate on our relationship with food and nature that questions shared beliefs and values to re-acclimatize consumers as citizens and co-producers in the foodscapes around them.

FEAST will produce four types of knowledge relevant to catalyzing agrifood transitions: 1) contextual knowledge of contemporary national, regional, and local food systems (production, distribution, and consumption); 2) co-produced visions of alternative food consumption and production practices and municipal transition plans identifying research, education, and policy needs; 3) scenario and modeling-based knowledge to inform coinciding deliberation and planning processes; 4) and knowledge related to intervention strategies (niche incubation, social learning and market transparency) on the execution and effectiveness of civic food processes toward policy and market-oriented information-providing tools (eco-label, food LCA smartphone app). A significant portion of the research is transdisciplinary in nature and many final outputs are geared for public use —including collective visioning and creation of new, empowered institutions to implement food policy. These outputs enable the project to have real-world impact beyond the five-year research period.

Contribution to Program

FEAST has introduced several key concepts to Program 3 in accordance to the five keywords of the program: sustainability, well-being, lifeworlds, design, and futures. Sustainability and well-being are intimately linked notions. FEAST research has made a

critical distinction between efficiency-driven/technological-fix approaches to achieving sustainability and well-being and the necessity of absolute reductions in overall consumption and production to achieve the satisfaction of human needs by interrogating the idea of sufficiency (sufficient local production for local consumption at the regional level, meeting needs through diverse, agrarian lifestyles aiming at sufficiency at the level of the lifeworld). We examined lifeworlds through analyzing current and future social practices related to food. The materials, meanings, and competencies needed to perform a practice are inescapably bundled with other practice performances and policy for sustainable food futures must acknowledge this reality effectively. FEAST designs participatory foresight methods that led to new policies and local institutions of food governance. A focus on imaginative, critical, and transformative food futures has driven the development of new methods to foster futures literacy and anticipatory governance.

FEAST has also contributed to the development of the idea of "lifeworlds of sustainability" and why it is essential for increasing agency to increase public buy-in of critical sustainable futures. At the 11th RIHN International Symposium, McGreevy presented on "Lifeworlds as pedagogy for socio-cultural change: sensuous food futures, practices, and meaning in everyday experience." The paper highlights the building blocks needed to "design lifeworlds" in the form of affect, embodied knowledge, and social practice (McGreevy 2017).

FEAST helps to achieve P3's mission by exploring the human and social dimensions of existing and alternative lifeworlds in both rural and urban spheres as they relate to food. FEAST also looks closely at the future and how social change and planning (design) processes can be co-initiated in society. Food systems are inherently linked with how urban-rural economic relationships are structured and will need to be changed to meet sustainability goals.

○ References

McGreevy, Steven R. 2017. Lifeworlds as pedagogy for socio-cultural change: sensuous food futures, practices, and meaning in everyday experience. Conference Proceedings for RIHN 11th International Symposium: "Asia's Transformations to Sustainability: Past, Present and Future of the Anthropocene".

Falk, J. et al. Exponential Roadmap 1.5. Future Earth. Sweden (September 2019).

Springmann, M. et al. 2018. Options for keeping the food system within environmental limits. Nature 562: 519–525.

Willet, W. et al. 2019. Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems. Lancet. 393 (10170): 447-492.

○ Progress and Results in 2020

1) Project Results

We summarize WG and overall project results.

WG1: Food system mapping & modeling

WG1 maps food-relevant land use for planning and food policy development, compiles data and statistics on food flows and impacts, and creates models to better understand how interventions in the food system can elicit transitions in a sustainable direction. Using satellite imagery, the current condition and potential for urban agriculture in Kyoto City was analyzed and saw a 10% decrease over a ten-year period, which has policy implications for the future of urban agriculture (Oda et al. 2018). Teaming with Global Footprint Network, WG1 found that higher ecological footprints (EF) are associated with urbanization, aging, and high income in Japan, and that food EF is driven by processed food. Decentralization/deurbanization and local food strategies can reduce the EF of food and should be pursued at the city and regional level (Tsuchiya et al. 2021). Preliminary results from modeling evaluating the ecological footprint of future diet scenarios (vegetarian, low energy ag. production, 1970s Japan) shows a smaller EF for diet typical to 1970s Japan (fish and vegetable heavy) than a vegetarian one.

WG2: Collaborative approaches to food citizenship

WG2 is interested in understanding how food transitions at the municipal scale can be catalyzed and governed and does so through an action research approach. Direct collaborations with food system actors in Kyoto, Kameoka, Nagano, and Noshiro and FEAST researchers continues to take place on a monthly basis to co-develop food policy and actions. Over 1250 structured engagements hours (meetings, facilitation, planning, dissemination, discussion, etc.) have been spent with stakeholders across all sites. New creative and exploratory methods for collective and critical envisioning of food futures and policies were tested at sites in Japan and found innovative (McGreevy et al. 2021, in press). In Bangkok, participatory practice-oriented urban food policy was envisioned and transition plans suggested to the Ministry of Public Health (Kantamaturapoj et al. 2021, under review). Our action research confirmed the need for time to build trust amongst actors and the need for alternative, cross-sectoral institutions to integrate diverse policy needs (McGreevy et al. 2021 forthcoming). Three new food policy organizations were developed in partnership with FEAST and direct policy engagement was achieved in five instances across the sites.

WG3: Agroecological strategies in policy and practice

WG3 focuses on the dimensions of agroecological food production and the potential of scaling-up agroecology in Japan, the working conditions on agroecological farms, the ecological health and stewardship of pollinators (bees), food system localization strategies in developing country contexts, farm-household production and consumption change in Bhutan, and COVID-19 responses. New methodology to assess the agroecological status of farms based on agroecological principles was developed and used successfully in Japan (Nicholls et al. 2020). Scaling up organic and agroecological production in Japan is hampered by a lack of training and support (McGreevy & Tanaka in revision). After extensive and diverse research on beekeeping and urban pollinators, we catalogued a range of household products that contain neonics (banned in the EU), policy gaps that hamper efforts to protect urban pollinators, and broad public support for bees (Shinkai et al. 2020, Shinkai et al 2020). The potential of local food valorization may need tourists to lead local residents in valuing local foods, such as coffee, in rural Thailand (Pongkijvorasin & McGreevy 2021,in press). Strict Buddhist teachings on animal consumption have decreased domestic livestock production, but demand for meat consumption has “exported” the sin of animal butchering to India (Kobayashi 2019). COVID-19 had a negative impact on coastal fisheries as sales decreased, increasing calls for fishery system change in Japan (Tamura 2020) and organic farmers showed autonomy in the face of COVID-19 when compared to conventional farmers (Tamura et al. 2021, forthcoming).

WG4: Supporting tools for sustainable regional production

The WG4 team’s guidelines for using biochar as a carbon-offsetting field amendment were accepted and incorporated into the J-Credit system, allowing farmers to generate income through carbon sequestration in agricultural fields. Toolkits and guides for farmers and municipal officers on implementing open eco-branding schemes that will take advantage of the J-Credit system are being finalized. Experiments showed above average willingness by the Chinese public to consume “low-carbon” agricultural products (Zhang et al. 2019) and soil-biochar experimentation developed evidence of nutrient rich compost (Zhang et al. 2016).

WG5: Transparent food chains

The database detailing the environmental, social, and health impacts of over 1.6 million processed food products was merged with FEAST generated data on fresh products (1,882 items) and incorporated into the Ecokana app. The app has been released on the App Store and Google Play. Negotiations are underway with major environmental NPO in Japan to partner in managing the app in the future.

WG6: Informal food practices and the imaginary

Spatial mapping of the informal food economy is included in a new website called "Minna de Tsukuru Chiiki no Shoku". The role of informal food practices in creating sustainable, alternative food systems and in composing wild food baskets in a post-growth Japan is the subject of a book scheduled to be published open access in 2021 with Australian National University Press.

As of March 30th 2021, FEAST research has yielded 81 peer-reviewed publications, garnered over 430 citations, given over 300 academic presentations and public lectures, organized 155 seminars/workshops/conference sessions, and been featured in the media over 150 times. We still have many more publications in the process of being released. We’ve successfully deployed many public outputs through transdisciplinary processes.

2) Project Organization

The research structure of FEAST did not change drastically over the course of the project: six working groups (WG) worked in interdisciplinary teams on their thematic areas, while cross-cutting initiatives bridged the work on the whole. All WGs shifted to publishing research results this year, as was the plan from the beginning. New undertakings were organized when new sources of funding were awarded: five FEAST researchers at RIHN have active Kaken grants and are pursuing personal research in conjunction with FEAST’s overall research trajectories. FEAST also worked closely with Core Projects (Open Team Science, Isotopes) and other RIHN teams (Future Earth, Terra School). Due to the COVID-19 pandemic, new research was initiated on the economic and socio-cultural impact of the pandemic for farmers, fisherfolk, and consumers in Japan and other countries. One planned event for this year was to host an assembly of stakeholders from the four Japan action research sites to share their insights and launch a network of food policy councils. This will need to take place after the pandemic has subsided or virtually, most likely after FEAST has concluded.

3) Outputs

FEAST produced a total of 18 research papers, authored or was featured in 65 print and online media publications, and gave 34 presentations at major academic conferences and lectures for the public this year. Five co-authored books and over twenty papers detailing FEAST research are slated to be released in the coming months. Selected outputs are below:

-How do we use scenarios to learn about, play with, and experiment in critical futures? FEAST co-authored a paper on the role of soft-scenario methods to elicit critical perspectives in food policy-linked foresight processes. The paper integrated examples from many action research sites and initiatives as part of the project and will be published in the Journal of the Society of Environmental Science, Japan.

-Do local residents value local food in developing countries? A survey and choice experiment (n=320) in Thailand found that tourists value local coffee more than residents, which has implications for a food localization valorization strategy in developing countries as local food must be "embedded" in place (Pongkijvorasin & McGreevy 2021, in press)

-What is Japan's food ecological footprint and how does it relate to food localization and decentralization strategies? Teaming with Global Footprint Network, FEAST found that higher EF are associated with urbanization, aging, and high income, and that food EF is driven by processed food. Decentralization/deurbanization and local food strategies can reduce the EF of food and should be pursued at the city and regional level (Tsuchiya et al. 2021).

-How do we assess the agroecological status of farms? Partnering with UC-Berkeley scholars Clara Nicholls and Miguel Altieri, we used fieldwork data accumulated in Japan to develop a principle-based assessment tool for farmers and researchers to assess the degree to which farms are agroecological (Nicholls et al. 2020). Follow-up research will expand the assessment to include the social sustainability of farms as agroecological "lighthouses."

-How will COVID-19 impact long-term sustainability of food systems? FEAST initiated a number of major COVID19 related initiatives. Surveys showed the economic vulnerability of small-scale fisherfolk relying on niche-based markets and the need for systemic change in the seafood system. Farmers in Italy and other high case countries were hit harder economically than Japanese farmers, although organic farmers demonstrated higher degrees of autonomy than non-organic farmers. Surveys are planned to compare how consumers were affected by the pandemic in five countries with partners from the Future Earth SSCP KAN initiative on COVID-19 and Sustainability Transitions.

-In what ways can we support urban pollinators and maintain bee-keeping culture? The FEAST bee team has identified a number of household insect products that contain harmful neonicotinoid chemicals and examined the legal frameworks that obscure the true numbers of hobby and professional bee-keepers in Japan. They also produced a video on the traditional beekeeping culture in Wakayama that has over 24,000 views on YouTube.

Outputs for the public

-Biochar and other forms of agricultural soil carbon sequestration were officially entered into the J-Credit scheme to allow for farmers to accrue carbon credits for sale in the J-Credit carbon offsetting system.

-FEAST developed a future school lunch exhibit with artists to illustrate four school lunch scenarios in Japan from four future scenarios (high-low degree of climate change v. high-low degree of global food trade). The exhibit was featured in newspaper articles and will be made into an online exhibit due to COVID-19 restrictions.

-In line with fieldwork and data analysis of informal food practices and non-mainstream food distribution, researchers mapped over 14,398 sites within Japan that, when networked, create an alternative food economy to the mainstream system. This network is being captured on an interactive website: Minna de Tsukuru Chiiki no Shoku.

-Through the support and guidance of the FEAST project, civic food networks have been developing at sites in Japan through action research and foresight methods. In Obuse Town, workshops were held to develop visions of ideal future school lunches and policy pathways to reach those visions. The Kyoto Food Policy Council has been working on issues related to organic production, urban agriculture, and residential compost networks while being included in policy discussions on municipal agriculture.

-The Eko-ka-na app has been released to the public, has been featured in a number of newspaper articles, and negotiations are underway with societal partners on the future of the app. Even without promotion, the app has close to 200 downloads.

○ References

Kanatamaturapoj, K. Steven R. McGreevy, Natapol Thongplew, Motoki Akitsu, Joost Vervoort, Astrid Mangnus, Kazuhiko Ota, Christoph D. D. Rupprecht, Norie Tamura, Maximillian Spiegelberg, Mai Kobayashi, Sittidaj Pongkijvorasin, Suwit Wibulpolprasert. Constructing practice-oriented participatory policy for sustainable everyday urban food futures in Bangkok." Futures(under review).

Kobayashi, Mai.To eat or not to eat: Bhutan's changing landscape of meat consumption and sin. 2019 Hong Kong Conference of the Global Research Forum on Sustainable Production and Consumption, 2019,06,26-06,29, Hong Kong.

McGreevy, Steven R., Norie Tamura, Christoph D. D. Rupprecht, Kazuhiko Ota, Mai Kobayashi, Maximilian Spiegelberg. 2021. Learning about, playing with, and experimenting in the future through soft scenarios: Directions for food policy. Kankyo Kagaku.

McGreevy, Steven R., Motoki Akitsu, Yoshimitsu Taniguchi. 2021. Food Policy: Exploring the Future through Food. Iwanami Shoten Publishers. (expected late-Spring 2021) (in Japanese)

McGreevy, Steven R. & Keiko Tanaka. Nurturing future farmers: Comparative analysis of beginning farmer support systems in Japan and the United States. Journal of Agriculture, Food Systems, and Community Development. (under review)

Nicholls, Clara, Miguel Altieri, Steven R. McGreevy, Mai Kobayashi, & Norie Tamura. 2020. Is this really an agroecological farm?A principle-based assessment tool for farmers. AgroSur 48, 2: 29-41.

Oda, Kimisato, C.D.D. Rupprecht, Kazuaki Tsuchiya, Steven R. McGreevy. 2018. Urban Agriculture as a Sustainability Transition Strategy for Shrinking Cities? Land Use Change Trajectory as an Obstacle in Kyoto City, Japan. Sustainability 10, 4.

Pongkijvorasin, Sittidaj & Steven R. McGreevy. Loving local beans? The challenge of valorizing local food in highland Thailand. Environment, Development, and Sustainability. (in press)

Shinkai, Rika, Maximilian Spiegelberg, C.D.D. Rupprecht & Norie Tamura. 2020. The Importance of Collecting Basic Data on Beekeeping in Japan: Issues and Ideas for Reform Based on an Analysis of Differences between Prefectural Application Forms for Beekeeping Registrations. Sustainable Livestock Production and Human Welfare 74(11): 921-929. (in Japanese)

Shinkai, Rika & MaximilianSpiegelberg. 2020. Daily Products Containing Neonicotinoid Insecticides. Tsuchi to Kenko Journal 501 (October/November Issue): 16-21. (in Japanese)

Tamura, Norie. 2020,10. COVID-19's Impacts on the Fishery. Techno-Ocean News (76):4-6. (in Japanese)

Tamura, Norie, Steven R. McGreevy, Mai Kobayashi, Simona Zollet. Comparative analysis of Japanese farmers response to COVID-19 outbreak. Journal of Rural Studies. (forthcoming)

Tsuchiya, Kazuaki, Katsunori Iha, David Lin, Adeline Murthy, Selen Altiok, Christoph D. D. Rupprecht, Steven R. McGreevy. Impacts of urbanization and aging on the Ecological Footprint of Japan's 47 prefectures. Journal of Cleaner Production. (under review)

Zhang, Jining, Guifa Chen, Huifeng Sun, Sheng Zhou, Guoyan Zou. 2016,01. Straw Biochar Hastens Organic Matter Degradation and Produces Nutrient-rich Compost. Bioresource Technology 200 :876-883.

Zhang, J.N., S. Zhou. 2019. Urban Residents' Willingness to Pay and the Influencing Factors for Low Carbon Agricultural Products: An Empirical Analysis on Low-carbon Vegetables in Shanghai. Research of Agricultural Modernization 40(1):89-97. (in Chinese with English abstract) (reviewed)

○ Future Themes

At the close of the FEAST project, we have a few key conclusions to share:

1) All the evidence points to dramatic changes needed in the food system and in society at large: Reaching the 1.5-degree Paris climate goals, protecting biodiversity, and securing functioning ecosystems into the future requires systemic change to food systems and also society and our economies. There is no easy, technical or efficiency-based fix that will deliver the impact we need. Our research on food's EF, spatial mapping of foodsheds, and modeling of sustainable diets has made this clear. New values, radically different ways of provisioning our societies, economic models that reject growth, and lifestyles that embrace sufficiency are desperately needed.

2) The challenge of integrated policy development and governance: Many countries, Japan included, are trapped in governance models and policy making processes that are not adequate to the sustainability challenges we face today. Our action research with food system actors and municipal governments has made this strikingly clear. New organizations/institutions to bridge the siloed-structure of governance and new meaningful participatory policy development processes are a step in the right direction.

3) Envisioning transition and transformation of lifeworlds: Conveying the magnitude of today's environmental crises and how society will need to change to be sustainable is incredibly difficult for the public. Through our diverse research on desirable futures and social-practice oriented policy development, we have directed the focus of change to our everyday lifeworlds as a way to surmount these challenges. Lifeworlds-focused work is relatable and can entice our imaginations in ways abstract global-scale transition narratives cannot.

4) Academics as change-agents: Researchers voices and expertise are needed to actively engage in action for sustainable social change. It is no time to hide behind objectivity.

Further details pertaining to these conclusions and FEAST research results are included in our book published by Showado, A feast of our making — participatory futures of food and agriculture (Tamura, Rupprecht, McGreevy 2021).

Tamura, Norie, Christoph D. D. Rupprecht, Steven R. McGreevy (eds.) (2021) A feast of our making — participatory futures of food and agriculture. Showado (昭和堂). (forthcoming in March) (In Japanese)

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●Achievements

○Books etc

- Shinkai, Rika 2021 Beekeeping History of Japanese Honeybee (Apis cerana japonica). Shaokang Huang et al (ed.) Standard Methods in Apis cerana Research. The COLOSS BEEBOOK, IV.
- Shinkai, R., Rupprecht, C.D.D. and Spiegelberg, M. 2021 Present status of Apis cerana japonica. Shaokang Huang et al. (ed.) Standard Methods in Apis cerana Research.. The COLOSS BEEBOOK, IV.
- Kobayashi, Mai and Rekha Chhetri (ed.) 2021,03 Zachum, Feast, Gochisou: Life around the Bhutanese plate. , Photobook of Bhutanese food

○Published Papers

- McGreevy, S.R., Tamura, N., Rupprecht, C.D.D., Ota, K., Kobayashi, M and Spiegelberg, M. 2020 Learning about, Playing with, and Experimenting in Critical Futures through Soft Scenarios: Directions for Food Policy. *Kankyokagaku* . (in Japanese) (reviewed).
- Muiderman, Karlijn, Aarti Gupta, Joost Vervoort, Frank Biermann 2020,09 Four approaches to anticipatory climate governance: Different conceptions of the future and implications for the present. *WIREs Climate Change* . DOI:10.1002/wcc.673 (reviewed).
- Nicholls, C. I., Altieri M., Kobayashi, M., Tamura. N., McGreevy S. R. and Hitaka, K. 2020,11 Assessing the agroecological status of a farm: a principle-based assessment tool for farmers. *Agro Sur* . DOI:10.4206/agrosur.2020.v48n2-04 (reviewed).
- Pongkijvorasin, Sittidaj & Steven R. McGreevy 2020,12 Loving local beans? The challenge of valorizing local food in the Thai Highlands. *Environment, Development, and Sustainability* . (reviewed).
- Rupprecht, Christoph D.D., Joost Vervoort, Chris Berthelsen, Astrid Mangnus, Natalie Osborne, Kyle Thompson, Andrea Urushima, Maya Kóvskaya, Maximilian Spiegelberg, Silvio Cristiano, Jay Springett, Benedikt Marschuetz, Emily Flies, Steven McGreevy, Laÿna Droz, Martin Breed, Jingchao Gan, Rika Shinkai, Ayako Kawai 2020,12 Multispecies Sustainability . *Global Sustainability* . DOI:10.1017/sus.2020.28 (reviewed).
- Sardeshpande, M., Rupprecht, C.D.D. and Russo, A. 2020,11 Edible urban commons for resilient neighbourhoods in light of the pandemic. *Cities* . DOI:10.1016/j.cities.2020.103031 (reviewed).
- Zollet, Simona, Luca Colombo, Paola De Meo, Davide Marino, Steven R. McGreevy, Nora McKeon, Simona Tarra 2021,02 Towards Territorially Embedded, Equitable and Resilient Food Systems? Insights from Grassroots Responses to COVID-19 in Italy and the City Region of Rome. *Sustainability* 13(5). DOI:10.3390/su13052425 (reviewed).

○Presentations

- Akitsu, Motoki Grappling at Food Policy in Kyoto: Experiences and Future Prospects. The 15th RIHN International Symposium: Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-growth Future, 2021.01.13-2021.01.16, Online.
- Kantamaturapoj, Kanang Constructing Practice-oriented Participatory Policy for Sustainable Everyday Urban Food Futures in Bangkok. The 15th RIHN International Symposium: Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-growth Future, 2021.01.13-2021.01.16, Online.
- Kawai, Ayako Being cared by vegetables: understanding Japanese farmers' seed saving practices from care ethics point of view. The 4th Asia Pacific Society for Agricultural and Food Ethics Conference 2020 "Supporting Sustainable Food Systems: Quality Food and Ethical Consumption", 2020.12.03-2020.12.16, Online.
- Kobayashi, Mai Love thy Robber: Exploring the Informal Food Economy of Unattended Food Stands. The 15th RIHN International Symposium: Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-growth Future, 2021.01.13-2021.01.16, Online.
- Kobayashi, Mai Exploring the coexistence of diversification, mainstreaming and commodification of Meat production and consumption in Bhutan. The 4th Asia Pacific Society for Agricultural and Food Ethics Conference 2020 "Supporting Sustainable Food Systems: Quality Food and Ethical Consumption", 2020.12.03-2020.12.06, Online.
- Kondo, Chika and Maximilian Spiegelberg Mapping Complexity behind Minnanoshoku (Everyday Food): Uncovering Japan's informal, wild, alternative, and local food practices within urban/rural foodscapes. The 4th Asia Pacific Society for Agricultural and Food Ethics Conference 2020 "Supporting Sustainable Food Systems: Quality Food and Ethical Consumption", 2020.12.03-2020.12.16, Online.

- Mangnus, Astrid Evaluating Futures for Food Systems Change: From Imagination to Transformation. The 15th RIHN International Symposium: Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-growth Future, 2021.01.13-2021.01.16, Online.
- McGreevy, Steven R. and Ashley Colby From "locking-down" to "locking-in": glocal dialogues and a glimpse into changes to everyday life and social practices. Future Earth Systems of Sustainable Consumption and Production Knowledge-Action Network Virtual Mini-Conference COVID-19 and Sustainability Transitions, 2020.05.27, Online.
- Niles, Daniel and Abe Ken-ichi The Cultural Dimensions of Sustainable Agriculture. The 15th RIHN International Symposium: Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-growth Future, 2021.01.13-2021.01.16, Online.
- Ota, Kazuhiko, Akito Inoue and Yuka Fujieda Representation of the Commons in a Serious Game. KYOTO 2020: IASC-RIHN Online Workshop on Commons, Post-development and Degrowth in Asia, 2020.07.20-2020.07.22, Online.
- Ota, Kazuhiko, Joost Vervoort, Astrid Mangnus, Yukihiro Tsujita, Kazutoshi Iida, Masahiko Murakami, Takeshi Ishikawa and Steven McGreevy Serious Board Game Jam: Collaborative Visualization of Social Issues and Scientific Knowledge. International Conference on Game Jams, Hackathons, and Game Creation Events (ICGJ 2020), 2020.08.24-2020.08.25, Online.
- Rupprecht, C. D. D. Edible green infrastructure or edible landscapes?: A case for co-stewardship in multispecies commons. The 4th Asia Pacific Society for Agricultural and Food Ethics Conference 2020 "Supporting Sustainable Food Systems: Quality Food and Ethical Consumption", 2020.12.03-2020.12.16, Online.
- Tamura, Norie and Hein Mallee Japan’s Fishery Forest Movement as a Sustainability Transition. The 4th Asia Pacific Society for Agricultural and Food Ethics Conference 2020 "Supporting Sustainable Food Systems: Quality Food and Ethical Consumption", 2020.12.03-2020.12.16, Online.
- Tanaka, Keiko Our Collective Future: Building Sustainable Agrifood Systems and Resilient Rural Communities. Lessons from the US and Japan. The 15th RIHN International Symposium: Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-growth Future, 2021.01.13-2021.01.16, Online.
- Tsuchiya, Kazuaki Designing the Sustainable Foodshed of Japan: Insights from Ecological Footprint Modeling and Local Food System Mapping. The 15th RIHN International Symposium: Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-growth Future, 2021.01.13-2021.01.16, Online.
- Vervoort, Joost Using Gaming to Develop Public Capacities for Anticipatory Governance. The 15th RIHN International Symposium: Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-growth Future, 2021.01.13-2021.01.16, Online.
- Zhang, JN., Zhou S., Sun HF., Zhang XX., Wang C. The Annual carbon dynamics response to biochar amendment over a 3-year intensive vegetable field. The 6th International Conference of Low Carbon on Asia & Beyond [Virtual Conference], 2020.09.01-2020.09.03, Online. (Awarded "Best Oral Presentation")
- Kishimoto-Mo, Ayaka Soil carbon sequestration through biochar amendments in farmland in Japan: History, potential and promoting schemes. Global Research Alliance - the Croplands Research Group Webinar , 2020.10.28, Online, Invited.
- McGreevy, Steven R. Transitioning to 1.5-degree food systems. Global Nitrous Oxide Budget 2020 and our food system, 2020.10.29, Online, Invited.
- McGreevy, Steven R. Ethical implications of transitioning to 1.5-degree Food Systems. The 4th Asia Pacific Society for Agricultural and Food Ethics Conference 2020 "Supporting Sustainable Food Systems: Quality Food and Ethical Consumption", 2020.12.03-2020.12.16, Online, Invited.
- McGreevy, Steven R. and Norie Tamura Japan's COVID-19 experience and what it means for agriculture, the countryside, and sustainability. Countryside and Community Research Institute Seminar- Food Citizenship plus Food in Japan during COVID-19, 2020.08.25, Online, Invited. (in Japanese)

Stage: Full research (FR)

Project Name: The Sanitation Value Chain: Designing Sanitation Systems as Eco-Community-Value System

Abbreviated Title: Sanitation Project

Project Leader: YAMAUCHI Taro

Program 3: Designing Lifeworlds of Sustainability and Wellbeing

URL: http://www.chikyu.ac.jp/sanitation_value_chain/

Key Words: resources oriented sanitation; value chain

○ Research Subject and Objectivesa) Problem, background, and objectives Global environmental problem discussed in the project

The word “sanitation” refers to the provision of facilities and services for the safe disposal and resource recovery of human urine, feces, and wastewater. Sanitation is essential for promoting health, preventing environmental pollution, conserving ecosystems, and recovering and recycling resources. Therefore, it can be said that sanitation is closely related to such current global issues as poverty, urban slums, conservation of ecosystems, and resource management. In the developing world, the population is growing rapidly, especially in urban slums, and there is high child mortality and poverty issues. It has been reported that as of 2015, 2.4 billion people were still using unimproved sanitation facilities, including 946 million people who were still practicing open defecation (UN, 2015). On the other hand, depopulation and aging are progressing, especially in the rural parts of the developed world, and the financial capabilities of municipalities, who manage sanitation systems, are becoming weaker and weaker.

Key question of the project

The questions “How can we handle the waste from 10 billion people in the future?” and “How can we achieve the water and sanitation targets in the sustainable development goals (SDGs)?” are global environmental problems that need to be solved.

Working hypotheses of the research

Hypothesis 1: Current sanitation issues are caused by the dissociation between the value that they provide and the values of individual people and/or communities.

Hypothesis 2: Sanitation technologies cannot work well without a support system. The mismatch between the prerequisites of technologies and local characteristics makes sanitation issues more complicated.

Key concept—Sanitation value chain

The project proposes a sanitation value chain, which entails the following basic policies: 1) Put the values of people and communities at the center of the discussion, and prepare a sanitation system to drive this value chain; 2) design the sanitation system by focusing on direct incentives for individual users and communities; 3) recognize that a sanitation system is an integrated system with social and technical units; and 4) design the sanitation system by making a good match between social characteristics and the prerequisites of technologies.

Why a value chain?

We strongly believe that 1) the planning and installation of infrastructures such as sanitation systems is nothing, but planning and installing a value chain is more valuable; and 2) because of the weakening of municipalities, the prerequisites of the current management model for water and sanitation systems will be no longer be met in the future.

b) Methodology Four research steps to achieve the goal

In Topic 1 (Life), field and literature surveys are performed to 1) analyze the values and happiness of people; 2) understand norms relating to human excreta in the current situation, as well as historical changes; 3) re-evaluate the value of sanitation systems; 4) analyze the mismatch between the prerequisites of sanitation technologies and the region-specific characteristics of humans and communities by gathering failed cases; 5) understand historical changes in the sanitation systems of target areas; and 6) match the values of people and communities to the value provided by sanitation systems. In Topic 2 (Technology), four research activities are planned: 1) Summarizing the prerequisites of sanitation technologies; 2) re-evaluating the value of sanitation systems; 3) analyzing the mismatch between the prerequisites of sanitation technologies and the region-specific characteristics of humans and communities by gathering failed cases; and 4) developing required technologies. In Topic 3 (Co-creation), the following three steps will be adapted: 1) identifying stakeholders and understanding the structure of the values of people and communities using a field survey; 2) analyzing the hierarchy and structure of stakeholders’ value chain and evaluating their mutual affinity; and 3) developing the co-creation process. In Topic 4 (Visualization), the main activity is developing

visualization methods for our concept and research results using various media and techniques. We strongly recognize the importance of visual images in the trans-disciplinary (TD) approach.

Field study

The project will involve field studies in 1) the rural area of Ishikari River Basin, 2) rural and urban areas in Burkina Faso, 3) an urban slum in Indonesia, and 4) an urban slum in Zambia.

c) Goals and expected results

The goals of this research project are 1) to propose that a sanitation value chain is relevant to both developing and developed countries; 2) to design several pilot studies demonstrating the significance of societal, academic, and professional involvement in the co-creation of this value chain; and 3) to contribute to the establishment of a new interdisciplinary academic foundation regarding sanitation. Examples of the sanitation value chain will be demonstrated and co-created at the pilot study sites.

d) Project organization and membership

For project management, a coordination group has been organized. Four research teams have also been organized.

e) Current status of research on resource oriented sanitation

Research groups in Switzerland, Germany, Sweden, Norway, and Finland are studying resource recovery-type sanitation. The specialist groups of the International Water Association (IWA) jointly held an international conference (S2SMALL) in October 2017. Also, the topics of the 6th Dry Toilet conference (DT2018) held in August 2018 were as follows: research on the safe use of excreta and/or urine; social and cultural aspects of sustainable sanitation; sanitation and nutrient recycling in business; cross-organizational cooperation and co-creation; hi- and low-tech solutions in urban/rural environments; “ecosan” meets the water-food-energy nexus; promoting sustainable sanitation and nutrient recycling among different stakeholders; and community engagement. Seven members of the project including the leader, sub-leader, and core members contributed to DT2018. The four research topics included in the project can make a big contribution to global research on sanitation.

f) Contribution to the program

Program 3 Goal

Our “lifeworlds” are composed of the physical spaces and socio-cultural spheres of our everyday lives. They are continually reproduced, reimagined, and evolved through an interactive and reflexive relationship with society, culture, and nature. Program 3 proposes research aimed at illuminating the reciprocal linkages between diverse rural and urban lifeworlds and contributing to solving sustainability problems by working with various societal partners such as governments, companies, and citizen groups. Special emphasis is placed on envisioning sustainable futures that improve wellbeing and gauging their feasibility.

Contribution to Program 3

In the mission statement of Program 3, there is the following message: “Through the reconstruction of the lifeworld concept and by highlighting the reciprocal linkages between rural and urban spaces, Program 3 designs lifeworlds of sustainability and wellbeing and co-creates concrete pathways for their realization.” We think that sanitation is an essential system for lifeworlds. Sanitation contributes to human public health, material/resource recycling by society, and environmental pollution/ecosystem management. In our project, sanitation value chains for not only rural areas but also for urban areas are discussed. When it comes to the sanitation value chain for urban areas, we design material and value flows between rural and urban spaces.

Our Program 3 mission statement also says that “Pre-existing, yet latent, diverse socio-cultural elements, such as livelihood styles, lay knowledge, conflict resolution strategies, and the vitality of the people themselves can be called upon to address problems and help to chart a course toward possible future societies. Program 3 builds upon these experiences and knowledge of human-nature interaction to propose concrete changes needed to achieve a sustainable society.” We could not succeed in installing a practical scale sanitation system in Burkina Faso as part of the SATREPS project, and we think that the reason for this was the lack of analysis of the human and social aspects. In our project, we carefully examine the values of people and communities, as well as norms related to human excreta at our field sites.

The mission statement includes the following message: “Program 3 will not investigate top-down approaches to system change, but will work with local residents, government officials, companies, citizen groups and other various stakeholders to propose sustainable alternatives and gauge their feasibility.” The co-creation of a “sanitation value chain” is one of the important points in our sanitation project.

We will contribute to the mission by aiming to design lifeworlds; showing solutions; proposing a social transition; realizing the co-creation of a sanitation value chain with diverse stakeholders; and establishing an academic foundation for sanitation. Our

program director, Dr. Saijo, has proposed the concept of “future design,” and he stresses the importance of a “virtual future generation” in design. Our sanitation project has started the discussion on how to include the “virtual future generation” in the design process of a sanitation value chain.

○ Progress and Results in 2020

(1) Achievement 1: Establishing the concept　In the previous year (FR3), we constructed a framework consisting of three realms (health and well-being, materials and socio-culture). During this FR4 period, we formulated the Sanitation Triangle model for the holistic approach on sanitation and promoting the inter-disciplinarity by the focus on the interaction between every two realms. We are preparing the academic book (in English) that proposes the model on sanitation to show the inter-dynamics between the engineering, health sciences, and the social sciences and the humanities, for publication in the next year (FR5).

(2) Achievement 2: Sanitation for women　Issues regarding sanitation and hygiene for girls and women are closely related to not only their health, but also human rights, dignity and security. Although these are considerably important issues in this context, they have been overlooked. We have started to conduct research on female sanitation and hygiene in our field sites in India, Indonesia and Cameroon. Furthermore, we also collaborated another research group consisted of cultural anthropologists on Menstrual hygiene management and held a co-organized workshop especially focused on the situation in Indonesia.

(3) Achievement 3: Visualizing the impact of WASH on health improvement　Motivation to invest in sanitation and generate behavioral change regarding sanitation improvement represents a fundamental challenge. Assuming the lack of such motivation stems from the invisible impact or role of sanitation on the health of local people, we conducted the following research projects in peri-urban communities in Lusaka, Zambia: 1) Quantified the impact unintentional fecal exposure to humans, with a focus on fecal transmission via flies and fecal ingestion through fomites, such as cups and dishes, which can be easily contaminated under poor sanitary conditions; 2) Reexamined a participatory methodology of the self-visualization of fecal contamination around living environments by local youths, through which people can visually see the contamination in survey form, learn what and how much is contaminated and design improvement actions based on their data by online interviews.

(4) Achievement 4: Sharing the distributed local knowledge in Ishikari　In the Ishikari River basin, residents manage the small-scale water systems. While its advantages are the low cost and the prevention of free riding, the knowledge of water sources and pipeline networks are distributed among a handful of individuals. To keep the systems, we interviewed them about their knowledge of water sources and pipeline networks in collaboration with the science club of a local high school and incorporated this distributed local knowledge into a map with GIS. In the process of action research with the science club, it is also important to recognize the network of former students who maintain the infrastructure in the local community. These visualized maps were shared with local actors, and the science club received an award from the Hokkaido Science and Culture Association for this project.

(5) Achievement 5: Progress in meta-studies　A core team member, a cultural anthropologist, published a paper on the idea of meta-studies, which consider various disciplines as different cultures. He discussed his experience of joint research in the sanitation project as a form of auto-ethnography. Starting from this paper, and collaborating with the cultural anthropologist and the expert of science communication, they developed the idea of meta-studies as insiders. We set up the session in the international online conference for the possibility of meta-studies through anthropologists’ auto-ethnography in collaboration with the anthropologists in RIHN and other countries.

○ Future Themes

Topic 1 Life group: 1) Preparation of the book, "Sanitation from Socio-Cultural Perspective," as a series of “Sanitation Studies”; 2) the 3rd workshop on Menstrual Hygiene Management in collaboration with another research group; 3) a workshop for developing the meta-studies in link with the anthropology of sciences and business ethnography.

Topic 2 Technology group: 1) analysis of the prerequisites and material flow of sanitation technologies; 2) developing a new methodology for identifying exposure pathways of pathogens; 3) analysis of a sanitation value chain of sludge reuse for agriculture in Ishikari; 4) developing new sanitation technologies with different prerequisites as a disinfection method for solid excreta and urine; 5) Presentation of future sanitation technology through integration of diverse studies.

Topic 3 Co-creation group: 1) try to explore the possibility of research in each field under the situation of COVID-19; 2) preparation of the book, "Co-creation in Sanitation," as a series of "Sanitation Studies"; 3) elaboration of the typology as a basis for comparative analysis of each field as a case study of co-creation.

Topic 4 Visualization group: 1) archiving videos of events to be shared among researchers in remote areas; 2) Carrying out action research utilising visualisation in Zambia by remote and online; and 3) conducting a qualitative analysis of the communication among researchers of different disciplines on visual representation.

Indonesia team: 1) demonstration and evaluation through the introduction of composting toilets at the elementary school in our field research site, Kiaracondong: 2) collaboration and co-creation between the elementary school, residents, community-based organizations, waste collection workers, and farmers; 3) organizing an international symposium in collaboration with LIPI (the Indonesian Institute of Sciences; our counterpart institute in Indonesia); 4) publication of Picture Book in cooperation with RIHN and LIPI during the past 15 years of collaborative research achievements; 5) a field survey on garbage workers in Kiaracondong; 6) Implementation of Sani-Camp, a project on sanitation between Indonesian (Junior High School) and Japanese children/ students.

Ishikari team: A local community-based water management system has already been co-created along with various local actors. Based on those experiences and that network, we aim to: 1) continue the collaboration with the local high school students in the action research; 2) overview the sanitation problem in all the Hokkaido including the Ishikari river basin; 2) share the results with other local actors; 3) discuss future sanitation value networks with local actors.

Burkina Faso team: Given the number of incidents in the main frontier of Mali and Niger by jihadists, we have decided to postpone our research activities in Burkina Faso for the moment. Therefore, we will temporally join the Cameroon team to complement their research. If the situation of security and COVID-19 in Burkina Faso improves, we aim to: 1) hold a workshop at Kongoussi in Bam prefecture to share the results regarding the quality and quantity of the harvest on a pilot farm settled in Ronguin village for comparing efficiency between human excrete and animal compost; 2) conduct interviews with 10-20 households in several villages concerning toilet use and treatments in anthropological views, especially regarding the number of toilets, toilet space, positioning of toilets and the frequency of treatment; 3) participate in observations regarding sludge management in Ouagadougou and Kongussi (continuing research).

Zambia team: We seek a people's centred approach to the investment in sanitation and realise behavioural change regarding sanitation improvement in collaboration with a local youth group called 'Dziko Langa'. We also aim to establish a resources-oriented fecal matter treatment/reuse system based on the sanitation value chain, as well as the following goals: 1) Creating a system for sustainable activities by Dziko Langa; 2) the digital storytelling action research by remote; 3) proposition of an improved workshop version of risk visualization and App prototype version; 4) evaluation on the sustainability of Diziko Langa from the perspective of Co-creation; 5) analysis on the sanitation conditions and fecal spread; 6) comparison of primary and secondary schools students between public and private schools on sanitation facilities/environment, health and nutritional status of children, and economic situation of families; 6) Menstrual Hygiene Management of girls and women in Lusaka.

Cameroon team: Depending the situation of COVID-19 in Cameroun, we plan to carry out the field survey directly or remotely 1) conduct interviews with sanitation facilities, NGOs and workers at private companies who remove faecal sludge in urban areas (Yaoundé); 2) trial a pilot farm aimed at the cultivation of fruit trees using toilet traces in local cities (Bertoua and others) and surrounding areas; 3) conduct a survey on sanitation for the Baka hunter-gatherers, who settled in the forest area. In particular, we will focus on the introduction of toilets and confirmation of usage for them. We consider both questions in the project through field surveys in urban and rural areas, and we are expecting international information dissemination on water and sanitation in Cameroon.

○Project Members

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Zulu (Zambia University・Lecturer)

●Achievements

○Awards

・第 33 回研究奨励賞, 中尾世治, 『西アフリカ内陸の近代：国家をもたない社会と国家の歴史人類学』に対して, 日本アフリカ学会, May 2021

・Environmental Technology/Project Award, Environmental Engineering Forum, Mayu Tsurumi;Hidenori Harada;Chua Min Li;Shigeo Fujii;Imasiku Nyambe;Meki Chirwa, Action research of visualization on fecal contamination and exposure in a peri-urban slum in Zambia, Environmental Engineering Research Committee, Japan Society for Civil Engineers, Dec. 2020

・Best Presentation Award, Sai A;Al Furqan R;Ushijima K;Hamidah U;Ikemi M;Widyarani;Sintawardani N;Yamauchi T, Physical and mental health of sanitation workers in an urban slum of Indonesia: Personal hygiene and the construction of self-esteem in waste-handling, Online International Symposium Sanitation Value Chain 2020, Dec. 2020, International society

○Books etc

・Sai A; Yamauchi T, Jan. 2022, Chapter 5: Dirty work masculinity and coping strategies among garbage collectors, Contributor, Rhetoric of masculinity: Male body image, media, and gender role stress/conflict (in press), D. Pompper (Ed.), Washington, D.C.: Lexington Books

・土方野分; 中尾世治, Aug. 2021, 対ブルキナファソ援助――暮らしの安定に資する農業支援, Contributor, 日本の国際協力 中東・アフリカ編 貧困と紛争にどう向き合うか, ミネルヴァ書房

・Japan Society of; Water Environment, 05 Apr. 2021, III-6 Water environment education and international cooperation 8-12, Joint editor, Encyclopedia of Water Environment, Asakura Publishing Co., Ltd.

・Japan Water Environmental Association, Apr. 2021, Contributor, Encyclopedia of Water Environment, Asakura Publisher

・山内太郎, 30 Nov. 2020, 148-158, 3.5 労働, 安河内朗, 岩永光一 編『生理人類学―人の理解と日常の課題発見のために』理工図書

・山内太郎, 30 Sep. 2020, 16-19, 北海道大学におけるアフリカ研究の紹介, 84, アフリカ／2020 AUTUMN No. 3/Vol. 60 アフリカ協会

・山内太郎, 03 Sep. 2020, 305-307, コラム 23 子どもクラブ アクション・リサーチ, 島田周平, 大山修一編『ザンビアを知るための 55 章 〜エリア・スタディーズ』・明石出版

・山内太郎, 03 Sep. 2020, 301-304, 47 章 都市スラムの水とトイレ事情―未計画居住区におけるサニテーション課題, 島田周平,大山修一編『ザンビアを知るための 55 章 〜エリア・スタディーズ』・明石出版

・中尾世治, Aug. 2020, Single work, 西アフリカ内陸の近代：国家をもたない社会と国家の歴史人類学, 風響社

○Published Papers

・Sikopo Nyambe; Taro Yamauchi, 06 Mar. 2021, Peri-urban water, sanitation and hygiene in Lusaka, Zambia: photovoice empowering local assessment via ecological theory, Global Health Promotion, 175797592199571-175797592199571, SAGE Publications, Refereed, Scientific journal DOI:10.1177/1757975921995713

・中尾世治; 廣田緑, Mar. 2021, アートと人類学の対称性へ：《trial 003: as if archaeologists》の意味の遡及的探求, arts/, 37, 115-125, Japanese, Refereed, Scientific journal

・廣田緑; 中尾世治, Mar. 2021, 『作品（アート）⇔研究（人類学）』: トラーンスフェリムスの実践、あるいは《トライアル 003》, FAB, 1, 148-174, Japanese, Refereed, Research institution

・Dalton Erick Baltazar; Hidenori Harada; Shigeo Fujii; Maria Francesca Tan; Shatirah Akib, 30 Jan. 2021, A Comparative Analysis of Septage Management in Five Cities in the Philippines, Eng, 2 (1), 12-26, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/eng2010002

・Loi Tan Huynh; Hidenori Harada; Shigeo Fujii; Lien Pham Hong Nguyen; Thu-Huong Thi Hoang; Hai Trung Huynh, 19 Jan. 2021, Greenhouse Gas Emissions from Blackwater Septic Systems., Environmental science & technology, 55 (2), 1209-1217, English, Refereed, Scientific journal DOI:10.1021/acs.est.0c03418

・Ming HAO; Jiabei HE; Yi ZENG; Wei HAN; Akira SAI; Taro YAMAUCHI, 07 Jan. 2021, A Comprehensive Assessment of Hand Washing: Knowledge, Attitudes and Practices (KAP) and Hand-Washing Behaviors among Primary School Students in Northeast China, Sanitation Value Chain, Refereed

・Arimi Mitsunaga; Taro Yamauchi, Dec. 2020, Evaluation of the nutritional status of rural children living in Zambia, Journal of Physiological Anthropology, 39 (1), Springer Science and Business Media LLC, Refereed, Scientific journal

・大石若菜; 加藤郁生; 西村修; 佐野大輔, Dec. 2020, スパース推定法と階層ベイズ推定法による環境水中ウイルス自然死滅モデルの構築, 土木学会論文集, 76 (6), III_449-III_460, Japanese, Refereed, Scientific journal
・Daisuke Sano; Astrid Louse Wester; Heike Schmitt; Mohan Amarasiri; Amy Kirby; Kate Medlicott; Ana Maria de; Roda Husman, Dec. 2020, Updated research agenda for water, sanitation and antimicrobial resistance, Journal of Water and Health, 18 (6), 858-868, English, Refereed, Scientific journal
・Pimchanok Nopprapun; Suwanna Kitpati Boontanon; Hidenori Harada; Nawatch Surinkul; Shigeo Fujii, Dec. 2020, Evaluation of a human-associated genetic marker for Escherichia coli (H8) for fecal source tracking in Thailand., Water science and technology : a journal of the International Association on Water Pollution Research, 82 (12), 2929-2936, English, Refereed, Scientific journal DOI:10.2166/wst.2020.525
・Dinala H; Sambo J; Nyambe S; Yamauchi T, 26 Nov. 2020, A Comparative Report on Health and Water, Sanitation and Hygiene in Malawi, Tanzania and Zambia, Sanitation Value Chain, 4 (3), 37-60, Refereed
・Yuko Shirai, Chai Podhisita and Parnnachat Tipsuk, Nov. 2020, Latrine Development in Thailand, Sanitation Value Chain, 4 (3), 21-36, English, Refereed DOI:10.34416/svc.00024
・Sambo, J; Muchindu, M; Nyambe, S; Yamauchi, T, 25 Aug. 2020, Sustainable Solid Waste Management: An Assessment of Solid Waste Treatment in Lusaka, Zambia, Sanitation Value Chain, 4 (2), 039-050, Refereed
・Sai A; Al Furqan R; Ushijima K; Hamidah U; Ikemi M; Widyarani; Sintawardani N; Yamauchi, T, 25 Aug. 2020, Personal Hygiene, Dignity, and Economic Diversity among Garbage Workers in an Urban Slum of Indonesia., Sanitation Value Chain, 4 (2), 051-066, Refereed
・Wakana Oishi; Ikuo Kato; Nowaki Hijikata; Ken Ushijima; Ryusei Ito; Naoyuki Funamizu; Osamu Nishimura; Daisuke Sano, 15 Aug. 2020, Inactivation kinetics modeling of Escherichia coli in concentrated urine for implementing predictive environmental microbiology in sanitation safety planning., Journal of Environmental Management, 268, 110672-110672, English, Refereed, Scientific journal DOI:10.1016/j.jenvman.2020.110672
・天野麻穂・片岡良美・川本思心, Aug. 2020, 学際研究プロジェクトにおける異分野研究者間コミュニケーション―インタビュー調査によるプロジェクト維持要因の仮説作成―, 年報『科学・技術・社会』, (29), 51-68, Japanese, Refereed
・Pimchanok Nopprapun; Suwanna Kitpati Boontanon; Shigeo Fujii; Hidenori Harada, Aug. 2020, Human-associated Escherichia coli Marker: Important Indicator to Evaluate River Water Quality and Treatment Ability of Surrounding Wastewater Treatment Plants, Thai Environmental Engineering Journal, 34 (2), 35-43, Environmental Engineering Association of Thailand, English, Refereed, Scientific journal
・Gugi Yogasawara; Shigeo Fujii; Hidenori Harada; Seyha Doeurn; Nguyen Pham Hong Lien; Nora H; Pandjaitan; Satyanto K. Saptomo, Jul. 2020, Comparative Study On Water Use behavior in Rural Southeast Asian Countries: Case Study in Vietnam and Indonesia, Environmental & Sanitary Engineering Research, 34 (3), 55-57, English, Symposium
・Min Li Chua; Hidenori Harada; Mayu Tsurumi; Shigeo Fujii; Imasiku Nyambe; Meki Chirwa; Taro Yamauchi, Jul. 2020, Fecal transmission via flies in a Zambian peri urban community, Environmental & Sanitary Engineering Research, 34 (3), 52-54, English, Symposium
・中尾世治, Jun. 2020, 言説的伝統と文字言語の社会的布置――20 世紀半ばの仏領西アフリカにおけるボボ・ジュラソのメデルサ設立運動の断絶と連続, 年報人類学研究, 11, 96-118, Japanese, Refereed, Scientific journal
・中尾世治; 池邉智基; 末野孝典; 平山草太, Jun. 2020, 西アフリカ・イスラーム研究の新潮流――教団、思想、言説的伝統, 年報人類学研究, 11, 51-72, Japanese, Refereed, Scientific journal
・中尾世治; 池邉智基; 末野孝典; 平山草太, Jun. 2020, 文献学的研究と人類学・民族誌学的研究の結合と乖離――1990 年代までの西アフリカ・イスラーム研究の変遷, 年報人類学研究, 11, 32-50, Japanese, Refereed, Scientific journal
・中尾世治, Jun. 2020, 特集・序――西アフリカ・イスラーム研究の新展開, 年報人類学研究, 11, 16-31, Japanese, Refereed, Scientific journal
・Sikopo Nyambe; Lina Agestika; Taro Yamauchi, 13 May 2020, The improved and the unimproved: Factors influencing sanitation and diarrhoea in a peri-urban settlement of Lusaka, Zambia, PLOS ONE, 15 (5), e0232763, Public Library of Science (PLoS), Refereed, Scientific journal
・Mariko Isshiki; Izumi Naka; Yusuke Watanabe; Nao Nishida; Ryosuke Kimura; Takuro Furusawa; Kazumi Natsuhara; Taro Yamauchi; Minato Nakazawa; Takafumi Ishida; Ricky Eddie; Ryutaro Ohtsuka; Jun Ohashi, 23 Apr. 2020, Admixture and natural selection shaped genomes of an Austronesian-speaking population in the Solomon Islands, Scientific Reports, 10 (1), Springer Science and Business Media LLC, Refereed, Scientific journal

・Reginald Adjetey Annan; Solomon Adjetey Sowah; Charles Apprey; Nana Ama Frimpomaa Agyapong; Satoru Okonogi; Taro Yamauchi; Takeshi Sakurai, 01 Apr. 2020, Relationship between breakfast consumption, BMI status and physical fitness of Ghanaian school-aged children, BMC Nutrition, 6 (19), Springer Science and Business Media LLC, Refereed, Scientific journal

・Syun-suke Kadoya; Osamu Nishimura; Hiroyuki Kato; Daisuke Sano, 2020, Regularized regression analysis for the prediction of virus inactivation efficiency by chloramine disinfection, Environmental Science: Water Research & Technology, 6 (12), 3341-3350, Royal Society of Chemistry (RSC), English, Refereed, Scientific journal DOI:10.1039/d0ew00539h

・Mokhtar GUIZANI; Takahiro ENDO; Ryusei ITO; Naoyuki FUNAMIZU, 2020, Polyethylene Glycol-Coated Magnetic Nanoparticles-Based Draw Solution for Forward Osmosis, Sanitation Value Chain J., 4 (1), 27-37, English, Refereed, Scientific journal

○**MISC**

・中尾世治; 斉藤尚文, Mar. 2021, 斉藤尚文さんとの対話――ある人類学者の半生について(3), 南山考人, (49), 21-49, Japanese, Report research institution

・大澤隆将; 金セッピョル; 中尾世治; 中原聖乃, Feb. 2021, 人類学者のジレンマと超学際的アプローチのなかでの可能性, Humanity & Nature Newsletter 地球研ニュース, 83, 12-15, Japanese, Others

・熊澤輝一; 中尾世治, Feb. 2021, 知識工学×人類学 地球環境学ビジュアルキーワードマップを切り口として, Humanity & Nature Newsletter 地球研ニュース, 83, 2-6, Japanese, Others

・Nakao, S, Feb. 2021, The Ethics of Sanitation Its Realms and Prospects, Sanitation Value Chain, 5 (1), 60, English

・K. Hayashi; T. Shimizu; H. Harada; S.=P. Etoga; Ch.-J. Nsonkali; V. Messe; G. Mbarga; Ch. Zobome; S. Nakao; T. Yamauchi, Feb. 2021, Co-Creation Practices on Sanitation in the Communities of Cameroon, Sanitation Value Chain, 5 (1), 51, English, Summary international conference

・Sai A; Al Furqan R; Ushijima K; Hamidah U; Ikemi M; Widyarani; Sintawardani N; Yamauchi T, Feb. 2021, Physical and mental health of sanitation workers in an urban slum of Indonesia: Personal hygiene and the construction of self-esteem in waste-handling, Sanitation Value Chain, 5 (1), 26-27, English, Refereed, Introduction international proceedings

・Tetsuya Kusuda, Sep. 2020, Future of environmental technology, Monthly Journal of Sewage, 43 (9), 66-71, Japanese, Invited, Introduction other

・Tetsuya Kusuda, Aug. 2020, Perspective on thoughts of environmental technology, Monthly Journal of Sewage, 43 (8), 68-72, Japanese, Invited, Introduction other

・Seyha Doeurn; Tomohiro Kinoshita; Shigeo Fujii; Hidenori Harada; Seingheng Hul, Jun. 2020, Water use behavior in peri-urban area in Cambodia: case study of Dangkao district, Phnom Penh city, Proceedings of the Annual Conference of SECE, 20, 13-14, English, Summary national conference

・中尾世治, May 2020, 国際ワークショップ「西アフリカにおける貨幣：商品から植民地通貨への転換についての経済・社会史」参加報, アフリカ研究, (97), 55-58, Japanese, Report scientific journal

・Hidenori HARADA; Mayu TSURUMI; Min Li CHUA; Shigeo FUJII; Sikopo NYAMBE; Imasiku NYAMBE; Taro YAMAUCHI, May 2020, A WASH Workshop Employing the Self-visualization of Fecal Contamination and Exposure An Early Trial in Lusaka, Zambia, Proceedings of the JAAS 57th Annual Meeting, Japanese, Summary national conference

○**Presentations**

・Nyambe S, Yamauchi T, Factors Impacting the Peri-urban Water, Sanitation and Hygiene Ecosystem in Lusaka, Zambia., Global Station for Indigenous Studies and Cultural Diversity Online Workshop., Online, 23 Mar. 2021, 23 Mar. 2021

・Hidenori Harada, Water, Sanitation and Hygiene in Asia and Africa: What are Values of Sanitation?, Visiting lecture of university professors, Takashima High School, 17 Mar. 2021, 17 Mar. 2021 17 Mar. - 2021, Invited, Japanese, Public discourse

・Chua Min Li; Harada Hidenori; Tsurumi Mayu; Fujii Shigeo, Fecal exposure assessment in living environment in peri-urban Lusaka, Zambia, 55th Annual Conference of JSWE, 11 Mar. 2021, 10 Mar. 2021 12 Mar. - 2021, English, Poster presentation

・Yogasawaga Gugi; Fujii Shigeo; Harada Hidenori; Doeurn Seyha, Influence analysis of socieeconomic factors on water use behavior in rural and peri-urban areas in Vietnam and Indonesia, 55th Annual Conference of JSWE, 10 Mar. 2021, 10 Mar. 2021 12 Mar. - 2021, English, Oral presentation

・Doeurn Seyha; Fujii Shigeo; Yogasawara Gugi; Harada Hidenori, Water and sanitation practices at six non-urbanized communities in Cambodia, Thailand, Vietnam, and Indonesia, 55th Annual Conference of JSWE, 10 Mar. 2021, 10 Mar. 2021 12 Mar. - 2021, English, Oral presentation

・Ryuichi Watanabe; Hidenori Harada; Shigeo Fujii; Nguyen Pham Hong Lien, Sewage sampling stragety reflecting the fluctuation of sewage characteristics: a case study in Hanoi, Vietnam, 55th Annual Conference of JSWE, 10 Mar. 2021, 10 Mar. 2021 12 Mar. - 2021, Japanese, Oral presentation

・清水貴夫; 小林広英; 中尾世治; 伊東未来, 継承困難な「伝統」技術を伝える試み. ブルキナファソ・カッセーナの伝統家屋の保全に向けて, Things. 工芸から覗く未来. 京都精華大学伝統産業イノベーションセンター×Kyoto Kougei Week 2021 シンポジウム, 21 Feb. 2021, Invited, Japanese, Nominated symposium

・Hidenori Harada, Final Overall Discussion : Important perspectives for CWIS implementation, Training program on wastewater management and CWIS (ADBI and JICA), 18 Feb. 2021, 15 Feb. 2021 18 Feb. - 2021, Invited, English, Nominated symposium

・Hidenori Harada, CWIS, onsite sanitation, and fecal sludge management, Training program on wastewater management and CWIS (ADBI and JICA), 17 Feb. 2021, 15 Feb. 2021 18 Feb. - 2021, Invited, English, Public discourse

・Hidenori Harada, Comparative study of sewerage in international business, Drawing sewerage in the future – beyong New Sewage Vision –, 01 Feb. 2021, 01 Feb. 2021 01 Feb. - 2021, Japanese, Public discourse

・Sikopo Nyambe; Lina Agestika; Taro Yamauchi, Socio-demographic and sanitation factors associated with diarrhea prevalence in peri-urban Lusaka, Zambia, Online International Symposium Sanitation Value Chain 2020, Online, 10 Dec. 2020, 09 Dec. 2020 10 Dec. - 2020, Oral presentation

・Akira Sai; Radhitiya Al Furqan; Ken Ushijima; Umi Hamidah; Mayu Ikemi; Widyarani; Neni Sintawardani; Taro Yamauchi, Physical and mental health of sanitation workers in an urban slum of Indonesia: Personal hygiene and the construction of self-esteem in waste-handling, Online International Symposium Sanitation Value Chain 2020, Online, 10 Dec. 2020, 09 Dec. 2020 10 Dec. - 2020, Oral presentation

・Mayu Tsurumi; Hidenori Harada; Chua Min Li; Shigeo Fujii; Imashiku Nyambe; Meki Chirwa, Action research of visualization on fecal contamination and exposure in a peri-urban slum in Zambia, 57th Environmental Engieering Forum, 10 Dec. 2020, 09 Dec. 2020 11 Dec. - 2020, Japanese, Poster presentation

・Hermes Dinala; Sikopo Nyambe; Taro Yamauchi, Assessment of Sanitation, Hygiene and Health Status of Primary School Children in a Zambian Slum, Online International Symposium Sanitation Value Chain 2020, Online, 09 Dec. 2020 10 Dec. - 2020, Poster presentation

・Chua Min Li; Hidenori Harada; Mayu Tsurumi; Shigeo Fujii; Imasik Nyambe; Meki Chirwa; Taro Yamauchi, Association of fecal contamination and WASH conditions in a Zambian peri urban community, Online International Symposium Sanitation Value Chain 2020, Online, 09 Dec. 2020 10 Dec. - 2020, Poster presentation

・Tatsuki Konishi; Koji Hayashi; Taro Yamauchi, Infant oral contact and cooperative breeding in a hunter-gatherer society in Cameroon, Online International Symposium Sanitation Value Chain 2020, Online, 09 Dec. 2020 10 Dec. - 2020, Poster presentation

・Kotomi Sato; Widayarani; Umi Hamidah; Mayu Ikemi; Ken Ushijima; Neni Sintawardani; Taro Yamauchi, Menstruation and Menstrual Hygiene Management Practices among Females in an Urban Slum of Indonesia, Online International Symposium Sanitation Value Chain 2020, Online, 09 Dec. 2020 10 Dec. - 2020, Poster presentation

・Yi Zeng; Jiabei He; Ming Hao; Wei Han; Taro Yamauchi, Knowledge, attitude, and practice of hygiene associated gross motor development delay among children in a suburban area of China, Online International Symposium Sanitation Value Chain 2020, Online, 09 Dec. 2020 10 Dec. - 2020, Poster presentation

・K. Hayashi; T. Shimizu; H. Harada; S.=P. Etoga; Ch.-J. Nsonkali; V. Messe; G. Mbarga; Ch. Zobome; S. Nakao; T. Yamauchi, Co-creation practices on sanitation in the communities of Cameroon., Online International Symposium on Sanitation Value Chain 2020, 09 Dec. 2020, English, Poster presentation

・S. Nakao, The Ethics of Sanitation: Its Realms and Prospects., Online International Symposium on Sanitation Value Chain 2020, 09 Dec. 2020, English, Poster presentation

・笹瀬達也; 佐井旭; 山内太郎, インドの 5 歳未満の子どもの健康と衛生ー水、サニテーション設備が整備されてもなぜ子どもは下痢を発症し続けるのかー, 第 85 回日本健康学会総会, オンライン, 05 Dec. 2020 06 Dec. - 2020, Poster presentation

・佐井旭; 池見真由; 山内太郎, インドネシアの都市スラムにおけるごみ収集人の身体的・精神的健康ー労働環境における衛生観念・行動と自尊心の形成ー, 第 85 回日本健康学会総会, オンライン, 05 Dec. 2020 06 Dec. - 2020, Poster presentation

・岡部千帆; 佐井旭; 山内太郎, SNS を用いた大学生の朝食習慣を改善するための取り組みの評価, 第 85 回日本健康学会総会, オンライン, 05 Dec. 2020 06 Dec. - 2020, Poster presentation

・山内太郎, 子どもと地域と研究者が共創するサニテーションプロジェクト, 地球研・高知大学合同勉強会, オンライン, 02 Dec. 2020, 02 Dec. 2020, Invited

・中尾世治, 学際・超学際研究の促進のためのメタ研究――サニテーションプロジェクトでの試み, 高知大地球研サニテーションプロジェクト合同勉強会, 02 Dec. 2020, Invited, Japanese, Others

・Kotomi Sato; Taro Yamauchi, Remote interview research to examine factors affecting MHM practices among females in an urban slum of Indonesia, The 6th RIHN-LIPI International Webinar, Online, 25 Nov. 2020, 25 Nov. 2020

・小玉祐矢; Sikopo Nyambe; Hermes Dinala; 佐井旭; 山内太郎, ルサカ市における WASH 改善に向けた地域型組織の組織コミットメント、動機付けの実態調査, Joint Congress on Global Health 2020 Osaka, オンライン, 01 Nov. 2020 03 Nov. - 2020, Poster presentation

・Yi Zeng; Jiabei He; Ming Hao; Wei Han; Taro Yamauchi, Risk factors affecting gross motor development delay among children in a suburban area of China: Focus on water, sanitation and hygiene, Joint Congress on Global Health 2020 Osaka, Online, 01 Nov. 2020 03 Nov. - 2020, Poster presentation

・Joy Sambo; Mazuba Muchindu; Sikopo, An Assessment of Sustainable Solid Waste Treatment and Occupational Health in Lusaka, Zambia, Joint Congress on Global Health 2020 Osaka, Online, 01 Nov. 2020 03 Nov. - 2020, Poster presentation

・滿永有美; 山内太郎, サハラ以南アフリカの子どもの成長チャート構築と成長の時代変化の検証, 第 31 回回日本成長学会学術集会, オンライン開催, 31 Oct. 2020

・小西達貴; 林耕次; 山内太郎, カメルーンの狩猟採集社会における乳幼児の口唇接触と育児協働, 第 74 回日本人類学会大会, オンライン開催, 31 Oct. 2020

・中尾世治, 西アフリカ内陸の近代史と歴史人類学の新しい可能性 : 史資料の偏在とパースペクティブ, 第 52 回 ASC セミナー・日本アフリカ学会関東支部 2020 年度第 3 回例会, 30 Oct. 2020, Invited, Japanese, Public discourse

・牛島 健, 地元高校生との小規模水道支援体制づくりの裏側, 地球研 OpenTS ウェビナー, オンライン, 28 Oct. 2020, Japanese, Oral presentation

・Yuko Shirai, Sustainable Cross-Border Community Development and Management in the East-West Economic Corridor in the time of COVID-19, Workshop 2020 International Grant Program, The Toyota Foundation, Online, 28 Oct. 2020, English, Oral presentation

・Sato K; Yamauchi T, Factors affecting MHM practices among females in an urban slum of Indonesia, The 5th RIHN-LIPI International Webinar, オンライン開催, 27 Oct. 2020

・郝明; 賀加貝; 曾怡, 韓威; 山内太郎, 中国東北部農村小学生向けの手洗い評価基準の検討, 日本生理人類学会第 81 回大会, オンライン開催, 25 Oct. 2020

・佐藤寿実; 山内太郎, 日本人女子大学生の体型認識とライフスタイルおよび主観的健康観, 日本生理人類学会第 81 回大会, オンライン開催, 25 Oct. 2020

・Hidenori Harada, Values created from water, sanitation and hygiene: from disaster area to Africa, Fredemic cafe@KRP with Kyodai Original Vol.3, 23 Oct. 2020, 23 Oct. 2020 23 Oct. - 2020, Invited, Japanese, Public discourse

・佐藤寿実; 山内太郎, インドネシアの都市スラムにおける月経衛生対処に影響を与える要因の影響の検討, 第 1 回サニテーション研究会：インドネシア都市スラムのサニテーション課題, 北海道大学大学院保健科学研究院, 21 Oct. 2020

・山内太郎, サニテーションプロジェクトにみる課題解決型プロジェクトのこれまでとこれから, 第 6 回人文・社会科学系研究推進フォーラム, オンライン開催, 09 Oct. 2020, Invited

・S. Nakao; T. Osawa, Anthropologists at the interfaces of knowledge: Possibilities of anthropology in environmental issues., Vienna Anthropology Days 2020, 01 Oct. 2020, 29 Sep. 2020 01 Oct. - 2020, English, Oral presentation

・Hidenori Harada, Water and Sanitation in Developing countries, 高大連携の一環としての膳所高等学校生徒向け公開講座, 25 Sep. 2020, 25 Sep. 2020 25 Sep. - 2020, English, Public discourse

・Dinala H; Nyambe S; Sambo J; Yamauchi T, A collaborative research on household WASH and COVID19 in peri-urban Zambia, 1st Webinar on Sanitation and Health in Lusaka, zoom, 16 Sep. 2020

・Nyambe S; Yamauchi T, Dziko Langa's future research plans & activities: Current outcomes & way forward, 1st Webinar on Sanitation and Health in Lusaka, zoom, 16 Sep. 2020

・Yamauchi T, Project research during pandemic period: publication and online field research, 1st Webinar on Sanitation and Health in Lusaka, zoom, 16 Sep. 2020

・Yoshimi Kataoka, A proposal to collaborate on visualization remotely, 1st Webinar on Sanitation and Health in Lusaka, Online, 16 Sep. 2020, English, Oral presentation

・Chua Min Li; Hidenori Harada, Fecal transmission assessment in a Zambian peri urban community, 1st Webinar on Sanitation and Health in Lusaka, 16 Sep. 2020, 16 Sep. 2020 16 Sep. - 2020, English, Public discourse

・Mayu Tsurumi; Hidenori Harada, Update of Self-visualization of Health Risk in WASH risk, 1st Webinar on Sanitation and Health in Lusaka, 16 Sep. 2020, 16 Sep. 2020 16 Sep. - 2020, English, Public discourse

・Hidenori Harada, Interdisciplinary framework on sanitation and health research in Lusaka, 1st Webinar on Sanitation and Health in Lusaka, 16 Sep. 2020, 16 Sep. 2020 16 Sep. - 2020, English, Public discourse

・Ken Ushijima, Umi Hamidah, Koji Hayashi, Neni Sintawardani, Mayu Ikemi, Contribution of waste-related workers in the informal sector to sustainable waste management, case of Bandung City in Indonesia, 2nd Sustainable Waste Management Conference, Online, 15 Sep. 2020 17 Sep. - 2020, English, Oral presentation

・Yamauchi T, Collaborative field research in rural area in Cameroon in the age of COVID-19 pandemic, The 3rd Online Workshop on Exploring New Style for International Joint Field Research with/after COVID-19 between Cameroon and Japan, zoom, 11 Sep. 2020

・Hidenori Harada, iFOM for sound fecal sludge and onsite sanitation management, Arm Sustainability Series Webinar: WASH, Cambridge (online), 03 Sep. 2020, 03 Sep. 2020 03 Sep. - 2020, Invited, English, Invited oral presentation

・Yamauchi T, Project research during pandemic period: publication and online field research, The 3rd RIHN-LIPI International Webinar, zoom, 26 Aug. 2020

・Yamauchi T, Generating ideas for field surveys in an urban slum in Cameroon in the age of COVID-19 pandemic, The 2nd Online Workshop on Exploring New Style for International Joint Field Research with/after COVID-19 between Cameroon and Japan, zoom, 06 Aug. 2020

・Yamauchi T, Sanitation value chain: Designing sanitation systems as eco-community-value system, The 1st Online Workshop on Exploring New Style for International Joint Field Research with/after COVID-19 between Cameroon and Japan, zoom, 05 Aug. 2020

・Yamauchi T, To continue field research in the age of COVID-19, RIHN-LIPI The 2nd International Mini Webinar: “Exploring new style for international joint field research after/with COVID-19”, Sanitation Project, Research Institute for Humanity & Nature & Indonesian Institute of Sciences, zoom, 29 Jul. 2020

・廣田緑; 中尾世治, アートと人類学 : 往還の先に見える可能性, 民族藝術学会第 36 回大会, 26 Jul. 2020, Japanese, Oral presentation

・Yamauchi T, Generating breakthrough ideas for field surveys in an urban slum in Indonesia during COVID-19 period, RIHN-LIPI Joint Mini Webinar: “Exploring new style for international joint field research after/with COVID-19”, Sanitation Project, Research Institute for Humanity & Nature & Indonesian Institute of Sciences, zoom, 24 Jun. 2020

・Sato K; Sai A; Yamauchi T, Menstruation and Sanitation of Mothers and Girls in Urban Slum in Indonesia, RIHN-LIPI Joint Mini Webinar: “Exploring new style for international joint field research after/with COVID-19”, Sanitation Project, Research Institute for Humanity & Nature & Indonesian Institute of Sciences, zoom, 24 Jun. 2020

・牛島 健, 北海道における住民との連携事例, 小規模水供給システム研究会（厚生労働科学研究「小規模水供給システムの持続可能な維持管理に関する統合的研究」, オンライン, 24 Jun. 2020, Invited, Japanese, Invited oral presentation

・佐藤寿実; 山内太郎, インドネシアの都市スラムにおける女性の月経および生理用品の使用・処理の実態, 女性のサニテーション研究会, 総合地球環境学研究所サニテーションプロジェクト（主催） 月経研究会（共催）, zoom, 23 Jun. 2020

・藤原 拓, OD 法における二点 DO 制御システム ～その源流、開発、地域実装、そして全国への水平展開～, 土木学会環境工学委員会 第 14 回環境技術思想小委員会・臨床環境技術小委員会合同ミニ講演会, 土木学会, オンライン, 17 Jun. 2020, Invited, Japanese, Invited oral presentation

・牛島 健・清水貴夫, サニテーションの問題解決における Co-creation, 日本アフリカ学会第 57 回学術大会, 日本アフリカ学会, オンライン, 23 May 2020 24 May - 2020, Japanese, Oral presentation

・片岡良美・Sikopo Nyambe・山内太郎, 映像を活用した参加型アクションリサーチ：ザンビアにおけるサニテーション課題解決をめざす子どもクラブの事例, 日本アフリカ学会第 57 回学術大会, 日本アフリカ学会, オンライン, 23 May 2020 24 May - 2020, Japanese, Oral presentation

・林耕次; 清水貴夫; 中尾世治; 山内太郎, 定住した狩猟採集民のサニテーションを Co-create する試み: カメルーン東部州の事例より, 日本アフリカ学会第 57 回学術大会, 23 May 2020, 23 May 2020 24 May - 2020, Japanese, Oral presentation

・清水貴夫; 中尾世治, 汚泥の農業利用をめぐるサニテーションを Co-create する：ブルキナファソ中北部州 Ronguin 村とローカル NGO との協働の事例から, 日本アフリカ学会第 57 回学術大会, 23 May 2020, 23 May 2020 24 May - 2020, Japanese, Oral presentation

・中尾世治, タカラガイの季節的暴落：仏領西アフリカの内陸における植民地通貨導入直後の貨幣状況, 日本アフリカ学会第 57 回学術大会, 23 May 2020, 23 May 2020 24 May - 2020, Japanese, Oral presentation
・牛島 健, 北海道におけるフューチャーデザインの試み, 高知工科大学フューチャーデザイン研究所セミナー, オンライン, 30 Apr. 2020, Invited, Japanese, Invited oral presentation
・牛島 健, 北海道内農村地域における生活系水インフラの課題と対策の糸口, 農村計画学会 2020 年度西日本ブロック地区セミナー, オンライン, 12 Apr. 2020, Invited, Japanese, Invited oral presentation

Stage: Full research (FR)

Project Name: Co-Creation of Sustainable Regional Innovation for Reducing Risk of High-impact Environmental Pollution

Abbreviated Title: SRIREP Project

Project Leader: SAKAKIBARA Masayuki

Program 3: Designing Lifeworlds of Sustainability and Wellbeing

URL: https://srirep.org/

○ Research Subject and Objectives

(1) Problem, background, and objectives

Mercury (Hg) is a toxic metal that seriously threatens the embryonic and early-childhood development of humans, and extremely poisonous to the human body. Mercury pollution is one of the most serious environmental issues and requires global action for its resolution (Gibb & O'Leary, 2014). Recent investigations by the United Nations Environment Programme (UNEP) have highlighted the enormity of Hg pollution in developing countries and the associated harmful effects on human health and ecosystems. One of the main sources of Hg pollution is artisanal and small-scale gold mining (ASGM), in which Hg is used as the traditional method of amalgamation to extract gold from the ore rock (Fig. 10-1). This activity emits 37% of global anthropogenic Hg into the atmosphere. This method is quicker, simpler, and more cost-effective than alternative methods, and is widely used by many ASGM communities (Gibb & O'Leary, 2014). According to data from the UNEP, ASGM produces 15-20 % of the global gold market. Almost 15 million people, including about 5 million women and children, participate in ASGM activities in more than 70 countries. The Hg pollution generated during ASGM indirectly affects more than 100 million people worldwide (UNEP, 2013; ELI, 2014). Those ASGM activities are also sources of social problems, such as land tenure issues, social instability such as migration, and conflict between residents. The vicious cycle relating to poverty and environmental degradation in developing countries has long been discussed (World Bank, 1992; UNEP, 1995). However, the behavioural patterns that make it difficult for those living under chronically impoverished conditions to escape from those conditions are still not well understood (Sen, 1999; Banerjee & Duflo, 2011).

The research theme of our FR is to elucidate the path to solve the global Hg pollution caused by ASGM in collaboration with various stakeholders (SHs) by constructing sustainable societies through regional innovations in the ASGM areas and strengthening the environmental governance in ASEAN countries. We also study theoretically and practically a transdisciplinary community of practice (TDCOP) (Cundill et al., 2015) organized by utilizing transformative boundary object (TBO) (Tsurusaki et al., 2013) that allows various SHs to participate in the dialogue, transformative learning, and practice.

(2) Methodology, structure and schedule: The research plan of our FR is influenced by COVID -19 and changed significantly in 2020, as described later:

a) Case studies on reduction of Hg pollution using a future scenario of ASGM in Indonesia; FR members will 1) study living conditions, cultures, history, and regional sociology; 2) undertake environmental and health impact assessments, and socioeconomic assessment; 3) co-create future scenario with key-SHs; 4) identify transdisciplinary boundary object (TBO) dynamically promotes dialogue among SHs who have conflicting interests or are not interested, 5) cultivate or organize TDCOPs used by TBO; 6) co-design and co-production of transformative learning and practice; 7) start social implementation research; and 8) evaluate the progress of regional innovation. We show the example of whole structure and schedule of the case study in Gorontalo, Indonesia.

b) Study on interregional networks that aim to generate Hg-free societies in Indonesia and Myanmar; the study will be conducted in three steps: 1) study of social informatics and construction of a platform in each region for communication; 2) study on the design, practical use and evaluation of information technologies and establishment of Hg-Free Society Network in a region; and 3) study on the expansion of platforms and networks and establishment of the linkage among multiple regions to make interregional networks.

c) Study on improvements in environmental governance in ASEAN countries; 1) study on the principles and processes used for multilayer and co-operative environmental governance and holding an international forum in each country; 2) study on regional approach from regional innovation to environmental governance and collaboration with each country of Southeast Asia; and 3) study on the establishment of multi-layered environmental governance.

d) Theoretical and practical studies of the design, practical use, and evaluation of TBO, and cultivation, development process, and roles of TDCOP; 1) basic research of TBO and TDCOP and co-design TBOs; 2) study on the design of TBO and TDCOP, and practice along with future scenario by TDCOPs using TBO; and 3) study on the practical design of TBO and TDCOPs for the regional innovation and development from the network of TDCOPs to regional innovation.

The following are summary of the schedule of our FR; 1) FR2-4 (2020-22): We will conduct a) step 3 to 6 in Indonesia and step 1 to 6 in Myanmar; b) step 1 and 2; c) step 1 and 2; and d) step 1 and 2; 2) FR 5 (2023): We will conduct a) step 7 and 8 in Indonesia; b) step 3; c) step 3; and d) step 3.

(3) Expected results: The regional innovation will arise as a consequence of environmental and industrial innovations introduced with a transdisciplinary approach, including the development of a future scenario for a Hg-free society, transformative learning and practice, and developments of TDCOPs. By strengthening environmental governance, we will also develop a route via which the problem of global environmental Hg pollution can be resolved.

(4) Project organization and membership: The research organization consists of 1) communicator, 2) culture, history, and behavioural transformation group, 3) social science group, 4) natural science group, 5) technological development group, and 6) project management group.

(5) Contribution to the program: Our research project on Southeast Asia will contribute to Program 3. In Southeast Asia, the environmental disruption, biological diversity disappearance, expansion of the gap between rich and poor, and traditional culture disappearance are progressing by the rapid expansion of human activities. Moreover, the degradation of living space and the increased risk of global environmental pollution by ASGM activities in rural communities are accelerated by poverty. It will provide a concrete framework for realizing a sustainable society from this research, and in that we will propose the change to society with a concrete future possibility. Furthermore, our FR project will take in the technique of the future design and future scenario, which Program 3 has proposed as an effective technique for solving problems of regional society.

○ Progress and Results in 2020

In the study (a), we conducted the researches with local researchers and SHs in Gorontalo, West Java, Southeast Sulawesi, and Lampung in Indonesia and Mandalay in Myanmar.

1) Gorontalo:

・The results reveal that poverty is a serious problem in Gorontalo and at least 2000 inhabitants work irregularly at ASGM. It is also a major problem in agricultural and fishing areas such as Limboto Lake area.

・It has become clear that the ASGM sites in Gorontalo can be divided into the following two types. One is a daily commuting ASGM site and the other is a long-stay ASGM site. In the latter case, one-third of ASGM workers are migrant workers from outside of Gorontalo. The proportion of ASGM miners living in each village near the ASGM sites with daily commuting is relatively high. On the other hand, the number of the miners repeatedly working at least a few weeks to three months as long-stay miners near ASGM site is low.

・Communities in East Suwawa district near Motonboto and Mohutango ASGM sites are still very vulnerable to Hg contamination, not only from mining activities, but also from the possible cosmetic effects. In addition, it was revealed that social

problems have occurred due to the mining activities in neighbouring villages, and that the economic situation has deteriorated due to the pandemic of COVID-19.

・Based on the research results during this period, some future scenarios for the Hg-free society have been revised.

・In 2020, we have cultivated or organized five TDCOPs with residents, which are “KTK (Kampung Tangguh Kesehatan; Healthy village)”, “Karawo Research Group”, “Natural Fiber Research Group”, “Geo-Cafe Gorontalo”, and “Dihima Limboto-Ko” to conduct co-design and co-production of transformative learning and practice since February 2020.

2) Bunikasih village of West Java: In collaboration with ITB, we conducted the environmental impact and socio-economic surveys in January 2021. We detected Hg in all tea leaf samples taken from the ASGM site to the village. Its Hg concentration is negatively correlated with the distance from ASGM's gold smelting facility.

3) Bombana area of Southeast Sulawesi: We found that the Moronene tribe has local wisdom in protecting the environment from damage and the people of Bombana have several cultural heritages which have the potential for developing into alternative livelihoods for ASGM miners. We published the results of the environmental, social, and cultural surveys.

4) Pesawaran Regency in Lampung: The UNILA members conducted the following basic studies in Pesawaran Regency in Lampung Province from October 2020. Soil, water, and ecosystems are contaminated with Hg around the ASGM site in the region. It was revealed that there is a close relationship between the poverty problem of the inhabitants and their dependence on ASGM. However, the income earned from ASGM work is not much compared to agricultural income. The inhabitants also tend to move away from ASGM as their agricultural income increases. As a result, it was suggested that Hg pollution could be reduced by creating a sustainable livelihood to replace ASGM's work.

5) Mandalay Region in Myanmar: We performed the remote health impact assessment of Hg pollution of ASGM community in Thabeikkyin Township. With the collaboration of NAG, we also have started collecting the samples of tree barks and house dust in Yamethin Township, in January 2021 to analyse the content of Hg released from gold refining places.

On the study of (b) and (c), we started the activities of the preparatory committee of Mercury-Free Society Network to establish the network in April 2021. We also held 3rd and 4th Japan - ASEAN Medical Seminars Metals (Webinars) for the audiences of Indonesia and Myanmar in October 2020 and January 2021, respectively. A total of about 650 people participated in these Webinars.

In the research (d), we have conducted reviews and theoretical studies and have reached the following conclusions; 1) Since the causes of serious environmental problems are complicated and the problems are interrelated, it is essential to conduct the problem-solving comprehensive approach and new knowledge creation by integrating local knowledge and scientific knowledge; 2) In communities with serious environmental problems, there is a lack of dialogue between SHs, but the presence of enthusiastic strangers, researchers, in the TDCOP is important and each of them can be used as a catalyst for starting dialogue; 3) In the contexts of serious environmental problems, SHs can have problems such as closed values and low learning motivation; however, the activities of the TDCOP can stimulate them to practice interactive and transformative learning. In Gorontalo, we practically identified many TBOs with key-SHs and organized four TDCOPs.

○ Future Themes

a) Case studies of reduction of Hg pollution using a future scenario of ASGM

We will focus on the transdisciplinary practical research on the TDCOPs in Gorontalo Province in FR3. We will develop the activities of two TDCOPs, GP2KL and Dihima Limboto-Ko, formed in 2017 and four TDCOPs, KTK, Karawo Research Group, Natural Fiber Research Group, and Geo-Cafe Gorontalo formed in 2020 in Gorontalo Province. Each TDCOP will co-design and co-produce the transformative learning and practice. We also will create some TDCOPs used by TBO in 2021. We will also create other two TDCOPs on Limboto Lake Issue and Development of the Facility for Reduction of Hg emission.

Regarding the members of the SRIREP project, we will boldly reinforce researchers in the social science field who study TDCOP, and proceed with research on the transformation of stakeholder values and the evaluation method of regional innovation through the activities of TDCOP.

The purpose of the practical research in this project is to elucidate the path to reduce Hg pollution in the ASGM area through the activities of TDCOP. Each TDCOP will repeatedly carry out the transformative learning related to environmental problems including Hg pollution by ASGM activities in collaboration with various stakeholders, thereby transform the values. The issues of TDCOP that have been created or will be created in the future can be broadly divided into the following two types;

①The TDCOP communities, “Karawo Research Group”, “Natural Fiber Research Group”, “Geo Cafe Gorontalo”, and “Dihima Limboto-Ko”, solve the poverty problems in the area by developing traditional industries that utilize the ecosystem service or by building new sustainable industries. This will reduce the influx of workers from neighbouring villages to ASGM sites in the future.

②Through administrative support and collaborative development of new technologies to reduce Hg emissions, the TDCOP community of KTK (Healthy village)”, aims to reduce the influx of workers and achieve environmental management. This practice will reduce the total amount of Hg released by ASGM in the future.

The activity plan of each TDCOP in Gorontalo is as follows;

・KTK (Healthy village; Person in charge: Newly hired researcher A in SRIREP project, Drs. Kasamatsu and Shimagami): Under the influence of COVID-19, RIHN researchers will participate in events at zoom. KTK members will hold meetings about twice a month to plan learning and practice. The immediate task is to talk to many miners to engage in dialogue and participation in KTK, by using of the health problems caused by Hg pollution and the social problems of the ASGM community in Motonboto and Mohutango as TBOs. A free health check for the KTK members and their families will be held after March. Since April, we will hold several learning sessions on Hg issues to evaluate the changes in the sense of values of miners. Throughout the year, the KTK will discuss social issues facing the ASGM community with KTK members and develop solutions.

・Karawo Research Group (Person in charge: Newly hired researcher A in SRIREP project, Ms. Sato, and Prof. Sakakibara): The TDCOP members change their perception of Karawo from "mere traditional embroidery" to "social icon" as TBO. They will take the initiative to create new value as a culture and industry from the perspective that residents will simply protect traditional embroidery. This TDCOP is scheduled to promote more practical activities with the support of JICA projects from January 2022.

・Natural Fiber Research Group (Person in charge: Newly hired researcher A in SRIREP project, Mr. Yamaguchi, and Sakakibara PL): The TDCOP will conduct co-design and co-production of transformative learning on the sustainable interaction of the environment and human society and the importance of local knowledge of natural fibers. We will start a soil erosion prevention test using a sugar palm fiber net at a national test site in Nagano Prefecture from May 2021.

・Geo-Cafe Gorontalo (Person in charge: Drs. Sugawara and Kohmoto): The members will conduct geo-cafe at the potential geosites & online zoom webinars, transdisciplinary interpretation interviews to the local people at the potential geosites, scientific field study, and organizing sustainable “top-down” and “bottom-up” structures. The scientific field study on geology will be

conducted mainly by ITB members.

・Dihima Limboto-Ko (Person in charge: Mr. Miyazaki, and Drs. Kasamatsu and Shimagami): Members will practically study the organic agriculture, agricultural products sales system, and introduction of resource-recycling complex agriculture in 2021.

・New TDCOP on Limboto Lake Issue (Person in charge: Newly hired researcher B in SRIREP project, Drs. Kasamatsu and Kimijima): This TDCOP will be created after September 2021 by the collaboration with UNILA, UNG, and RIHN members.

・New TDCOP on Development of the Facility for Reduction of Hg emission (Person in charge: Prof. Sakakibara, M. and Prof. Ofuji, H. in Tokoku University): This TDCOP will develop the simple and easy Hg collection technology that mine workers can practically use.

b) A study of interregional networks that aim to generate Hg-free societies Network in Indonesia and Myanmar

We will establish MFSN after April 2021. The aim of this study is for the construction and the establishment of interregional networks to aim for Hg-free societies in Indonesia and Myanmar. We are currently developing the websites including the contents and expected to launch a homepage (English language) by early May 2021.

The MFSN expanded the collaboration to a research and development NGO registered in Kenya known as Poverty and Health Integrated Solutions, and South American Hg-free Network. We will hold the international seminars (Webinar) in collaboration with Indonesian universities and the MFSN, and share the research results up to FR2, and support each university's research for solving environmental pollution problems by ASGM. We will also strengthen the cosmetic market surveillance activities on Hg adulteration and conduct the research activities on Hg-related health issues by the impact of Hg-containing cosmetics.

・Japan-ASEAN Medical Seminar on the Human Health Impact of Heavy Metals

We also will conduct the 5th Japan-ASEAN Medical Seminar on the Human Health Impact of Heavy Metals (Webinar) for medical professions of Indonesia and Myanmar will be held on the topics of “Problem on Hg-bearing whitening cosmetics” by the field experts in May 2021. The 6th Webinar for the general public of Indonesia and Myanmar will be held on the topics of “Minamata Disease” by Prof. Takashi Yorifuji in Okayama University after May, 2021.

c) A study of improvements in environmental governance in ASEAN countries

Following FR2, FR members will study the current status and challenges of environmental governance and its policies in ASEAN countries and environmental governance for sustainable development. Members will plan and hold seminars in collaboration with FR members, JAU, and SHs from around the world to share and discuss knowledge and experience on environmental governance and policies.

The 4th TREPSEA will be held as Webinar by UNILA in September 2021 and the 3rd TRPNEP will be held at Assumption University in Thailand in December according to scheduled plans.

d) Theoretical and practical studies of the design, practical use, and evaluation of TBO, and cultivation, development process, and roles of TDCOP

Based on the FR2 results on the TBO and TDCOP, FR members will develop the theoretical research of TBO and TDCOP, and create the evaluation methodology of TBO and TDCOP. During FR3, FR members will theoretically create methodologies for the assessment and evaluation of the outcome of transformational learning and practice in TDCOP, as well as the impact of TDCOP activity in the community. In the process of transformative studies of TDCOP, we have to understand when and how to did SHs change their opinion and mind. To grasping the qualitative evaluation, we will use the most significant change method, narrative interview, and discursive practice in each TDCOP.

○Project Members

◎	SAKAKIBARA Masayuki	(Research Institute for Humanity and Nature・Professer・Research supervisor)
○	MATSUDA Hiroyuki	(Yokohama National University・Professer・Leader of Natural Science Group)
○	KASAMATSU Hiroki	(Ehime University・Senior Assistant Professor・Sociology of the local community in ASGM area)
○	SHIMAGAMI Motoko	(Ehime University・Associate Professor・Sociology of community in ASGM area)
○	MATSUMOTO Yuichi	(Kwansei Gakuin University・Professer・Theoretical and practical studies on TDCOP)
○	KOMATSU Satoru	(Nagasaki University・Associate Professor・Social economic evaluation in ASGM area)
○	ISA Ishak	(Gorontalo State University・Professer・Study on bioethanol)
○	MOHAMAD Jahja	(Gorontalo State University・Associate Professor・Physical analytical study on natural products)
○	ARIFIN Bustanul	(University of Lampung・Professer・Socioeconomic evaluation of agricultural areas in Gorontalo province)
○	ISOMONO Hanung	(University of Lampung・Lecturer・Socioeconomic evaluation of agricultural areas in Gorontalo province)
○	ABDURRACHMAN Mirzam	(Institut Teknology Bandung・Lecturer・Basic study of Geopark, Case study of ASGM site in Southern Bandung area, Indonesia)
○	KURNUAWAN Andri Idham	(Institut Teknology Bandung・Reseacher・Basic study of Geopark, Case study of ASGM site in Southern Bandung area, Indonesia)
○	BASRI	(College of Health Sciences Makassar・Lecturer and Researcher・Environmental science in ASGM area in Bombana Regency, Southeast Sulawesi Province, Indonesia)
○	BOBBY	(Network Activities Groups・Chief Executive Officer・Practice of action program and its management in Myanmar)
	SUGAWARA Hisanari	(Gunma Museum of Natural History・Curator・Study on community management of global geopark)
	MIYAZAKI Hideki	(Global Environmental Forum・Researcher・Practical research of value-added composite agriculture in non-polluted area)
	NARABAYASHI Kenji	(Ehime University・Professer・Environmental Law in Southeast Asian Countries)
	MIYAKITA Takashi	(Kumamoto Gakuen University・Professer・Research on a reconstruction of community / Epidemiological survey on ASGM areas)
	YAMAMOTO Yuki	(Nagasaki University・Associate Professor・Social economic evaluation in ASGM area)
	ITO Yutaka	(Akita University・Lecturer・Social economic evaluation in ASGM area)
	ABE Akira	(Mie Prefectural College Of Nursing・Associate Professor・Theoretical research on poverty and environmental ethic problems)
	SAYANAGI Nobuo	(Yamanashi Eiwa College・Associate Professor・Psychological study on poverty in ASEAN countries)
	OKAMOTO Ikuko	(Toyo University・Professer・Study on internatioal development)
	KOHMOTO Daichi	(Nara University of Education・Associate Professor・Study on community management of global geopark)
	KITAMURA Kenji	(Kanazawa University・Assistant Professor・Theoretical study on TDCOP)
	YAMAGUCHI Tsutomu	(ESPEC MIC Corp.・Chief of Nagoya office・Technological support for the development of plant products)
	WATABE Yasuko	(Watanabe tette・CEO・Design development of traditional hand-craft "Karawang" in Gorontalo province)
	KOIZUMI Hatsue	(Soshisha, the Minamata Disease Museum・Staff・Sociology of community in ASGM area)
	FURUTANI Kaho	(Ehime University, the Graduate School of Humanities and Social Sciences・Graduate student・Engage in environmental education in collaboration with local stakeholders)
	ARIFIN Indriati Yayu	(Gorontalo State University・Lecturer and Researcher・Study on medical geology in Gorontalo Province, Indonesia)
	FATSAH Hasanuddin	(Gorontalo State University・Professor・Study on Limboto Lake issues in Bone Bolango Regency)
	LAHINTA Agus	(Gorontalo State University・Lecturer・Study on Karawo management)
	MANYOE Noviantari Intan	(Gorontalo State University・Lecturer・Study on Geopark at Gorontalo)
	PATEDA Sri Manovita	(Gorontalo State University・Lecturer・Development of bioindicator on mercury exposure)
	OLILINGO Fachruddin	(Gorontalo State University・Lecturer・Social-economical evaluation on transdisciplinary practical researches)
	PONGOLIU D Isyana Yayu	(Gorontalo State University・Lecturer・Social-economical evaluation on transdisciplinary practical researches)
	MASULILI Febryanto	(Gorontalo State University・Lecturer・Study on Geopark at Gorontalo)
	RACHMAN Bahar Agus	(Gorontalo State University・Senior Lecturer・Introduction of value-added composite agriculture Co-creation at Gorontalo)

	PRASETIA Hendra	(Lampung University・contract lecturer・Development of bioindicator using dendrochemistry)
	KARDENA Edwan	(Institut Teknology Bandung・Associate Professor・Study on environmental governance in Indonesia)
	ABBAS Habo Hasriwiani	(Universitas Islam Indonesia・Lecturer and Researcher・Medical geology of traditional smelters in Sulawesi)
	ZAENAL Abidin	(Bogor Agricultural University・Lecturer and Researcher・Development of environmental remediation materials)
	MOHAD Lamanasa	(Bone Bolango Regency・Prefecture staff・Local communicator)
	GAFUR Abdul Nurfitri	(BAPPEDA-LITBANG of Bone Bolango regency・Expert of Researcher・Environmental science in ASGM area in Bone Bolango Regency)
	MUHAMMAD Gobel	(Bogor Agricultural University・Graduate student・Local communicator)
○	KIMIJIMA Satomi	(Research Institute for Humanity and Nature・Reseacher・Case studies of ASGM sites in Indonesia and Myammar)
○	Win Thiri Kyaw	(Research Institute for Humanity and Nature・Researcher・Medical study on mercury toxicity in Myanmar)
○	KUANG Xiaoxu	(Research Institute for Humanity and Nature・Reseacher・Chemical analysis of environmental samples)
	JOMAE Kyoko	(Ehime University・Clerical Assistant・Project management)
	Myo Han Htum	(Research Institute for Humanity and Nature・Research Associate・Management on websites and Supporting FR researchers)
	TAKEHARA Mari	(Research Institute for Humanity and Nature・Research Associate・Project management)

●Achievements

○Books etc

・北居, 明; 松本, 雄一; 鈴木, 竜太; 上野山, 達哉; 島田, 善道, May 2020, 経営学ファーストステップ, 172p, 八千代出版, Japanese, ISBN: 9784842917740

○Published Papers

・Zaenal Abidin; Vicky Prajaputra; Sri Budiarti; Dyah Tjahyandari Suryaningtyas; Naoto Matsue; Masayuki Sakakibara, 07 Jan. 2021, Effect of Alkaline Concentrations on the Synthesis of Volcanic Soil-Based Zeolite for Methylene Blue Removal by Fenton-Like Oxidation Process, Revista de Chimie, 71 (12), 47-55, Revista de Chimie SRL, English, Refereed, Scientific journal DOI:10.37358/rc.20.12.8385

・Kenji Kitamura; Daisuke Utsunomiya; Koji Ito, Dec. 2020, Participatory evaluation of community-university collaboration programs: A case study of Noto, Japan, Journal of Community Practice, 28 (4), 403-415, English, Refereed, Scientific journal

・Satoru Komatsu; Katsuya Tanaka; Masayuki Sakakibara; Yayu Indriati Arifin; Sri Manovita Pateda; Intan Noviantari Manyoe, Dec. 2020, Sociodemographic Attributes and Dependency on Artisanal and Small-scale Gold Mining: the Case of Rural Gorontalo, Indonesia, IOP Conference Series: Earth and Environmental Science, 589, 012020-012020, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/589/1/012020

・Arifin, Y. I, Sakakibara, M., Takakura, S., Mohamad, J., Lihawa, F. and Sera, K., 29 Nov. 2020, Artisanal and small-scale gold mining activities and mercury exposure in Gorontalo Utara Regency, Indonesia, Toxicological & Environmental Chemistry, 1-22, Informa UK Limited, English, Refereed, Scientific journal DOI:10.1080/02772248.2020.1839074

・K Okazaki; T Kurahashi; S Yamazaki; M Sakakibara, 19 Nov. 2020, Temperature dependence for purification of leachate containing heavy metals by phytoremediation using the artificial channel, IOP Conference Series: Earth and Environmental Science:Proceeding of the 3rd International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia(TREPSEA2018), 589, 012019-012019, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/589/1/012019

・Abbas, H. H., Sakakibara, M., Sera, K., Arma, L. H. and Sididi, M., 19 Nov. 2020, Socioeconomic and Mercury Exposure to The Goldsmiths in Manggal Subdistrict of Urban Artisanal Gold Mining (UAGM) Area in Makassar, South Sulawesi, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the 3rd International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia(TREPSEA2018), 589, 012015-012015, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/589/1/012015

・Komatsu, S; Tanaka, T; Sakakibara, M; Arifin, Y. I; Pateda, S. M; Manyoe, I. M, 19 Nov. 2020, Sociodemographic Attributes and Dependency on Artisanal and Small-scale Gold Mining: the Case of Rural Gorontalo, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the 3rd International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia(TREPSEA2018), 589, 012020-012020, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/589/1/012020

・A K M A Amin; M Sakakibara; Y I Arifin; N Akase, 19 Nov. 2020, Facies Study of Lake Deposits Formation (Qpl) To Determine Deposition Environment of Ancient Limboto Lake: a Preliminary Result, IOP Conference Series: Earth and Environmental Science:The 3rd International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia 11-12 August 2018(TREPSEA2018), Negeri Gorontalo, Indonesia, 589, 012007-012007, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/589/1/012007

・Arifin, Y. I, Sakakibara, M., Sera, K., Puluhulawa, F. U. and Lihawa, F., 19 Nov. 2020, Mercury exposure from small scale gold mining activities and neurological symptoms on inhabitants and miners: a case study in Bolaang Mongondow, North Sulawesi Province, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the 3rd International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia(TREPSEA2018), 589, 012013-012013, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/589/1/012013

・Kimijima, S., Sakakibara, M., Abd. Kadir Mubarak A Amin, Nagai. M. and Arifin, Y., 18 Nov. 2020, Mechanism of the Rapid Shrinkage of Limboto Lake in Gorontalo, Indonesia., Sustainability, 12 (22), English, Refereed DOI:10.3390/su12229598

・Usman, F. C. A., Manyoe, I. N., Duwingik, R. F. and Kasim, D. N. P, 18 Nov. 2020, Geophysical survey of landslide movement and mechanism in Gorontalo Outer Ring Road, Gorontalo., IOP Conference Series: Earth and Environmental Science, 589, English, Refereed DOI:10.1088/1755- 1315/589/1/012008

・Annisa, W., Manyoe, I. N., Mubarak, A. K., Napu, S. S. S., Pratama, I. G. S. and Fatimah, S., 18 Nov. 2020, Chemical content analysis of coral limestone as prospecting of extractive development in Gorontalo City, IOP Conference Series: Earth and Environmental Science, 589, English, Refereed DOI:10.1088/1755-1315/589/1/012021

・Novianti, S., Abdurrachman, M., Claudia, D. and Basuki, N. I., 18 Nov. 2020, Environmental Risk and Health Hazardous Substances in Artisanal Small-Scaled Gold Mining in Sekotong, West Nusa Tenggara, Indonesia., IOP Conference Series: Earth and Environmental Science, 589, English, Refereed DOI:10.1088/1755-1315/589/1/012022

・Soviana, N. N., Brahmantyo, B., Abdurrachman, M. and Sabila, F. S. N., 18 Nov. 2020, Gunung Api Purba Nglanggeran welcomes UNESCO Global Geopark Reassessment in 2019., IOP Conference Series: Earth and Environmental Science, 589, English, Refereed DOI:10.1088/1755- 1315/589/1/012025

・Win Thiri Kyaw; Xiaoxu Kuang; Masayuki Sakakibara, Sep. 2020, Health Impact Assessment of Artisanal and Small-Scale Gold Mining Area in Myanmar, Mandalay Region: Preliminary Research, International Journal of Environmental Research and Public Health, 17 (18), 6757-6769, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/ijerph17186757

・Jahja, M., Arifin, Y. I, Syamsul, A. M. N. F. S., Mobiliu, F. P., Fitriani, Kirana, K. H. and Agustine, E., 18 Aug. 2020, Approaches to sustain microhydro power plants (MHPP) operation in rural areas of Gorontalo Regency, Indonesia., AIP Conference Proceedings, 2251, English, Refereed DOI:10.1063/5.0015782

・Kaori Tembata; Yuki Yamamoto; Masashi Yamamoto; Ken'ichi Matsumoto, Aug. 2020, Don't rely too much on trees: Evidence from flood mitigation in China, Science of The Total Environment, 732, 138410-138410, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.scitotenv.2020.138410

・Abbas, H. H., Sakakibara, M., Sera, K., Nurgahayu and Andayanie, E., 24 Jul. 2020, Mercury Exposure and Health Problems of the Students Using Skin-Lightening Cosmetic Products in Makassar, South Sulawesi, Indonesia, Cosmetics, 7 (3), 58-58, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/cosmetics7030058

・Pateda, M, S; Sakakibara, M, 21 Jul. 2020, Preliminary Study on Human Lung Function of Artisanal and Small-scale Gold Miner in Gorontalo Province, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the International Conference on Transdisciplinary Approach Reserch 2017(ICTAR2017), 536, 012009-012009, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/536/1/012009

・Prasetia, H; Sakakibara, M; Sera, K, 21 Jul. 2020, Preliminary Study of Atmospheric Mercury Contamination Assessment Using Tree Bark in an ASGM Area in North Gorontalo Regency, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the International Conference on Transdisciplinary Approach Reserch 2017(ICTAR2017), 536, 012007-012007, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/536/1/012007

・Basri; Sakakibara, M., 21 Jul. 2020, The Stakeholders Position Map Related to the Mercury Pollution Reduction Program in Bombana Area, Southeast Sulawesi, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the International Conference on Transdisciplinary Approach Reserch 2017(ICTAR2017), 536, 012008-012008, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/536/1/012008

・Kasamatsu, H., Mohamad, J., Arifin, Y. I., Baga, M., Shimagami, M. and Sakakibara, M., 21 Jul. 2020, Prior Study for the Biology and Economic Condition as Rapidly Environmental Change of Limboto Lake in Gorontalo, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the International Conference on Transdisciplinary Approach Reserch 2017(ICTAR2017), 536, 012005-012005, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/536/1/012005

・Gafur, N. A; Sakakibara, M; Sera, K; Arifin, Y. I, 21 Jul. 2020, Toxic Metal Concentrations of Human Hair in Downstream of ASGM Sites in Bone Bolango Regency, Gorontalo Province, Indonesia, IOP Conference Series: Earth and Environmental Science, International Conference on Transdisciplinary Approach Research 2017(ICTAR2017), 536, 012006-012006, IOP Publishing, English, Refereed, Scientific journal DOI:10.1088/1755-1315/536/1/012006

・Kuruniawan, I. A; Sugawara, H; Sakakibara, M; Arifin, Y.I; Eraku, S.S, 21 Jul. 2020, The Potential of Gorontalo Province as Global Geopark, IOP Conference Series: Earth and Environmental Science:Proceeding of International Conference on Transdisciplinary Approach Research 2017 19 August 2017(ICTAR2017), Universitas Negeri Gorontalo, Indonesia, 536 (1), 012004-012004, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/536/1/012004

・Namba, H., Iwasaki, Y., Heino, J. and Matsuda, H., 01 Jul. 2020, What to survey? A systematic review of the choice of biological groups in assessing ecological impacts of metals in running waters, Environmental Toxicology and Chemistry, 39 (10), 1964-1972, English DOI:10.1002/etc.4810

・Jahja, M., Gunawan, A., Syamsul, A. M. N. F. S., Arifin, Y. I and Koerniawan, M. D., 19 Jun. 2020, The prototypes of energy-efficient residential Building with metal roof in Gorontalo, Indonesia., IOP Conference Series: Earth and Environmental Science, 520, English, Refereed DOI:10.1088/1755- 1315/520/1/012025

○MISC

・松本 雄一, Nov. 2020, Enhancing the Creation, Sharing, and Transfer of Practical Intelligence in Communities of Practice, 日本労働研究雑誌, 62 (11), 99-107, 労働政策研究・研修機構, Japanese

・松本 雄一, Jun. 2020, Personnel Development at the AI Era, 日本経営学会誌 = Journal of business management, (44), 82-90, 千倉書房, Japanese

○Presentations

・Miyakita. T., The Role and Responsibility of Public Health in the History of Minamata (MINAMATA), 9th Annual Meeting the Japan Academy of Public Health Nursing, Online, Japan, 10 Jan. 2021, Japanese, Invited oral presentation

・Win Thiri Kyaw, Mercury Free Society Network, 3rd Japan-ASEAN Medical Seminar on Human Health Impact of Heavy Metals, 31 Oct. 2020, English, Public discourse

・KOHMOTO Daichi, How the Geopark concepts have been illustrated?, The General Meeting of the AJG Autumn 2020, 18 Oct. 2020, Invited

・Arifin, Y. I, Geological study of Pantai Indah for geotourism development in Gorontalo area based on geological observation and assessment of sciences, education, tourism, and the risk degradation, 1st international conference on mathematics, natural science and learning in the new normal order on Manado State University, Online, Indonesia, 15 Oct. 2020, English, Oral presentation

・Nanyoe, I. M., Assessment of the values of science, education tourism and risk degradation of geothermal areas to developing geotourism in the Limboto Lake Plain, Gorontalo, 1st international conference on mathematics, natural science and learning in the new normal order on Manado State University, Online, Indonesia, 15 Oct. 2020, English, Oral presentation

・Shuto Mikami; Yutaka Ito; Hernán Gabriel; Oyola Gonzales, University Students' Preferences for Labour Conditions at a Mining Site: Evidence from Two Peruvian Universitie, 環境経済政策学会, 27 Sep. 2020, 26 Sep. 2020 27 Sep. - 2020, Japanese, Oral presentation

・Hernán Gabriel; Oyola Gonzales; Yutaka Ito; Shuto Mikami; Satoru Komatsu, Residents Social and Environmental Preferences regarding Mining Activities The Best-Worst Scaling Technique and Mixlogit Model, 環境経済政策学会, 26 Sep. 2020, 26 Sep. 2020 27 Sep. - 2020, English, Others

・末永 京; アハメド ハシフ; アリフ フィルダウス; 山崎瑞季; 伊藤 豊, ベストワーストスケーリングを用いた住民主体の水質改善政策に関する研究 ミャンマーインレー湖湖上生活者を対象として, 環境経済政策学会, 26 Sep. 2020, Japanese, Others

・Matsumoto. Y., Learning for Community of practice, 94th Japan Academy of Business Administration, Online, Japan, 03 Sep. 2020, Invited, Japanese, Invited oral presentation

・Sugawara. H., Sustainable Tourism and Gorontalo Geopark, Implementation of webinar by the United Engineering Indonesia (PII), Online, Indonesia, 03 Aug. 2020, Invited, English, Invited oral presentation

○**Academic Contribution**

・4th Japan – ASEAN Medical Seminar on Human Health Impact of Heavy Metals, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 25 Jan. 2021, 25 Jan. 2021

・8th seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 14 Dec. 2020, 14 Dec. 2020

・3rd Japan - ASEAN Medical Seminar on Human Health Impact of Heavy Metals, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 31 Oct. 2020, 31 Oct. 2020

・SRIREP Project International webinar, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 14 Sep. 2020, 14 Sep. 2020

・SRIREP Project 2nd International mini seminar, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 11 Sep. 2020, 11 Sep. 2020

・6th seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 25 Aug. 2020, 25 Aug. 2020

・4th seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 17 Jul. 2020, 17 Jul. 2020

・5th seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 13 Jul. 2020, 13 Jul. 2020

・SRIREP Project 1st International mini seminar, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 01 Jul. 2020, 01 Jul. 2020

・3rd seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 29 Jun. 2020, 29 Jun. 2020

・2nd seminar for SRIREP Project, SRIREP Project, Research Institute for Humanity and Nature, 11 Jun. 2020, 11 Jun. 2020

・1st seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 02 Jun. 2020, 02 Jun. 2020

○**Media Coverage**

・Fight against COVID-19. Symbiosis with Virus. Part 4, Nishinippon Shinbun, 22 Oct. 2020, Page18, Paper

・Fight against COVID-19. Symbiosis with Virus. Part 1, Nishinippon Shinbun, 01 Oct. 2020, Page22, Paper

○**Others**

・SRIREP Project Newsletter2(4), Dec. 2020, Dec. 2020

・SRIREP Project Newsletter2(3), Sep. 2020, Sep. 2020

・SRIREP Project Newsletter2(2), May 2020, May 2020

Core Program

Program Director: TANIGUCHI Makoto

○ Research Subject and Objectives

Based on the mission of RIHN and in order to execute the strategies and policies formulated by the Council for Research Strategy, the Core Program undertakes research on an ongoing basis. During Phase III (2016-2021) of RIHN, the Core Program will develop concepts and methodologies to solve global environmental problems in collaboration with society. The Core Program develops comprehensive and systematic concepts and methodologies for transdisciplinary and interdisciplinary research. Core Projects produce conceptual and methodological frameworks together with RIHN Research Projects based on individual methods, techniques, and tools from the divisions in the RIHN Center. Core Projects collaborate with Research Projects, building on the case studies developed by these projects, and develop comprehensive and systematic methodologies beyond an individual Research Program or Project. Core Projects also deliver completed concepts and methodology to Research Programs and Projects, the RIHN Center, and related stakeholders.

○ Progress and Results in 2020

The Core Program affiliates two Core Projects, “Open team science project (FR3-PI: Yasuhisa Kondo)” and “Co-creation project (FR1-PI: Yuko Onishi), and two Core FSs, “Serious game project (FS-leader: Kazuhiko Ota)”, and “Decision support project (FS-leader: Sanghyun Lee)”. The Core Program develops comprehensive and systematic concepts and methodologies for interdisciplinary and transdisciplinary research. The Core Program also works together with core projects based on the framework of targets, methodologies/concepts, and methods/tools for the Core Program and Core Projects.

The Core Program also works together with core projects based on the framework of targets, methodologies/concepts, and methods/tools for the Core Program and Core Projects.

The Core Projects produce conceptual-methodological frameworks together with the Research Projects implementing individual methods/techniques/tools from the divisions in the RIHN Center. In the case of the “Open Team Science Core Project (PI: Kondo), the conceptual framework (target) of “openness/justice” has been developing in interdisciplinary and transdisciplinary studies with the Research Projects “Sanitation (program 3, PI: Yamauchi)” and completed project “Nutrient Cycling (program 2, PI: Okuda)”. In the case of the “Co-creation Project (PI: Onishi)”, the conceptual framework (target) of “recursive” has been developing between scientists and non-scientists with completed RIHN projects.

“Open Team Science Core Project (PI: Kondo)” is now reaching the final year (FR3), and is the second Core Project to contribute to the targets of the Core Program. “Openness/Justice” among the scientists with different disciplines (Sanitation Project), and between scientists and non-scientists (Nutrient Cycling Project and other case studies) has been studied through the visualization of the gaps among scientists, and the changes in the consciousness of stakeholders by graphic recording and others. The “Co-creation” Core Project (PI: Onishi) is now in the FR1 stage, therefore the research results of the Core Project are currently in progress, even though the difficulty with Covid-19 situation.

One of other activities of the Core Program is research developments for Core FS. After identifying gaps in themes within the existing Core Projects/FSs and comprehensive research frameworks such as the JSRA (Japan Strategic Research Agenda) and Sustainable Development Goals (SDGs) in the previous year, the Core Program held an open call for 2020 Core FSs on environmental ethics, justice/equity, and integrated scenario developments with stakeholders. The two Core FSs selected were: “Tackling Wicked Problems: Co-creating Serious Games as a Transdisciplinary Methods to Solve Socio-Environmental Challenges (Core FS-leader: Kazuhiko Ota), and Development of data-driven decision support platform based on sustainable life cycle assessment of SDGs Nexus (Core FS-leader: Sanghyun Lee). The Core Program organized two Core Program seminars and several individual meetings with the Core FS leaders/members for research development through the discussion of comprehensive and systematic concepts and methodologies for the Core Program.

The Core program decided to develop the new ideas/concepts through integration of completed RIHN research as well as global environmental studies and SDGs.

One of them is related to RIHN’s Research Mapping, and two seminars were held. RIHN’s research mapping is designed to survey the research network based on themes, methods, targets and so on of all research conducted at RIHN. The research networks are examined from a wide perspective such as SDGs/JSRA/Global Environmental Research frames for 20 years RIHN’ s Research. The aim of this research development is to contemplate RIHN’s 4th Phase Future Plan, as well as to generate an image of the RIHN 20th Anniversary (April 23, 24, 2021).

Another research developments have been also made for Global Environmental SDGs including “Resource NEXUS and Global Environment SDGs”, “Behaviour change for a sustainable society”, and ”Environmental Footprints”. Four Core program meetings and one special meeting were held to discuss and develop the Core program research. In addition to regular research activities through the affiliated Core Projects and research developments, the Core Program carries out its own research with Research Programs/Projects and Core Projects to integrate global environmental issues and share knowledge/data through the “Belmont Forum project: Intelligent Urban Metabolic Systems for Green Cities of Tomorrow: an Food-Water-Energy Nexus-based Approach (METABOLIC)”, and Cross-program research on SDGs. The Program Director (PD) of the Core Program organized inter-program meetings related to the Water-Energy-Food Nexus and SDGs to discuss the concepts, methodologies, and data for global environmental research and sustainability. As a result, the Core Program organized the Nexus session at the American Geophysical Union in December 2020.

We have made the following 11 Core Program seminar:

29th (Jan 22, 2021) Core program meeting

Progress Report by two Core FR (Full Research)

1. Yasuhisa Kondo “Information Asymmetry Reduction in Open Team Science for Socio-environmental Cases”

2. Yuko Onishi “Methods and tactics to foster knowledge Co-creation: A practical framework for transdisciplinary research on the environmental issues”

28th (Nov 6, 2020) Core program meeting

Progress Report by two Core FR (Full Research) and two Core FS (Feasibility Study)

1. Yasuhisa Kondo “Information Asymmetry Reduction in Open Team Science for Socio-environmental Cases”

2. Yuko Onishi “Methods and tactics to foster knowledge Co-creation: A practical framework for transdisciplinary research on the environmental issues”

3. Kazuhiko Ota (RIHN) “Tackling Wicked Problems: Co-creating Serious Games as a Transdisciplinary Methods to Solve Socio-Environmental Challenges”

4. Sanghyun Lee (RIHN) “Development of data-driven decision support platform based on sustainable life cycle assessment of SDGs Nexus”

27th (Sep 29, 2020) Core Program meeting

Research Mapping of RIHN (Session 2):

1. Makoto Taniguchi (RIHN)

Summary of joint research on global environmental research for 20 years in RIHN

2. Rei-ichiro Ishii(RIHN)

Mission of RIHN and the differences from other institutions

3. Ichiro Tayasu (RIHN)

Networks of RIHN’s research

4. Kaoru Sugihara (RIHN)

Publications as books from RIHN during 20 years

26th (Sep 2 2020) Core Program Meeting,

Global Environment SDGs series 4 “Behaviour change for a sustainable society (session 2)”

1. Shunsaku Sasaki (Tohoku-Gakuin Uni.)

Behavior changes on global environmental changes: from the viewpoints of Behavior Economics.

27th Core Program meeting, Sep. 29 (Tuesday)

Research Mapping of RIHN (Session 2):

1. Makoto Taniguchi (RIHN)

Summary of joint research on global environmental research for 20 years in RIHN

2. Rei-ichiro Ishii(RIHN)

Mission of RIHN and the differences from other institutions

3. Ichiro Tayasu (RIHN)

Networks of RIHN's research

4. Kaoru Sugihara (RIHN)

Publications as books from RIHN during 20 years

25th (Aug 27, 2020) Core Program Meeting,

Global Environment SDGs series 3: "Environmental Footprints"

1. Akio Saito and Tamiya Naito (IGES)

Ecological footprint of IGES

2. Satoshi Kojima (IGES)

Life style for 1.5 ℃: Carbon footprint and transformation toward sustainable society

3. Naoki Masuhara, RIHN Researcher

Ecological footprint of RIHN

Special meeting (Aug 24, 2020)

"Disaster Prevention and Mitigation under the Global Warming"

1. Takehito Yoshida, RIHN Associate Professor

Eco-DRR

2. Masahiko Haraguchi (JSPS PD, RIHN)

Connected disaster risks: Analyses of infrastructure

24th (Aug 6, 2020) Core Program Meeting,

Global Environment SDGs series 2 "Behavior change for a sustainable society (session 1)"

1. Hideo Yokoo (Hitotsubashi Univ.)

Environmental issues by tackling with economics and political trials: Four key words

23rd (Aug 6, 2020) Core Program Meeting, Global Environment SDGs series 1 "Resource NEXS and Global Environment SDGs"

1. Masahiko Haraguchi (JSPS PD, RIHN)

Waste management and heat exhaustion as adaptation/mitigation for global warming

2. Takuro Kobashi (National Institute for Environmental Studies)

Technological, economical and social problems for new electrical system with combination of rooftop solar panels and electric cars in Kyoto.

22nd (Jul 13, 2020) Core Program Meeting, Progress Report by two Core FR (Full Research)

1. Yasuhisa Kondo (RIHN) "Information Asymmetry Reduction in Open Team Science for Socio-environmental Cases"

2. Yuko Onishi (RIHN) "Methods and tactics to foster knowledge co-creation: A practical framework for transdisciplinary research on the environmental issues"

21st (Jun 8, 2020) Core Program Meeting, Progress Report by two Core FS (Feasibility Study)

1. Kazuhiko Ohta (RIHN) "Tackling Wicked Problems: Co-creating Serious Games as a Transdisciplinary Methods to Solve Socio-Environmental Challenges"

2. Sanghyun Lee (RIHN) “Development of data-driven decision support platform based on sustainable life cycle assessment of SDGs Nexus”

20th (May 11, 2020) Core Program Meeting, RIHN’s Research mapping (1): workshop

19th (Apr 2 2020) Core Program Meeting, Annual schedule of Core program meetings

○ Future Themes

1) The Core Program will synthesize the Core Projects and Core FSs to create synergy in the program.

2) The Core Program will affiliate Core Projects which will develop new methodologies by filling the gaps within the existing Core Projects/FSs and comprehensive research frameworks such as the JSRA (Japan Strategic Research Agenda) and SDGs.

3) The Core Program together with Research Programs will synthesize the research activities in RIHN and organize inter-program research related to the WEF Nexus, SDGs and others.

4) The Core Program will work more closely with the strategies and policies formulated by the Council for Research Strategy of RIHN.

5) The Core Program will seek opportunities to apply the developing concepts and methodologies to other Research Projects with stakeholders.

6) The Core Program will work more closely with international alliances related to “Humanity and Nature” such as the Future Earth alliance, Resilience alliance, and Sustainability alliance to disseminate the results of the Core Projects.

7) The Core Program will develop inter-program research project with external funding on connected wicked problems including global warming for transformation　toward sustainability in Anthropocene.

○Project Members

TANIGUCHI Makoto	(Research Institute for Humanity and Nature・Professor)
KONDO Yasuhisa	(Research Institute for Humanity and Nature・Associate Professor)
ONISHI Yuko	(Research Institute for Humanity and Nature・Assistant Professor)
OHTA Kazuhiko	(Research Institute for Humanity and Nature・Assistant Professor)
LEE Sanghyun	(Research Institute for Humanity and Nature・Assistant Professor)

●Achievements

○Books etc

・谷口真人, 2021, III-3 水・エネルギー・食料連環の重要性, 366-369, Contributor, 水環境の事典, 朝倉書店, Japanese, Dictionary or encycropedia

・総合地球環境学研究所, 05 Oct. 2020, 持続可能な社会と富士山, 4-14, ビオシティ 84 号 特集号 富士山から持続可能な未来へ－自然・社会・文化・まちのネクサス, 冊, ビオシティ, Japanese, ISBN: 9784907083625

・Foster, S; Dillon, P; Stigter, T; Taylor, R; Scanlon, B; Andreo, B; Kebede, S; Escolero, O; Taniguchi, M; Wende, F, 2020, Climate-change adaptation and groundwater, 6, Association of Hydrogeologists, Strategic Overview Series, English

・宮越昭暢; 谷口真人, 2020, 地球温暖化が進むと地下水や湧水に影響はあるのですか？, 182-185, Contributor, 「地下水・湧水の疑問」, 日本地下水学会編、成山堂書店, Japanese

○Published Papers

・Henrietta Dulai; Isaac R. Santos; Makoto Taniguchi; Ryo Sugimoto; Jun Shoji; Abhijit Mukherjee, 20 Jan. 2021, Editorial: Submarine Groundwater Discharge: Impacts on Coastal Ecosystem by Hidden Water and Dissolved Materials, Frontiers in Environmental Science, 8, Frontiers Media SA, Refereed, Scientific journal DOI:10.3389/fenvs.2020.629509

・Lee, S.H; Taniguchi, M; Masuhara, N; Mohtar, R.H; Yoo, S.H; Haraguchi H, 2021, Analysis of industrial water–energy–labor nexus zones for economic and resource-based impact assessment, Resources, Conservation and Recycling, 169, 105483, Refereed

・Sang-Hyun Lee; Jin-Yong Choi; Seung-Oh Hur; Makoto Taniguchi; Naoki Masuhara; Kwang Soo Kim; Shinwoo Hyun; Eunhee Choi; Jae-hoon Sung; Seung-Hwan Yoo, Dec. 2020, Food-centric interlinkages in agricultural food-energy-water nexus under climate change and irrigation management, Resources, Conservation and Recycling, 163, 105099-105099, Elsevier BV, English, Refereed, Scientific journal DOI:10.1016/j.resconrec.2020.105099

○Presentations

・谷口真人, コロナ禍と水・エネルギー・食料研究の新たな課題, 日本学術会議公開シンポジウム「コロナ禍が加速する持続可能な社会の実現に向けた地球環境変化の人間的側面研究の推進」, オンライン開催, 24 Mar. 2021, Invited

・Masuhara, N, Lee; S. Taniguchi, M, Hydro-power Generation as Energy-Water-Land Interactions from Historical Perspective., American Geophysical Union Fall meeting, 12 Dec. 2020, Poster presentation

・Lee S; Taniguchi, M; Masuhara, N, Analysis of transboundary water flows linking physical water supply and virtual water trade through water-food-trade nexus approach, American Geophysical Union Fall meeting(iPoster), 12 Dec. 2020, Poster presentation

・Taniguchi, M; Lee, S; Masuhara,N, Nexus approach of water-energy-food-land interactions for multi-scale sustainability, American Geophysical Union Fall meeting (iPoster), 12 Dec. 2020, Poster presentation

・谷口真人, SDGs と地理学, 立命館地理学, 28 Nov. 2020, Invited, Japanese, Invited oral presentation

・Taniguchi, M; Lee, S; Masuhara, N, Multi-Scale FEW Nexus based on resource-sheds and stakeholders., 2020 Brazilian Belmont Forum Meeting（Zoom 会議）, 23 Sep. 2020, Oral presentation

・谷口真人; 若松永憲; 山下瞳; 熊澤輝一, 文理融合型学際研究を進める総合地球環境学研究所における多様性指標の活用, 第 6 回 RA 協議会（Zoom 会議）, 17 Sep. 2020, Japanese

・谷口真人, 持続可能な社会のための行動変容（その２）, 第 26 回地球研コアプログラム研究会：地球環境 SDGs 第 4 回(Zoom 会議）, 02 Sep. 2020, Oral presentation

・谷口真人, 環境フットプリントと SDGs, 第 25 回地球研コアプログラム研究会：地球環境 SDGs 第 3 回（Zoom 会議）, 27 Aug. 2020

・持続可能な社会のための行動変容（その１）, 第 24 回地球研コアプログラム研究会 : 地球環境 SDGs 第 2 回（Zoom 会議）, 07 Aug. 2020

・地球環境 SDG 第 2 回「持続可能な社会のための行動変容（その１）」, 第 24 回地球研コアプログラム研究会, 07 Aug. 2020, - 1900

・谷口真人, 資源ネクサスと地球環境 SDGs, 第 23 回地球研コアプログラム研究会：地球環境 SDGs 第 1 回, 06 Aug. 2020

・Taniguchi, M, "The Great Debate: Geoscience and societal leadership in support of planetary stewardship", JpGU-AGU-EGU" joint session at the JpGU-AGU Joint Meeting, 17 Jul. 2020, Invited, English, Invited oral presentation

○Academic Contribution

・M-G134: Groundwater Resources Conservation, JpGU-AGU Joint Meeting (Session convener), Academic society etc, JpGU-AGU Joint Meeting, 25 Jul. 2020

・GC064: Multisector Dynamics: Energy–Water–Land Interactions at Multiple Scales, American Geophysical Union (Session convener), American Geophysical Union, 10 Dec. 2020

○Media Coverage

・未来への大気水圏科学, Myself, 地球惑星科学連合 ニュースレター, Dec. 2020, 16(3), 5, PR

Stage: Full research (FR)

Project Name: Information Asymmetry Reduction in Open Team Science for Socio-environmental Cases

Abbreviated Title: OpenTS

Project Leader: KONDO Yasuhisa

Core Program

URL: https://openteamscience.jp/

Key Words: open science, collaborative research, open team science

○ Research Subject and Objectives

1 Problem, background, and objectives

Environmental deterioration can result from defective interactions between human society and nature, and is often perceived as a wicked problem that has no clear-cut solution [1]. Such a problem cannot simply be solved by research experts. Rather, it requires collaborations with experts from different domains (interdisciplinary research) [2] as well as practitioners such as governments, funding bodies, industry, non-profit organizations, and members of civil society (transdisciplinary research) [3,4] in order to "dissolve" the problem among the relevant societal actors. Therefore, such solution-oriented research projects are always completed by a team of two or more experts in an interdependent fashion [5,6]. However, this team format is often disrupted by asymmetric information [7], knowledge, wisdom [8], value, socio-economic status [9,10], and power among the above-mentioned actors, as well as by different historical and geopolitical contexts. How can we span such boundaries (or reduce asymmetries)? Motivated by this research question, this Core Project, also called the Open Team Science Project, developed the Open Team Science (OpenTS) Method, an academic methodology to reduce (rather than dissolve) such socio-psychological asymmetry to enable more effective community-based research on socio-environmental issues. This enterprise academically explores a new dimension of open science for and with society (see Section 8, Figure 1).

2 Methodology, structure, and schedule

To develop the OpenTS Method, we interlinked the concept of open science, as an open scientific knowledge production system, with a transdisciplinary approach to boundary spanning [11,12] by transforming in-between spaces [13,14] into shared epistemic living spaces (Figure 2). Technically, boundary spanning can be achieved through a combination of (1) warranting ethical equity [15] with special attention to empowering marginalized (or "small voice") actors; (2) building trust by warranting transparency (i.e., traceability and synchronousness) in the research process (for instance, by promoting fair use of research data based on the FAIR (findable, accessible, interoperable, and reusable) Principles [16]); (3) facilitating dialogue and synlogue (a conversation in which another speaker seamlessly succeeds over the speech of the first speaker [17], particularly to Asian contexts); and (4) discovering and sharing the platform on which actors with different interests and thoughts can tackle together (transcend) [18], where necessary (Figure 3). Civic technology [19] was applied as a holistic approach, through which civic engineers develop solutions to local issues by using available data and information technologies. This Method is a working hypothesis that needs to be improved upon through a short-term iterative circuit of abduction to identify more reasonable hypotheses by assessing practices [20], with special attention given to participants' perceptual transformation (Figure 4).

During the first half (2018–19) of the three-year time period of this project, we reviewed case studies to develop the OpenTS Method. We expected to test the Method through practical case studies during the second half (2019–20; see Figure 5), but this could not be fully attained due to the emergence of the COVID-19 pandemic.

3 Results

We developed the OpenTS Method as a self-checklist (Figure 3) for diverse types of community-based research projects on socio-environmental issues. The Method was published in a Japanese book of collected papers for general readers [a], a concept paper in Current Opinion in Environmental Sustainability [g], four opinion papers in Japanese academic journals [b,c,j,l], and two newspaper commentaries [f,h], among other media (see Sections 1, 2, 4, 6, and Annex 2).

d) Project organization, membership, and collaboration with RIHN Research Projects

In the original plan, the organization of this Core Project was loosely divided into Theory and Practice groups, while synergistic collaboration between (sub-)groups was encouraged. The Research Group developed the aforementioned OpenTS Method by reviewing literature and case studies from the multifaceted viewpoints of philosophy, ethics, anthropology, social psychology, ecology, open science theory, the science of team science (SciTS), and science communication, in an ad-hoc collaboration with the Historical Climate Adaptation, Sanitation, and FEAST projects. The Practice Group focused on aquatic weed recycling in the

catchment of Lake Biwa, Japan, in collaboration with the Ecological Recycling (e-Rec) project, and on a community-based built heritage management project in Oman. See Sections 2 and 4 for details.

4 Contribution to the Core Program

This project contributed to the Core Program by exploring the ethical, legal, and social issues (ELSI) of open science with and for society, as a common methodology of the Program, in collaboration with the Environmental Traceability project. Moreover, the conceptual importance of openness, fairness, and equity in the transdisciplinary process has been recognized as a research interest shared by the Program (see Section 3).

○ Progress and Results in 2020

5 Project Progress during Full Research

1) The OpenTS Method has been developed as a self-checklist.

We developed the OpenTS Method as a self-checklist for diverse types of community-based research projects on socio-environmental issues in the following manner: Conceptually, we interlinked the concept of open science, as an open scientific knowledge production system, with a transdisciplinary approach to boundary spanning [11,12] by transforming in-between spaces [13,14] into shared epistemic living spaces (Figure 2). Technically, boundary spanning can be achieved by a combination of (1) warranting ethical equity [15] with special attention to empowering marginalized (or "small voice") actors; (2) building trust by warranting transparency (i.e., traceability and synchronousness) in the research process (for instance, by promoting fair use of research data based on the FAIR (findable, accessible, interoperable, and reusable) Principles [16]); (3) facilitating dialogue and synlogue (a conversation in which another speaker seamlessly succeeds on the speech of the first speaker [17], particularly occurred in Asian contexts); and (4) discovering and sharing the goals that actors with different interests can tackle together (transcend) [18] where necessary (Figure 3).

2) The OpenTS Method was tested in interdisciplinary projects.

Semi-structured interviews with Takeshi Nakatsuka, leader of the Historical Climate Adaptation project, revealed an asymmetry in the intellectual reciprocity between climatologists (i.e., natural scientists) and archaeologists and historians (i.e., social scientists).

Based on this experience, a dialogic questionnaire survey was designed to visualize the participants' understanding of key concepts such as culture, technology, and environment, and views for co-authorship in the JSPS KAKENHI PaleoAsia project. The survey was conducted with the participation of 60 project members at the meeting in May 2019. A second online survey was conducted with 40 members in June 2020. The results indicated that the understanding of key concepts, such as culture, environment, and technology, differed at the individual level, with natural scientists tending to change their thoughts regarding the concept of culture during the project (Figure 5). Additionally, cultural anthropologists were found to prefer single authorship. A report will be submitted to the Interrogating Interdisciplinarity Collection of Humanities and Social Sciences Communications.

3) The OpenTS Method was also tested in community-based projects.

In the second general meeting of this project held in August 2019, the following cases were reviewed to test the applicability of the OpenTS Method (Figure 6): (1) aquatic weed overgrowth and community-based solutions in the Lake Biwa catchment, Shiga prefecture; (2) invasive species removal and open data solution in Kokonoe Town, Oita prefecture; (3) urban planning in Takashima, Shiga; (4) digital archive of memories of nuclear refugees in the Marshall Islands; and (5) community-based restoration of built heritage in southern Oman. An intensive discussion concluded that, rather than openness/closedness, the focus on inclusiveness and transparency should be increased focus because these concepts are more closely connected to the development of trust.

Due to the COVID-19 pandemic, we canceled all travel and face-to-face meetings from April 2020. Instead of testing the applicability to fieldwork, we focused on compiling a collected volume of theories and case studies in light of the OpenTS Method [a]. A discussion on cross-chapter synthesis will be conducted after publication.

4) An e-system to circulate good will is being developed in Lake Biwa.

In collaboration with the e-Rec project, we conducted a three-year action research project for aquatic weed recycling in the South Basin of Lake Biwa to test the OpenTS Method (Figure 7). We conducted four civic participatory workshops in 2018, and participating local actors decided to develop (1) Biwa Point, an e-point system that enables coordinators, participants, and

supporters of voluntary environmental conservation projects to circulate good will (Figure 8), and (2) a portal website to disseminate environmental information of the area to strengthen the solidarity among highly-motivated people and facilitate the involvement of less-motivated people are being developed. To operate the Biwa Point system and portal website sustainably, the non-profit organization Biwako-chishin (https://biwako.info) was founded in October 2019. In addition to the original plan, the Biwa Point system is being applied to a public campaign to remove invasive fish species as well as a smart city project in Ōtsu. Thus, this system to circulate good will is being applied more widely in the field of environmental conservation and sustainable development in local communities. There were some ethical issues during the action research (see Section 2-7). A synthesis paper is currently being reviewed for publication in Socio-Ecological Practice Research.

5) The psychological effects of graphic recording are to be studied continuously.

To test the working hypothesis that graphic recording transforms self-closed epistemic living spaces (Shell Mode) to make them intersect with those of others (Reborder Mode; see Figure 9), a psychological experiment using a questionnaire survey for participants of meetings with (and without) graphic recording was designed using the modified grounded theory approach. The questionnaire survey was conducted with 44 participants of a group dialogue session on the community-based aquatic weed recycling at the RIHN Regional Seminar in Shiga, February 2020. Results showed that participants were generally less satisfied with the process and results of the meeting with graphic recording than they were with those without recording (Figure 10). Further experiments in a controlled setting are being planned to verify the effect properly.

6) The OpenTS Method has been disseminated and being deployed to new projects.

A concept paper on the aforementioned topics in Points 1, 3, and 4 was published in Current Opinion in Environmental Sustainability [g]. This paper was co-authored with members of the e-REC, FEAST, and Sanitation projects (see Section 2). A brief introduction to the paper was posted on https://i2insights.org/, an international weblog on transdisciplinary research. Some early works [f,g,h,j,l] resulted in the project leader's appointment as a member of the Science Council of Japan with his expertise in "open science and society." Moreover, funding from two third parties has been awarded for proposals that refer to the OpenTS Method [n,o].

○ Future Themes

6 Application of the theory and methodology after Core Project

We aim to establish a Post-Core Collaborative Research Initiative at the RIHN Center to further improve and disseminate the OpenTS Method to upcoming, ongoing, and completed RIHN research projects, as well as to other community-based projects on broader research topics such as living heritage management [n], public health education [o], and public humanities for biocultural diversity conservation.

a. Yasuhisa Kondo*, Hideyuki Ōnishi (eds.), 2021.3 (in press). Dissolving Environmental Problems: An Introduction to Open Team Science (環境問題を解く：ひらかれた協働研究のすすめ). Kamogawa Publishers, Kyoto (in Japanese). See Section 2 for individual chapters.

b. Yasuhisa Kondo*, 2021.2 (in press). Open Team Science as a methodology of transparent collaborative research (オープンチームサイエンス：ひらかれた協働研究の方法論). Trends in the Sciences (学術の動向) 26(2) (invited, in Japanese).

c. Yasuhisa Kondo*, 2020.9. Collaborative research and online tools in the era of COVID-19 (コロナ時代の共同研究とオンラインツール). Journal of Rural Planning (農村計画学会誌) 39: 104-107 (invited, in Japanese).

d. Akihiro Miyata, 2020.9. Dwelling and speaking: a question to the crack and silence in Michiko Ishimure's Kugai jōdo (Paradise in the Sea of Sorrow) (住まうことと語ること―石牟礼道子『苦海浄土』の沈黙と亀裂へ向けて―). Heidegger-Forum 14: 1-18 (in Japanese with English abstract, peer-reviewed). http://heideggerforum.main.jp/data2020/Miyata.pdf

e. Takeshi Osawa, Takaaki Nishida, Takeshi Oka, 2020.9. Paddy fields located in water storage zones could take over the wetland plant community. Scientific Reports 10: 14806. https://doi.org/10.1038/s41598-020-71958-z (peer-reviewed)

f. Yasuhisa Kondo*, 2020.2. How to promote civic tech (シビックテック生かすには). Nihon Keizai Shinbun (日本経済新聞; NIKKEI), Morning, 27 February 2020 (in Japanese).

g. Yasuhisa Kondo*, Akihiro Miyata, Ui Ikeuchi, Satoe Nakahara, Ken'ichiro Nakashima, Hideyuki Ōnishi, Takeshi Osawa, Kazuhiko Ota, Kenichi Sato, Ken Ushijima, Bianca Vienni Baptista, Terukazu Kumazawa, Kazuhiro Hayashi, Yasuhiro Murayama, Noboru Okuda, Hisae Nakanishi, 2019.10. Interlinking open science and community-based participatory research for socio-environmental issues. Current Opinion in Environmental Sustainability 39: 54-61 (peer-reviewed). https://doi.org/10.1016/j.cosust.2019.07.001

h. Yasuhisa Kondo*, 2019.10. Waterweed in Lake Biwa: As a researcher accompanying local communities (琵琶湖の水草 : 研究者として地域に寄り添う). The Kyoto Shimbun (京都新聞連載「上賀茂発地球研フィールドノート」第 7 回), Evening, 9 October 2019 (in Japanese).

i. Ui Ikeuchi, 2019.9. Reliability of open research data: Data selection methods and improving quality (研究データの信頼性 : データの選択方法と質の向上). The Journal of Information Science and Technology Association (情報の科学と技術) 69(9): 435-437 (in Japanese). https://doi.org/10.18919/jkg.69.9_435

j. Yasuhisa Kondo*, 2019.9. Ethical issues in open science and open governance (オープンサイエンスとオープンガバナンスの倫理的諸問題). Advances in Social Research (社会と調査) 23: 43-51 (in Japanese).

k. Kazuhiro Hayashi, 2019.3. Progress of open science and transforming citizen science to co-creative research. Trends in the Sciences (学術の動向) 23(11): 12-29 (in Japanese with English abstract). https://doi.org/10.5363/tits.23.11_12

l. Yasuhisa Kondo*, Kazuhiro Hayashi, 2019.3. Open science to social issue solution: foresight from a multi-stakeholder workshop. STI Horizon 5(1): 35-40 (in Japanese with English abstract, reviewed). https://doi.org//10.15108/stih.00167

Conference presentations

m. Yasuhisa Kondo*, 2020.10. Open Team Science: a methodology for transparent collaborative research (オープンチームサイエンス : ひらかれた協働研究の方法論). Keynote lecture at the 6th Forum on the Promotion of Humanities and Social Sciences (第 6 回人文・社会科学系研究推進フォーラム), held online on 3 October 2020. https://u4u.oeic.hokudai.ac.jp/5242/

Third party funds awarded with the proposal referred to the OpenTS Method

n. JSPS KAKENHI Fund for Fostering Joint International Research (B), grant number JP20KK0020, “Restoration and Inheritance of Living Heritage under a Vulnerable Social Environment of a Port City in Southern Oman,” to Yasuhisa Kondo* (Principal Investigator), Naoyuki Matsumoto, Tomo Ishimura, Hideyuki Ōnishi (Co-Investigator), Naima Benkari (International Collaborator), Kengo Hayashi, Mikio Koshihara (Collaborator) et al., from October 2020 to March 2025.

o. EU HORIZON 2020 CSA (Coordination & Support Action) Science with and for Society (SwafS), grant number 101006514, “Opportunities and education in networked innovation for new graduates with PhDs using open online resources (OPENING DOORS),” to Denice McGrath (Principal Investigator), Yasuhisa Kondo* (International Partner) et al., from January 2020 to September 2021.

References

1.Ruth DeFries, Harini Nagendra, 2017. Ecosystem management as a wicked problem. Science 356: 265-270. https://doi.org/10.1126/science.aal1950

2.Allen F. Repko, Rick Szostak, 2020. Interdisciplinary Research: Process and Theory. 4th ed. SAGE Publications.

3.Gertrude Hirsch Hadorn, Holger Hoffmann-Riem, Susette Biber-Klemm, Walter Grossenbacher-Mansuy, Dominique Joye, Christian Pohl, Urs Wiesmann, Elisabeth Zemp, 2007. Handbook of Transdisciplinary Research. Springer.

4.Wolfram Mauser, Gernot Klepper, Martin Rice, Bettina Susanne Schmalzbauer, Heide Hackmann, Rik Leemans, Howard Moore, 2013: Transdisciplinary global change research: the co-creation of knowledge for sustainability. Current Opinion in Environmental Sustainability 5(3-4):420-431. https://doi.org/10.1016/j.cosust.2013.07.001

5.National Research Council (ed.), 2015. Enhancing the Effectiveness of Team Science. The National Academies Press. https://doi.org/10.17226/19007

6.Kara L. Hall, Amanda L. Vogel, Robert T. Croyle (eds.), 2019. Strategies for Team Science Success. Springer. https://doi.org/10.1007/978-3-030-20992-6

7.George Akerlof, 1970. The market for lemons: quality uncertainty and the market mechanism. Quarterly Journal of Economics 84(3):488-500.

8.Gene Bellinger, Durval Castro, Anthony Mills, 2004. Data, information, knowledge, and wisdom. http://www.systems-thinking.org/dikw/dikw.htm (Accessed 28 December 2018)

9.Michael W. Kraus, Stéphane Côté, Dacher Keltner, 2010. Social class, contextualism, and empathic accuracy. Psychological Science 21:1716-1723. https://doi.org/10.1177/0956797610387613

10.Ken’ichiro Nakashima, S. Lee, 2016. Benefits and pitfalls of high economic status based on three findings in Japanese samples. In: Geoffrey Perkins (ed.) Socioeconomic Status: Influences, Disparities and Current Issues. New York: NOVA Science Publishers, pp. 109-145.

11.Lee Fleming, David M. Waguespack, 2007. Brokerage, boundary spanning, and leadership in open innovation communities. Organization Science 18(2): 165-180. https://doi.org/10.1287/orsc.1060.0242

12.Dan Wang, Alessandro Piazza, Sarah A. Soule, 2018. Boundary-spanning in social movements: Antecedents and outcomes. Annual Review of Sociology 44: 167-187. https://doi.org/10.1146/annurev-soc-073117-041258

13.Homi K. Bhabha, 1994. The Location of Culture. Routledge.

14.Ulli Vilsmaier, Vera Brandner, Moritz Engbers, 2017. Research in-between: The constitutive role of Cultural differences in transdisciplinarity. Transdisciplinary Journal of Engineering & Science 8:169-179.

15.Fabien Medvecky, 2017. Fairness in knowing: Science communication and epistemic justice. Science and Engineering Ethics 24:1393-1408. https://doi.org/10.1007/s11948-017-9977-0

16.Mark D. Wilkinson, Michel Dumontier, Barend Mons et al., 2016: The FAIR guiding principles for scientific data management and stewardship. Scientific Data 3: 160018. https://doi.org/10.1038/sdata.2016.18

17.Dominique Chen, 2020. Languages to Make the Future: To Bridge Non-understandings (未来をつくる言葉：わかりあえなさをつなぐために). Shinchōsha.

18.Johan Galtung, 2004. Transcend and Transform: An Introduction to Conflict Work. Routledge.

19.Knight Foundation, 2013. The Emergence of Civic Tech: Investments in a Growing Field. https://www.knightfoundation.org/media/uploads/publication_pdfs/knight-civic-tech.pdf (Accessed 30 December 2019)

20.Sei'ichiro Watanabe, Takeshi Nakatsuka, Tomohiro Oh (eds.), 2014. Clinical Environmental Studies (臨床環境学). Nagoya University Press, in Japanese.

21.Rachel Kelly, Mary Mackay, Kirsty L. Nash et al., 2019. Ten tips for developing interdisciplinary socio-ecological researchers. Socio-Ecological Practice Research 1: 149-161. https://doi.org/10.1007/s42532-019-00018-2

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●Achievements

○Books etc

・大西秀之, 01 Mar. 2021, 211-223, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, ISBN: 9784780311440

・陀安一郎, 01 Mar. 2021, 178-184, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, ISBN: 9784780311440

・中塚武, 01 Mar. 2021, 184-197, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, ISBN: 9784780311440

・奥田昇, 01 Mar. 2021, 139-151, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, General book, ISBN: 9784780311440

・大澤剛士, 01 Mar. 2021, 127-138, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, ISBN: 9784780311440

・太田和彦, 01 Mar. 2021, Contributor, 太田和彦, 環境問題を解く ひらかれた協働研究のすすめ, かもがわ出版, Japanese, ISBN: 9784780311440

・熊澤輝一, 01 Mar. 2021, 31-43, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, ISBN: 9784780311440

・近藤康久; 大西秀之, 01 Mar. 2021, はじめに、8 章「琵琶湖の水草ーひらかれた協働研究の理想と現実」, 4-15; 114-126, Joint editor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, General book, ISBN: 9784780311440

・中原聖乃, 01 Mar. 2021, 166-177, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, General book, ISBN: 9784780311440

・林憲吾, 01 Mar. 2021, 198-210, 環境問題を解く ひらかれた協働研究のすすめ, 227, ISBN: 9784780311440

・池内有為, 01 Mar. 2021, 4 章 研究データ公開の「ずれ」を軽減させるガイドライン, 60-69, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, ISBN: 9784780311440

・加納圭, 01 Mar. 2021, 51-59, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, ISBN: 9784780311440

・佐藤賢一, 01 Mar. 2021, 152-165, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, General book, ISBN: 9784780311440

・宮田晃碩, 01 Mar. 2021, 44-50, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, Japanese, ISBN: 9784780311440

・宮田晃碩, 01 Mar. 2021, 18-30, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, ISBN: 9784780311440

・清水淳子, 中島健一郎, 01 Mar. 2021, 84-99, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, General book, ISBN: 9784780311440

・Yasuhisa Kondo; Hideyuki Ōnishi, Mar. 2021, 第 5 章 研究データ公開の「ずれ」を軽減させるガイドライン, 60-69, Contributor, 環境問題を解く: ひらかれた協働研究のすすめ, 227, かもがわ出版, ISBN: 9784780311440

・Ui Ikeuchi; Kazuhiro Hayashi, Feb. 2021, Survey on Utilization and Perception of Preprints, 94, National Institute of Science and Technology Policy (NISTEP), Japanese, Report DOI:10.15108/rm301

・近藤康久; 酒井陽一郎; 大園享司, 25 Dec. 2020, 2-6 南湖の水草問題をめぐる重層的なアプローチ, 190-212, Contributor, 流域ガバナンス : 地域の「しあわせ」と流域の「健全性」, 454, 京都大学学術出版会, Japanese, Scholarly book, ISBN: 9784814003037

・関野樹, Dec. 2020, Joint work, あいまいな時空間情報の分析, 248, 古今書院, Japanese

・太田和彦, Oct. 2020, 207-222, 環境倫理学. 3STEP シリーズ, 2, 259, 昭和堂, ISBN: 9784812219348

・太田和彦, Oct. 2020, 71-86, 環境倫理学. 3STEP シリーズ, 2, 259, 昭和堂, ISBN: 9784812219348

・松木武彦; 近藤康久, 30 Sep. 2020, 第 5 章 岡山平野における居住高度の通時的推移と気候変動－弥生・古墳時代を対象に－, 131-148, Contributor, 先史・古代の気候と社会変化, 304, 臨川書店, Japanese, Refereed

・Okuda, N., T. Takeyama, T. Komiya, Y. Kato, Y. Okuzaki, Z. Karube, Y. Sakai, M. Hori, I. Tayasu & T. Nagata, 26 Aug. 2020, A food web and its long-term dynamics in Lake Biwa: a stable isotope approach., 331-337, Single work, Lake Biwa: Interactions between Nature and People (2nd Edition)., 966, Springer Academic, English, Scholarly book

・Ui Ikeuchi; Kazuhiro Hayashi, May 2020, A Survey on Open Research Data and Open Access 2018, 96, National Institute of Science and Technology Policy (NISTEP), Japanese, Report DOI:10.15108/rm289

・大澤剛士, Apr. 2020, 33-51, 自然史・理工系研究データの活用, 240, 勉誠出版株式会社, Japanese, ISBN: 9784585202837

○**Published Papers**

・Yasuhisa Kondo; Eiichi Fujisawa; Kanako Ishikawa; Satoe Nakahara; Kyohei Matsushita; Satoshi Asano; Kaoru Kamatani; Satoko Suetsugu; Kei Kano; Terukazu Kumazawa; Kenichi Sato; Noboru Okuda, 29 Mar. 2021, Community capability building for environmental conservation in Lake Biwa (Japan) through an adaptive and abductive approach, Socio-Ecological Practice Research, 3 (2), 167-183, Springer Nature, English, Refereed, Scientific journal DOI:10.1007/s42532-021-00078-3

・Ōnishi, Hideyuki, Mar. 2021, Historical Dynamics of Ainu Society: The Social Structure of Hokkaido Ainu in Historic Documents in the Premodern Period., SENRI ETHNOLOGICAL STUDIES (Hunter-Gatherers in Asia: From Prehistory to the Present), (106), 197-216

・Yasuyuki Minamiyama; Ui Ikeuchi; Kunihiko Ueshima; Nobuya Okayama; Hideaki Takeda, 28 Dec. 2020, Investigation and Development of the Workflow to Clarify Conditions of Use for Research Data Publishing in Japan, Data Science Journal, 19 (1), 53, Ubiquity Press, Ltd., English, Refereed, Scientific journal DOI:10.5334/dsj-2020-053

・関野 樹, Dec. 2020, HuTime を使った年表・時系列グラフの共有., 情報処理学会シンポジウムシリーズ じんもんこん 2020 論文集, 101-106

・Takeshi Osawa; Takaaki Nishida; Takashi Oka, Dec. 2020, Paddy fields located in water storage zones could take over the wetland plant community, Scientific Reports, 10 (1), Springer Science and Business Media LLC, English, Refereed, Scientific journal DOI:10.1038/s41598-020-71958-z

・Takeshi Osawa; Shin-ichi Yoshimatsu; Yukinobu Nakatani, Nov. 2020, Specimen-based records and geographic locations of carabid beetles (Coleoptera) collected mainly by Dr. Kazuo Tanaka, Ecological Research, 35 (6), 1029-1034, Wiley, Scientific journal DOI:10.1111/1440-1703.12167

・近藤康久, Sep. 2020, コロナ時代の共同研究とオンラインツール, 農村計画学会誌, 39 (2), 104-107, 農村計画学会, Japanese, Invited, Scientific journal DOI:10.2750/arp.39.104

・Nosé Masahito; Ikeuchi Ui, Sep. 2020, Data Citation as the New Standard of Research Activity: Report of Research Data Citation Subcommittee, Research Data Utilization Forum （RDUF）, Current Awareness, (345), 2-4, National Diet Library, Japanese DOI:10.11501/11546850

・宮田晃碩, Sep. 2020, 住まうことと語ること―石牟礼道子『苦海浄土』の沈黙と亀裂へ向けて―, Heidegger-Forum, (14), 1-18, Japanese, Refereed

・Jun'ichiro Ide, Takuya Ishida, Abigail P. Cid-Andres, Ken'ichi Osaka, Tomoya Iwata, Takuya Hayashi, Masanori Akashi, Ichiro Tayasu, Adina Paytan, Noboru Okuda, Aug. 2020, Factors characterizing phosphate oxygen isotope ratios in river water: an inter-watershed comparison approach, LIMNOLOGY, 21 (3), 365-377, English DOI:https://doi.org/10.1007/s10201-020-00610-6

・Mitsuyo Saito, Noboru Okuda, Shin-ichi Onodera, Aug. 2020, Material transport and cycle in watersheds: toward the interdisciplinary collaboration between limnology and the other research disciplines, LIMNOLOGY, 21 (3), 427-428, Japanese DOI:10.1007/s10201-020-00632-0

・淺野悟史, Aug. 2020, 滋賀県大津市の南湖沿岸部におけるアオサナエとホンサナエの記録, 滋賀自然環境研究会誌, (18), 73-74, Japanese, Refereed

・Nakashima, K., Aug. 2020, Rethinking connection from exclusion-Comments on Tamai's article-, Japanese Psychological Review, 63 (2), 183-191, Invited

・Abe, K., & Nakashima, K., Aug. 2020, Excessive-reassurance seeking and mental health: Interpersonal networks for emotion regulation, Current Psychology, Refereed

・Tatsuki Sekino, Jul. 2020, Time Information System, HuTime - A Visualization and Analysis Tool for Chronological Information of Humanities., Proceedings of Digital Humanities Conference 2020 (DH2020), English

・Pei-Chi Ho, Esther Wong, Fan-Sian Lin, Akash R. Sastri, Carmen García-Comas, Noboru Okuda, Fuh-Kwo Shiah, Gwo-Ching Gong, Rita S.W. Yam, Chih-hao Hsieh, Jul. 2020, Prey stoichiometry and phytoplankton and zooplankton composition influence the production of marine crustacean zooplankton/ Progress in Oceanography, Progress in Oceanography, 186, 102369, English DOI:https://doi.org/10.1016/j.pocean.2020.102369

・Marta Entradas; Martin W. Bauer; Colm O'Muircheartaigh; Frank Marcinkowski; Asako Okamura; Giuseppe Pellegrini; John Besley; Luisa Massarani; Pedro Russo; Anthony Dudo; Barbara Saracino; Carla Silva; Kei Kano; Luis Amorim; Massimiano Bucchi; Ahmet Suerdem; Tatsuo Oyama; Yuh-Yuh Li, Jul. 2020, Public communication by research institutes compared across countries and sciences: Building capacity for engagement or competing for visibility?, PLOS ONE, 15 (7), PUBLIC LIBRARY SCIENCE, English, Refereed, Scientific journal DOI:10.1371/journal.pone.0235191

・Yazawa, A., Furukawa, Y., & Nakashima, K., Jul. 2020, The effect of critical thinking ability and orientation on empathic accuracy, Japanese Journal of Social Psychology, 36 (1), 16-24, Refereed

・太田和彦, May 2020, レジリエンス研究における和辻風土論の寄与：生の哲学との比較と「旅行者の体験における弁証法」, 比較思想研究, 46, 109-117, Japanese

・Takuya Ishida, Yoshitoshi Uehara, Tohru Ikeya, Takashi F. Haraguchi, Satoshi Asano, Yohei Ogino, Noboru Okud, 24 Apr. 2020, Effects of winter flooding on phosphorus dynamics in rice fields, Limnology, 21, 403-413 DOI:https://doi.org/10.1007/s10201-020-00621-3

・加納圭; 後藤崇志; 塩瀬隆之, 2020, 全国学力・学習状況調査「小学校理科」の教科横断的分析, 科学教育研究, 44 (2), 77-85, Refereed

・Yuko Ikkatai; Azusa Minamizaki; Kei Kano; Atsushi Inoue; Euan McKay; Hiromi M. Yokoyama, 2020, Gender-biased public perception of STEM fields, focusing on the influence of egalitarian attitudes toward gender roles, JCOM-JOURNAL OF SCIENCE COMMUNICATION, 19 (1), 1-20, SCUOLA INT SUPERIORE STUDI AVANZATI-S I S S A-INT SCH ADVANCED STUDIES, English, Refereed, Scientific journal DOI:10.22323/2.19010208

・Furutani, K., Maryam, A., & Nakashima, K., 2020, Exhausted parents in Japan: preliminary validation of the Japanese version of the parental burnout assessment, New Directions for Child and Adolescent Development, Refereed, Invited

・Toya, Akihiro; Nakashima, Ken'ichiro, 2020, Reconsidering Terror Management Theory in Japan, PSYCHOLOGIA, 62 (3-4), 206-216, PSYCHOLOGIA SOC, Refereed DOI:10.2117/psysoc.2019-A110

・Abe, Natsuki; Abe, Kazuaki; Nakashima, Ken'ichiro, 2020, The role of perceived stress and fear of negative evaluation in the process from alexithymia to over-adaptation, PSYCHOLOGIA, 62 (3-4), 217-232, PSYCHOLOGIA SOC, Refereed, Scientific journal DOI:10.2117/psysoc.2020-A001

○**MISC**

・大西秀之, Feb. 2021, 身体を飼いならす:民族誌フィールドからの「自己家畜化」再考, 科学, 91 (2), 191-192

・林憲吾, Dec. 2020, 都市とは何か？, 先見創意の会, Japanese

・林憲吾, 09 Oct. 2020, Lukasz Stanek, Architecture in Global Socialism: Eastern Europe, West Africa, and the Middle East in the Cold War., 建築討論

・大西秀之, Aug. 2020, 「B01 班報告」『出ユーラシアの統合的人類史学：文明創出メカニズムの解明（出ユーラシア・プロジェクト第 2 集）2019 年度研究活動報告』第 2 集, 36-43

・Saito, M., N. Okuda & S. Onodera, 18 Jul. 2020, Material transport and cycle in watersheds: toward the interdisciplinary collaboration between limnology and the other research disciplines. Special Feature 'Material transport and cycle in watersheds, Limnology, 21, 427-428 DOI:https://doi.org/10.1007/s10201-020-00632-0

・Onodera, S., N. Okuda, S. Ban, M. Saito, A. Paytan & T. Iwata, 18 Jul. 2020, Phosphorus cycling in watersheds; from limnology to environmental science. Special Feature 'Phosphorus cycle in watersheds', Limnology, 21, 327-328, English DOI:https://doi.org/10.1007/s10201-020-00631-1

・奥田昇, Jul. 2020, 超学際研究における生態学の役割, 生態学研究センターニュース, (146), 4

・林憲吾, 02 Jun. 2020, アーロン・S・モーア著『「大東亜」を建設する：帝国日本の技術とイデオロギー』, 建築討論
・奥田昇・淺野悟史・池谷透・石田卓也・石橋弘之・小林邦彦・三村豊, Jun. 2020, 地域の声に寄りそった研究の軌跡　地域から流域へ、そして地球へ, 地球研ニュース （Humanity & Nature Newsletter）, (81), 3-7
・林憲吾, Jun. 2020, 新旧のあわいを探る 第 9 回 mASEANa 国際会議「近現代建築を若返らせるには？：日本と東南アジアをつなぐ」, 月刊建築技術, (2020 年 6 月号), 191
・太田和彦, May 2020, 人新世という物語：新たな地質年代、一つの地球、いくつもの世界, 福音と世界, 2020 年 5 月号, 12-17, Japanese
・熊澤輝一, May 2020, まちづくりを考えるとはどういうことか, びわ湖の水草ニューズレター, (3), 4-4, 三井物産環境基金 2016 年度研究助成：オープンサイエンスと社会協働の融合に基づく琵琶湖流域圏水草資源活用コミュニティーの形成, Japanese, Introduction other
・淺野悟史、時任美乃理、西前 出, May 2020, 愛媛県西条市にてコハンミョウの確認, 月刊むし, 591 (60)
・林憲吾, 2020, mASEANa 国際会議モダンムーブメントの地勢：モンスーンアジアの気候、地域性、そして近現代建築, ICOMOS JAPAN INFORMATION, 11 (4), 15-16

○**Presentations**

・高橋卓也・内田由紀子・石橋弘之・奥田昇, 都市化と森林再生の時代における政策指標としての主観的幸福度, 第 132 回日本森林学会, オンライン, Japan, 19 Mar. 2021 23 Mar. - 2021, Japanese, Oral presentation
・大澤剛士, コロナ禍におけるコラボレーション, ジャパンリンクセンター「対話・共創の場」, オンライン, Jan. 2021, Japanese, Invited oral presentation
・大西秀之, 民族誌フィールドからの文明の再検討, 『出ユーラシアの統合的人類史学第 4 回全体会議』, オンライン, 10 Jan. 2021, Japanese
・関野樹, HuTime を使った年表・時系列グラフの共有, 人文科学とコンピュータシンポジウム, オンライン, 12 Dec. 2020 13 Dec. - 2020, Japanese
・Ramirez, F. C. R., T. Ishida, J. A. I. V. Cabardo, O. L. Privaldos, Y. Uehara, L. Fujiyoshi, K. Osaka, F. Magbanua, R. D. Papa & N. Okuda, Tracing Phosphorus Sources in an Urbanized Silang-Sta. Rosa Subwatershed using Oxygen Isotopes, The VIRTUAL Philippine Nuclear Research & Development Conference 2020 (PNRDC2020), online, 08 Dec. 2020 10 Dec. - 2020, English, Poster presentation
・Privaldos, O. L. A., K. Osaka, Y. Uehara, S. Asano, L. Fujiyoshi, C. Yoshimizu, I. Tayasu, A. C. Santos-Borja, M. P. Espino, N. Okuda, Identifying Groundwater Nitrate Sources using Nitrate Stable Isotopes in Silang-Santa Rosa Sub-Watershed, The VIRTUAL Philippine Nuclear Research & Development Conference 2020 (PNRDC2020), online, 08 Dec. 2020 10 Dec. - 2020, English, Poster presentation
・Ui Ikeuchi; Kazuhiro Hayashi, Utilization and perceptions of preprints by researchers in Japan, 情報メディア学会第 22 回研究大会, Japanese Society for Information and Media Studies, online, 07 Nov. 2020, Japanese, Oral presentation
・関野樹, あいまいな時間情報とその活用. あいまいな時空間情報を分析するためのツールの開発とその応用:「あいまいな時空間情報の分析」出版記念シンポジウム, 第 29 回 地理情報システム学会 学術研究発表大会 (GISA2020), オンライン, 25 Oct. - 2020, Japanese
・近藤康久, コロナ時代の共同研究：オンラインツール利用状況調査をふまえて, 第 29 回地理情報システム学会研究発表大会企画セッション「COVID-19 における「GIS と社会」を考える〜情報流通とデジタル地図における役割・課題・展望〜」, 地理情報システム学会, オンライン開催, 23 Oct. 2020, 23 Oct. 2020 25 Oct. - 2020, Invited, Japanese, Nominated symposium
・近藤康久, オープンチームサイエンス〜ひらかれた協働研究の方法論〜, 第 6 回人文・社会科学系研究推進フォーラム, 北海道大学 大学力強化推進本部 研究推進ハブ URA ステーション, オンライン開催, 03 Oct. 2020, 03 Oct. 2020 03 Oct. - 2020, Invited, Japanese, Keynote oral presentation
・Ui ikeuchi, The 'Guideline for specifying conditions of use in research data publishing' and restricted access, The 1st SPARC Japan Seminar 2020 "Making Research Data Accessible: The boundary between 'fully open access' and 'restricted access'", SPARC Japan, online, 02 Oct. 2020, Japanese
・Satoe Nakahara, Auto-ethnography of Research Project on Solving Local Environmental Issues, Date, Vienna Anthropology Days (VANDA), Austria (Online), 01 Oct. 2020, English, Oral presentation
・中原聖乃, TD 研究による『異なる回路』の発見プロセスの可視化―環境トレーサビリティープロジェクトホームページ作成の現場から, 第 21 回 OpenTS ウェビナー, RIHN(online), 23 Sep. 2020, Japanese, Oral presentation

・Ui ikeuchi, 日本の研究者による研究データマネジメント（RDM）の実践状況：「研究データ公開と論文のオープンアクセスに関する実態調査」から, 第 4 回京都大学研究データマネジメントワークショップ：セッション 1「我が国における研究データマネジメントの現状と課題」, online, 19 Sep. 2020, Invited, Japanese, Public discourse

・野間紘久，重松潤，中島健一郎, 抑うつの認知的脆弱性の適応的側面について―ストレスフルイベントに着目して―, 日本認知・行動療法学会第 46 回大会, オンライン, 11 Sep. 2020, Japanese

・藤林恵・伊藤雅之・小林由紀・池谷透・M. U. Mendoza・J. L. Aguilar・K. S. A. R. Padilla・R. D. S. Papa・C.-h. Hsieh・F.-K. Shiah・奥田昇, 脂肪酸を指標とした湖沼メタン栄養食物網の緯度間比較, 第 23 回日本水環境学会, オンライン, Japan, 09 Sep. 2020 10 Sep. - 2020, Japanese, Oral presentation

・矢澤順根，阿部夏希，中島健一郎, クリティカルシンキングの社会的・対人的有用性の検討（2）―言語的情報を手掛かりとする共感の正確さとの関連から―, 日本心理学会第 84 回大会, 東洋大学, 08 Sep. 2020 02 Nov. - 2020, Japanese

・ケイン聡一，中島健一郎, 同調動機尺度の提案と検討, 日本心理学会第 84 回大会, オンライン, 08 Sep. 2020 02 Nov. - 2020, Japanese

・清水陽香，中島健一郎, 防衛的悲観主義者は成功を感じにくいのか：認知的方略と報酬, 日本心理学会第 84 回大会, オンライン, 08 Sep. 2020 02 Nov. - 2020, Japanese

・阿部夏希，中島健一郎, COVID-19 影響下におけるオンライン授業に対する感情の動向―Twitter のつぶやきを用いた感情分析―, 日本心理学会第 84 回大会, オンライン, 08 Sep. 2020 02 Nov. - 2020, Japanese

・李受珉，戸谷彰宏，中島健一郎, 精神的健康における Shift-and-Persist strategy の効果:メタ分析による知見の統合, 日本心理学会第 84 回大会, オンライン, 08 Sep. 2020 02 Nov. - 2020, Japanese

・太田和彦, Serious Board Game Jam: Collaborative Visualization of Social Issues and Scientific Knowledge., International Conference on Game Jams, Hackathons, and Game Creation Events (ICGJ 2020), Online, 24 Aug. 2020 25 Aug. - 2020, English

・謝　新宇，福井謙一郎，中島健一郎, 愛着不安傾向が身体的攻撃につながるプロセス―DV のエスカレート法則の観点から―, 日本心理学会第 84 回大会, オンライン, 08 Aug. 2020 02 Nov. - 2020, Japanese

・Yasuhisa Kondo, Interdisciplinary challenges of the Cultural History of PaleoAsia project and its database development: Lessons learnt, Human Origins - Digital Future (HODiF) ROCEEH Online Conference 2020, ROCEEH, Zoom, 30 Jul. 2020, 27 Jul. 2020 31 Jul. - 2020, Invited, Japanese, Invited oral presentation

・中原聖乃, びわ湖湖畔でのたったひとりの清掃活動の意味を考える, 第 19 回 OpenTS ウェビナー, RIHN(online), 29 Jul. 2020, Japanese, Oral presentation

・Takahashi, T, Y. Uchida, H. Ishibashi, N. Okuda, Subjective well-being related to forests and common forests in the era of post-development: A potential policy indicator for industrialized and developing countries, KYOTO 2020: IASC-RIHN Online Commons Workshop on Post-Development and Degrowth In Asia, 20 Jul. 2020 22 Jul. - 2020, English, Public symposium

・Kazuhiko Ota, Akito Inoue, Yuka Fujieda, Commons and Serious Games., Kyoto 2020: IASC-RIHN Online Workshop, Online, 20 Jul. 2020 22 Jul. - 2020, English

・Satoe Nakahara, Action Research on Community Formation to Use Waterweed as a Fertilizer in Lake Biwa., IASC-RIHN Online Workshop on Commons, IASC, RIHN, online, 20 Jul. 2020, 20 Jul. 2020 22 Jul. - 2020, English, Oral presentation

・Saito, M., S. Onodera, Y. Tomozawa, K. Wang, S. Ban & N. Okuda, Observation for the spatial variation of lacustrine groundwater discharge (LGD) in the northern basin of Lake Biwa by multi-layer measurement of radon (222Rn), JpGU-AGU Joint Meeting 2020, online, Japan, 15 Jul. 2020

・Kondo, Y., K. Kano, T. Kumazawa, S. Nakahara, K. Nakashima, N. Okuda, H. Ōnishi, T. Osawa, K. Ota, Five key elements to enable open science for society, JpGU-AGU Joint Meeting 2020, online, Japan, 15 Jul. 2020, English, Oral presentation

・Ishida, T., Y. Tomozawa, X. Liu, J. Qian, M. Saito, S. Onodera, N. Okuda & S. Ban, Distribution of phosphate oxygen isotope in boring core samples for evaluation of phosphorus cycling in groundwater, JpGU-AGU Joint Meeting 2020, online, Japan, 15 Jul. 2020

・Onodera, S, M. Saito, K. Wang, S. Ban, N. Okuda, Y. Tomozawa, Role of groundwater and river discharge on phosphorus supply into the lake, JpGU-AGU Joint Meeting 2020, Japan Geoscience Union, American Geophysical Union, online, Japan, 12 Jul. 2020 16 Jul. - 2020, English, Public symposium

・Ban, S, X. Liu, M. Maruo, N. Goto, K. Osaka, S. Onodera, M. Saito, T. Ishida, N. Okuda, Did artificial re-oligotrophication induce a reduction of fish catch in Lake Biwa?, JpGU-AGU Joint Meeting 2020, Japan Geoscience Union, American Geophysical Union, online, Japan, 12 Jul. 2020 16 Jul. - 2020, English, Public symposium

・Okuda, N, M. U. Mendoza, J. I. Aguilar, K. S. A. R. Padilla, J. C. A. Briones, R. D. S. Papa, M. Ito, M. Fujibayashi, T.-H. Tu, L.-H. Lin, P.-L. Wang, Y. Kobayashi, E. Austria, F.-K. Shiah, Methanotrophic food webs in tropical lakes., JpGU-AGU Joint Meeting 2020, Japan Geoscience Union, American Geophysical Union, online, Japan, 12 Jul. 2020 16 Jul. - 2020, English, Public symposium

・林憲吾, 伝統知のビジュアライゼーション：オマーン石造家屋の解剖と再生, 第 18 回 OpenTS ウェビナー, OpenTS プロジェクト, online, Japan, 26 Jun. 2020, Japanese, Public discourse

・Satoe Nakahara, Action Research on Community Formation to Use Waterweed as a Fertilizer in Lake Biwa., The 11th Annual International Science of Team Science Conference, Duke University, Duke USA, United States, 01 Jun. 2020, 01 Jun. 2020 04 Jun. - 2020, English, Oral presentation

・大西秀之, 「アイヌ文化」を問われた地域住民のナラティブ：北海道東部標津町における聞き取り調査を通して, 日本文化人類学会第 54 回研究大会, 早稲田大学（web 開催）, May 2020, Japanese

・太田和彦, 持続可能なフードシステムに関する学習に 果たすアクティブ・ラーニングの継続的効果., 応用哲学会 2020 年度大会, 信州大学（オンライン）, 25 Apr. 2020 26 Apr. - 2020, Japanese

・太田和彦, フードシステムの持続可能性の向上を目指す取り組みへの 食農倫理学の寄与の方向性, 応用哲学会 2020 年度大会, 信州大学（オンライン）, 25 Apr. 2020 26 Apr. - 2020, Japanese

・太田和彦, 都市における持続可能性、技術、ウェルビーイング、倫理的諸問題, 応用哲学会 2020 年度大会, 信州大学（オンライン）, 25 Apr. 2020 26 Apr. - 2020, Japanese

・太田和彦, 超学際的実践のなかの省察 : サマースクール「フードスケープをつなぐ」を事例として, 応用哲学会 2020 年度大会, 信州大学（オンライン）, 25 Apr. 2020, 26 Apr. 2020, Japanese

○Social Contribution

・身近な生きもので考える人の暮らしと環境の関係, 淺野悟史, 京都大学フィールド科学研究センター, 京と森の学び舎, 29 May 2020, 29 May 2020

○Others

・中原 聖乃, グラフィックレコーディングの手法を取り入れた環境トレーサビリティプロジェクトウェブページ作成, Jul. 2020, Jul. 2020, グラフィックレコーディングの手法を取り入れた環境トレーサビリティプロジェクトウェブページ作成(https://www.environmentalisotope.jp/)

・OpenTS ウェビナー, Jun. 2020, Oct. 2020, OpenTS ウェビナー・コーディネーター

Stage: Full research (FR)

Project Name: Methods and Tactics to Foster Knowledge Co-creation: A Practical Framework for Implementing Transdisciplinary Research

Project Leader: ONISHI Yuko

Core Program

○ Research Subject and Objectives

Global environmental problems are often referred to as wicked problems (Rittel and Webber, 1973) as they are highly complex, the stakes are high and science alone cannot provide a definite solution. For this reason, it is increasingly recognized that transdisciplinary (TD) approaches are useful in creating new knowledge and solutions through collaboration between scientists and stakeholders involved in the problem (Pohl, 2008; Wickson et al., 2006; Wiek, 2007). The TD method has been developed mainly by European researchers since the 1970s, however, in recent years, research using this method has been rapidly increasing in a wide range of regions, including Asia and Africa, and in the context of various environmental problems (e.g. Fazey et. al., 2018; Pereira, et al., 2019). While the number of studies focusing on theoretical insights has also increased significantly in recent years, TD research still faces many challenges, notably large gaps between the ideal and real TD processes (i.e.theory and practice), a lack of a universally accepted definition, and a lack of practical frameworks (e.g. Zecheischler, et al. 2017; Thompson, et al., 2017).

RIHN is one of the few research institutes in Japan that has implemented a number of projects that employ TD methods in environmental studies. However, as the institute operates on a project-based system, knowledge and experience gained by the members through the TD projects are often lost along with the members when the teams are dissolved at the end of the project cycle. Moreover, collaborations between RIHN and the project stakeholders (e.g. local residents) often also come to an end when a project is completed. Accumulation of this kind of loss of knowledge, experience and network of the projects could lead to a significant loss for the institute. Against this background, this core project therefore focuses on accumulating and systematizing the experiences and lessons learnt by researchers and stakeholders who have participated in TD projects and developing a practical methodology that can easily be applied in TD research to foster knowledge co-creation and societal outcomes. To that end, we are conducting research on the following three themes:

1) TD landscape

Under the theme of TD landscape, the project aims to categorize TD research and present a new definition by providing a comprehensive overview of co-creation research. In this study, we will collect and analyse case studies of projects using TD approaches, including approaches similar to TD such as participatory approach or action research, to identify commonalities and differences based on factors such as type of environmental problem addressed, target region, co-creation methods, approaches, participants, and societal outcomes.

2) Lessons learnt

The objective of the lessons learnt component is to elucidate the knowledge and experiences that practitioners and stakeholders have gained from participating in TD research, and to organize and present it in a way that it can be adopted in future activities. To this end, the research will focus on two perspectives. Firstly, we will create a pattern language for co-creation (TD pattern language) for TD researchers, using the "pattern language" method to discover and systematize the knowledge and experiences accumulated by individuals. Interviews and workshops will be organized with researchers that have experience with co-creation projects to identify tips, knowledge, and methods for coping with complex problems and promoting collaboration with stakeholders. Secondly, we will conduct interviews with societal actors involved in selected TD projects (e.g. local residents who participate in or are affected by the activities of the project) to understand the societal impacts of TD projects such as changes in perceptions and behaviour. We also aim to understand the pathways of change, by identifying the activities and research results that could lead to the transformation of society. Through this research, the project contributes to creating a foundation of TD research methods and tactics that can be effectively applied in other parts of Japan and abroad.

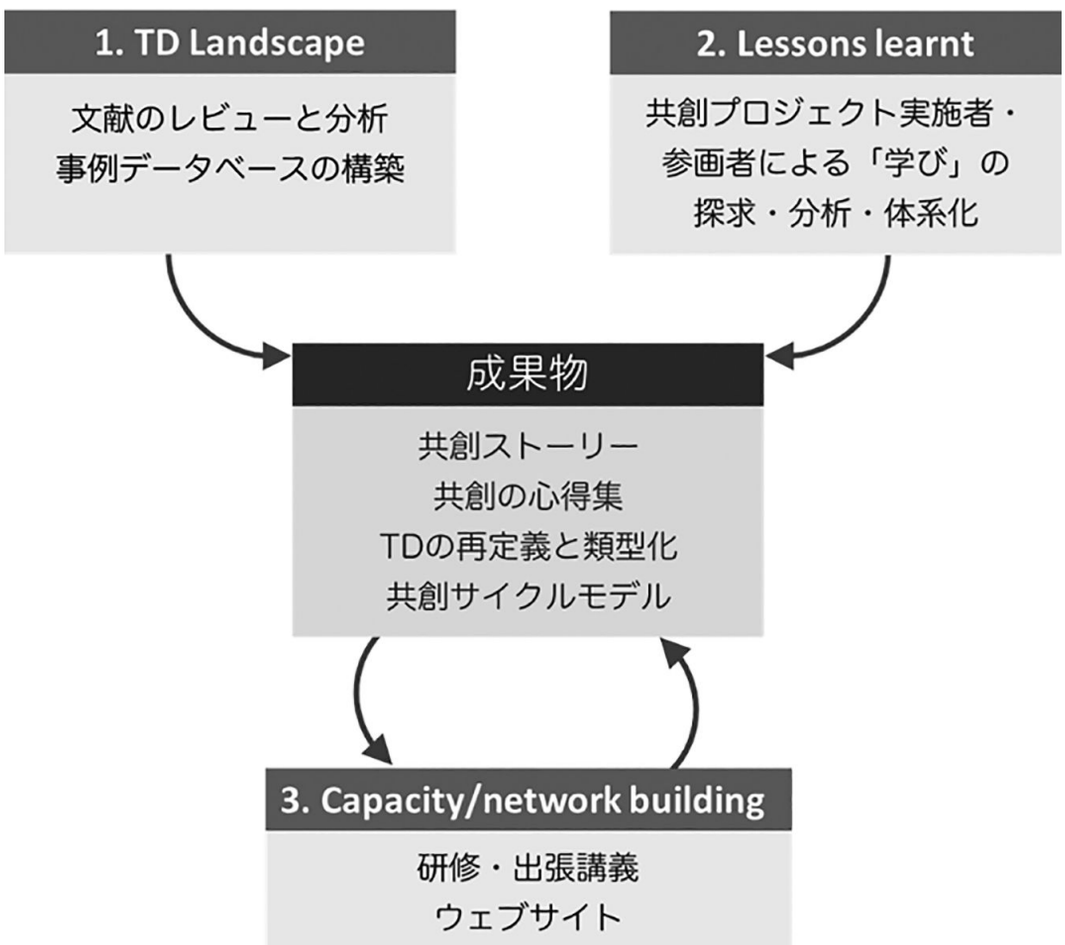
3) Capacity building

The above results are used to build capacity of researchers wishing to undertake TD research. We plan to disseminate our findings with a wide audience through educational events with universities and other research institutes as well as through our

website and social media accounts. In addition, we aim to expand our outreach and research activities by expanding our collaboration with domestic and overseas TD researchers and networks.

○ Challenges and achievements for this year

This year, many of our activities were severely restricted by the coronavirus pandemic and we subsequently made major revisions to our future research plans. Most importantly, the former working group system was abolished and the three research themes as described above were established to allow project members to freely contribute to all research activities.



The project achievements are described for each theme below

1) WG 1 TD Landscape

We conducted literature reviews and collected case studies of research project using co-creation approach. This year, the focus was on studies using the word “transdisciplinary” within the documents identified through Web of Science. Specifically, we analysed 198 case studies as of February to identify research trends such as the areas where the research was conducted and the type of environmental problems that are targeted.

2) WG2 Lessons learnt

We analysed the results of the in-house workshop held last year and identified 12 patterns. For each pattern identified, a draft pattern description was developed which each describes a common problem, the situation or context in which it likely occurs, and the core of the solution to that problem

Interviews with related parties in society were not possible this year due to restrictions on business trips in response to the spread of new corona infection. Therefore, we focused on holding interviews and online meetings with researchers involved in TD projects instead and making preparations for the fieldwork to be conducted next year, such as seeking new

collaborations and narrowing down the potential group of interviewees. In addition, we conducted online interviews with former project members of the Ecological Recycling Project, Nexus Project, and Water and Integrated Water Management Project, to clarify the relationship between the projects and local residents.

3) WG3 Capacity building

We obtained a budget from the visualization sophistication project at RIHN and developed an online interactive workshop system. We also identified effective methods for online co-creation workshops and produced written and video guides. Furthermore, we created a project website, which functions as a platform for learning and sharing information about co-creation, and expanded our network.

○ Future Themes

Currently we are still restricted by the Corona situation and t here is no prospect of visiting overseas fieldwork sites. Therefore, we have been considering a number of alternative methods, including online interviews, implementation of the research by local partners , hiring local consultants, or changing the fieldwork sites. Although all these methods are possible, there is a concern whether sufficient academic results will be obtained , so we continu e to examine appropriate research plans while closely monitoring the changing situation overseas. Research progress in Japan has also been affected by requests for self-restraint from activities across prefectures, but we are preparing to proceed with the fieldwork as soon as relaxation of the rules are announced.

○Project Members

◎ ONISHI Yuko (Research Institute for Humanity and Nature・assistant professor)
○ KIKUCHI Naoki (Kanazawa University・associate professor)
○ OH Tomohiro (Research Institute for Humanity and Nature・visiting researcher)
○ LAMBINO Ria (Research Institute for Humanity and Nature・associate professor)
○ RAMPISELA Dorotea (Hassanudin University・Professor)
○ KUIPERS Rob (Research Institute for Humanity and Nature・Research Associate)

●Achievements

○Presentations

・Yuko Onishi, Development of an online interactive workshop system for participatory learning, General Meeting of the Association of Japanese Geographers in Spring 2021, Oral presentation

Stage: Pre-research (PR)

Project Name: Fair for whom? Politics, power and precarity in transformations of swidden social-ecological systems in Southeast Asia

Project Leader: Grace Wong

Program 2: Fair use and management of diverse resources

○ Research Subject and Objectives

a) Problem, background, and objectives

In many parts of the tropics, forest frontiers are rapidly changing and leading to radical transformations in landscapes and livelihoods, especially when the change is from swidden to increasingly commodified agriculture. These frontiers of agriculture, fallow and forest mosaics provide multiple ecosystem services and support diverse social, cultural and livelihood needs. These are also areas where swidden farmers have traditional rights to land and resources (Li 2020, Peluso 2005). Loss of these complex systems to increasingly homogenous landscapes is a global environmental problem – and a social-ecological crisis.

This is not a simple trajectory of change however. The social-ecological outcomes of land use intensification – often pursued as 'sustainable development' – have not led to expected win-win solutions (Rasmussen et al. 2018). Local residents often benefit less from land intensification than the more powerful actors who are remote from these changing landscapes (Assembe-Mvondo et al. 2013, Li 2017). The different outcomes are mainly a result of contextual institutional factors and the underlying politics and power structures across different levels of governance and society (Brockhaus et al. 2014, Hardin et al 2011). They reflect the many ways in how local people are able to navigate political and economic processes around forests and land, and exercise agency to pursue their own aspirations (De Vos et al. 2018, Hall et al. 2015); and how they respond to changes in the suite of ecosystem services from changing landscapes. These different outcomes may also reflect policy preferences, when policy decisions prioritize particular ecosystem services (and associated human wellbeing outcomes) over others, hence creating trade-offs between them.

While current literature largely focuses on specific outcomes in isolation and often from disciplinary (economic, ecological or social) perspectives, our project applies a holistic bundling approach to analyse the multiple and interconnected social and ecological outcomes and trade-offs in changing landscapes (Hamann et a. 2016), the political and institutional dynamics underlying these outcomes, and their equity consequences. The overall objective of this research is thus to advance understanding of the social and ecological effects of transformations in the forest-agriculture frontier on ecosystems and people by going beyond standard measurements of a narrow range of well-being and ecosystem service variables.

b) Methodology, structure and schedule

We will carry out the research in different contexts and analyze possibilities for alternative pathways of change. Our proposed case study regions are Malaysian Borneo (Sabah, Sarawak), Mainland Southeast Asia (Myanmar, Laos), and the Congo Basin (Cameroon, Democratic Republic of the Congo (DRC)). These regions are unique laboratories where we will study transformations in the forest-agriculture frontiers along different ecological, social and institutional gradients such as forest cover, fallow diversity, inequality and human wellbeing indices, institutional/political control, and democracy and civil society engagement in policy processes. We combine various sources of data and knowledge systems, including spatial data and observations at local levels, local and indigenous knowledge, policy documents and trade transactions.

The project is organized into five modules. The first will carry out a discursive analysis of development in forest-agriculture frontiers in the case study regions; the second and third modules will address the bundles of ecosystem services and well-being benefits (or lack thereof) experienced in the transformation processes; the fourth is specifically aimed at communications, engagement and co-production of knowledge with agents of change and the fifth module will provide integrative and comparative analyses across modules, scales and countries. The analytical framework is built on theories of power and everyday politics, social and environmental justice and adaptive governance, integrated with the ecosystem services framework to provide a comprehensive, interdisciplinary analysis. We will develop a structured protocol for data collection and management to enable comparability, and data collection activities will be co-led by the core team and in-country research partners.

c) Expected results

We will employ a comparative analysis to learn from different contexts embedded in these case studies. The comparative approach allows us to identify the enabling and hindering conditions for more equitable and sustainable development pathways for the millions of people who still depend on these diverse landscapes for their livelihoods. With new interdisciplinary collaborations amongst the team members and with boundary partners, we expect to collectively: 1) advance theory and empirical methods for assessing equity, ecosystem services and wellbeing, and the complexities of transformations in an

integrated manner; 2) realize the desired policy reforms outlined in the theory of change through novel and robust approaches to co-production and engagement.

d) Project organization and membership

The complexity of this social-ecological problem will require a transdisciplinary approach. Within the core team of collaborators in this project, we have organized teams with a mix across disciplinary and geographic expertise. Rather than individual researchers working in isolation in their cases and coming together for synthesis at the end as is often the norm in projects of this nature, we have designed and structured our project implementation to mix teams of researchers on both expertise and geographies to inject fresh perspectives, enable true interdisciplinary collaboration and harness the deep experience in the project team. Outside of the core team, we will engage with diverse actor groups and stakeholders to co-produce and integrate different knowledge systems, and engage with agents of change or 'boundary partners' who will help to translate and bring our research results to relevant policymakers, development implementers and other key societal actors.

CONTRIBUTION TO THE PROGRAM

The project will contribute to RIHN Program 2's goal of examining "wise and fair management systems capable of addressing multiple resource uses by multiple stakeholders in multi-spatial scales" in three distinct and substantive ways:

i. Our approach to assessing ecosystem services and human wellbeing bundles (Hamann et al. 2016) in frontier regions will provide new ways of identifying and examining trade-offs in development and resource governance. Such information can inform decision makers and development practitioners on design of policy interventions that minimize negative social-ecological trade-offs;

ii. The application of a multi-dimensional framework of equity (Pascual et al. 2014, McDermott et al. 2012) will generate new insights to understanding the procedural, recognition and contextual elements of fairness to expand upon Program 2's current focus on distributive fairness. We aim to contribute both theoretical and methodological advancements to this framework in our research on forest-agriculture frontiers. Such an approach can open up new platforms for constructive dialogue between diverse societal actors to identifying sustainable and equitable resource management options;

iii. Our transdisciplinary multiple evidence base (MEB) approach to engagement and co-production of knowledge (Tengö et al. 2017, 2014) will also include actor groups who have been traditionally excluded from decision making and policy processes. The project will adapt and develop different methods and multi-media techniques for engaging with indigenous peoples, local farmers, civil society actors, policy makers and entrepreneur groups.

○ Progress and Results in 2020

PROJECT PROGRESS DURING THE PR PERIOD

In 2020, the project was in transition from Feasibility Study to Pre-Research stage. Much of the focus in the past year has been spent on identifying and negotiating between possible administrative arrangements for an institutional collaboration between the Stockholm Resilience Centre (SRC) and RIHN. This has proved to be a challenge given both the constraints of RIHN funding and operational rules, and restrictions of Stockholm University's academic and institutional requirements. After much discussions and compromise, the project is now changed from institutional collaboration to individual collaboration with the project leader, Grace Wong to be hired as a RIHN staff starting on 1 January 2021, with the expectation that there will continue to be institutional collaborations through exchanges of knowledge, learnings and researchers between the two institutions. The PR stage has started on 1 January 2021.

The two key project activities for the FS/PR year are to: 1) carry out background studies and literature reviews on frontier transformations; and 2) identify in-country researchers and partner institutions in our 6 case study regions, and develop agreements for collaborative work.

With regards to the first project activity to carry out background studies on frontier transformations, the core project members at SRC, University of Copenhagen and University of Helsinki are working with Masters student interns to carry out supporting literature reviews:

i. Literature review on indigenous rights and claims in changing forest frontiers in Southeast Asia (led by SRC)

ii. Literature review on environmental sustainability of shifting cultivation systems (led by University of Copenhagen)

iii. Literature and policy review of transitions in forest frontiers in Cameroon and DR Congo, including English and French archival literature (led by University of Helsinki and SRC)

The literature reviews are designed to contribute towards to two papers being led by core project members:

i. Synthesis paper on “Shifting cultivation and sustainable management of forested landscapes”, a study commissioned by FAO, led by T.B. Bruun and O. Mertz (with co-authors: G. Wong, M. Brockhaus); expected date of publication in Aug 2021

ii. “The ‘making’ of resource frontier spaces in the Congo Basin and Southeast Asia: a review of discourses, actors and drivers”, led by G. Wong and M. Brockhaus, expected submission to journal in May 2021

Collectively, the literature reviews and synthesis papers will document different methodological approaches, and identify convergences, discrepancies and gaps in current knowledge on the above topics. As such, these studies will contribute to methods development in the project.

On the second activity on partnership development with in-country researchers, we have reached out to individual researchers and colleagues within our networks who are either based in, or are working extensive in the project’s six case study regions. The research partners who have agreed to collaborate with us include: Dr. Symphorien Ongolo (French National Research Institute for Sustainable Development), Dr. Samuel Assembe-Mvondo (University of Dschang, Cameroon), Dr. Blaise-Pascal Ntirumenyerwa Mihigo (University of Kinshasa, DR Congo), Kelvin Egay (University Malaysia Sarawak), Dr. Thoumthone Vongvisouk (National University of Laos), Dr. Nyein Chan (Land Issues Working Group Myanmar).

Unfortunately, travel restrictions and the disruptions to normal working conditions imposed by the COVID-19 pandemic across the world has challenged our ability to engage meaningfully with research partners and institutions in the countries where we will be carrying out field research. We hope to be able to engage with their institutions and develop collaborative agreements in 2021 once travel is again possible. We expect the partners to engage in the refinement of methods design and adaptation to the different country and regional contexts.

In addition, several science and policy events where project team members were expecting to present research findings and engage with policy stakeholders in 2020 have been cancelled, e.g. IUFRO International Forest Policy Meeting and the African Forest-related Policies and Politics conference 2020.

However, we have adapted to the COVID-19 pandemic restrictions by utilizing several online mechanisms for coordinating and sharing with core team members who are located across the world:

1) Created the Slack FairFrontiers project space as a forum for sharing updates and announcements.

2) Created the Mendeley FairFrontiers reference library. There are currently 233 papers in the library relevant to the research topics of our project and will be a critical resource for all project members.

3) Quarterly Zoom calls with core project members in 2020.

With regards to budget planning, we directed a substantive portion of our FS/PR budget in 2020 to carry out background studies on frontier transformations (described above) given that initial plans for travel to meet with institutional partners and scoping visits to case study sites have had to be cancelled. Additionally, we had planned to hold a project kick-off event with all project members in Kyoto in February 2021, which would also include a 3-day intensive workshop on project planning to work through practical coordination structures, development of a detailed project timeframe and field activities, and refinement of methods. The kick-off meeting and workshop will be postponed to summer or fall 2021, depending on the pandemic situation.

AMENDMENTS TO RESEARCH OBJECTIVES, METHODOLOGY AND ORGANIZATION AS APPLICABLE

There is no change to the research objectives, methodology and organization. While activities in the FS/PR stage have been slightly delayed or constrained both by the COVID-19 pandemic and the lengthy institutional negotiations between RIHN and SRC, we do not expect these to affect the project in any substantive manner in the coming years.

MOST NOTABLE OUTPUTS TO DATE

1) M. Brockhaus, S. Ongolo, B.P. Ntirumenyerwa Mihigo (contributing authors), 2020, Chapter 3: Forest-Poverty Dynamics: Current State of Knowledge, in Forests, Trees and the Eradication of Poverty: Potential and Limitations: A Global Assessment Report. IUFRO World Series, Volume 39. https://www.iufro.org/fileadmin/material/publications/iufro-series/ws39/ws39.pdf.

2) Grace Wong (contributing author), 2020, Effects of transformation to climate neutral societies on low- and middle-income countries. Report to SIDA Swedish Leadership for Sustainable Development. Stockholm Resilience Centre. https://www.stockholmresilience.org/publications/publications/2020-12-16-effects-of-transformations-to-climate-neutral-societies-on-low--and-middle-income-countries.html.

PROJECT ORGANIZATION AND MEMBERS

The core project team includes researchers from different academic backgrounds with extensive experience working on swidden, rural development, social forestry, forest ecology and ecosystem services; and bring diverse analytical skills and approaches to these complex issues. The researchers have extensive field experience in Malaysian Borneo, Laos and Cameroon, with incipient

work ongoing in Myanmar and DRC. This provides the value-addition of existing data and well established in-country partnerships. In addition, all the researchers have led or worked in collaborative interdisciplinary teams, and have conducted transdisciplinary research.

The organization of the Project as presented below is based on discussions during the FS stage in November 2019, and will be re-affirmed with in-country partners once collaborative agreements are signed/agreed. We expect to finalize the project organization during the project kick-off and planning workshop which we anticipate to be held in summer or fall 2021 (depending on the changing pandemic situation).

Project core members can act as leads of research modules and/or act as case study coordinators. The designated leads of the five research modules and coordinators of the six case study regions were identified based on their specific expertise, capacity and availability. Module leads will lead the development of research methods in collaboration with other core members, develop method guides, coordinate with in-country partners to ensure that the research is consistently implemented across all case regions, and coordinate joint analyses of data with the project team. The country coordinators, with support of research module leads and in-country partners, ensure that the different module research activities are consistently implemented, provide back-stopping support to field research, lead country-specific theory of change development and support policy engagement and transdisciplinary efforts.

In order to strengthen collaborative and interdisciplinary analyses, we have proposed that project core members will engage in more than one research module and participate or support field work in more than one research site.

○ Future Themes

RESEARCH PLAN

We expect to start with the Full Research stage in fiscal year 2021. As discussed in previous sections, we have adapted to the COVID-19 pandemic by implementing mechanisms for exchanges and planning amongst the project core members using online tools such Slack and Mendeley. We have had to postpone all activities that included travel, including the project kick-off and planning workshop, which was initially planned for February. This has also hampered our ability to engage meaningfully with in-country partner institutions.

We aim to carry out the following key activities below in FY2021, with the assumption that the COVID-19 pandemic restrictions will be gradually lifted across the next year:

Administrative:

- Hire project staff: Senior researchers/researchers (4), Associate researcher (1), Administrative assistant (1) (Feb-Mar)

- Finalize collaborative agreements with in-country partner institutions: University of Kinshasa, University of Dschang, National University of Laos, University Malaysia Sarawak, Land Issues Working Group Myanmar/ University of Forestry (By Dec 2021)

Planning:

- Hold an on online workshop to share/discuss ongoing studies and methods with core members (Feb 24-25)

- Hold project kick-off meeting and intensive planning workshop in Kyoto, late summer/early fall 2021 (Aug/Sept)

Research:

- Hold writing workshop to finalize background studies (Apr)

- Finalize research methodologies and produce a methods guide (Feb-Aug)

- Start field research in at least 1 case study region. We expect to work with local researchers and graduate students (M.Sc./Ph.D.) in field research and data collection. (Oct onwards)

- Hold workshop in at least 1 case study region, in collaboration with in-country partners. (Oct onwards)

- Participate and present in at least 1 regional or global conference or policy event. Possible events include the UNFCCC COP, IUFRO XV World Forestry Congress and the Rethinking Development conference. (TBD)

- At least 2 papers or briefs produced. (By March 2022)

●Achievements

○Published Papers

・M. Brockhaus, S. Ongolo, B.P. Ntirumenyerwa Mihigo (contributing authors), 2020, Chapter 3: Forest-Poverty Dynamics: Current State of Knowledge, in Forests, Trees and the Eradication of Poverty: Potential and Limitations: A Global Assessment Report. IUFRO World Series, Volume 39, https://www.iufro.org/fileadmin/material/publications/iufro-series/ws39/ws39.pdf.

○MISC

・Grace Wong (contributing author), 2020, Effects of transformation to climate neutral societies on low-income countries. Report to SIDA Swedish Leadership for Sustainable Development. Stockholm Resilience Centre. https://www.stockholmresilience.org/publications/publications/2020-12-16-effects-of-transformations-to-climate-neutral-societies-on-low--and-middle-income-countries.html

○Presentations

・ G.Wong, ”Politics, power and precarity in changing forests: Challenges for research”, FOCALI (Forest, Climate and Livelihood Swedish research network) annual meeting, 4 Nov 2020, keynote talk.

○Social Activities

・ M.Brockhaus, public discussion on strategic engagement of the University of Helsinki, Finland, and the EU with the African continent in science, policy and practice, 15 Oct 2020, panelist.

○Media Coverage

・ G.Wong contributed to an assessment of the decade long partnership between Switzerland and ASEAN on social forestry through research, capacity building and support to policy development in Southeast Asia.

Stage: Feasibility Study

Project Name: An ecology of care approach to neurological disorders: toward a comprehensive model for care embedded in a biosocial milieu

Project Leader: NISHI Makoto

○ 研究目的と内容

This study presents the idea of “ecology of care” as a framework for interdisciplinary research and practice that focuses on the interdependence of human health and the natural environment. The ecology of care is a methodology for exploring the knowledge, skills, sociality, and values that minimize the vulnerability of humans living in a changing ecological environment. This study will focus on neurological disorders, which represent a significant health burden for humanity but are difficult to resolve through pharmaceutical interventions. With a particular focus on autism, refractory epilepsy, and dementia, we will identify the resources and technologies to improve the quality of life of patients and their families living in various ecological and social environments. Based on this approach, we aim to formulate an essential framework of interventions for achieving the SGDs goal of "health and well-being for all." This framework also helps transform societies into ones that can flexibly cope with the suffering of illness and disability in a changing ecological and social environment and provide a framework of protection for people.

●Achievements

○書籍等出版物

・西真如 2021 「新しい日常のための実験法――パンデミックと自閉症者の脳神経学的環境」『新型コロナウイルス感染症と人類学――パンデミックとともに考える』浜田明範, 西真如, 近藤祉秋, 吉田真理子編, 64–81. 水声社.（査読なし）

○論文

・Latio, Lugala Samson Yoane, Nguyen Hai Nam, Jaffer Shah, Chris Smith, Kikuko Sakai, Kato Stonewall Shaban, Richard Idro, Makoto Nishi, et al. 2020. “Economic Burden of the Persistent Morbidity of Nodding Syndrome on Caregivers in Affected Households in Northern Uganda.” PLOS ONE 15 (9): e0238643.（査読あり）

・Nishi, Makoto. 2020. “Jishuku, Social Distancing and Care in the Time of COVID-19 in Japan.” Social Anthropology 28 (2): 331–32.（査読あり）

○MISC

・西真如 2020 「パンデミックの民族誌」『地球研ニュース』 82: 17–20.（査読なし）

Stage: Feasibility Study

Project Name: Metacognitive interventions on social actors to enable the transition toward a sustainable society

Project Leader: NAKAGAWA Yoshinori

○ 研究目的と内容

Much knowledge has been accumulated on how people's waste-related behaviors can be modified. It is considered that presentation of social norms is one of the promising approaches among others. By means of literature survey and laboratory experiment, the present study argues that future design can be regarded as a metacognitive intervention to presentism, and demonstrated that it is a new member of this category that has the potential to overcome deficits inherent in existing intervention measures of the same kind. Specifically, it is often argued that norms transformed in fairly one-way manners may fail to reach the intended audience or spark the public dialog needed to change peoples' perceptions of what others in their group do and approve of (Cislaghi et al., 2019). We argued that future design's metacognitive intervention can overcome this deficit because it promotes a two-way communication between selves as the present and future generations inside an individual. Some empirical evidence was obtained in a lab experiment and has been reported in Pandit, Nakagawa et al. (2019).

Cislaghi, B., Denny, E.K., Cissé, M., Gueye, P., Shrestha, B., Shrestha, P.N., Ferguson, G., Hughes, C., Clark, C.J., 2019. Changing Social Norms: the Importance of "Organized Diffusion" for Scaling Up Community Health Promotion and Women Empowerment Interventions. Prev. Sci. 20, 936–946.

Varotto, A., Spagnolli, A., 2017. Psychological strategies to promote household recycling. A systematic review with meta-analysis of validated field interventions. J. Environ. Psychol. 51, 168–188.

●Achievements

○論文

・ Pandit, A., Nakagawa, Y., Timilsina, R.R., Kotani, K., Saijo, T. (2021). Taking the perspectives of future generations as an effective method for achieving sustainable waste management. Sustainable Production and Consumption, 27, 1526—1536.（査読有）

Stage: Feasibility Study

Project Name: Developing Inclusive Wealth with Clarifying Mechanism of Social Value Formation and Application to Sustainable Policy Design

Project Leader: MANAGI Shunsuke

○ 研究目的と内容

How should we allocate our budgets to the 169 targets of the SDGs to improve sustainability? It is difficult to give a concrete answer to this question scientifically and objectively. It is difficult to answer this question in a scientific, objective, and concrete way, because although we can explain the seriousness of each social problem and the need to address it, we lack the scientific basis to determine what priorities should be given to them. In response to these issues, a sustainability index called the "New Wealth of Nations Index," proposed by Partha Dasgupta and Kenneth Arrow in 2012 and developed mainly by the United Nations, has been developed, accelerating the move to quantitatively assess sustainability based on scientific knowledge. The Inclusive Wealth Index is an index that estimates the total capital that generates a prosperous society and economy on a monetary value basis and is calculated by summing up the three types of capital: human wealth (human capital), physical wealth (physical capital), and natural wealth (natural capital). In Japan, the Ministry of the Environment's "Basic Environmental Plan for Fiscal Year 2008" states that the goal is to improve the inclusive wealth index, and Hisayama Town and Miyawaka City in Fukuoka Prefecture are formulating their budgets regarding the inclusive wealth index. Based on the above academic background, we analyzed the sustainability of prefectures and municipalities in Japan from the perspective of the inclusive wealth index, placing the highest priority on natural capital such as renewable resources as the core academic question of this project.

●Achievements

○論文

・ Konishi, Y., and S. Managi. 2020. "Do Regulatory Loopholes Distort Technical Change? Evidence from New Vehicle Launches under the Japanese Fuel Economy Regulation", Journal of Environmental Economics and Management (forthcoming).

・ Morita, T., and S. Managi. 2020. "Autonomous Vehicles: Willingness to Pay and the Social Dilemma", Transportation Research Part C (forthcoming).

・ Kumagai, J., M. Wakamatsu, and S. Managi. 2020. "Do commuters adapt to in-vehicle crowding on trains?", Transportation (forthcoming).

・ Yagi, M., S. Kagawa, S. Managi, H. Fujii, and D. Guan. 2020. "Supply Constraint from Earthquakes in Japan in Input-Output Analysis", Risk Analysis: An International Journal (forthcoming). DOI: 10.1111/risa.13525

・ Keeley, A. R., K. Tanaka, K. Matsumoto, Y. Sugiawan, and S. Managi. 2020. "The Impact of Renewable Energy Generation on the Spot Market Price in Germany: Ex-Post Analysis using Boosting Method", The Energy Journal (forthcoming).

Stage: Feasibility Study

Project Name: Adaptive governance of multiple resources based on land-sea linkages of the water cycle: application to coral reef island systems

Project Leader: SHINJO Ryuichi

○ 研究目的と内容

Towards the sustainable use of limited natural resources in the tropical to subtropical coral reef islands in the western Pacific region, we 1) explore the land-sea linkage through the water cycle by various stable isotopes, environmental tracers, and metagenome analysis, and try to understand the response of multiple resources to climate change and socioeconomic changes. 2) By a historical ecological approach, we will explore the potential mechanisms of society and traditional ecological knowledge that use these limited resources. Using an action research method, we will attempt to record endangered biocultural diversity and design community education with regards to inheritance of culture. 3) we investigate changes and multi-layered governance systems, organizations, and consciousness related to diverse resources through behavioral science and multi-level institutional analysis. In addition, 4) we visualize the linkage of the results from several perspective study, create new values, and integrate scientific knowledge and community knowledge, in order to create stronger resilient society that responds to global climate change and socio-economic changes.

●Achievements

○論文

- Aizawa, M., Shinjo, R., Okamura, S., Takahashi, T., Fujimayashi, N. (2021) Geochemical evidence for “cryptic amphibole fractionation” and lower crust melting for the generation of island arc tholeiitic rocks from northern Fossa Magna, central Japan. Lithos, 386-387, 106028.（査読有）
- Shinjo, R., Amuro, T., Oura, K., Oshiro, K., Tahara, S., Sakai, H. (2020) Geochemical characteristics of mafic and felsic igneous rocks (1.9–1.75 Ga) in the Lesser Himalaya: Regional variation and its implications for tectonic setting. Island Arc, 2020;29:e12369.（査読有）
- Asami, R., Yoshimura, N., Toriyabe, H., Minei, S., Shinjo, R., Hongo, C., Sakamaki, T., Fujita, K. (2020) High-resolution evidence for middle Holocene East Asian winter and summer monsoon variations: Snapshots of fossil coral records. Geophysical Research Letters, 47, e2020GL088509.（査読有）
- Asami, R., Kinjo, A., Oshiro, D., Naruse, T., Mizuyama, M., Uemura, R., Shinjo, R., Ise, Y., Fujita, Y., Sakamaki, T. (2020) Evaluation of geochemical records as a paleoenvironmental proxy in the hypercalcified demosponge Astrosclera willeyana. Progress in Earth and Planetary Science, 7, Article number: 15.（査読有）
- Armid, A., Shinjo, R., Takwir, A., Rusian, R., Wijaya, A. R. (2020) Spatial distribution and pollution assessment of trace elements Pb, Cu, Ni, Fe and As in the surficial water of Staring Bay, Indonesia. Journal of the Brazilian Chemical Society, 32(2), 299-310.（査読有）
- Deevsalar, R., Shinjo, R. (2020) “Petrogenesis of gabbroic rocks from the Malayer plutonic complex (Sanandaj-Sirjan zone, west Iran)”: Discussion. Periodico di Mineralogia, 89, 281-284.（査読有）
- Nielsen, S., Shu, Y., Auro, M., Yogodzinski, G., Shinjo, R., Plank, T., Kay, S., Horner, T. (2020) Barium isotope systematics of subduction zones. Geochimica et Cosmochimica Acta. 275, 1-18.（査読有）
- Eskandari, A., Deevsalar, R., De Rosa, R., Shinjo, R., Donato, P., Neill, I. (2020) Geochemical and isotopic constraints on the evolution of magma plumbing system at Damavand Volcano, N Iran, Lithos, 354-355, 105274.（査読有）
- Gheshlaghi, R. S., Ghorbani, M., Asghar Sepahi, A. A., Deevsalar, R., Shinjo, R. (2020) Petrogenesis of gem sapphire in a pegmatite-aplite vein from the Alvand batholith, Western Iran. Mineralogy and Petrology, 114, 501-513.（査読有）

○MISC

- 新城竜一 (2020) 沖縄トラフ 地史と海底噴出物. 特別展「岩石－石ころから見える地球のダイナミズム― 展示会図録. 沖縄県立博物館・美術館, pp. 84-85.（査読なし）
- 宇佐美賢, 宮城宏之, 我謝昌一, 宮城直樹, 新城竜一 (2020) 伊平屋島西部の２種類の緑色岩の産状と全岩化学組成：その噴出テクトニック場の考察. 特別展「岩石－石ころから見える地球のダイナミズム― 展示会図録. 沖縄県立博物館・美術館, pp.87-88.（査読なし）

Stage: Feasibility Study

Project Name: Tackling Wicked Problems: Co-creating Serious Games as Transdisciplinary Methods to Solve Socio-Environmental Challenges

Project Leader: OTA Kazuhiko

Core Program

○ 研究目的と内容

In recent years, serious games have been attracting attention to reflect the results of research and practice on environmental and social issues in society. Many games on "wicked problems" such as climate change countermeasures and resource management have been developed. These games make players interested in the theme, improve literacy, and promote behavior change. However, there are concerns that the annoyance of the problem will be oversimplified and lead to a misunderstanding as if there is a universal solution. Therefore, this research aims to [A] classifies the practical projects of the RIHN, which have tackled environmental and social problems as wicked problems from various viewpoints and approaches, [B] Identify the game mechanics which fit with the characteristics and narratives of each classification groups and create a prototype, and [C] reports containing the generalization of the obtained empirical rules. By publishing the report, we will deepen the experience gained through serious games and return the research results stocked at the RIHN to society more widely.

●Achievements

○論文

・Ota, K., Tsujita, Y., Murakami, M., Iida, K., Ishikawa, T., Ohtani, M., Vervoort, J., Mangnus, A., Kagawa, S., Kumazawa, T. (2021). Serious Board Game Jam as an Exercise for Transdisciplinary Collaboration., Simulation and Gaming for Social Design to Come. Springer. ［※編集者による査読あり］ ※審査中

・Vervoort, M. J., Milkoreit, M., van Beek, L., Mangnus, A., Farrell, D., Prokopy, L., Huber, M., Reed, J., Weiner, R., Johnson, D., McGreevy, S., Ota, K., Rupprecht, C., Kobayashi, M., Tamura, N., Thompson, K. (2021). Not Just Playing: Designing simulation game processes for impact on climate governance. Geoforum. ［※査読あり］ ※審査中

・Vervoort, M. J., Mangnus, A., McGreevy, S. R., Ota, K., Thompson, K., Rupprecht, C. D., Tamura, N., Moossdorff, C., Spiegelberg, M., Kobayashi, M. (2021). Unlocking the potential of gaming for anticipatory governance. Earth System Governance. ［※査読あり］ ※審査中

○MISC

・太田和彦. (2021). 超学際的な共同作業のエクササイズとしてのシリアスボードゲームジャム. 近藤康久, 大西秀之編. 環境問題を解くために：ひらかれた協働研究のすすめ. 昭和堂

○講演・口頭発表等

・太田和彦. 都市における持続可能性、技術、ウェルビーイング、倫理的諸問題. 応用哲学会 2020 年度大会, 2020 年 04 月 25 日-2020 年 04 月 26 日, 信州大学（オンライン）. （本人発表). 新型コロナウィルスの影響により、書面大会

・太田和彦. 持続可能なフードシステムに関する学習に果たすアクティブ・ラーニングの継続的効果. 環境社会学会 2020 年度夏季大会, 2020 年 06 月 14 日, オンライン. （本人発表).

・Kazuhiko Ota, Akito Inoue, Yuka Fujieda. Commons and Serious Games. Kyoto 2020: IASC-RIHN Online Workshop, 2020.07.20-2020.07.22, オンライン. （本人発表).

・Kazuhiko Ota. Serious Board Game Jam: Collaborative Visualization of Social Issues and Scientific Knowledge. International Conference on Game Jams, Hackathons, and Game Creation Events (ICGJ 2020), 2020.08.24-2020.08.25, Online. （本人発表).

・太田和彦. Sustainability transition を促進するツールとしてのシリアスゲームの有効性と限界. 日本社会学会 2020 年度大会, 2020 年 10 月 31 日-2020 年 11 月 01 日, オンライン. （本人発表)

・太田和彦. シリアスボードゲームジャムの生態系［企画セッション］. 日本デジタルゲーム学会 2020 年度大会, 2021 年 3 月 13 日, オンライン.（本人発表）

○社会貢献活動

・上西充子、飯田和敏、あかたちかこ、太田和彦、坂上香、皿倉のぼる、武市香織、西口想、納口龍司. 「『呪いの言葉の解きかた』ゲーム」オンライン・ワークショップの開催. 2020 年 8 月 8 日. https://youtu.be/4ksn8qLjkmg (2020 年 11 月 11 日閲覧)

・高倉暁大、太田和彦. 「【図書館総合展 2020】『図書館×シリアスボードゲームジャム』」企画内対談. 2020 年 10 月 31 日. https://youtu.be/bYRyg9nITf8 (2020 年 11 月 11 日閲覧)

Stage: Feasibility Study

Project Name: Development of data-driven decision support platform based on sustainable life cycle assessment towards SDGs-Nexus

Project Leader: LEE Sanghyun

Core Program

○ 研究目的と内容

The goal of Core FS was to analyze the approach of SEE-Nexus for assessing various strategies and policy of SDGs. Accordingly, the outputs from Core FS would be worked as fundamental research for holistic impact assessment considering various resources and multi-stakeholders. The case study about transboundary water and food management in Kansai region could give insight about holistic impacts in transboundary management, and it will be connected to energy-shed, for instance embedded energy in food trade, through the SEE-Nexus. In addition, the dashboard in SEE-Nexus could link to the RIHN archive and Visual Keyword Map, and it would improve the feasibility of application of SDGs to RIHN projects.

●Achievements

○論文

・ Lee, S. H., Choi, J.Y., Hur, S.O., Taniguchi, M., Masuhara, N., Kim, K.S., Hyun, S., Choi, E., Sung, J.H. and Yoo, S.H., 2020. Food-centric interlinkages in agricultural food-energy-water nexus under climate change and irrigation management. Resour. Conserv. Recycl., 163, p.105099. Lee, S. H., Taniguchi, M., Masuhara, N., and Mohtar R.H, 2020. Analysis of Industrial Water-Energy-Labor Nexus Zones for Economic and Resource-based Impact Assessment. Resour. Conserv. Recycl. (Under reviewing)

○講演・口頭発表等

・Lee, S. H., Taniguchi, M., and Masuhara, N., 2020. Multi-scale Food-Energy-Water Nexus to link national, regional and local sustainability based on resource-sheds and system dynamics modeling: A case study of Japan. EGU General Assembly 2020, 4-8 May 2020.

Incubation Studies

The sustainability of oceanic islands through the water-carbon-ecosystem nexus

ISHIDA Atsushi (Kyoto University)

Oceanic islands give us abundant ecosystem services due to their rich, specific nature. However, climate-change driven increases in frequency and intensity of drought and typhoons have degraded the ecosystems. The invasion of alien species and the epidemics by globalism, water deficit, the high dependency on external energy, and the exceeded waste are also common threats in oceanic islands in the world. Here, the presentations of various alternatives for compromising these issues are major priority for establishing its sustainability. We clarify the complex nexus of water-carbon-ecosystem, and construct a new scheme of socio-ecosystems for ensuring island sustainability under ongoing global warming. Oceanic islands are semi-closed systems with specific characteristics in geographics and ecosystem services, envisioned as a “Mini-Earth”. We can thus grasp each island as a micro-globe with various social and ecological systems. At the Ogasawara Islands, one of the World Natural Heritage sites, we visualize the climate-change driven ecosystem degradation and the resource issues due to visitor variations, and we propose the developed adaptive measures for the cooperation of resident-government-enterprise. We transmit the analyzed results to improve adaptive measures. The presented “Ogasawara Model” here will have a fundamental contribution for constructing a new carbon-free society in the world.

Traditional food preservation and storage culture using freezing-Transformation and succession of food life history under environmental change-

SAITO Kazuyuki (JAMSTEC)

This project explores the “food life history” of the cold storage practices by Indigenous peoples / local residents in the northern communities under conditions of natural environmental change (e.g. degrading frozen ground; wetting or drying caused by precipitation regime shift) and social changes caused by contemporary lifestyle including education, urbanization, and processed foods. People in northern communities in Siberia and Alaska have relied on underground caches to store, ferment, and preserve their traditional harvests such as walrus and whale meat, birds, fish, vegetables, and other foods including water (ice). In the past few decades, underground caches have been facing malfunctions and/or malpractices of the cold storage system, which threatens local food security. To better understand the function and direction of the use of cold storage traditions as related to local cultural life, environment, and the food cycle, we propose a new perspective “food life history.” This approach considers the historical/cultural uses and preservation of food, and the role and meaning of food to the community.

Towards Sustainable Nitrogen Use Connecting Human Society and Nature

HAYASHI Kentaro (NARO)

Nitrogen use as fertilizer and other materials threatens human and environmental health via various environmental impacts due to the accompanied and unintended loss of reactive nitrogen to the environment. To solve this nitrogen issue, the current human system must be converted to a more sustainable system by reducing the nitrogen loss to the environment from production to consumption. Both top-down policy and technological measures and bottom-up behavioral changes of stakeholders are indispensably needed to realize the sustainable nitrogen use. In this study, aiming to provide the interdisciplinary evidence that contributes to solve the nitrogen issue, we formed an interdisciplinary research team to tackle with this issue and organized a talk event for public as a trial of transdisciplinary collaboration. Continuously, our research will focus on the food aspect of nitrogen issue as the largest nitrogen use in human system. For the sustainable food system with respect to nitrogen use, we will elaborate the nitrogen flow estimation, further develop the nitrogen footprint to quantify behavior changes, analyze the costs and benefits of nitrogen use and those of measures, and establish transdisciplinary frameworks in a municipal scale that practice reducing the nitrogen waste achieving a balance with the wealth of food.

Influence of global environmental changes and regional catastrophic events on social vulnerability

WATANABE Tsuyoshi (Hokkaido University)

Climate change has governed ecosystems in land and ocean and migration, settlement, civilization, and human lifestyle. Recent economic development, population growth, and globalization would be possible triggers to societies' vulnerability with the simplification of lifestyles. This research will reconstruct both the global scale of climate changes and local catastrophic environmental events such as earthquakes, tsunami, volcanic eruptions, flood and drought events, and infectious diseases, which influenced human life. With our hypotheses, human societies' vulnerability was triggered and accelerated by overlapped occurrences of global climate changes and local catastrophic events in the past. We will estimate the impact of future climate/environmental changes on human society and suggest sustainable frameworks and lifestyles with expected climate changes.

Project Name: Post Core Project: Applied research platform based on environmental traceability

Abbreviated Title: Environmental Traceability

Project Leader: TAYASU Ichiro

○ Research Subject and Objectives

This project will conduct joint research to solve a wide range of environmental issues using the "Environmental Traceability Methodology" developed in the core project. Based on the website created as a platform for environmental traceability, this project aims to conduct joint research using the research infrastructure by connecting researchers who can provide technologies related to environmental traceability methodology, mainly isotope analysis, and stakeholders including researchers, government, and general public who want to use the methodology. This research will be conducted for a period of three years (FY2020-2022), in collaboration with the "Isotope Environmental Study" conducted by the Laboratory and Analysis Division of the RIHN Center. Finally, we will improve and reconstruct the "Environmental Traceability Methodology" to establish a new function as an inter-university research institute.

○ Progress and Results in 2020

It was time to start activities based on the website created as a platform for environmental traceability. However, due to the global outbreak of a new coronavirus (COVID-19), a state of emergency was declared from the beginning of the project, which made it difficult to conduct the research. We conducted the following research on possible activities under these restrictions.

(1) Revision of the website that will serve as a platform to disseminate and promote the environmental traceability method

The web site established by the "Environmental Traceability Core Project" was revised jointly with the Laboratory and Analysis Division. The product can be downloaded free of charge from the website of the RIHN, " A world drawn by Environmental Isotope Study: 2021 edition " edited by Ichiro Tayasu and Ki-Cheol Shin. As of March 31, 2021, the website had 4654 page views and 1008 downloads.

(2) Relationship with the community

The relationship with the local community was considered independently of the past project and was reexamined.

For Ono City, Dr. Tayasu participated in the "Ohno City Water Cycle and Spring Water Culture Revitalization Promotion Liaison Council" and expressed his opinions on the formulation of the new plan. As for Oshino Village, we continued the research under the "Oshino Village Groundwater Entrusted Research Fund" represented by Dr. Taniguchi. Dr. Yabuzaki participated in the "Housing Environment Preservation Council" and expressed her opinions. Although the symposium was cancelled under the influence of COVID-19, a special issue of BIOCITY (BIOCITY No.84 "From Mt: Fuji to a Sustainable Future: The Nexus of Nature, Society, Culture, and Town") was published. In addition, we received inquiries from new regions and drew up research plans.

(3) Activities with Overseas Countries

We discussed future joint research with Gabriel J. Bowen, a world authority on isotope maps (Isoscapes), and agreed to have a cooperative study. We also agreed to discuss a new research plan for Lake Taal in the Philippines.

○ Future Themes

The purpose of this project is to utilize the research infrastructure by connecting researchers who can provide technologies related to environmental traceability methodologies, mainly isotope analysis, with stakeholders including researchers, government agencies, and the general public who want to use the environmental traceability methodologies. Due to the effects of the global new coronavirus (COVID-19), actual activities have been greatly limited. While steadily working on what we can do under these conditions, we hope to achieve our ultimate goal of constructing new functions for inter-university research institutes and proposing core methods of utilizing the research infrastructure.

○Project Members

TAYASU Ichiro	(Research Institute for Humanity and Nature・Professor)
SHIN Ki-Cheol	(Research Institute for Humanity and Nature・Associate Professor)
YOSHIMIZU Chikage	(Research Institute for Humanity and Nature・Researcher)
YABUSAKI Shiho	(Research Institute for Humanity and Nature・Researcher)
FUJIYOSHI Lei	(Research Institute for Humanity and Nature・Researcher)

TAKANO Shinya　　(Research Institute for Humanity and Nature・Researcher)

●Achievements

○Books etc

・陀安一郎, 01 Mar. 2021, 178-184, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, ISBN: 9784780311440

・ Mar. 2021, Tayasu, I. and Shin, K.-C., Editor, A world drawn by Environmental Isotope Study: 2021 edition, Research Institute for Humanity and Nature

・陀安一郎; 藤吉麗, Dec. 2020, 脇田健一, 谷内茂雄, 奥田昇 編, 流域ガバナンス：地域の「しあわせ」と流域の「健全性」, 98-103, Contributor, 環境トレーサビリティと流域の環境, 454, 京都大学出版会

・陀安一郎, Oct. 2020, 総合地球環境学研究所編, BIOCITY No.84, 100-106, Contributor, 自治体や住民と行う同位体環境学 環境トレーサビリティの実践

・総合地球環境学研究所, Oct. 2020, 忍野八海と忍野村の地下水, 36-43p, Contributor, BIOCITY, No.84, 株式会社ブックエンド

Stage: Completed Research

Project Name: Human-Environmental Security in Asia-Pacific Ring of Fire: Water-Energy-Food Nexus (2013-2017)

Abbreviated Title: WEF Nexus Project

Project Leader: ENDO Aiko

Program 2: Fair Use and Management of Diverse Resources

Key Words: Water-Energy-Food Nexus

●Achievements

○Published Papers

・増原直樹・馬場健司, Mar. 2021, 水・エネルギーネクサスに対する学際・超学際的アプローチの成果と課題-別府市における温泉・観光と地熱発電に関するシナリオプランニングの事例-, 環境科学会誌, 34 (2), Japanese, Refereed, Scientific journal

○MISC

・Rosales-Ramirez, T.Y., Allen, D.M. and Kirste, D., Mapping Areas Most Vulnerable to Groundwater Quality Deterioration through Wastewater Spills/Leaks in Northeast British Columbia, Technical Report Prepared for BC Oil and Gas Commission, 20 pp plus maps

Stage: Completed Project

Project Name: Societal Adaptation to Climate Change in Japan: Integrating Palaeoclimatological Data and Archaeological Evidence (2014-2018)

Project Leader: NAKATSUKA Takeshi

Program 1: Societal Transformation under Environmental Change

●Achievements

○Awards

・アウトスタンディングディスカッション賞, 芳村圭, 土木学会　水工学委員会

○Books etc

・小林謙一, 35-59、191-214, Contributor, 中塚 武監修 中塚 武・若林邦彦・樋上 昇編, 気候変動から読みなおす日本史 第 3 巻　　先史・古代の気候と社会変化, 310, 臨川書店, ISBN: 978-4-653-04503-8

・藤尾慎一郎, 2021, 73-79, Contributor, 中塚 武監修 中塚 武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね編, 気候変動から読みなおす日本史　第 1 巻　新しい気候観と日本史の新たな可能性, 338, 臨川書店, Japanese, ISBN: 978-4-653-04501-4

・中塚　武, 2021, 185-197, Contributor, 近藤康久・大西秀之編, 環境問題を解く―ひらかれた協働研究のすすめ―, 230, かもがわ出版, Japanese, ISBN: 978-4780311440

・中塚　武, 2021, 229-258, Contributor, 中塚　武監修/中塚　武・對馬あかね・佐野雅規編　, 気候変動から読みなおす日本史　第 2 巻　古気候の復元と年代論の構築, 288, 臨川書店, ISBN: 978-4-653-04502-1

・中塚　武, 2021, 203-228, Contributor, 中塚　武監修/中塚　武・對馬あかね・佐野雅規編　, 気候変動から読みなおす日本史　第 2 巻　古気候の復元と年代論の構築, 288, 臨川書店, ISBN: 978-4-653-04502-1

・中塚　武, 2021, 59-87, Contributor, 中塚　武監修/中塚　武・對馬あかね・佐野雅規編, 気候変動から読みなおす日本史　第 2 巻　古気候の復元と年代論の構築, 288, 臨川書店, ISBN: 978-4-653-04502-1

・中塚　武, 2021, 19-58, Contributor, 中塚　武監修/中塚　武・對馬あかね・佐野雅規編, 気候変動から読みなおす日本史　第 2 巻　古気候の復元と年代論の構築, 288, 臨川書店, ISBN: 978-4-653-04502-1

・中塚　武, 2021, 301-329, Contributor, 中塚　武監修/中塚　武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね編, 気候変動から読みなおす日本史　第 1 巻　新しい気候観と日本史の新たな可能性, 338, 臨川書店, ISBN: 978-4-653-04501-4

・中塚　武, 2021, 261-300, Contributor, 中塚　武監修/中塚　武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね編, 気候変動から読みなおす日本史　第 1 巻　新しい気候観と日本史の新たな可能性, 338, 臨川書店, ISBN: 978-4653045014

・中塚　武, 2021, 225-260, Contributor, 中塚　武監修/中塚　武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね編, 気候変動から読みなおす日本史　第 1 巻　新しい気候観と日本史の新たな可能性, 338, 臨川書店, ISBN: 978-4-653-04501-4

・中塚　武, 2021, 207-224, Contributor, 中塚　武監修/中塚　武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね編, 気候変動から読みなおす日本史　第 1 巻　新しい気候観と日本史の新たな可能性, 338, 臨川書店, ISBN: 978-4-653-04501-4

・中塚　武, 2021, 51-53, Contributor, 中塚　武監修/中塚　武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね編, 気候変動から読みなおす日本史　第 1 巻　新しい気候観と日本史の新たな可能性, 338, 臨川書店, ISBN: 978-4-653-04501-4

・中塚　武, 2021, 49-50, Contributor, 中塚　武監修/中塚　武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね編, 気候変動から読みなおす日本史　第 1 巻　新しい気候観と日本史の新たな可能性, 338, 臨川書店, ISBN: http://www.rinsen.com/linkbooks/ISBN978-4-653-04501-4.htm

・中塚　武, 2021, 21-47, Contributor, 中塚　武監修/中塚　武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね編, 気候変動から読みなおす日本史　第 1 巻　新しい気候観と日本史の新たな可能性』, 338, 臨川書店, ISBN: 978-4-653-04501-4

・松木武彦, 2021, 55-61、91-95, Contributor, 中塚 武監修 中塚 武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね編, 気候変動から読みなおす日本史 第 1 巻　新しい気候観と日本史の新たな可能性, 338, 臨川書店, Refereed, ISBN: 978-4-653-04501-4

・井上智博, 2021, 80-84, Contributor, 中塚 武監修 中塚 武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね編, 気候変動から読みなおす日本史 第 1 巻　新しい気候観と日本史の新たな可能性, 338, 臨川書店, ISBN: 978-4-653-04501-4

・伊藤俊一, 2021, 131-137, Contributor, 中塚 武監修 中塚 武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね編, 気候変動から読みなおす日本史　第 1 巻　新しい気候観と日本史の新たな可能性, 338, 臨川書店, ISBN: 978-4-653-04501-4

・生田敦司, 2021, 96-104, Contributor, 中塚 武監修 中塚 武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね編, 気候変動から読みなおす日本史 第 1 巻　新しい気候観と日本史の新たな可能性, 338, 臨川書店, ISBN: 978-4-653-04501-4

・高槻泰郎, 2021, 188-193, Contributor, 中塚 武・鎌谷かおる・佐野雅規・伊藤啓介・對馬あかね, 気候変動から読みなおす日本史 第 1 巻　新しい気候観と日本史の新たな可能性, 338, 臨川書店, ISBN: 978-4-653-04501-4

・ 22 Dec. 2020, 水野章二, 災害と生きる中世―旱魃・洪水・大風・害虫―, 223, 吉川弘文館, Japanese, ISBN: 9784642083928

・藤尾慎一郎, 2020, 67-97, Contributor, 中塚 武監修 中塚 武・若林邦彦・樋上 昇編, 気候変動から読みなおす日本史 第 3 巻　　先史・古代の気候と社会変化, 310, 臨川書店, Japanese, ISBN: 978-4-653-04503-8

・藤尾慎一郎, 2020, 45-50, Contributor, 中塚 武監修 中塚 武・若林邦彦・樋上 昇編, 気候変動から読みなおす日本史　第 3 巻　先史・古代の気候と社会変化, 310, 臨川書店, Japanese, ISBN: 978-4-653-04503-8

・中塚　武, 2020, 15-33, Contributor, 中塚　武監修/鎌谷かおる・渡辺浩一編, 気候変動から読みなおす日本史　第 5 巻　気候変動から近世をみなおすー数量・システム・技術』, 296, 臨川書店, ISBN: 978-4-653-04505-2

・中塚　武, 2020, 15-35, Contributor, 中塚　武監修/伊藤啓介・田村憲美・水野章二編　, 気候変動から読みなおす日本史　第 4 巻　気候変動と中世社会, 354, 臨川書店, ISBN: 978-4-653-04504-5

・中塚　武, 2020, 61-66, Contributor, 中塚 武監修 中塚 武・若林邦彦・樋上 昇編, 気候変動から読みなおす日本史　第 3 巻　先史・古代の気候と社会変化, 310, 臨川書店, ISBN: 978-4653045038

・中塚　武, 2020, 17-34, Contributor, 中塚　武監修/中塚　武・若林邦彦・樋上　昇編　, 気候変動から読みなおす日本史　第 3 巻　先史・古代の気候と社会変化, 310, 臨川書店, ISBN: 978-4-653-04503-8

・松木武彦, 2020, 131-148、149-153, Contributor, 中塚 武監修 中塚 武・若林邦彦・樋上 昇編, 気候変動から読みなおす日本史 第３巻　先史・古代の気候と社会変化, 310, 臨川書店, Refereed, ISBN: 978-4-653-04503-8

・小林謙一, 2020, 1-60, 小林謙一、建石徹、河西学、工藤雄一郎、永田悠記、佐々木憲一、西川広平, 考古学と歴史学, 248, 中央大学出版部, Japanese, ISBN: 978-4-8057-5357-6

・井上智博, 2020, 98-105, Contributor, 禰冝田佳男、原田幹、井上智博, 弥生農耕―田んぼとはたけ―, 116, 六一書房, Refereed

・井上智博, 2020, 247-267, Contributor, 中塚 武監修 中塚 武・若林邦彦・樋上 昇編, 気候変動から読みなおす日本史　第３巻　先史・古代の気候と社会変化, 310, 臨川書店, ISBN: 978-4-653-04503-8

・伊藤俊一, 2020, 259-294, Contributor, 中塚 武監修 伊藤啓介・田村憲美・水野章二編, 気候変動から読みなおす日本史　第４巻　気候変動と中世社会, 354, 臨川書店, ISBN: 978-4-653-04504-5

・生田敦司, 2020, 279-304, Contributor, 中塚 武監修 中塚 武・若林邦彦・樋上 昇編, 気候変動から読みなおす日本史 第３巻　先史・古代の気候と社会変化, 310, 臨川書店, ISBN: 978-4-653-04503-8

・高槻泰郎, 2020, 153-184, Contributor, 中塚 武監修 鎌谷かおる・渡辺浩一編, 気候変動から読みなおす日本史　第 5 巻　気候変動から近世をみなおす : 数量・システム・技術, 296, 臨川書店, ISBN: 978-4-653-04505-2

・遠藤崇浩, 2020, 187-221, Contributor, 中塚 武(監修)鎌谷 かおる(編集)渡辺 浩一(編集), 気候変動から読みなおす日本史　第 5 巻　気候変動から近世をみなおす―数量･システム･技術, 296, 臨川書店, Japanese, General book, ISBN: 978-4-653-04505-2

○Published Papers

・Toride, K., K. Yoshimura, M. Tada, C. Diekmann, B. Ertl, F. Khosrawi, M. Schneider, 19 Feb. 2021, Potential of tropospheric water isotopes to improve weather predictability, Geophysical Research Letters, (48), English

・Nagashima, K., J. Addison, T. Irino, T. Omori, K. Yosimura, N. Harada, 02 Feb. 2021, Aleutian Low variability for the last 7,500 years and its relation to the westerly jet, Quaternary Research, 1-19, Cambridge University Press, English

・山田隆二・木村　誇・苅谷愛彦・佐野雅規・對馬あかね・李　貞・中塚　武・國分（齋藤）陽子・井上公夫, 2021, 大規模土砂移動発生履歴の高精度復元に向けた埋没樹木の年代測定－歴史時代に中部山岳地域で発生した事例－, 砂防学会誌, 73 (5), 3-14, 砂防学会

・Xu, C. B. Buckley, S.-Y. S. Wang, W. An, Z. Li, T. Nakatsuka, and Z. Guo, 30 Dec. 2020, Oxygen Isotopes in Tree Rings from Greenland: A New Proxy of NAO, Atmosphere, (12), MDPI, English

・Li, Q., Y. Liu, T. Nakatsuka, R. Liu, Q. Cai, H. Song, S. Wang, C. Sun, and C. Fang, 20 Dec. 2020, Delayed warming in Northeast China: Insights from an annual temperature reconstruction based on tree-ring ﾃﾞﾙﾀ 18O, Science of The Total Environment, (749), ELSEVIER, English

・Nakatsuka, T., M. Sano, Z. Li, C. Xu, A. Tsushima, Y. Shigeoka, K. Sho, K. Ohnishi, M. Sakamoto, H. Ozaki, N. Higami, N. Nakao, M. Yokoyama, and T. Mitsutani, 11 Nov. 2020, A 2600-year summer climate reconstruction in central Japan by integrating tree-ring stable oxygen and hydrogen isotopes, Climate of the Past, (16), English

・庄司悟・岡﨑淳史・芳村圭, Nov. 2020, 気候プロキシの同位体比データ同化による千年解析値の作成に向けた比較検討, 土木学会論文集 B1(水工学), 74 (5), Japanese

・Jones, Miriam C., Max Berkelhammer, Katherine J. Keller, Matthew J. Wooller, Kei Yoshimura, 20 Sep. 2020, High sensitivity of Bering Sea winter sea ice to winter insolation and carbon dioxide over the last 5,500 years, Science Advances, 6 (36), English

・Xu G., X. Liu, W. Sun, P. Szejner, X. Zeng, K. Yoshimura, V. Trouet, 21 Aug. 2020, Seasonal divergence between soil water availability and atmospheric moisture recorded in intra-annual tree-ring omega 18O extremes, Environmental Research Letters, 15 (9), IOP Science, English

・En-Bi Choi, Masaki Sano, Jun-Hui Park, Yo-Jung Kim, Zhen Li, Takeshi Nakatsuka, Masataka Hakozaki, Katsuhiko Kimura, Hyun-Min Jeong & Jeong-Wook Seo, 31 Jul. 2020, Synchronizations of tree-ring ﾃﾞﾙﾀ 18O time series within and between tree species and provinces in Korea: a case study using dominant tree species in high elevations, Journal of Wood Science, (66), Springer, English

・Sengupta, S., S. K. Bhattacharya, A. Parekh, Nimya S. S., K. Yoshimura, A. Sarkar, 03 Jul. 2020, Signatures of monsoon intra-seasonal oscillation and stratiform process in rain isotope variability in northern Bay of Bengal and their simulation by isotope enabled general circulation model, Climate Dynamics, (55), Springer, English

・Chiang, John C. H., Michael J. Herman, Kei Yoshimura, and Inez Y. Fung, 30 Jun. 2020, Enriched East Asian oxygen isotope of precipitation indicate reduced summer seasonality in regional climate and westerlies, PNAS, 117 (26), National Academy of Sciences, English

・Nathsuda Pumijumnong, Achim Bräuning, Masaki Sano, Takeshi Nakatsuka, Chotika Muangsong & Supaporn Buajan, 02 Jun. 2020, A 338-year tree-ring oxygen isotope record from Thai teak captures the variations in the Asian summer monsoon system, Scientific Reports, 10 (1), nature, English

・松木武彦, 01 May 2020, グローバル・ヒストリーと日本考古学：弥生・古墳時代の世界史的位置, 季刊考古学, (151 号), 101-105, 雄山閣, Refereed, Invited

・Xu, C., H. Zhu, S.-Y. S. Wang, F. Shi, W. An, Z. Li, M. Sano, T. Nakatsuka, and Z. Guo, 30 Apr. 2020, Onset and maturation of Asian summer monsoon precipitation reconstructed from intra-annual tree-ring oxygen isotopes from the southeastern Tibetan Plateau, Quaternary Research, 1-9, Cambridge University Press, English

・Li, Q., Y. Liu, T. Nakatsuka, Q-B. Zhang, K. Ohnishi, A. Sakai, O. Kobayashi, Y. Pan, H. Song, R. Liu, C. Sun, and C. Fang, 2020, Oxygen stable isotopes of a network of shrubs and trees as high-resolution plaeoclimatic proxies in Northwestern China, Agricultural and Forest Meteorology, (285-286), Elsevier

・中塚　武, 2020, 古気候学者から歴史学者への協働の呼びかけ―現代の諸問題に対峙するために―, 日本史研究, (700), 147-162, 日本史研究会

・小林謙一, 2020, 徳島県矢野遺跡出土土器付着物の炭素 14 年代測定研究―縄紋時代後期前半を中心に―, 人文研紀要, (第 96 号), 183-206, 中央大学人文科学研究所, Refereed

・伊藤俊一, 2020, 「災害史研究と村落のレジリエンス ―海老澤衷編『中世荘園村落の環境歴史学』を読む―」, 歴史評論, (845 号), 33-43, 歴史科学協議会

○Presentations

・中塚　武, 古気候データは歴史研究にどう活用できるか―文理協働の実現に向けて（プロジェクト代表の集中講義形式, 北海道大学スラブ・ユーラシア研究センター公募プロジェクト型共同研究『「14 世紀の危機」に関する文理協働研究－北東アジア地域を突破口として, オンライン, Japan, 06 Mar. 2021, 06 Mar. 2021 06 Mar. - 2021, Invited

・中塚　武, 樹木年輪酸素同位体比を用いた先史時代の人口変動のシミュレーション, 日本第四紀学会大会, オンライン, Japan, 26 Dec. 2020, 26 Dec. 2020 27 Dec. - 2020

・Wang, X, K. Yoshimura, and K. Toride, Historical Weather Reconstruction by Cloud Cover Data Assimilation with Gaussian Transformation, AGU Fall Meeting 2020, New Orleans(online), United States, 13 Dec. 2020 17 Dec. - 2020

・庄司 悟・岡崎淳史・芳村 圭, 千年解析値の作成に向けた比較検討, 第 65 回水工学講演会, オンライン開催, 04 Nov. 2020 06 Nov. - 2020

・Kino, K., A. Okazaki, A. Cauquoin and K. Yoshimura, LGM simulation with MIROC5-iso and impacts of the Southern Annular Mode on stable water isotopes in the Antarctic ice cores, PMIP 2020, Nanjing(online), China, 26 Oct. 2020 30 Oct. - 2020

・Lan, H., Yoshimura, K., and Liu, Precipitation stable isotope simulation over East Asia monsoon region during last glacial maximum, PMIP 2020, Nanjing(online), China, 26 Oct. 2020 30 Oct. - 2020

・中塚　武, 樹木年輪酸素同位体比を用いた先史時代の気候・農業生産・人口の変動シミュレーション, 日本文化財科学会第 37 回大会, オンライン, Japan, 05 Sep. 2020 13 Sep. - 2020

・Eguchi, N., K. A. Walker, N. Saitoh, Y. Yoshida, K. Yoshimura, K. Toride, M. Fujiwara, Y. Kawatani, Y. Eguchi Yamashita, R. Nassar, D. Jones, D. Plummer, K. Strong, FTS satellite observation mission for understanding chemical and dynamical processes in the upper atmosphere, JpGU-AGU Joint Meeting, online, Japan, 12 Jul. 2020 16 Jul. - 2020

・Masuda, K., P. Neluwala, K. Toride, K. Yoshimura, H. Tanaka, S. Miyazaki, S. Nozawa, M. Ichino, Y. Okubo, J. Hirano, Atmospheric data assimilation which accommodates weather descriptions as observations of solar radiation: Evaluation of performance with a modern one-year case, JpGU-AGU Joint Meeting, online, Japan, 12 Jul. 2020 16 Jul. - 2020

・Yoshimura, K., X. Wang, Data assimilation of historical weather using Gaussian transformation, JpGU-AGU Joint Meeting, online, Japan, 12 Jul. 2020 16 Jul. - 2020

・Harada, A., K. Yoshimura, T. Mizutan, Quantification and Application of "Climate-Risk" based on the tree-ring proxy data, JpGU-AGU Joint Meeting, online, Japan, 12 Jul. 2020 16 Jul. - 2020, Invited

・Takeshi Nakatsuka, Periodical enhancements of multi-decadal hydroclimate variations in central Japan and its implication for the 2600-year East Asian history, JpGU, Virtual, Japan, 12 Jul. 2020 16 Jul. - 2020

・Takeshi NAKATSUKA and Members of Historical Climate Adaptation Project in RIHN, Interactive data production and data analysis on past climate between paleoclimatology, history and archaeology for last 3,000 years in Japan, JpGU, Virtual, Japan, 12 Jul. 2020 16 Jul. - 2020

・中塚　武, 酸素同位体比年輪年代法－その原理・課題・未来－, 地球惑星科学連合大会, 公益社団法人日本地球惑星科学連合，米国地球物理学連合, 千葉（オンライン）, Japan, 12 Jul. 2020 16 Jul. - 2020, Invited

・Kino, K., Okazaki, A., Cauquoin, A. and Yoshimura, Investigation of the response of water isotope records to the changes in orbital forcing with the isotope-enabled AGCM MIROC5-iso, EGU 2020, Vienna(online), Austria, 04 May 2020 08 May - 2020

○Presentations

・中塚　武, 古気候データは歴史研究にどう活用できるか―文理協働の実現に向けて（プロジェクト代表の集中講義形式, 北海道大学スラブ・ユーラシア研究センター公募プロジェクト型共同研究『「14 世紀の危機」に関する文理協働研究－北東アジア地域を突破口として, オンライン, Japan, 06 Mar. 2021, 06 Mar. 2021 06 Mar. - 2021, Invited

・中塚　武, 樹木年輪酸素同位体比を用いた先史時代の人口変動のシミュレーション, 日本第四紀学会大会, オンライン, Japan, 26 Dec. 2020, 26 Dec. 2020 27 Dec. - 2020

・Wang, X, K. Yoshimura, and K. Toride, Historical Weather Reconstruction by Cloud Cover Data Assimilation with Gaussian Transformation, AGU Fall Meeting 2020, New Orleans(online), United States, 13 Dec. 2020 17 Dec. - 2020

・庄司 悟・岡崎淳史・芳村 圭, 千年解析値の作成に向けた比較検討, 第 65 回水工学講演会, オンライン開催, 04 Nov. 2020 06 Nov. - 2020

・Kino, K., A. Okazaki, A. Cauquoin and K. Yoshimura, LGM simulation with MIROC5-iso and impacts of the Southern Annular Mode on stable water isotopes in the Antarctic ice cores, PMIP 2020, Nanjing(online), China, 26 Oct. 2020 30 Oct. - 2020

・Lan, H., Yoshimura, K., and Liu, Precipitation stable isotope simulation over East Asia monsoon region during last glacial maximum, PMIP 2020, Nanjing(online), China, 26 Oct. 2020 30 Oct. - 2020

・中塚　武, 樹木年輪酸素同位体比を用いた先史時代の気候・農業生産・人口の変動シミュレーション, 日本文化財科学会第 37 回大会, オンライン, Japan, 05 Sep. 2020 13 Sep. - 2020

・Eguchi, N., K. A. Walker, N. Saitoh, Y. Yoshida, K. Yoshimura, K. Toride, M. Fujiwara, Y. Kawatani, Y. Eguchi Yamashita, R. Nassar, D. Jones, D. Plummer, K. Strong, FTS satellite observation mission for understanding chemical and dynamical processes in the upper atmosphere, JpGU-AGU Joint Meeting, online, Japan, 12 Jul. 2020 16 Jul. - 2020

・Masuda, K., P. Neluwala, K. Toride, K. Yoshimura, H. Tanaka, S. Miyazaki, S. Nozawa, M. Ichino, Y. Okubo, J. Hirano, Atmospheric data assimilation which accommodates weather descriptions as observations of solar radiation: Evaluation of performance with a modern one-year case, JpGU-AGU Joint Meeting, online, Japan, 12 Jul. 2020 16 Jul. - 2020

・Yoshimura, K., X. Wang, Data assimilation of historical weather using Gaussian transformation, JpGU-AGU Joint Meeting, online, Japan, 12 Jul. 2020 16 Jul. - 2020

・Harada, A., K. Yoshimura, T. Mizutan, Quantification and Application of "Climate-Risk" based on the tree-ring proxy data, JpGU-AGU Joint Meeting, online, Japan, 12 Jul. 2020 16 Jul. - 2020, Invited

・Takeshi Nakatsuka, Periodical enhancements of multi-decadal hydroclimate variations in central Japan and its implication for the 2600-year East Asian history, JpGU, Virtual, Japan, 12 Jul. 2020 16 Jul. - 2020

・Takeshi NAKATSUKA and Members of Historical Climate Adaptation Project in RIHN, Interactive data production and data analysis on past climate between paleoclimatology, history and archaeology for last 3,000 years in Japan, JpGU, Virtual, Japan, 12 Jul. 2020 16 Jul. - 2020

・中塚　武, 酸素同位体比年輪年代法－その原理・課題・未来－, 地球惑星科学連合大会, 公益社団法人日本地球惑星科学連合，米国地球物理学連合, 千葉（オンライン）, Japan, 12 Jul. 2020 16 Jul. - 2020, Invited

・Kino, K., Okazaki, A., Cauquoin, A. and Yoshimura, Investigation of the response of water isotope records to the changes in orbital forcing with the isotope-enabled AGCM MIROC5-iso, EGU 2020, Vienna(online), Austria, 04 May 2020 08 May - 2020

○**Media Coverage**

・Better predictions with water isotopes, Other than myself, Science, 12 Mar. 2021, Editors' choice https://science.sciencemag.org/content/371/6534/twil, Internet

・Bering Sea ice extent is at most reduced state in last 5,500 years, 02 Sep. 2020, EurekAlert! https://www.eurekalert.org/pub_releases/2020-09/uoaf-bsi082820.php, Internet

・『気候変動から読みなおす日本史』 斬新な世界像への期待, Other than myself, 毎日新聞・東京夕刊, 2021, https://mainichi.jp/articles/20210322/dde/014/040/004000c, Paper

Stage: Completed Research

Project Name: Biodiversity-driven Nutrient Cycling and Human Well-being in Social-Ecological Systems (2015-2019)

Abbreviated Title: Ecological Recycling Project (e-REC Project)

Project Leader: OKUDA Noboru

Program 2: Fair Use and Management of Diverse Resources

Key Words: Biodiversity, Ecosystem service, Human well-being, Nutrient balance, Watershed governance

●Achievements

○Books etc

- 谷内茂雄・脇田健一・奥田昇, 420-435, 脇田健一・谷内茂雄・奥田昇編, 流域ガバナンス：地域の「しあわせ」と流域の「健全性」, 20201225, Japanese, ISBN: 978-4814003037
- 奥田昇, 03 Mar. 2021, 139-151, Contributor, 近藤康久・大西秀幸編, 環境問題を解く：ひらかれた協働研究のすすめ, 230, かもがわ出版, Japanese, ISBN: 978-4780311440
- 脇田健一・谷内茂雄・奥田昇, 25 Dec. 2020, 406-419、420-435, Contributor, 脇田健一・谷内茂雄・奥田昇（編）, 流域ガバナンスー地域の「しあわせ」と流域の「健全性」, 454, 京都大学学術出版会, Japanese, ISBN: 9784814003037
- 脇田健一・谷内茂雄, 25 Dec. 2020, 27-44、61-77、77-85, Contributor, 脇田健一・谷内茂雄・奥田昇（編）, 流域ガバナンスー地域の「しあわせ」と流域の「健全性」, 454, 京都大学学術出版会, Japanese, ISBN: 9784814003037
- 谷内茂雄, 25 Dec. 2020, 11-21, Contributor, 脇田健一・谷内茂雄・奥田昇（編）, 流域ガバナンスー地域の「しあわせ」と流域の「健全性」, 454, 京都大学学術出版会, Japanese, ISBN: 9784814003037
- 陀安一郎, 藤吉麗, 25 Dec. 2020, 98-103, Contributor, 脇田健一, 谷内茂雄, 奥田昇 編, 流域ガバナンス：地域の「しあわせ」と流域の「健全性」, 454, 京都大学学術出版会, Japanese, ISBN: 9784814003037
- 脇田健一・谷内茂雄・奥田昇, 25 Dec. 2020, 406-419, Contributor, 脇田健一・谷内茂雄・奥田昇編, 流域ガバナンス：地域の「しあわせ」と流域の「健全性」, 454, 京都大学学術出版会, Japanese, ISBN: 978-4814003037
- R. Lambino・奥田昇, 25 Dec. 2020, 382-399, 脇田健一・谷内茂雄・奥田昇編, 流域ガバナンス：地域の「しあわせ」と流域の「健全性」, 454, 京都大学学術出版会, Japanese, ISBN: 978-4814003037
- R. D. S. Papa・E. M. Peralta・I. B. De Jesus・奥田昇, 25 Dec. 2020, 350-359, Contributor, 脇田健一・谷内茂雄・奥田昇編, 流域ガバナンス：地域の「しあわせ」と流域の「健全性」, 454, 京都大学学術出版会, Japanese, ISBN: 978-4814003037
- 岩田智也・石田卓也・奥田昇, 25 Dec. 2020, 238-255, Contributor, 脇田健一・谷内茂雄・奥田昇編, 流域ガバナンス：地域の「しあわせ」と流域の「健全性」, 454, 京都大学学術出版会, Japanese, ISBN: 978-4814003037
- 奥田昇, 25 Dec. 2020, 108-117, Contributor, 脇田健一・谷内茂雄・奥田昇編, 流域ガバナンス：地域の「しあわせ」と流域の「健全性」, 454, 京都大学学術出版会, Japanese, ISBN: 978-4814003037
- 奥田昇, 25 Dec. 2020, 44-51, Contributor, 脇田健一・谷内茂雄・奥田昇編, 流域ガバナンス：地域の「しあわせ」と流域の「健全性, 454, 京都大学学術出版会, Japanese, ISBN: 978-4814003037
- 25 Dec. 2020, Joint editor, 脇田 健一・谷内 茂雄・奥田 昇 編, 流域ガバナンス：地域の『しあわせ』と流域の『健全性, 454, 京都大学学術出版会, Japanese, ISBN: 978-4814003037
- 近藤康久・酒井陽一郎・大園享司, 25 Dec. 2020, 190-212, Contributor, 脇田 健一 （編）,谷内 茂雄 （編）,奥田 昇（編）, 流域ガバナンス−地域の「幸せ」と流域の「健全性」, 454, 京都大学学術出版会, Japanese, ISBN: 978-4814003037
- Elfritzson M. Peralta, Irisse Bianca B. De Jesus, Rey Donne S. Papa, Okuda N, Dec. 2020, Nutrient cycling and biodiversity in Silang-Santa Rosa Subwatershed, Contributor, 脇田 健一・谷内 茂雄・奥田 昇 編, Basin governance: Regional「happiness」and Basin「health」, 470, 京都大学学術出版会, Japanese, ISBN: 9784814003037

○Published Papers

- 野波寛・大友章司・坂本剛・田代豊・青木俊明, 2021, NIMBY 問題で当事者に対する優位的正当化が抑制されるとき：地層処分場を焦点とした「誰がなぜゲーム」における将来世代の呈示. リスク学研究, 30 (3), 161-175, J-STAGE, Refereed

・Yasuhisa Kondo, Eiichi Fujisawa, Kanako Ishikawa, Satoe Nakahara, Kyohei Matsushita, Satoshi Asano, Kaoru Kamatani, Satoko Suetsugu, Kei Kano, Terukazu Kumazawa, Kenichi Sato, Noboru Okuda, 29 Mar. 2021, Community capability building for environmental conservation in Lake Biwa (Japan) through an adaptive and abductive approach, Socio-Ecological Practice Research, 3, Springer, English

・Takahashi, T., Y. Uchida, H. Ishibashi and N. Okuda, 15 Mar. 2021, Subjective well-being as a potential policy indicator in the context of urbanization and forest restoration, Sustainability, 13 (6), MDPI, English, Refereed

・Kumagai, M., r. Robarts and Y. Aota, 18 Feb. 2021, Increasing benthic vent formation: a threat to Japan's ancient lake, Scientific Reports, 11, nature, English

・Ko,C.Y., Asano, S., Lin, M.J., Ikeya, T., Peralta, E.M., Triño, E., Uehara, Y., Ishida, T., Iwata, T., Tayasu, I., Okuda, N., Feb. 2021, Rice paddy irrigation seasonally impacts stream benthic macroinvertebrate diversity at the catchment level., Ecosphere, English, Refereed

・大園享司・門祐太, 31 Jan. 2021, リン溶解菌の機能的多様性, 同志社大学ハリス理化学研究報告, 61 (4), 221-229, 同志社大学ハリス理化学研究所, Japanese

・Chang, C., H. Ye, T. Miki1, E. R. Deyle, S. Souissi, O. Anneville, R. Adrian , Y. Chiang, S. Ichise, M. Kumagai, S. S. Matsuzaki, F. Shiah, J. Wu, C. Hsieh and G. Sugihara, 31 Aug. 2020, Long-term warming destabilizes aquatic ecosystems through weakening biodiversity-mediated causal networks, Global Change Biology, 26 (11), WILEY, English

・Iwaki, M., Y. Yamashiki, K. Muraoka, T. Toda, C. Jiao and M. Kumagai, 31 Jul. 2020, Effect of precipitation-influenced river influx on Lake Biwa water levels: time scale analysis based on an impulse response function, Inland Waters, 10 (2), 283-294, Taylor & Francis, English

・Bégin, P.N., Y. Tanabe, M. Kumagai, A.I. Culley, M. Paquette, D. Sarrazin, M. Uchida and W.F. Vincent, 24 Jul. 2020, Extreme warming and regime shift toward amplified variability in a far northern lake, LIMNOLOGY AND OCEANOGRAPHY, 66 (S1), S17-S29, Association for the Sciences of Limnology and Oceanography, English

・Ho, P.-C., E. Wong, F.-S. Lin, A. R. Sastri, C. Garcia-Comas, N. Okuda, F.-K. Shiah, G-C. Gong, R. S. W. Yam, C.-h. Hsieh, Jul. 2020, Prey stoichiometry and phytoplankton and zooplankton composition influence the production of marine crustacean zooplankton, Progress in Oceanography, 186, ELSEVIER

・谷口吉光・竹林優磨・鎌田洋平, 2020, 八郎湖流域における環境学習の到達点と課題：環境学習を受講した中学生・高校生へのアンケート調査の結果から, 八郎湖流域管理研究, (5), 19-34, 八郎湖流域管理研究会

・熊谷道夫, 2020, 温暖化と琵琶湖－全循環（深呼吸）のひみつ, 湖国と文化, (173), 18-25, びわ湖芸術文化財団, Japanese, Refereed

・Peralta, E.M., Magbanua, F.S.M, Briones, J.C.A., Okuda, N., Papa, R.D.S, 2020, Linking Anthropogenic Impacts with Community Assemblages and Food Web Structures Using Stable Isotopes: The Laguna de Bay and Marikina Watershed Scenarios, Transactions of National Academy of Scienceand Technology Philippines, 42 (1), International conference proceedings

○Presentations

・高橋卓也・内田由紀子・石橋弘之・奥田昇, 都市化と森林再生の時代における政策指標としての主観的幸福度, 第132回日本森林学会, オンライン, 19 Mar. 2021 23 Mar. - 2021

・高橋卓也・石橋弘之・内田由紀子・奥田昇, 都市化と森林再生の時代における政策指標としての主観的幸福度, 第132回日本森林学会大会, 日本森林学会、 日本木材学会, 東京農工大学（オンライン）, Japan, 19 Mar. 2021 21 Mar. - 2021

・Peralta, E.M, Watersheds in the Anthropocene: Towards sustainability from changing climate and land use. What we are right now: Youth Advocacy for the Preservation of the Environment, Red Cross Youth Council –Accountancy Unit, Manila(Zoom Meeting Webinar), Philippines, 06 Mar. 2021

・Takahashi, T., Y. Uchida, H. Ishibashi and N. Okuda, Factors affecting forest-related subjective well-being: A case study in the upper Yasu River watershed, The 4th University of Santo Tomas and University of Shiga Prefecture Joint Symposium, online, 05 Mar. 2021, 04 Mar. 2021 05 Mar. - 2021

・Peralta, E.M.*, De Jesus, I.B.B., Gregorio, J., Ramirez, F.C.R., Privaldos, O.L., Briones, J.C.A., Borja, A.S., Magbanua, F.S., Papa, R.D.S., Okuda, N, e-REC gears towards understanding and managing socio-ecological health of watersheds in the Philippines–A DPSIR approach, 4thUST-USPJoint Symposium, 04 Mar. 2021, Invited

・Privaldos, O. L. A., K. Osaka, Y. Uehara, S. Asano, L. Fujiyoshi, C. Yoshimizu, I. Tayasu, A. C. Santos-Borja, M. P. Espino, N. Okuda, Identifying Groundwater Nitrate Sources using Nitrate Stable Isotopes in Silang-Santa Rosa Sub-Watershed, The VIRTUAL Philippine Nuclear Research & Development Conference 2020 (PNRDC2020), online, 08 Dec. 2020 10 Dec. - 2020

・Ramirez, F. C. R., T. Ishida, J. A. I. V. Cabardo, O. L. Privaldos, Y. Uehara, L. Fujiyoshi, K. Osaka, F. Magbanua, R. D. Papa & N. Okuda, Tracing Phosphorus Sources in an Urbanized Silang-Sta. Rosa Subwatershed using Oxygen Isotopes, The VIRTUAL Philippine Nuclear Research & Development Conference 2020 (PNRDC2020), online, 08 Dec. 2020 10 Dec. - 2020

・Osbert Leo A. Privaldos, Ken'ichi Osaka, Yoshitoshi Uehara, Satoshi Asano, Lei Fujiyoshi, Chikage Yoshimizu, Ichiro Tayasu, Adelina C. Santos-Borja, Maria Pythias Espino, Noboru Okuda, Identifying groundwater nitrate sources using nitrate stable isotopes in Silang-Santa Rosa sub-watershed, 2nd Philippine Nuclear Research and Development Conference, Department of Science and Technology - Philippine Nuclear Research Institute (DOST-PNRI), Philippines, 08 Dec. 2020 10 Dec. - 2020

・Ramirez, F.C.R.*, Ishida, T., Cabardo, J.A.I.V, Privaldos, O.L.A, Uehara, Y., Fujiyoshi, L., Osaka, K., Magbanua, F.S., Papa, R.D.S, Okuda, N, Tracing Phosphate Sources in an Urbanized Silang-Sta.Rosa Subwatershed using Oxygen Isotopes, Philippine Nuclear Research & Development Conference 2020,, Virtual, Philippines, 08 Dec. 2020 10 Dec. - 2020

・藤林恵・伊藤雅之・小林由紀・池谷透・M. U. Mendoza・J. L. Aguilar・K. S. A. R. Padilla・R. D. S. Papa・C.-h. Hsieh・F.-K. Shiah・奥田昇, 脂肪酸を指標とした湖沼メタン栄養食物網の緯度間比較, 第 23 回日本水環境学会, オンライン, 09 Sep. 2020 10 Sep. - 2020

・Takahashi, T., Y. Uchida, H. Ishibashi & N. Okuda, Subjective well-being related to forests and common forests in the era of post-development: A potential policy indicator for industrialized and developing countries, KYOTO 2020: IASC-RIHN Online Commons Workshop on Post-Development and Degrowth In Asia, online, 22 Jul. 2020

・Takahashi, T., Y. Uchida, H. Ishibashi and N. Okuda, Subjective well-being related to forests and common forests in the era of post-development: A potential policy indicator for industrialized and developing countries, IASC (International Association for the Study of the Commons) - RIHN (Research Institute for Humanity and Nature) Online Workshop on Commons Post-Development and Degrowth in Asia, 総合地球環境学研究所、IASC ASIA, オンライン, 22 Jul. 2020, 20 Jul. 2020 22 Jul. - 2020

・12. Ishida, T., Y. Tomozawa, X. Liu, J. Qian, M. Saito, S. Onodera, N. Okuda & S. Ban, Distribution of phosphate oxygen isotope in boring core samples for evaluation of phosphorus cycling in groundwater, JpGU-AGU Joint Meeting 2020, online, 15 Jul. 2020

・11. Saito, M., S. Onodera, Y. Tomozawa, K. Wang, S. Ban & N. Okuda, Observation for the spatial variation of lacustrine groundwater discharge (LGD) in the northern basin of Lake Biwa by multi-layer measurement of radon (222Rn), JpGU-AGU Joint Meeting 2020, online, 15 Jul. 2020

・Onodera, S., M. Saito, K. Wang, S. Ban, N. Okuda & Y. Tomozawa, Role of groundwater and river discharge on phosphorus supply into the lake, JpGU-AGU Joint Meeting 2020, online, 15 Jul. 2020

・Ban, S., X. Liu, M. Maruo, N. Goto, K. Osaka, S. Onodera, M. Saito, T. Ishida & N. Okuda, Did artificial re-oligotrophication induce a reduction of fish catch in Lake Biwa?, JpGU-AGU Joint Meeting 2020, online, 15 Jul. 2020

・Kondo, Y., K. Kano, T. Kumazawa, S. Nakahara, K. Nakashima, N. Okuda, H. Ōnishi, T. Osawa, K. Ota, Five key elements to enable open science for society, JpGU-AGU Joint Meeting 2020, online, 15 Jul. 2020

・Okuda1, N., M. U. Mendoza, J. I. Aguilar, K. S. A. R. Padilla, J. C. A. Briones, R. D. S. Papa, M. Ito, M. Fujibayashi, T.-H. Tu, L.-H. Lin, P.-L. Wang, Y. Kobayashi, E. Austria & F.-K. Shiah, Methanotrophic food webs in tropical lakes, JpGU-AGU Joint Meeting 2020, online, 15 Jul. 2020

・Peralta, E.M.*, Magbanua, F.S.M, Briones, J.C.A., Okuda, N., Papa, R.D.S, Linking Anthropogenic Impacts with Community Assemblages and Food Web Structures Using Stable Isotopes: The Laguna de Bay and Marikina Watershed Scenarios, 42ndNational Academy of Science and Technology Annual Scientific Meeting, Virtual Meeting via Zoom, Philippines, 07 Jul. 2020 10 Jul. - 2020

○**Media Coverage**

・「オープンサイエンスと社会協働の融合に基づく 琵琶湖流域圏水草資源活用コミュニティ」三井物産環境基金研究助成ーの形成, 2020, PR

・超学際研究における生態学の役割」生態学研究センターニュース 146:4, Jul. 2020, Paper

・「若い力が拓く生態学の未来」生態学研究センターニュース 147:, Jan. 2021, Paper

・地球研オープンハウス LIVE「里山と里海をめぐるまなざし」登壇, 22 Nov. 2020, Others
・「地域の声に寄りそった研究の軌跡　地域から流域へ、そして地球へ」地球研ニュース 81:3-7, 2020, PR

RIHN Center

The RIHN Center provides foundations and platforms for RIHN's research activities and promotes engagement in interactive collaborations with academic and societal stakeholders. The Center also promotes capacity building activities related to global environmental studies.

The RIHN Center consists of five divisions. The Laboratory and Analysis Division develops and maintains the laboratory facilities necessary for research and fieldwork. The Information Resources Division maintains RIHN research databases and archive. The Communication Division develops a variety of communication strategies linking RIHN research to academic, public and user-specific communities. The Collaboration Division facilitates internal and external research networking. The Future Earth Division organizes RIHN engagement with the international Future Earth initiative and manages activities of Future Earth in Asia.

Division Name: Laboratory and Analysis Division

Head of Division: TAYASU Ichiro

○ Subject and Objectives

Laboratory and Analysis Division organizes three types of collaborative studies in the Phase III Medium-Term Plan.

(1) Research collaboration with research projects

The division manages eighteen basement laboratories dedicated to various analytical needs. In addition, the division is responsible for maintaining state-of-the-art facilities, especially stable isotope mass spectrometers, and collaborates with research projects.

(2) Research collaboration with core projects

A core project FR entitled "Proposal and verification of the validity of isotope environmental traceability methodology in environmental studies (FY2017-2019)" established a methodology for how to use the concept of environmental traceability using multiple isotope ratios. The division collaborated with the project from an analytical viewpoint. From 2020, a post-core project named "Applied research platform based on environmental traceability" has started within the division.

(3) Research collaboration with universities via "Environmental Isotope Study"

The division provides "Joint Research Grant for the Environmental Isotope Study" for universities and affiliated institutions throughout Japan, allowing them to use the facilities and exchanging research information. From the FY2016, the division has started two types of collaborations, "Collaborative research with the Division" or "General collaborative research". From 2020, "Collaborative research in the NIHU" has started.

○ Progress and Results in 2020

The division installed or maintained various analytical instruments in the laboratories. The laboratories were closed from 10 April to 5 July and from 18 January to 28 February because of the COVID-19.

The division accepted 65 proposals of "(A) General collaborative research", 10 proposals of "(B) Collaborative research with the Division" and 1 proposals of "(S) Collaborative research in the NIHU", under "Joint Research Grant for the Environmental Isotope Study".

The division organized a session in JpGU2020 entitled "H-TT16: Development and application of environmental traceability methods" on 12 July 2020. 16 iPoster papers were presented in the online session.

The division made online video tutorials how to use instruments for stable isotope analysis.

The division organized the tenth annual symposium of Environmental Isotope Study on 18 December online. 95 researchers and students attended the symposium.

○ Future Themes

The division considers that "Environmental Isotope Study" is one of the most important function of RIHN as an Inter-University Research Institute Corporation. Toward the Phase IV Medium-Term Plan of the institute, the division continuously develops analytical techniques to collect various environmental information in order to solve environmental issues.

○Project Members

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YABUSAKI Shiho	(Research Institute for Humanity and Nature・Researcher)
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SAITO Yu	(Waseda University・Lecturer, without tenure)
OTSUKA Akira	(National Agriculture and Food Research Organization・Unit Leader)
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ZHANG Jing	(University of Toyama・Professor)
YOKOO Noriko	(Doshisha University・Assistant Professor)
OKADA Naoki	(Kyoto University・Associate Professor)
YOSHIKAWA Takashi	
HYODO Fujio	
GOTO Yunosuke	
KAWAI Kiyoaki	

●Achievements

○Books etc

- 01 Mar. 2021, 環境問題を解く ひらかれた協働研究のすすめ, かもがわ出版, Japanese
- Mar. 2021, Tayasu, I. and Shin, K.-C., Editor, A world drawn by Environmental Isotope Study: 2021 edition, Research Institute for Humanity and Nature
- 陀安一郎, Mar. 2021, 近藤康久，大西秀之編，環境問題を解く ひらかれた協働研究のすすめ, 178-184, Contributor, 環境トレーサビリティとは何か, 227, かもがわ出版
- 静岡県, Mar. 2021, 125-132, Contributor, 日下宗一郎, 静岡県史別編 4 人口史, 静岡県, Japanese
- Mar. 2021, 39-44, Contributor, 安部豊・内山佳美, 同位体環境学がえがく世界　2021 年度版, 182, 総合地球環境学研究所, Japanese, ISBN: 978-4-906888-84-9
- 陀安一郎; 藤吉麗, Dec. 2020, 脇田健一, 谷内茂雄, 奥田昇 編，流域ガバナンス：地域の「しあわせ」と流域の「健全性」, 98-103, Contributor, 環境トレーサビリティと流域の環境, 454, 京都大学出版会
- 小池孝良ら, Dec. 2020, 安定同位体から見た森林樹木, 共立出版, Japanese
- 陀安一郎, Oct. 2020, 総合地球環境学研究所編，BIOCITY No.84, 100-106, Contributor, 自治体や住民と行う同位体環境学 環境トレーサビリティの実践
- 総合地球環境学研究所, Oct. 2020, 忍野八海と忍野村の地下水, 36-43p, Contributor, BIOCITY, No.84, 株式会社ブックエンド
- Okuda, N; T. Takeyama; T. Komiya; Y. Kato; Y. Okuzaki; Z. Karube; Y. Sakai; M. Hori; I. Tayasu; T. Nagata, Aug. 2020, Lake Biwa: Interactions between Nature and People (2nd Edition). (Eds. Kawanabe, H. et al.), Contributor, A food web and its long-term dynamics in Lake Biwa: a stable isotope approach, Springer Academic
- 日本地下水学会編, Jun. 2020, Q20 地下水や湧水はミネラルが豊富でおいしいというのは本当ですか？ ；Q29 名水百選とはどのようなものですか？ ；Q30 湧水や井戸の名称はどのように付けられたのですか？, Contributor, 地下水・湧水の疑問, 成山堂書店

○**Published Papers**

・Kenji Suetsugu; Takashi F. Haraguchi; Akifumi S. Tanabe; Ichiro Tayasu, Mar. 2021, Specialized mycorrhizal association between a partially mycoheterotrophic orchid Oreorchis indica and a Tomentella taxon, MYCORRHIZA, 31 (2), 243-250, SPRINGER, English, Refereed, Scientific journal DOI:10.1007/s00572-020-00999-z

・藪崎志穂, Mar. 2021, 水の安定同位体をいた地下水や湧水の涵養域の推定― 福島県沿岸域の研究例 ―, 陀安一郎, 申 基澈 編「同位体環境学がえがく世界：2021 年版」, 67-71, Japanese, In book

・Sase, H., Saito, T., Takahashi, M., Morohashi, M., Yamashita, N., Inomata, Y., Ohizumi, T., Nakata, M., Mar. 2021, Transboundary air pollution reduction rapidly reflected in stream water chemistry in forested catchment on the Sea of Japan coast in central Japan, Atmospheric Environment, 248, English DOI:10.1016/j.atmosenv.2021.118223

・後藤祐之介, 川井清明, 申基澈, 陀安一郎, Mar. 2021, 元素及び重元素安定同位体比分析によるニンジンの産地判別法の開発, 食品関係等調査研究報告, (44), 16-25, Japanese

・Tsubasa Otake; Ryoichi Yamada; Ryohei Suzuki; Shunsuke Nakamura; Akane Ito; Ki-Cheol Shin; Tsutomu Sato, Feb. 2021, Large Fe isotope fractionations in sulfide ores and ferruginous sedimentary rocks from the Kuroko volcanogenic massive sulfide deposits in the Hokuroku district, northeast Japan, GEOCHIMICA ET COSMOCHIMICA ACTA, 295, 49-64, PERGAMON-ELSEVIER SCIENCE LTD, English, Scientific journal DOI:10.1016/j.gca.2020.12.009

・Suetsugu K, Matsubayashi J, Feb. 2021, Evidence for mycorrhizal cheating in Apostasia nipponica, an early-diverging member of the Orchidaceae., New Phytologist, 229 (4), 2302-2310, English DOI:10.1111/nph.17049

・Yoshitaka Oishi, Feb. 2021, Potential use of Sr isotope ratio to evaluate trace metal uptake in moss, Ecological Indicators, 121 DOI:https://doi.org/10.1016/j.ecolind.2020.107063

・Shiho Yabusaki, Jan. 2021, Estimation method of recharge area and residence time in groundwater by using stable isotopes, CFCs and SF6, 地球科学, 75, 91-96, Japanese, Refereed, Scientific journal

・Takaya Chikamasa, Hideaki Shibata, Rieko Urakawa, Karibu Fukuzawa, Muneto Hirobe & Yoshiyuki Inagaki, Dec. 2020, Spatial distribution of mercury accumulation in the surface soil of Japanese forests, Journal of Forest Research, 26 (2), 161-167, English DOI:10.1080/13416979.2020.1865510

・Tsujisaka, M., Nishida, S., Takano, S., Murayama, M. & Sohrin, Y., Dec. 2020, Constraints on redox conditions in the Japan Sea in the last 47,000 years based on Mo and W as palaeoceanographic proxies., Geochem. J., 54 (6), 351-363, English

・西藤 清秀・板橋 悠, バハレーン, Dec. 2020, マカバ古墳群の調査, ヘレニズム～イスラーム考古学研究 2020, 85-103, Japanese, Refereed DOI:http://doi.org/10.24517/00061641

・Naoto F. Ishikawa; Jacques C. Finlay; Hiromi Uno; Nanako O. Ogawa; Naohiko Ohkouchi; Ichiro Tayasu; Mary E. Power, Nov. 2020, Combined use of radiocarbon and stable carbon isotopes for the source mixing model in a stream food web, Limnology and Oceanography, 65 (11), 2688-2696, Wiley, English, Refereed, Scientific journal DOI:10.1002/lno.11541

・Kenji Suetsugu; Shintaro Taketomi; Akifumi S. Tanabe; Takashi F. Haraguchi; Ichiro Tayasu; Hirokazu Toju, Oct. 2020, Isotopic and molecular data support mixotrophy in Ophioglossum at the sporophytic stage, New Phytologist, 228 (2), 415-419, Wiley, English, Refereed, Scientific journal DOI:10.1111/nph.16534

・Kenji Suetsugu; Jun Matsubayashi; Ichiro Tayasu, 01 Sep. 2020, Use of radiocarbon for assessing the mycorrhizal status of mycoheterotrophic plants, Plant Signaling & Behavior, 15 (9), 1785667-1785667, Informa UK Limited, Refereed, Scientific journal DOI:10.1080/15592324.2020.1785667

・日下宗一郎，藤澤珠織，矢野健一, Sep. 2020, 2020. 本州内陸部の宮崎遺跡から出土した成人骨と乳児骨の多元素安定同位体分析, 文化財科学, 81, 49-58, Japanese

・Tomomitsu Kinoshita, Atsushi Kume, and Yuko T. Hanba, Sep. 2020, Seasonal variations in photosynthetic functions of the urban landscape tree species Gingko biloba: photoperiod is a key trait, Trees, 35, 273-285, English DOI:10.1007/s00468-020-02033-3

・Kai Nils Nitzsche; Ki-Cheol Shin; Yoshikazu Kato; Hiromitsu Kamauchi; Shotaro Takano; Ichiro Tayasu, Aug. 2020, Magnesium and zinc stable isotopes as a new tool to understand Mg and Zn sources in stream food webs, Ecosphere, 11 (8), Wiley, English, Refereed, Scientific journal DOI:10.1002/ecs2.3197

・Jun'ichiro Ide; Takuya Ishida; Abigail P. Cid-Andres; Ken'ichi Osaka; Tomoya Iwata; Takuya Hayashi; Masanori Akashi; Ichiro Tayasu; Adina Paytan; Noboru Okuda, Aug. 2020, Factors characterizing phosphate oxygen isotope ratios in river water: an inter-watershed comparison approach, LIMNOLOGY, 21 (3), 365-377, SPRINGER JAPAN KK, English, Refereed, Scientific journal DOI:10.1007/s10201-020-00610-6

・Shiho Yabusaki, Aug. 2020, Characteristics of water quality and estimation of the recharge area in the northern part of the coastal area, Fukushima prefecture, 地下水学会誌, 62 (3), 449-471, 日本地下水学会, Japanese, Refereed, Scientific journal

・Wakana A Azuma, Satoru Nakashima, Eri Yamakita, Tamihisa Ohta, Aug. 2020, Water Adsorption to Leaves of Tall Cryptomeria japonica Tree Analyzed by Infrared Spectroscopy under Relative Humidity Control, Plants, 9 (9), English DOI:10.3390/plants9091107

・Fujiwara, Y., Tsujisaka, M., Takano, S. & Sohrin, Y., Aug. 2020, Determination of the tungsten isotope composition in seawater: The first vertical profile from the western North Pacific Ocean., Chem. Geol., 555 (20), English

・Yoshikazu Kato; Hiroyuki Togashi; Yutaka Kurita; Hiromitsu Kamauchi; Ichiro Tayasu, Jul. 2020, Discrimination of nursery locations of juvenile Japanese flounderParalichthys olivaceuson the Pacific coast of northern Japan based on carbon and nitrogen stable isotope ratios, FISHERIES SCIENCE, 86 (4), 615-623, SPRINGER JAPAN KK, English, Refereed, Scientific journal DOI:10.1007/s12562-020-01436-y

・Takashi Yoshikawa, Akira P. Takagi, Satoshi Ishikawa, Mina Hori, Takanori Nakano, Ki-Cheol Shin, Hort Sitha, Eng Cheasan & Srun Limsong, Jul. 2020, Major and trace elements in the surface water of Tonle Sap Lake, Mekong River, and other tributary rivers in Cambodia., Environmental Monitoring and Assessment, 192 (7), Article number: 467, English DOI:https://doi.org/10.1007/s10661-020-08292-4

・Tamihisa Ohta, Ikuyo Saeki, Jun. 2020, Comparisons of calcium sources between arboreal and ground-dwelling land snails: implication from strontium isotope analyses, Journal of Zoology, 301 (2), 137-144, English DOI:10.1111/jzo.12767

・Takahiro Hosono, Chisato Yamada, Michael Manga, Chi-Yuen Wang & Masaharu Tanimizu, Jun. 2020, Stable isotopes show that earthquakes enhance permeability and release water from mountains, Nature Communications, 11 (2776), English DOI:doi.org/10.1038/s41467-020-16604-y

・Shoko Tsuji, Toru Nakashizuka, Koichiro Kuraji, Atsushi Kume, and Yuko T. Hanba, Jun. 2020, Sensitivity of stomatal conductance to vapor pressure deficit and its dependence on leaf water relations and wood anatomy in nine canopy tree species in a Malaysian wet tropical rainforest., Trees, 34 (5), 1299-1311, English DOI:10.1007/s00468-020-01998-5

・Jun Matsubayashi; Yutaka Osada; Kazuaki Tadokoro; Yoshiyuki Abe; Atsushi Yamaguchi; Kotaro Shirai; Kentaro Honda; Chisato Yoshikawa; Nanako O. Ogawa; Naohiko Ohkouchi; Naoto F. Ishikawa; Toshi Nagata; Hiroomi Miyamoto; Shigeto Nishino; Ichiro Tayasu, May 2020, Tracking long-distance migration of marine fishes using compound-specific stable isotope analysis of amino acids, Ecology Letters, 23 (5), 881-890, Wiley, English, Refereed, Scientific journal DOI:10.1111/ele.13496

・Yoshioka Y, Nakamura K, Takimoto H, Sakurai S, Nakagiri T, Horino H, Tsuchihara T, May 2020, Multiple-indicator study of the response of groundwater recharge sources to highly turbid river water after a landslide in the Tedori River alluvial fan, Japan., Hydrological Processes, 34 (16), 3539-3554, English DOI:https://doi.org/10.1002/hyp.13796

・Kohtaroh Shutoh; Yuko Tajima; Jun Matsubayashi; Ichiro Tayasu; Syou Kato; Takashi Shiga; Kenji Suetsugu, Apr. 2020, Evidence for newly discovered albino mutants in a pyroloid: implication for the nutritional mode in the genus Pyrola, American Journal of Botany, 107 (4), 650-657, Wiley, English, Refereed, Scientific journal DOI:10.1002/ajb2.1462

・末次健司; 松林順; 陀安一郎, 2020, Some mycoheterotrophic orchids depend on carbon from dead wood: Novel evidence from a radiocarbon approach, 日本生態学会大会講演要旨(Web), 67th (5), 1519-1529, WILEY, English, Refereed DOI:10.1111/nph.16409

・SHIMANO Yasuo; YABUSAKI Shiho, 2020, Visit to valuable water springs (128) Valuable water springs in upper and middle drainage basins of Tama River, Journal of Groundwater Hydrology, 62 (1), 113-129, Japanese Association of Groundwater Hydrology, Japanese DOI:10.5917/jagh.62.113

○MISC

・勝田長貴・世一実紅・内藤さゆり・香川雅子, Mar. 2021, モンゴル南西部・オログ湖湖底堆積物の最終氷期における硫黄安定同位体組成変動, 科学研究補助金新学術領域研究「パレオアジア文化史」, 計画研究 A03 令和 2 年度研究報告書, 27-31, Japanese

・大塚彰, Mar. 2021, 長距離を移動する昆虫の同位体を調べて分かること, 同位体環境学がえがく世界 2021 年版, 147-150, Japanese

○Presentations

・Boungnaphalom Nanthana, Zhang Jing, Katazakai Saki, Impact of mining on water quality and heavy metal dynamics in southern Lao PDR : A brief report, JpGU-AGU Joint Meeting 2020, オンライン, Japan, English, Poster presentation

・久米篤・ 清水啓史・ 山岸彩 ・ 半場祐子, 自動車排気ガス由来の一酸化窒素と道路周辺樹木の生理活性変化, 第 131 回日本森林学会大会, オンライン, Japan, 27 Mar. 2021, Japanese, Invited oral presentation

・野田昌裕、堀川恵司、申基澈、IODP Expedition 379 Scientists, 鮮新世温暖期における西南極大陸氷床の大規模融解：アムンゼン湾堆積物試料の Fe-Mn 水酸化物の Pb 同位体比分析から, 2020 年度東京大学大気海洋研究所共同利用研究集会「微量元素・同位体を用いた海洋生物地球化学研究の推進と新しい展開にむけて」, オンライン, Japan, 23 Mar. 2021 24 Mar. - 2021, Japanese, Oral presentation

・滝澤遼・勝山正則・申基澈・正岡直也・小杉賢一朗, 花崗岩山地におけるストロンチウム同位体比を用いた基岩内地下水動態の解明, 第 132 回日本森林学会大会, Web 開催, Japan, 19 Mar. 2021 23 Mar. - 2021, Japanese, Poster presentation

・浦川梨恵子, 太田民久, 申 基澈, 佐瀬裕之, 柴田英昭, 日本の森林土壌に含まれる可給態鉛の地理的分布, 第 132 回日本森林学会大会, 東京農工大学（オンライン）, Japan, 19 Mar. 2021 23 Mar. - 2021, Japanese, Poster presentation

・大石善隆, コケを利用した窒素降下物の影響評価, 第 68 回 日本生態学会大会, 岡山（オンライン）, Japan, 19 Mar. 2021, Japanese, Poster presentation

・幸田良介，原口岳，石塚譲, Can deer nutritional condition and pregnancy rate improve with increasing crop uptake? Evaluation using nitrogen stable isotope values, 日本生態学会第 68 回大会, オンライン, Japan, 19 Mar. 2021, Japanese, Poster presentation

・Tomomitsu KINOSHITA, Yuko T. HANBA, Atsushi KUME, Seasonal variations in photosynthetic functions of the urban landscape tree species Gingko biloba, 日本生態学会第 68 回全国大会, オンライン, Japan, 18 Mar. 2021, English, Oral presentation

・松浦拓海, 京都市内において、大気汚染物質が街路樹の気孔応答に与える影響, 日本生態学会第 68 回全国大会, オンライン, Japan, 18 Mar. 2021, Japanese, Poster presentation

・筒井悠理, 前田耕治, 半場祐子, マルバシャリンバイにおける塩ストレス耐性の評価, 日本生態学会第 68 回全国大会, オンライン, Japan, 18 Mar. 2021, Japanese, Poster presentation

・目戸綾乃, 大型淡水魚の脂肪酸による食性解析、自由集会「バイオマーカーからみた生態系：脂肪酸から見えてくるもの、その利用の実際」, 日本生態学会第 68 回全国大会, 岡山（オンライン）, Japan, 17 Mar. 2021, Japanese, Invited oral presentation

・放射性核種を化学トレーサーに用いた海底湧水による陸域から沿岸海域への水・物質輸送状況の解明, 片境　紗希、張　勁、青野　辰雄, 2020 年度放射能環境動態・影響評価ネットワーク共同研究拠点年次報告会, オンライン, Japan, 15 Mar. 2021, Japanese, Poster presentation

・栗林千佳、伊藤茜、谷水雅治, 地下水流動解析のための 234U/238U 同位体指標の基礎検討, 同位体科学会, オンライン開催, Japan, 12 Mar. 2021, Japanese, Oral presentation

・塩澤直人, 由水千景, 陀安一郎, 占部城太郎, 砂浜海岸における小動物の栄養源の解明, 日本生態学会第 67 回大会, 岡山（オンライン）, Japan, 07 Mar. 2021, Japanese, Oral presentation

・古川綾華・藪崎志穂・川越清樹, 物質流出成分に寄与する地域条件の因果関係の検討, 令和 2 年度　土木学会東北支部技術研究発表会, オンライン, Japan, 06 Mar. 2021, Japanese, Oral presentation

・幡谷有翼・藪崎志穂・川越清樹, 土地利用に応じた阿武隈川の物質流出機構の地域特性解析, 令和 2 年度　土木学会東北支部技術研究発表会, オンライン, Japan, 06 Mar. 2021, Japanese, Oral presentation

・永江あゆみ，高野祥太朗，宗林由樹, 亜寒帯北太平洋における溶存態 Ni, Cu, Zn 安定同位体比の東西鉛直断面分布, 令和 2 年度化学研究所大学院生研究発表会, 京都大学化学研究所(オンライン), Japan, 05 Mar. 2021, Japanese, Oral presentation

・大塚　進平、勝田　裕大、端野　開都, 新エネルギー メタンハイドレートの開発が海洋環境にもたらすリスク評価,「学生による地域フィールドワーク研究助成」成果報告会,大学コンソーシアム富山, 富山, Japan, 26 Feb. 2021, Japanese, Oral presentation

・飯田真基，飯塚天嶺，吉岡有美, 宍道湖西岸農地地区における地下水の水質・水文特性, 第 75 回農業農村工学会中国四国支部研究発表会, オンライン, 08 Feb. 2021 21 Feb. - 2021, Japanese, Others

・半場祐子, 安田柚里, 中澤誠, 蒲池浩之, 小野田雄介, 唐原一郎, 久米篤, 笠原春夫, 鎌田源司, 嶋津徹, 鈴木智美, 矢野幸子, 藤田知道, 国際宇宙ステーション (ISS) で生育したヒメツリガネゴケ茎葉体の光合成･成長特性, 第 35 回 宇宙環境利用シンポジウム, オンライン, Japan, 19 Jan. 2021, Japanese, Oral presentation

・蒲池 浩之，小野田 雄介，新濱 梨奈，浅野 加杜己，森 耀久，佐々木 智哉，唐原 一郎，久米 篤，半場 祐子，笠原 春夫，鎌田 源司，嶋津 徹，鈴木 智美，矢野 幸子，藤田 知道, 国際宇宙ステーションで生育したヒメツリガネゴケ茎葉体の機械的特性，第 35 回 宇宙環境利用シンポジウム，オンライン, Japan, 19 Jan. 2021, Japanese, Oral presentation

・田代　喬, 近世以降の濃尾平野揖斐川右岸地域における水域の変遷, 土木学会環境水理部会研究集会, オンライン, Japan, 15 Jan. 2021, Japanese, Oral presentation

・横山裕矢・勝田長貴・香川雅子・内藤さゆり・森本真紀・由水千景・陀安一郎・川上紳一, 浅間火山濁川の水の硫黄同位体比分析, JpGU, オンライン, Japan, 2020, Japanese, Poster presentation
・高野祥太朗，坂田昂平，宗林由樹, 安定同位体比を用いた大気エアロゾル中微量金属の起源解析, 微量元素・同位体を用いた海洋生物地球化学研究の推進と新しい展開に向けて, 東京大学大気海洋研究所(オンライン), Japan, 2020, Japanese, Oral presentation
・永江あゆみ，高野祥太朗，宗林由樹, 亜寒帯北太平洋における溶存態 Ni, Cu, Zn 安定同位体比の東西鉛直断面分布, 京都大学化学研究所第 120 回研究発表会, 京都大学化学研究所, Japan, 21 Dec. 2020, Japanese, Poster presentation
・勝田長貴, モンゴル・永久凍土地帯の湖沼堆積物の硫黄による古環境復元の高精度化に向けて, パレオアジア文化史学・第 10 回研究大会プログラム, オンライン開催, Japan, 19 Dec. 2020, Japanese, Oral presentation
・目戸綾乃、大手信人、木庭啓介、荒井修亮、光永靖、久米学、西澤秀明、Thavee Viputhanumas、児嶋大地、能勢貴司、三田村啓理, 脊椎骨の安定同位体比を用いたパンガシウス科魚類の成長に伴う食性変化推定, 第 10 回同位体環境学シンポジウム, オンライン, Japan, 18 Dec. 2020, Japanese, Poster presentation
・横尾頼子，前田哲弥，濱口弘平，浅井公輔，堀井彩衣，安間了，S. Mehrabani, 申基澈, イランの大気降下物の Sr 同位体比とイオン組成, 第 10 回同位体環境学シンポジウム, Online, Japan, 18 Dec. 2020, Japanese, Poster presentation
・石田卓也, リン酸酸素安定同位体比を用いた土壌における可給態リン形成機構の解明, 第 10 回同位体環境学シンポジウム, オンライン, Japan, 18 Dec. 2020, Japanese, Poster presentation
・日下宗一郎，申基澈, 縄文時代人骨と動物骨の亜鉛同位体比による食性解析, 第 10 回同位体環境学シンポジウム, オンライン, Japan, 18 Dec. 2020, Japanese, Poster presentation
・八木龍太，陀安一郎，末次健司, ラン科シュスラン連における栄養摂取様式の解明：部分的菌従属栄養性は一般的か？, 第 10 回同位体環境学シンポジウム, オンライン開催, Japan, 18 Dec. 2020, Japanese, Poster presentation
・浦川梨恵子, 太田民久, 申 基澈, 佐瀬裕之, 柴田英昭, 中野孝教, 日本の森林土壌の化学性に対する地質と大気降下物の影響―Sr 同位体比による解析―, 第 10 回同位体環境学シンポジウム, 地球研（オンライン）, Japan, 18 Dec. 2020, Japanese, Poster presentation
・四柳宏基， 諸橋将雪， 高橋雅昭， 大泉毅， 藪崎志穂， 陀安一郎 ， 大河内博， 佐瀬裕之, 日本海側の森林地域における降水イベント時の渓流イオン成分の流出特性, 第 10 回同位体環境学シンポジウム, オンライン, Japan, 18 Dec. 2020, Japanese, Poster presentation
・諸橋将雪， 四柳宏基， 高橋雅昭， 齋藤辰善， 猪股弥生， 申基澈， 陀安一郎， 大泉毅， 佐瀬裕之, 中部日本の森林集水域における降水及び渓流水に溶存する微量元素等の季節変動とその地域特性, 第 10 回同位体環境学シンポジウム, オンライン, Japan, 18 Dec. 2020, Japanese, Poster presentation
・幡谷有翼・藪崎志穂・川越清樹, 阿武隈川における各小流域の外部負荷量と地域特性の検討, 第 10 回同位体環境学シンポジウム, オンライン, Japan, 18 Dec. 2020, Japanese, Poster presentation
・杉浦 遼平, 大竹 翼, 山内 大蔵, 大友 陽子, 佐藤 努, 32 億年前に形成した縞状鉄鉱層中の鉄同位体比に記録された太古代浅海域における鉄の酸化沈殿プロセス, 第 10 回同位体環境学シンポジウム, オンライン, Japan, 18 Dec. 2020, Japanese, Poster presentation
・筒井　悠理、前田　耕治、半場　祐子, 塩ストレス条件下における街路樹の生理学的応答の比較, 第 10 回 同位体環境学シンポジウム, オンライン, Japan, 18 Dec. 2020, Japanese, Poster presentation
・松浦拓海、半場祐子, 京都市内において、大気汚染物質が街路樹の気孔応答および水利用効率に与える影響, 第 10 回 同位体環境学シンポジウム, オンライン, Afghanistan, 18 Dec. 2020, Japanese, Poster presentation
・千葉 仁、藤池 竜也、山本 翼, 中国地方における降水硫酸と岡山市の浮遊粒子状物質の水溶性硫酸イオンの硫黄・酸素同位体比, 第 10 回同位体環境学シンポジウム, オンライン, Japan, 18 Dec. 2020, Japanese, Poster presentation
・柏谷公希，多田洋平，Shoedarto Riostantieka Mayandari，Rahayudin Yudi，小池克明, 地熱流体の循環状態把握への同位体の活用, 第 10 回同位体環境学シンポジウム, オンライン　, Japan, 18 Dec. 2020, Japanese, Poster presentation
・龍山智道，高野祥太朗，宗林由樹, 海水中モリブデン、タングステン安定同位体比分析法の最適化, 第 10 回同位体環境学シンポジウム, 総合地球環境学研究所, オンライン開催, Japan, 18 Dec. 2020, Japanese, Poster presentation
・勝田長貴、世一実紅、橋本雄輔、香川雅子、内藤さゆり、陀安一郎, 永久凍土地帯における湖沼堆積物の硫黄同位体比分析, 第 10 回同位体環境シンポジウム, オンライン開催, Japan, 18 Dec. 2020, Japanese, Poster presentation
・香川雅子，山岸悠人，橋本雄輔，内藤さゆり，勝田長貴，陀安一郎，由水千景, 岐阜市近郊における硫酸エアロゾル中の δ34S と δ18O の季節変化, 第 10 回　同位体環境学シンポジウム, オンライン, Japan, 18 Dec. 2020, Japanese, Poster presentation
・大塚彰，藤井智久，申基澈，陀安一郎, 海外から飛来するツマジロクサヨトウの同位体解析の予備的結果, 第 10 回同位体環境学シンポジウム, オンライン, Japan, 18 Dec. 2020, Japanese, Poster presentation

・伊藤　茜、山下　勝行、申　基澈、谷水　雅治, 超苦鉄質岩を構成する主要鉱物間のクロム安定同位体比変動, 第10回同位体環境学シンポジウム, 地球研（オンライン）, Japan, 18 Dec. 2020, Japanese, Poster presentation

・原口岳，幸田良介，石塚譲, Estimation of Trophic Enrichment Factors (TEF) of carbon and nitrogen stable isotope ratios using information of captive-bred individuals under different diets: a case study on herbivorous rodents, 第10回同位体環境学シンポジウム, オンライン, Japan, 18 Dec. 2020, Japanese, Poster presentation

・八木龍太，陀安一郎，末次健司, ラン科における混合栄養植物の探索 -チドリソウ亜科シュスラン連に着目して-, 第26回日本生態学会近畿地区会, オンライン開催, Japan, 12 Dec. 2020, Japanese, Oral presentation

・野田昌裕、堀川恵司、申基澈、IODP Expedition 379 Scientists, 鮮新世温暖期における西南極大陸氷床の大規模融解：アムンゼン湾堆積物試料の Fe-Mn 水酸化物の Pb 同位体比分析から, 2020 年度日本地球環境史学会年会, オンライン, Japan, 26 Nov. 2020, Japanese, Oral presentation

・永江あゆみ，高野祥太朗，宗林由樹, 亜寒帯北太平洋における溶存態 Ni, Cu, Zn 安定同位体比の東西鉛直断面分布, 2020 年度日本地球化学会第 67 回オンライン年会, オンライン, Japan, 20 Nov. 2020, Japanese, Oral presentation

・野田昌裕、堀川恵司、申基澈、IODP Expedition 379 Scientists, アムンゼン湾沖鮮新世堆積物の Fe-Mn 水酸化物 Pb 同位体比変動は西南極氷床の大規模融解の証拠になるか？, 2020 年度日本地球化学会年会, オンライン, Japan, 19 Nov. 2020 21 Nov. - 2020, Japanese, Oral presentation

・川井 清明, ニンジンの元素分析及び安定同位体比分析による産地判別検査法の開発, 独立行政法人農林水産消費安全技術センター令和 2 年度公開調査研究発表会, 農林水産消費安全技術センター本部, Japan, 18 Nov. 2020, Japanese, Oral presentation

・新濱梨奈、浅野加杜己、小野田雄介、久米篤、唐原一郎、半場祐子、藤田知道、蒲池浩之, 微小重力及び過重力環境におけるヒメツリガネゴケ茎葉体の抗重力反応, 北陸植物学会 2020 年度大会, オンライン, Japan, 14 Nov. 2020, Japanese, Oral presentation

・西村日向子，堀川恵司，申基澈, 魚類に含まれる微量元素の分析および Pb 同位体比分析による魚類の産地判別, 日本地球化学会　2020 年会, オンライン, Japan, 11 Nov. 2020 26 Nov. - 2020, Japanese, Oral presentation

・半場 祐子・松本 真由・木下 智光・清水 啓史・ 堀家広樹・久米 篤, 京都市内における街路樹の光合成機能評価 〜乾燥ストレス耐性・大気汚染ストレス耐性〜, グリーンインフラ・ネットワーク・ジャパン全国大会（GIJ2020）, オンライン, Japan, 06 Nov. 2020, Japanese, Oral presentation

・Riostantieka Mayandari Shoedarto, 多田洋平, 柏谷公希, 小池克明, Impacts of regional faults on groundwater flow regimes elucidated from the alkali earth metals, transition metals, and 87Sr/86Sr analysis in the Southern Bandung Geothermal Field, Indonesia, 日本地下水学会 2020 年秋季講演会, オンライン　, Japan, 05 Nov. 2020, English, Oral presentation

・犬飼郁也，柏谷公希・Yudi Rahayudin・多田洋平・小池克明, インドネシア Tampomas 地熱地域における複数の放射性同位体を用いた地熱流体の起源と滞留時間の推定, 日本地下水学会 2020 年秋季講演会, オンライン　, Japan, 04 Nov. 2020, Japanese, Oral presentation

・安田柚里・中澤誠・半場祐子・久米篤・ 唐原一郎・蒲池浩之・新濱梨奈・浅野加杜己・小野田雄介・藤田知道・横井真希, 微小重力がヒメツリガネゴケの光合成・成長に与える影響~国際宇宙ステーションを用いた実験の結果から~, 日本植物学会第 84 回大会, オンライン, Japan, 21 Sep. 2020, Japanese, Invited oral presentation

・筒井悠理、前田耕治、半場祐子, 塩ストレス条件下における街路樹の生理学的応答の比較, 日本植物学会第 84 回大会, オンライン, Japan, 21 Sep. 2020, Japanese, Poster presentation

・鵜嶋　涼・村上　涼生・杉本　凌真・玉置 大介・唐原 一郎・半場 祐子・鈴木 義人・若杉 達也・土`田　努, 多種生物間相互作用研究の新モデル：マダラケシツブゾウムシ Smicronyx madaranus の超入れ子型共生系, 日本進化学会第 22 回オンライン大会, オンライン, Japan, 07 Sep. 2020, Japanese, Poster presentation

・内田悦生、河西　彩、中村勇太、申　基澈, アンコール遺跡の砂岩材表面に析出した石こうに対する Sr および S 同位体分析, 日本文化財科学会第 37 回大会, 別府大学（大分県別府）, Japan, 05 Sep. 2020 12 Sep. - 2020, Japanese, Poster presentation

・杉浦 遼平, 大竹 翼, 山内 大蔵, 大友 陽子, 佐藤 努, 32 億年前に形成した南アフリカ・バーバトン緑色片岩帯ムーディーズ縞状鉄鉱層における鉄同位体分別, JpGU-AGU Joint Meeting 2020, オンライン, Japan, 12 Jul. 2020 16 Jul. - 2020, Japanese, Poster presentation

・Kyaw Zay Ya, 大竹 翼, 実松 健造, 佐藤 努, Environmental study on the Pinpet Fe deposit in southern Shan State, Myanmar, JpGU-AGU Joint Meeting 2020, オンライン, Japan, 12 Jul. 2020 16 Jul. - 2020, Japanese, Poster presentation

・大竹 翼, インドネシアおよびミャンマーにおける超苦鉄質岩の化学風化とニッケル濃集に与える地球化学的要因, JpGU-AGU Joint Meeting 2020, オンライン, Japan, 12 Jul. 2020 16 Jul. - 2020, Japanese, Poster presentation

・堀川恵司、野田昌裕、岩井雅夫、山根雅子、Gohl Karsten、Wellner Julia、IODP Expedition 379 Scientists, Preliminary results of IODP Expedition 379 (Amundsen Sea West Antarctic Ice Sheet History), JpGU-AGU Joint Meeting 2020, オンライン, Japan, 12 Jul. 2020 15 Jul. - 2020, English, Oral presentation

・西村日向子，堀川恵司，申基澈, 魚の骨の Pb 同位体比を用いた産地判別法, 2020 年公益社団法人日本地球惑星科学連合（Japan Geoscience Union）, オンライン, Japan, 12 Jul. 2020 15 Jul. - 2020, Japanese, Oral presentation

・R. Ando, Y. Yokoo, N. Ishikawa, K. C. Shin, Effect of natural and anthropogenic substances on atmospheric deposition in the Kyoto-Osaka-Kobe area using strontium and lead isotope ratios, JpGU Meeting 2020, Online, Japan, 12 Jul. 2020, Japanese, Poster presentation

・日下 宗一郎、西岡 佑一郎、Duangkrayom Jaroon、Jintasakul Pratueng、國松 豊, タイ東北部コラートから発見された後期中新世の哺乳類化石の安定同位体分析（予報）, JpGU - AGU Joint Meeting 2020: Virtual, オンライン, Japan, 12 Jul. 2020, Japanese, Poster presentation

・富永 修,戸邉 星良,石田 健大, アサリ貝殻の炭素・酸素安定同位体比を用いた近過去の地下水環境復元, 日本地球惑星科学連合, オンライン開催, Japan, 12 Jul. 2020, Japanese, Poster presentation

・Sase, H, Morohashi, M, Takahashi, M, Inomata, Y, Yabusaki, S, Saito, T, Yamashita N, Tayasu, I, Nakata, M., Multi-isotopic approach to evaluate effects of transboundary air pollution on forest ecosystems of central Japan, JpGU-AGU Joint Meeting 2020, オンライン, Japan, 12 Jul. 2020, Japanese, Oral presentation

・千葉 仁、藤池 竜也、山本 翼, 鳥取－岡山の降水硫酸と岡山市の浮遊粒子状物質中の水溶性硫酸イオンの硫黄・酸素同位体比, 日本地球惑星科学連合 2020 年大会, オンライン, Japan, 12 Jul. 2020, Japanese, Poster presentation

・横山裕矢・勝田長貴・香川雅子・内藤さゆり・森本真紀・由水千景・陀安一郎・川上紳一, 浅間火山濁川の水の硫黄同位体比分析, JpGU, オンライン開催, Japan, 12 Jul. 2020, Japanese, Poster presentation

・原口岳，藤本修平，佐藤 圭一郎，長谷川元洋, Trophic niche shift of soil microarthropods associated with soil disturbance: an evaluation using carbon and nitrogen stable isotope measurements, JpGU2020, オンライン, Japan, 12 Jul. 2020, Japanese, Poster presentation

・Liu Yunye, Zhang Jing, Katazakai, Saki, Nakayasu Yuhei, Ary Rezedan, Groundwater recharge in the Kurobe River Alluvial Fan and the nutrient dynamics using chemical compositions, oxygen and hydrogen isotopes: influence by land-use and climate changes over the past 30 ye, JpGU-AGU Joint Meeting 2020, オンライン, Japan, Jul. 2020, English, Poster presentation

・片境　紗希、張　勁、青野　辰雄, 放射性核種を化学トレーサーに用いた海底湧水による陸域から沿岸海域への水・物質輸送状況の解明, 2020 年度放射能環境動態・影響評価ネットワーク共同研究拠点キックオフミーティング, オンライン, Japan, 19 May 2020, Japanese, Poster presentation

○Media Coverage

・熊本地震で山腹の水流れ込む　阿蘇外輪山の地下水上昇, 熊本日日新聞, Jun. 2020, Paper

・科学スクープ　魚の“見えない足取り”追う, 京都新聞, Aug. 2020, 夕刊　2 面, Paper

○Others

・修士論文、塩澤直人、東北大学　砂浜生態系における栄養基盤としての海起源と陸起源有機物の相対的重要性, Mar. 2021

・202103、学士論文、西岡翔太、弘前大学理工学部、弘前における冬季降水安定同位体比変動の原因～2019 年から 2020 年冬季～

・202103、学士論文、鈴木健、東京農業大学農学部バイオセラピー学科、安定同位体解析を用いた中井町に生息するイノシシの食性推定

・202103、学士論文、村岡美侑、同志社大学理工学部、イラン 7 都市の降水に含まれる不溶性物質の Sr-Nd 同位体比の地域的特徴

・202103、学士論文、栗原　渉、同志社大学理工学部、イラン 15 都市の月別降水の Sr 同位体比と元素組成にみられる自然・人為起源物質の影響

・202103、学士論文、栗原　渉、早稲田大学、プレア・ヴィヘア遺跡周辺に分布するコラート層群の砂岩に関する研究

・202103、学士論文、陳　秀テイ、早稲田大学、サンボール・プレイ・クック遺跡に使用されているレンガ材の劣化に関する研究

・202103、修士論文、河西　彩、早稲田大学、アンコール遺跡及びサンボール・プレイ・クック遺跡に使用されている建築材並びに鉄スラグ・鉄鉱石の研究

・202103、学士論文、滝澤遼、京都府立大学生命環境学部、花崗岩山地におけるストロンチウム安定同位体比を用いた基岩内地下水動態と渓流水形成への影響の解明
・202103、学士論文、杉浦惇希、岐阜大学、原生代後期キャップカーボネートと粘土層の高分解能解析による環境変動復元
・202103、学士論文、宮崎開、岐阜大学、水と堆積物の分析による古環境指標の確立と環境変動の復元
・202103、修士論文、八杉和輝、神戸大学大学院人間発達環境学研究科、兵庫県千種川の河川水と流域の降水中の酸素・水素安定同位体比の特徴および同河川の水循環機構の推定
・修士論文、八木龍太、神戸大学理学研究科、Exploring Nutritional Mode of Rhizoctonia-associated Orchids : Is Mixotrophy a Common Phenomenon ?, Mar. 2021
・202103、学士論文、松本茉倫、富山大学、樹高 50m の高さを誇るアキタスギの成長メカニズム～同位体および一次・二次代謝物質の測定から迫る～
・202103、学士論文、井田慎一郎、富山大学、長良川河川水のストロンチウム同位体マップの作成～サツキマス生活史の 解明に向けて～
・202103、学士論文、古川綾華、福島大学、土地被覆に応じた化学組成と負荷影響の検討
・202003、修士論文、中川卓樹、関西学院大学大学院理工学研究科、火山性流体が混入した河川における重金属元素の吸着・沈殿挙動の理解
・202006、博士論文、Kyaw Zay Ya、北海道大学、Ore Ore Genesis and Environmental Study of Pinpet Iron Deposit, Southern Shan State, Myanmar
・202103、学士論文、安井祐大郎、京都工芸繊維大学応用生物学課程、冠水ストレスが水生植物の光合成に与える影響
・202103、学士論文、松浦拓海、京都工芸繊維大学応用生物学課程、京都市内において交通量が高木街路樹の光合成機能に与える影響
・202103、学士論文、飯塚天嶺、島根大学生物資源科学部、宍道湖西岸水田地区における 地下水の流動と酸素・水素安定同位体比
・202103、学士論文、飯田真基、島根大学生物資源科学部、酸素・水素安定同位体比と主要イオンからみた地下水における河川水の影響評価
・202102、修士論文、犬飼郁也、京都大学大学院工学研究科、複数の地球化学指標に基づく地熱流体の起源と循環状態の推定
・202005、博士論文、Yudi Rahayudin、京都大学大学院工学研究科、 Clarification of geochemical properties and flow system of geothermal fluids around the Bandung basin for geothermal-resource assessment
・202103、修士論文、西村日向子、富山大学理工学教育部、微量元素・鉛同位体比分析による魚類の産地・生育場の判別
・202009、修士論文、劉蘊曄、富山大学、過去 30 年間の土地利用変化による黒部川扇状地地下水の涵養状況・栄養塩動態の長期変化～酸素・水素安定同位体・主要溶存成分解析を用いて～
・202103、学士論文、谷口耕一、富山大学、化学トレーサーを用いた片貝川扇状地における浅層・深層地下水流動状況解析の試み
・202103、学士論文、松本碧人、富山大学、過去 40 年間温暖化に伴う富山県の河川流量及び沿岸海域への栄養塩供給量の解析～化学成分と同位体比を用いて～
・202103、学士論文、世一実紅、岐阜大学、モンゴル湖沼堆積物の硫黄と有機物炭素の分析による古環境研究
・202103、学士論文、橋本雄輔、岐阜大学、伊自良湖周辺における大気及び環境水中の硫酸イオンの循環と同位体比変動に関する研究
・202103、学士論文、田野未来哉、神戸大学・理学部生物学科、両側回遊性魚類による捕食性淡水魚類への 海洋資源輸送機能の解析
・202103、学士論文、五十嵐和貴、石川県立大学生物資源環境学部環境科学科、地球化学的指標による北陸地方の黒ボク土に含まれる結晶性粘土鉱物の起源推定
・202103、学士論文、吉田創志、同志社大学理工学部環境システム学科、撹乱に対する土壌動物の応答の安定同位体比を用いた解析

Division Name: Information Resources Division

Head of Division: KUMAZAWA Terukazu

○Project Members

KUMAZAWA Terukazu (Research Institute for Humanity and Nature・Associate Professor)
KONDO Yasuhisa (Research Institute for Humanity and Nature・Associate Professor)
MATSUMOTO Tae (Research Institute for Humanity and Nature・Associate Professor)

●Achievements

○Books etc

・三村豊; 熊澤輝一; 遠山真理; 寺田匡宏; 柴田宣史, Mar. 2021, Joint editor, 未来会話からつくる社会ー未来を見立て、問いを育てる環境教育ガイドブック, 10, 総合地球環境学研究所 未来社会の風土論 研究グループ, Japanese, Others

○Published Papers

・Yasuhisa Kondo; Eiichi Fujisawa; Kanako Ishikawa; Satoe Nakahara; Kyohei Matsushita; Satoshi Asano; Kaoru Kamatani; Satoko Suetsugu; Kei Kano; Terukazu Kumazawa; Kenichi Sato; Noboru Okuda, 29 Mar. 2021, Community capability building for environmental conservation in Lake Biwa (Japan) through an adaptive and abductive approach, Socio-Ecological Practice Research, Springer Science and Business Media LLC, English, Refereed, Scientific journal DOI:10.1007/s42532-021-00078-3

・KIMURA Michinori; MATSUI Takanori; BABA Kenshi; IWAMI Asako; KUMAZAWA Terukazu; OH Tomohiro; KAWASE Reina; KIM Jaegyu; ONO Satoru; HORI Keiko; UWASU Michinori, Mar. 2021, An Attempt to Create a Vision of the Future Society of the Region with the Participation of Citizens and an Examination of Acceptance Factors—Case of Takashima City, Shiga Prefecture—, ENVIRONMENTAL SCIENCE, 34 (2), 108-123, SOCIETY OF ENVIRONMENTAL SCIENCE, JAPAN, Japanese, Refereed, Invited, Scientific journal DOI:10.11353/sesj.34.108

・Tae Matsumoto, Mar. 2021, Remodeling an old Japanese house by remote and Development of e-learning content, Proceedings of the CIEC Spring Conference2021, Vol.12, Refereed

○MISC

・近藤康久; 北川浩之; 三木健裕; 黒沼太一, 31 Mar. 2021, アラビア半島におけるホモ・サピエンスの定着：オマーン内陸部ワディ・タヌーフ 1 号洞穴遺跡の土層堆積状況と年代について, パレオアジア文化史学 計画研究 A03 2020 年度研究報告書, 1-4, Japanese, Technical report

・熊澤輝一, May 2020, まちづくりを考えるとはどういうことか, びわ湖の水草ニューズレター, (3), 4-4, 三井物産環境基金 2016 年度研究助成：オープンサイエンスと社会協働の融合に基づく琵琶湖流域圏水草資源活用コミュニティーの形成, Japanese, Introduction other

○Presentations

・松本多恵, リモート古民家再生と e ラーニング教材の開発, CIEC 春季カンファレンス会議, 20 Mar. 2021

・Yasuhisa Kondo; Takeshi Osawa, Protect area selection procedure for Japan, 3rd PARSEC Synthesis Meeting, PARSEC Project, Zoom, 19 Jan. 2021, 19 Jan. 2021 22 Jan. - 2021, English, Oral presentation

・熊澤輝一, デジタルとアナログのあいだで考える人と自然, デジタルとアナログのあいだー新しい風土論に向けて（2020 年度環境情報科学 研究発表大会 企画セッション４）, 環境情報科学センター, オンライン開催, 17 Dec. 2020, 11 Dec. 2020 18 Dec. - 2020, Japanese, Nominated symposium

・熊澤輝一, 持続可能性行動を動機づけるゲーミフィケーションのパターンの探索, 日本シミュレーション＆ゲーミング学会 2020 年度秋期全国大会, 日本シミュレーション＆ゲーミング学会, オンライン開催, 06 Dec. 2020, 05 Dec. 2020 06 Dec. - 2020, Japanese, Oral presentation

・三村豊; 熊澤輝一; 遠山真理; 寺田匡宏, 未来社会の会話づくりー未来への洞察と現在の備え, 環境芸術学会第 21 回大会, 環境芸術学会, オンライン開催, 08 Nov. 2020, 07 Nov. 2020 08 Nov. - 2020, Japanese, Oral presentation

・小野聡; 熊澤輝一; 寺田匡宏, リスク情報受容の規定因としての科学技術の「風土化」, 環境科学会 2020 年会, 環境科学会, オンライン開催, 19 Sep. 2020 20 Sep. - 2020, Japanese, Oral presentation

・谷口真人; 若松永憲; 山下瞳; 熊澤輝一, 文理融合型学際研究を進める総合地球環境学研究所における多様性指標の活用, RA 協議会第 6 回年次大会, RA 協議会, オンライン開催, 17 Sep. 2020, 17 Sep. 2020 18 Sep. - 2020, Invited, Japanese, Oral presentation

・Yasuhisa Kondo; Kei Kano; Terukazu Kumazawa; Satoe Nakahara; Ken'ichiro Nakashima; Noboru Okuda; Hideyuki Ōnishi; Takeshi Osawa; Kazuhiko Ota, Five key elements to enable open science for society., JpGU-AGU Joint Meeting 2020: Virtual. MGI36-06., Jul. 2020, English, Oral presentation

Division Name: Collaboration Division

Head of Division: ISHII Reiichiro

○ Subject and Objectives

The Collaboration Division fosters research collaborations between RIHN and research institutions and organizations in Japan and abroad and also provides the organizational infrastructure for capacity building. It facilitates the conclusion of collaborative agreements with research institutions and local governments in Japan and abroad, the planning of collaborative research, and the development of proposals for new RIHN projects. While providing a forum for broad information exchange and discussion of research on global environmental problems, the Division also undertakes the development, maintenance and organization of advances personal, financial and institutional networks.

Based on the results of RIHN research projects, the Division further fosters active engagement with international research agenda setting and helps to enhance the presence of RIHN in the international research community.

Furthermore, in order to promote global environmental research and capacity building in Japan and the Asia region, together with the other Divisions it provides the necessary organizational and financial basis and supports the development and mobilization of capacity for inter- and trans-disciplinary research with researchers and societal stakeholders in Japan and Asia.

The third phase of the Collaborative Network Division has the following three main goals:

(1) Bring research resources from outside to the Institute

(2) Strengthen and maintain the Institute's ties to important international initiatives.

(3) Increase the domestic and international presence of the Institute, and reflect the Institute's research activities and results in the setting of plans.

○ Progress and Results in 2020

In FY2020, the Collaborative Network Division implemented the followings.

1. Information gathering (1)

2. Strengthening and maintaining ties with external organizations (2)

Confirmation and support for renewal/new MOUs/comprehensive academic agreements, etc.

3. Coordination of applications for large-scale external research funds (2), (3), and (4)

4. Outreach and human resource development (3)

5. COVID-19 measures (The following tasks, which were not planned at the beginning of the fiscal year, were prioritized in cooperation with the Administration Department.)

Newly concluded MOUs

Lao Tropical and Public Health Institute, Ministry of Health, Lao PDR

Hainan Provincial Center for Disease Control and Prevention Hainan Provincial Preventive Medicine Association, China

Copernicus Institute of Sustainable Development, Utrecht University, Netherlands

Association Okani, Cameroon

Network Activities Group, Myanmar

Ministry of Natural Resources and Environmental Conservation, Environmental Conservation Department, The Republic of The Union of Myanmar

Planning, management and organizing

181st RIHN Seminar "Developing transdisciplinarity for sustainable livestock farming: A cross-fertilization of concepts and methodologies, with a practical application for the Water-Energy-Livestock nexus", Cyrille Rigolot (Senior Researcher/Deputy Director UMR TerritoiresIndonesia), 2020/10/7

182-1st RIHN Seminar (Special series) 'Our Earth: A planet created by life –Rethinking of "How human-nature relation ought to be" – ', Tetsuzo YASUNARI (Director-General), 2020/11/6

182-2nd RIHN Seminar (Special series) "Another Asian Drama: Growth, Resource Use and the Responsibility for Global Sustainability", Kaoru SUGIHARA (Director of Program 1), 2020/12/11

182-3rd RIHN Seminar (Special series) "Thinking about Human Evolution and Culture from Primatological Viewpoints", Juichi YAMAGIWA (Next Director-General), 2020/12/25

182-4th RIHN Seminar (Special series) "Future Design: Bequeathing Sustainable Natural Environments and Sustainable Societies to Future Generations", Tatsuyoshi SAIJO (Director of Program 3), 2021/1/19

182-5th RIHN Seminar (Special series) "Living on the planet of water", Makoto TANIGUCHI (Director of Core Program) 2021/2/12

182-6th RIHN Seminar (Special series) "How we can solve the issues on the fair-use of multi-resources with multi-stakeholders", Tohru NAKASHIZUKA (Former Director of Program 2), 2021/2/26

183rd RIHN Seminar "Is there something like a Kyoto (RIHN) "school" of transdisciplinarity? Impressions from a three months investigation", Cyrille Rigolot (Senior Researcher/Deputy Director UMR TerritoiresIndonesia), 2020/12/15

184th RIHN Seminar "Human-Environmental System: From local to Global Sustainabilit", Chuluun Togtokh (Invited Scholar/ Director/Institute for Sustainable Development, National University of Mongolia), 2021/1/6

185th RIHN Seminar "Sustainable Development for People and Planet", Chuluun Togtokh (Invited Scholar/ Director/Institute for Sustainable Development, National University of Mongolia), 2021/3/11

Division Name: Communication Division

Head of Division: ABE Kenichi

○ Subject and Objectives

Knowledge networking is the basis of RIHN Communication and Production Division activities. The Division engages with many different individuals, institutions, and organizations, working to link existing knowledge and information relevant to the contemporary environment, and then to develop novel syntheses and conceptual innovations.

For this purpose, the following three pillars were set up. The first pillar is exploring new transdisciplinary methods to disseminate research results, especially through the development of visual materials. Visual materials can communicate abstract environmental information effectively, and development of such materials enables new platforms for knowledge and information networking.

The second pillar is environmental education. These activities present opportunities to exchange knowledge and information with the next generation, to explore ways of integrating and representing RIHN project research for youth audiences, and at the same time to develop new methods of environmental education.

The last pillar is new wisdom and value. In synthesizing the results of RIHN research activities and making this knowledge and information available and relevant to other communities and social fields, the Communication Division develops methods that create new environmental and societal values.

○ Progress and Results in 2020

【Developing methods of outreach of research results in the transdisciplinary era】

The purpose is to construct methods of public relations/dissemination of research results utilizing visual contents.

Research Plan❶ Created a videos to awaken civic pride. In collaboration with the NIHU Interactive Communication Initiative, the Division explored creative methods to stimulate societal values around environmental science.

Research Plan❷ As a novel outreach method, the Division supported a module for high school students designed to use dance as a medium for exploration of community environmental values, especially those related to regional wellbeing and conservation of wildlife. A key partner was the General Incorporated Association for the Conservaiton of the Oriental White Stork.

Research Plan❸ Held "MANGA x SCIENCE Research Association" co-sponsored by Kyoto Seika University and RIHN based on MOU. This research explores new methods, especially collaboration between scientists, manga artists, and local craftspeople, to create manga as environmental learning materials.

【Developing environmental education: the RIHN Method to connect communities and generations】

The purpose of these activities is to elaborate the RIHN method of environmental Education.

Research Plan❶ Supported several Environment classes in two senior high schools of Kyoto, and coordinated collaborative learning projects between elementary and senior high schools. Finally, based on a MOU agreement, it is to explore the creation of a new Community School addressing environmental subjects. Published field reports of research results “Learning Global Environmental Issues under Pandemic Situation of Covid-19”.

Research Plan❷ Held "Climate Action Summit by Senior high school students in Kyoto", a collaboration with Kyoto Prefectural Office, Kyoto City Office, and the Boards of Education.

Research Plan❸ Held Exchange Program between three high schools in Kyoto and Miyazaki Prefectures in order to enhance the knowledge network.

【Creating new wisdom and value through “GIAHS” by Food and Agriculture Organization of United Nations: FAO】

The purpose is to construct a methodology that creates new environmental values. Emphasis on globally important agricultural heritage systems as dynamic heritages. Implemented research activities based on design science working together with local governments.

Research Plan ❶ Serve as research advisor for agricultural heritage sites in Japan at both designated and newly-proposed sites. Provided support for the creation of a site action plan in Miyazaki, Japan, and developed two agricultural heritage proposals in Thailand.

Research Plan❷Implemented research activities with local communities related to Globally Important Agricultural Heritage Systems. This included research activities related to public transportation systems in ther heritage zone of Hinokage Town, Miyazaki. Held the conference "Regional Revitalization through GIAHS: Dialogue Between Generations" at Morotsuka Village as the 29th RIHN Regional Community Seminar.

Research Plan❸ Constructed Global network of GIAHS. Attended the 2nd World Conference on the Revitalization of the Mediterranean Diet (Italy), Session16: Sustainable Diets: Linking Nutrition and Food Systems. Held the 2nd forum for officials in Japan of GIHAS at RIHN.

【Developing environmental education: RIHN Method to connect communities and generations】

Provided Online Program for learning global environmental issues to high schools under Pandemic of Covid-19 and published the booklet in order to sharing experience and findings.

【Creating new wisdom and value through GIAHS by the Food and Agriculture Organization (FAO) of the United Nations】

Inaugurated Regional Collaboration program advisor in Ifugao, Philippines as requested research of Miyazaki Prefectural Gokase Secondary School.

Inaugurated Promotion advisor of and eco-school in Shibukawa Elementary School, Kusatsu, Shiga.

○ Future Themes

The three research pillars have begun to harmonize with each other. For example, there are promising signs of the potential to mix activites and methods related to GIAHS and environmental education, as well as development of visual media in environmental education in different contexts.

This increasing harmonization demonstrates the smooth progress and coordination of the Division research activities, and calls for increased focus on theoretically and practically integrating the three independent research and development activities in the next fiscal year.

○Project Members

ABE Kenichi	(Research Institute for Humanity and Nature・Professor・Ecological Anthropology)
NILES Daniel	(Research Institute for Humanity and Nature・Associate Professor・Geography)
MIMURA Yutaka	(Research Institute for Humanity and Nature・Researcher・Architectural History, Urban History, Historical GIS)
SHIMADA Nahoko	(Research Institute for Humanity and Nature・Researcher・Study of Ecological thought)
SODA Katsuya	(Research Institute for Humanity and Nature・Researcher・Forced Migration Studies)

●Achievements

○Books etc

- 柳澤, 雅之; 阿部, 健一, Mar. 2021, Joint editor, ノーライフ・ノーフォレスト : 熱帯林の「価値命題」を暮らしから問う, v, 290p, 京都大学学術出版会, Japanese, ISBN: 9784814003341
- 三村豊; 熊澤輝一; 遠山真理; 寺田匡宏; 柴田宣史, Mar. 2021, Editor, 未来会話からつくる社会, 総合地球環境学研究所 未来社会の風土論 研究グループ
- 宗田勝也; 井上藍; 上水陽一; 河嶋隆司; 中野源大, Mar. 2021, Editor, Covid-19, Highschool Students and Global Environment, Research Institute for Humanity and Nature
- 村田和代; 中川雅道; 森本郁代; 香取一昭; 野村恭彦; 杉岡秀紀; 佐藤徹; 田中富雄; 宗田勝也; 中村香苗; 岡本能里子; 服部圭子; 佐野亘, 18 Dec. 2020, 多文化社会における話し合い—言葉とまなざしをめぐって, Joint work, これからの話し合いを考えよう, ひつじ書房
- Yumiko Nara; Tetsuya Inamura, Aug. 2020, Ken-ichi Abe. 'Resilience of Earth System', Contributor, Resilience and Human History, Springer

○**Published Papers**

・Katsuya SODA, 31 Jan. 2021, A Suggestion for Realization of "No One will be Left Behind": A Report of a Volunteer Activities of Migrants and Refugees under the Pandemic of COVID-19 in Japan, Journal of Volunteer Studies, (21), 33-38, Japanese, Refereed, Scientific journal

・MIMURA Yutaka; KUMAZAWA Terukazu; TOYAMA Mari; TERADA Masahiro, 07 Nov. 2020, Creating Conversations for Future Society—Approach to Forecasting and Backcasting, 環境芸術, (25), 30, Japanese, Scientific journal

○**MISC**

・SHIMADA Nahoko, Jun. 2020, -GIAHS Forum-, Humanity & Nature Newsletter, 81, 10-11, RIHN, Japanese, Refereed, Report research institution

・Katsuya SODA, Jun. 2020, A Report of the 11th Earth Hall of Fame KYOTO - Review on Joining of High School Students to the Discussion, Humanity & Nature Newsletter, (81), 12-12, Japanese, Meeting report

○**Presentations**

・阿部健一, 地域内における GIAHS の認知度向上とシビック プライドの醸成, 世界農業遺産国内認定地域連携会議 令和 2 年度第 2 回研修会, 16 Feb. 2021, Invited, Japanese, Public discourse

・D. Niles; K. Abe, The cultural dimensions of agricultural sustainability, 15th RIHN International Symposium: Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-Growth Future", 16 Jan. 2021, 13 Jan. 2021 16 Jan. - 2021, Invited, English, Invited oral presentation

・Yutaka Mimura, Analysis of Development Trends in Post-war Jakarta Using Reconnaissance Satellite Imagery GAMBIT（KH- 7） and HEXAGON(KH-9), 東南アジア学会第 102 回研究大会（オンライン開催）, 20 Dec. 2020, 19 Dec. 2020 20 Dec. - 2020, Japanese, Oral presentation

・阿部健一, バウンダリー・オブジェクトとしての世界農業遺産ー関係価値の創造ー, GIAHS 地域を事例とした大学・地域連携に関する地域シンポジウム, 19 Dec. 2020, Invited, Japanese, Nominated symposium

・嶋田奈穂子, 世界農業遺産認定地の試行錯誤ー実務者の課題と希望ー., 農村計画学会 2020 年度秋季大会シンポジウム（オンライン）, 19 Dec. 2020, Invited, Japanese, Invited oral presentation

・三村豊, 共に創る未来社会への備えーいかに創造的な思考を育むか, 2020 年度 環境情報科学 研究発表大会（オンライン開催）, 17 Dec. 2020, 11 Dec. 2020 18 Dec. - 2020, Japanese, Oral presentation

・D. Niles, World in a Basket. In: Waza on the Move: Ineffable arts of learning., France/Japan Joint Workshop for Techniques & Culture, 23 Oct. 2020, 23 Oct. 2020 23 Oct. - 2020, Invited, English, Invited oral presentation

・Katsuya SODA; Kenichi ABE, Learning Climate Justice with High school Students- Lesson from project of Research Institute of Human and Nature, 31st Annual Meeting of The Japanese Society for Environmental Education, 23 Aug. 2020, 21 Aug. 2020 23 Aug. - 2020, Japanese, Oral presentation

・阿部 健一, 農業の再認識：演劇でつなぐアジアの高校生, 日本環境教育学会第 31 回年次大会, 22 Aug. 2020, 21 Aug. 2020 23 Aug. - 2020, Japanese, Oral presentation

・Katsuya SODA, Community Media in the Post-Pandemic World - Present Situation in Japan -, UNESCO Chair on Community Media, Global Dialogues 6. Reaching the Unreached: Community Radio in Southeast Asia and the Pacific, 06 Aug. 2020, 06 Aug. 2020 06 Aug. - 2020, Invited, English, Nominated symposium

・Ken-ichi Abe, KLaSiCa Workshop to connect rural landscape in Asia through theater, JpgU-AGU Joint Meeting 2020: Virtual, 13 Jul. 2020, 12 Jul. 2020 16 Jul. - 2020, English, Oral presentation

Division Name: Future Earth Division

Head of Division: MALLEE Hein

URL: https://www.futureearth.asia/ja

○ Subject and Objectives

【Research Subject and Objectives】

Future Earth Division hosts and operates the Regional Centre for Future Earth in Asia. Its main role is to provide secretariat functions and coordination for the network of Future Earth in the region while facilitating linkages between RIHN and Future Earth. It provides a forum for broad information exchange and discussion of research on global environmental problems. Based on the results of RIHN research projects, FE Bumon further fosters active engagement with the international research agenda setting. Furthermore, in order to promote global environmental research and capacity building in Japan and the Asia region, it supports the development and mobilization of capacity for inter- and trans-disciplinary research with researchers and societal stakeholders in Japan and Asia with a focus on early career researchers.

○ Progress and Results in 2020

1. Research Enabling

Our division aims to promote, facilitate and enable transdisciplinary research addressing global environmental sustainability through hosting of symposia, workshops, writeshops and convening on relevant research themes with a focus on Asia.

Initiatives and Outputs/outcomes 1:

Guiding the Science-based Pathways initiative in the Asian region

◆ A webinar to introduce this Initiative to the Asian network, with 20 participants representing Future Earth in Taipei, China, India, Philippines, Mongolia, Japan, Korea. （April 24, 2020）

◆ A series of workshops on Futures-Informed Knowledge-into-Action Innovations and Initiatives, a Science-Based Pathways for SDGs Virtual Workshop held in the Philippines December 16-18, 2020 and February 23-24, 2021.

10 New Insights for Climate Science 2020

Engaged in coordinating and writing of two insights (COVID-19 and Green Recovery and COVID-19 and governance) of this report. A peer-review paper based on the 10 New Insights for Climate Science in 2020 was also published in Global Sustainability Journal.

Initiatives and Outputs/outcomes 2:

Systems of Sustainable Consumption and Production Knowledge Action Network: SSCP KAN

The division continues to support the Knowledge-Action Network on Systems of Sustainable Consumption and Production (SSCP KAN). A new set of Steering Committee members were elected. The SSCP KAN has been active and delivered various research outputs such as journal articles, research proposals, white papers etc.

Co-hosted the Virtual Mini Conference: COVID-19 and Sustainability Transitions, May 27, 2020, with over 150 participants. A Collaborative Research Action (CRA) Topic proposal on Systems of Sustainable Consumption and Production for the Belmont Forum was developed. It was successfully accepted last October 15, 2020 and currently in the scoping process. Hosted SSCP KAN Webinar: From Activism and Science to Political Change Working Group on Political Economy, November 23, 2020. Hosted the ShowCase and AgendaSetting Event for the SSCP-KAN, March 3, 2020 where Working Groups identified plans and prospects for collaborative activities for the network.

2. Regional Networking

Another objective of the Division is to contribute to the enhancement and progress of global environmental and sustainability research in the Asian region through the formation of community networks in Asia.

◆ Future Earth in Asia Network Online Meeting (April 24, 2020) First time for National Committees in Asia to come together, meet and discuss about their respective initiatives and programs.

◆ Support for the development of other Future Earth units in the region: South Asia Governing Council Meeting (September 3, 2020), a new Future Earth network being developed in Thailand.

◆ Ongoing Support for Regional Research Initiatives:

- A virtual Advanced Institute of HI-ASAP (Health Investigation and Air Sensing for Asian Pollution) regional interdisciplinary research activity (October 5-6, 8 and 15th, 2020)

- Development of a collaboration scheme in Asia: CORDEX (Coordinated Regional

- Climate Downscaling Experiment) and MAIRS-FE (Monsoon Asia Integrated Research for Sustainability-Future Earth)

- Moonsoon Asia Integrated Research for Sustainability Scientific Steering Committee Meeting December 17, 2020.

3. Communications and Outreach

As host of the Regional Center for Future Earth in Asia, the FE Division maintains the Future Earth Asia website, social media facebook page and the publication of regular newsletters. Various content for these publications such as research synthesis, updates and feature articles are regularly being developed and posted.

The FE Division also manages the mailing lists and social media accounts for the SSCP KAN and TERRA School.

New website of the SSCP KAN was launched in August 2020. Preparation for the launch of Future Earth Asia's new website was completed in March 2020.

4. Capacity Building

The Future Earth Division spearheaded an introductory course on transdisciplinary research for young researchers and practitioners in the Asian region under the title TERRA SCHOOL (Transdisciplinarity for Early career Researchers in Asia School).

The objective of this initiative is to build capacity for transdisciplinary research. It is envisioned to be a cultivation encounter, aimed at creating awareness of what transdisciplinarity can offer and the challenges involved in its implementation leveraging on RIHN research experience, results and methods.

Seventeen (17) early career researchers from various natural and social backgrounds from 8 countries all over Asia attended the online live sessions and asynchronous activities during the period March 5th to 19th, 2021.

A Workshop on Co-design processes was organized at RIHN last November 2020.

○ Future Themes

【Future Plan】

◆ Join other institutions in Japan in applying for a Future Earth Global Secretariat Hub in Japan.

◆ Support Science Based Pathways for Sustainability Initiative in Philippines, Mongolia, and Japan.

◆ Organize a new batch for TERRA School（2021）

◆ Host a session in SRI2021 (June 12-15, 2021 Brisbane and online）

◆ Organize Future Earth Asia Symposium

◆ Co-host TREPSEA international conference on transdisciplinary research

◆ Facilitate co-design and co-production of new joint collaboration

○Project Members

MALLEE Hein	(Research Institute for Humanity and Nature・Professor)
LAMBINO Ria	(Research Institute for Humanity and Nature・Specially Associate Professor)
ONISHI Yuko	(Research Institute for Humanity and Nature・Assistant professor)
OKA Masami	(Research Institute for Humanity and Nature・Research Associate)

OKAMOTO Takako　(Research Institute for Humanity and Nature・Research Associate)

●Achievements

○Books etc

・ Jan. 2021, Coordinating Writer and co-author, Joint work, 10 New Insights in Climate Science 2020, Future Earth, Earth League & WRCP

○Published Papers

・Erik Pihl; Eva Alfredsson; Magnus Bengtsson; Kathryn J Bowen; Vanesa Castan Broto; Kuei Tien Chou; Helen Cleugh; Kristie Ebi; Clea M Edwards; Eleanor Fisher; Pierre Friedlingstein; Alex Godoy-Faúndez; Mukesh Gupta; Alexandra R Harrington; Katie Hayes; Bronwyn M Hayward; Sophie R Hebden; Thomas Hickmann; Gustaf Hugelius; Tatiana Ilyina; Robert B Jackson; Trevor F Keenan; Ria A Lambino; Sebastian Leuzinger; Mikael Malmaeus; Robert I McDonald; Celia McMichael; Clark A Miller; Matteo Muratori; Nidhi Nagabhatla; Harini Nagendra; Cristian Passarello; Josep Penuelas; Julia Pongratz; Johan Rockström; Patricia Romero-Lankao; Joyashree Roy; Adam A Scaife; Peter Schlosser; Edward Schuur; Michelle Scobie; Steven C Sherwood; Giles B Sioen; Jakob Skovgaard; Edgardo A Sobenes Obregon; Sebastian Sonntag; Joachim H Spangenberg; Otto Spijkers; Leena Srivastava; Detlef B Stammer; Pedro HC Torres; Merritt R Turetsky; Anna M Ukkola; Detlef P van Vuuren; Christina Voigt; Chadia Wannous; Mark D Zelinka, 27 Jan. 2021, 10 New Insights in Climate Science 2020 - a Horizon Scan, Global Sustainability, 1-65, Cambridge University Press (CUP), English, Refereed, Scientific journal DOI:10.1017/sus.2021.2

・Boone, Christopher G., Steward T. A. Pickett, Gabriele Bammer, Kamal Bawa, Jennifer A. Dunne, Iain J. Gordon, David Hart, Jessica Hellmann, Alison Miller, Mark New, Jean P. Ometto, Ken Taylor, Gabriel, 31 May 2020, Preparing interdisciplinary leadership for a sustainable future, Sustainability Science, Springer DOI:https://doi.org/10.1007/s11625-020-00823-9

○MISC

・R. Lambino as co-author in Future Earth, 27 Jan. 2021, The Earth League, WCRP, 10 New Insights in Climate Science, Future Earth

○Presentations

・Hein Mallee, From Ecosystem Health to Planetary Health — The Development of Health, National Institute for Environmental Studies-Nagasaki University-RIHN Symposium on Planetary Health, 19 Feb. 2021

・Lambino Ria, Future Earth in Asia Updates and Outlook, Scientific Steering Committee Meeting of Monsoon Asia Integrated Research for Sustainability-FE Beijing, Future Earth Beijing, China (online), 17 Dec. 2020

・Lambino Ria, Unpacking the 17 SDGs: Challenges & Exemplar, National Workshop on SDG Futures, Pathways & Initiatives, Philippines (online workshop), Philippines, Philippines, 16 Dec. 2020

・Lambino Ria, Future Earth in Asia and Early Career Networks, Principal Investigators and Project Proposal Development Training workshop, Mongolia Academy of Sciences (online workshop), Mongolia, 08 Dec. 2020

・Lambino Ria, Boundary Crossing: Role of Transdisciplinarity in Environmental Studies, Kyoto University International Online Symposium 2020 on Education and Research in Global Environmental Studies in Asia, Kyoto University, Kyoto (Online), 01 Dec. 2020

・Hein Mallee, 食と感染症, ウェビナーシンポジウム「アフターコロナ-食の行方を考える, 京都府立大学和食文化センター, 京都市, 18 Sep. 2020

Outreach Programs and Events

1. RIHN International Symposium

To diffuse the findings of FR projects, the RIHN 15th International Symposium "Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-growth Future" was held online with zoom and Slack January 13-16, 2021. The details of the symposium are as follows.

RIHN 15th International Symposium

<Wednesday, January 13>

Welcome and Opening Remarks: YASUNARI Tetsuzo (Director-General, RIHN)
Introduction: Steven R. McGREEVY (RIHN)
Keynote Address: Overcoming the Problem Bias – Researching and Learning Sustainable Food Economy Solutions
Arnim WIEK (Arizona State University, USA)

Session 1: Regional and Regenerative Foodsheds

Chair: Steven R. McGREEVY (RIHN)
Designing the Sustainable Foodshed of Japan: Insights from Ecological Footprint Modeling and Local Food System Mapping
TSUCHIYA Kazuaki (The University of Tokyo, Japan)
The Bounty of Enough: (De)Constructing the Global Industrial Food Complex through Narratives of Scarcity
Oliver TAHERZADEH (RIHN)
Designing Biodiverse and Resilient Farming Systems: Experiences from Latin America
Clara Ines NICHOLLS (University of California, Berkeley, USA)
Our Collective Future: Building Sustainable Agrifood Systems and Resilient Rural Communities. Lessons from the US and Japan
TANAKA Keiko (University of Kentucky, USA)
Session Discussion

<Thursday, January 14>

Yesterday's Recap & Today's Overview
Christoph D. D. RUPPRECHT (RIHN)
Keynote Address: Limits, Degrowth and Environmental Justice
Giorgos KALLIS (Universitat Autònoma de Barcelona, Spain)
Keynote Q&A
Moderator: Christoph D. D. RUPPRECHT (RIHN)
Arnim WIEK Keynote Q&A
Moderator: Steven R. McGREEVY (RIHN)

Session 2: Food Futures, Transdisciplinary Processes, and Politics

Chair: Chair: Christoph D. D. RUPPRECHT (RIHN)
Using Gaming to Develop Public Capacities for Anticipatory Governance
Joost VERVOORT (Utrecht University, Netherlands)
Commodity, Commons, Public Good or Human Right. Normative Food Narratives Shape Future Food Transitions
Jose Luis VIVERO POL (Université Catholique de Louvain, Belgium)
Grappling at Food Policy in Kyoto: Experiences and Future Prospects
AKITSU Motoki (Kyoto University, Japan)

Evaluating Futures for Food Systems Change: From Imagination to Transformation
Astrid MANGNUS (Utrecht University, Netherlands)
Constructing Practice-oriented Participatory Policy for Sustainable Everyday Urban Food Futures in Bangkok
Kanang KANTAMATURAPOJ (Mahidol University, Thailand)
Session Discussion

<Friday, 15 January>
Yesterday's Recap & Today's Overview
Maximilian SPIEGELBERG (RIHN)

Session 3: Food Alternatives in the Present
Chair: Maximilian SPIEGELBERG (RIHN)
Reimagining Informal Food Practices: Sustainability Lessons from the European East
Petr JEHLIČKA (Czech Academy of Sciences, Czech Republic)
Consumption and Everyday Life: How Prescriptions Inform Our Understanding of Healthy and Sustainable Food
Marlyne SAHAKIAN (University of Geneva, Switzerland)
Love thy Robber: Exploring the Informal Food Economy of Unattended Food Stands
KOBAYASHI Mai (RIHN)
Legumes' Role Post-COVID-19: Reorienting the Focus of Policy on Legumebased Food and Feed System
Bálint BALÁZS (Environmental Social Science Research Group, Hungary)
Session Discussion

Practitioner Roundtable
Facilitator: Hein MALLEE (RIHN)
Kyoto Organic Action (KOA): A Cooperative Attempt to Establish an Independent Distribution System for Local Organic Produce
SUZUKI Kentaro (Kyoto Organic Action, Japan)
Realizing Gender Justice through Agroecology – Lessons from Women's Collective Farming Efforts in India
Ashlesha KHADSE (Amrita Bhoomi Agroecology Center, India)
Climbing Mount Improbable: The Beginnings of a Post-growth Food Narrative in the UK
Chris SMAJE ("A Small Farm Future", England)
Discussion

<Saturday, 16 January>
Yesterday's Recap & Today's Overview
TAMURA Norie (RIHN)
Keynote Address: Food Journeys: Encounters that Engender Empathy across Difference
Michael CAROLAN (Colorado State University, USA)
Keynote Q&A
Moderator: TAMURA Norie (RIHN)

Session 4: Sufficiency and Cultural Change
Chair: TAMURA Norie (RIHN)
Willingly Sliding down the Slope: Narratives and Games for a more Sustainable Food Culture
Ilan CHABAY (Institute for Advanced Sustainability Studies, Germany)

The Cultural Dimensions of Sustainable Agriculture
Daniel NILES (RIHN) and ABE Ken-ichi (RIHN)
Subsistence Agriculture in the US: Reconnecting to Work, Nature, and Community
Ashley COLBY (Rizoma Field School, Uruguay)
Pahom and the Everlasting Plate – Stories as Bearers of Alternative Food Visions
Rajat CHAUDHURI (Fiction writer and Activist)
Session Discussion

Final Session
Chair: Steven R. MCGREEVY (RIHN)
Final Comments & Discussion
SATO Yo-Ichiro (Kyoto Prefectural University, Japan)
TACHIKAWA Masashi (Nagoya University)
Closing Remarks
Steven R. McGREEVY (RIHN)

2. Symposium of Environmental Isotope Study

Joint research grant for Environmental Isotope Study has conducted multidisciplinary joint researches using various isotope analysis facilities RIHN has maintained. To exchange research information and promote the Environmental Isotope Study network, "Symposium of Environmental Isotope Study" has been held once a year since 2011.

The 10th Annual Symposium of Environmental Isotope Study
Date: 18 December 2020
Venue: Online (Zoom/LINC Biz)

Opening Remarks: YASUNARI Tetsuzo (Director-General, RIHN)
10 years of Environmental Isotope Study, 10 years from now: NAKANO Takanori, TAYASU Ichiro (RIHN)
Poster session (1) Deposition from the air (Chair: Yoriko YOKOO)
Poster session (2) Water cycling (Chair: Shiho YABUSAKI)
Poster session (3) Water quality, nutrient dynamics and catchment study (Chair: Rieko URAKAWA)
Poster session (4) Biodiversity and ecosystem function (Chair: Nozomu TAKEUCHI)
Poster session (5) Provenance of foods and materials, and environmental history (Chair: Soichiro KUSAKA)
Poster session (6) Development of methods, etc. (Chair: Katsuyuki YAMASHITA)
Discussion & Summary

3. RIHN Open House

In order to introduce RIHN's research projects and facilities to the surrounding community, RIHN has opened our buildings to the public once a year since 2011. In 2020, the 10th anniversary of the event, it was held online by the first attempt, YouTube Livestreaming. We held various events such as a laboratory introduction, activity reports in the field of world research, live distribution of research presentations by high school students in Kyoto and Miyazaki, and cross talks with Keiichiro Hirano (writer) and Brian William (landscape painter). The first day of the event attracted 934 viewers, and the second day attracted 669 viewers.

Date: 15, 22 November 2020
Venue: RIHN (YouTube Livestreaming)

4. RIHN Seminars

RIHN Seminars are invited talks by esteemed Japanese or foreign researchers. The seminars provide opportunities for RIHN scientists to learn of the latest topics and research directions in a variety of fields; they also often are a first step toward future research collaborations between RIHN researchers and those of other institutions. Seminars are held several times a year.

181st	7 October 2020 at RIHN Lecture Hall/ Remote (zoom) Developing transdisciplinarity for sustainable livestock farming: A cross-fertilization of concepts and methodologies, with a practical application for the Water-Energy-Livestock nexus Cyrille Rigolot (Visiting Research Fellow/Senior Researcher/Deputy Director UMR Territoires, Institut National de la Recherche Agronomique)
182-1st	6 November 2020 at RIHN Lecture Hall/ Remote (zoom) Our Earth: A planet created by life. –Rethinking of "How human-nature relation ought to be?" Dr. Tetsuzo Yasunari (Director General, RIHN)
182-2nd	11 December 2020 at RIHN Lecture Hall/ Remote (zoom) Another Asian Drama: Growth, Resource Use and the Responsibility for Global Sustainability Speaker: Dr. Kaoru Sugihara (Program Director, RIHN) Commentator: Dr. Michael Feener
182-3rd	25 December 2020 at RIHN Seminar Rooms 3 & 4/ Remote (zoom) Thinking about Human Evolution and Culture from Primatological Viewpoints Speaker: Dr. Juichi Yamagiwa (Next Director General) Commentator: Dr. Tetsuya Inamura (The Open University of Japan, Section of Humanities and Culture/ Specially Appointed Professor)
182-4th	19 January 2021 at RIHN Lecture Hall/ Remote (zoom) Future Design: Bequeathing Sustainable Natural Environments and Sustainable Societies to Future Generations Speaker: Dr. Tatsuyoshi Saijo (Program Director, RIHN) Commentator: Dr. Keiichiro Kobayashi (The Tokyo Foundation for Policy Research/ Keio University)
182-5th	12 February 2020 at RIHN Lecture Hall/ Remote (zoom) Living on the planet of water Speaker: Dr. TANIGUCHI Makoto (Program Director, RIHN) Commentator: Dr. TAKARA Kaoru (Professor, Kyoto University)
182-6th	26 February 2021 at RIHN Seminar Rooms 3 & 4/ Remote (zoom) Historical and Global Perspectives on Multi-level Water Governance in China Speaker: Dr. NAKASHIZUKA Toru (Previous Program Director, RIHN)
183rd	15 December 2020 at RIHN Seminar Rooms 3 & 4/ Remote (zoom) Is there something like a Kyoto (RIHN) "school" of transdisciplinarity? Impressions from a three months investigation Cyrille Rigolot (Visiting Research Fellow/Senior Researcher/Deputy Director UMR Territoires, Institut National de la Recherche Agronomique)
184th	6 January 2021 at RIHN Seminar Rooms 3 & 4 / Remote (zoom) Human-Environmental System: From local to Global Sustainability Chuluun Togtokh (Invited Scholar/Director/Institute for Sustainable Development, National University of Mongolia)

185th 11 March 2021 at RIHN Seminar Rooms 3 & 4/ Remote (zoom)
Sustainable Development for People and Planet
Chuluun Togtokh (Invited Scholar/Director/Institute for Sustainable Development, National University of Mongolia)

5. RIHN General Meeting (RGM)

RIHN researcher, office staffs, and outside research collaborators gather to review the year's progress. All project leaders present their research findings and accomplishments and receive questions from the floor.

In the three-day debriefing session in 2020, a total of 371 people participated, including onsite participation and online viewing, with 102 people on the first day, 142 on the second day, and 127 on the third day. These holistic efforts and active exchange of opinions are important research activities that lead to self-inspection and evaluation for RIHN.

Date: 25 - 27 November 2020
Venue: Co-op inn Kyoto

6. Publications

6-1 RIHN Series

"A feast of our making — participatory futures of food and agriculture"
Edited by Norie Tamura, Christoph David Dietfried Rupprecht, Steven Robert McGreevy (in Japanese)

6-2 RIHN Science Series

"Watershed governance - community-based "well-being" and "social-ecological health" of the watershed"
Edited by Kenichi Wakita, Shigeo Yachi, Noboru Okuda (in Japanese)

"Anthropocene and Asia: Investigation, Critique, and Contribution from the Environmental Humanities Perspective"
Edited by Masahiro Terada, Daniel Niles (in Japanese)

6-3 Others

"Eco-DRR as Learned from Local History -Traditional and local knowledge of Eco-DRR at the foot of Hira Mountains"
Edited by Risa Shimauchi, Minami Nakai, Gavin Walton, and others

"Future Design: Incorporating Preferences of Future Generations for Sustainability"
Edited by Tatsuyoshi Saijo

6-4 RIHN News: Humanity & Nature Newsletter

This periodical communicates RIHN identity and latest news to specific research communities. The newsletter is published in an A4 format with easy-to read content. Issues 81-84 were published in fiscal year 2020.

Individual Achievements

A	ABE Ken-ichi	Professor
	AIBA Masahiro	Specially Appointed Assistant Professor
	ARAKI Hikaru	Research Associate
E	ENDO Aiko	Visiting Associate Professor
F	FARABI ASL Hadi	Researcher
	FRY Jacob Redman	Senior Researcher
	FUJII Shigeo	Visiting Professor
	FUJIYOSHI Rei	Researcher
H	HABU Junko	Visiting Professor
	HARAGUCHI Takashi	Visiting Researcher
	HAYASHI Hiroaki	Visiting Professor
	HAYASHI Koji	Researcher
	HAYASHIDA Sachiko	Professor
	HONMA Saki	Research Associate
	HUANG Wan Hui	Researcher
I	IKEYA Tohru	Visiting Researcher
	ISHIBASHI Hiroyuki	Visiting Researcher
	ISHII Reiichiro	Associate Professor
	ITO Keisuke	Visiting Researcher
	ITO Takafumi	Research Associate
	IWASAKI Yumiko	Research Associate
J	JIANG Hong-wei	Research Fellow NIHU for Area Studies
K	KADA Ryohei	Visiting Professor
	KAJITA Ryosuke	Researcher
	KANEMOTO Keiichiro	Associate Professor
	KANIE Norichika	Visiting Professor
	KARATSU Fukiko	Research Associate
	KASUGA Fumiko	Visiting Professor
	KATAFUCHI Yuya	Researcher
	KATSURA Tomomi	Research Associate
	KAWASAKI Masahiro	Visiting Professor
	KIM Satbyul	Research Fellow NIHU for Area Studies
	KIMIJIMA Satomi	Researcher
	KIMURA Aoi	Research Associate
	KIMURA Ayako	Research Associate
	KOBAYASHI Kunihiko	Researcher
	KOBAYASHI Mai	Researcher
	KOBAYASHI Yuko	Research Associate
	KONDO Yasuhisa	Associate Professor
	KOZAN Osamu	Associate Professor
	KUANG Xiaoxu	Researcher
	KUIPERS Rob	Research Associate
	KUMAZAWA Terukazu	Associate Professor
	KURATA Junko	Research Associate
	KURONUMA Taichi	Visiting Researcher
	KUSAGOU Takayoshi	Visiting Professor
L	LAMBINO Ria Adoracion Apostol	Specially Appointed Associate Professor
	LEE Jemyung	Researcher
	LEE Sanghyun	Assistant Professor
M	MALLEE Henricus Paulus	Professor

	MANAGI Shunsuke	Visiting Professor
	MASUHARA Naoki	Senior Researcher
	MATSUMOTO Tae	Associate Professor
	MATSUMOTO Takuya	Visiting Researcher
	MATSUOKA Yuko	Research Associate
	MCGREEVY Steven Robert	Associate Professor
	MIMURA Yutaka	Researcher
	MISRA Prakhar	Researcher
	MIZUNO Kosuke	Visiting Professor
	MURAO Rumiko	Researcher
	MYO HAN HTUN	Research Associate
N	NAKAGAWA Yoshinori	Visiting Associate Professor
	NAKAHARA Satoe	Researcher
	NAKAI Minami	Research Associate
	NAKAO Seiji	Specially Appointed Assistant Professor
	NAKATSUKA Takeshi	Visiting Professor
	NGUYEN Tien Hoang	Senior Researcher
	NILES Daniel Ely	Associate Professor
	NISHI Makoto	Visiting Associate Professor
	NISHIWAKI Aki	Research Associate
O	ODA Kimisato	Researcher
	OH Tomohiro	Research Associate
	OHTA Kazuhiko	Assistant Professor
	OKA Masami	Research Associate
	OKADA Saeko	Associate Professor
	OKAMOTO Takako	Research Associate
	OKUDA Noboru	Visiting Professor
	ONISHI Yuko	Assistant Professor
	OSAWA Takamasa	Researcher
	OTANI Michitaka	Research Associate
	OTOGAWA Mari	Research Associate
R	RUPPRECHT Christoph David Dietfried	Senior Researcher
S	SAIJO Tatsuyoshi	Specially Appointed Professor
	SAKAKIBARA Masayuki	Professor
	SENDA Masako	Research Associate
	SHAHRIER Shibly	Researcher
	SHIBATA Akira	Visiting Professor
	SHIMADA Nahoko	Researcher
	SHIMAUCHI Risa	Research Associate
	SHIMIZU Takao	Visiting Associate Professor
	SHIN Ki-Cheol	Associate Professor
	SHINJO Ryuichi	Visiting Professor
	SHINKAI Rika	Researcher
	SHIODERA Satomi	Researcher
	SHIRAI Yuko	Researcher
	SOUDA Katsuya	Researcher
	SPIEGELBERG Maximilian	Researcher
	SUETSUGU Satoko	Research Associate
	SUGIHARA Kaoru	Specially Appointed Professor
	SUGIMOTO Hayato	Research Associate

T	TAHERZADEH Oliver Ahrash	Senior Researcher
	TAKANO Shinya	Researcher
	TAKATA Shoko	Research Associate
	TAKEHARA Mari	Research Associate
	TAMURA Norie	Senior Researcher
	TANIGUCHI Makoto	Professor
	TAYASU Ichiro	Professor
	TERADA Masahiro	Visiting Associate Professor
	TOGTOKH Chuluun	Invited Scholar
U	UEDA Sachiko	Research Associate
W	WAKAMATSU Hisanori	Specially Appointed Assistant Professor
	WATANABE Kazuo	Visiting Associate Professor
	WIN THIRI KYAW	Researcher
	WONG Grace Mun Yee	Associate Professor
Y	YABUSAKI Shiho	Researcher
	YAMADA Taiki	Researcher
	YAMAKAWA Ayano	Research Associate
	YAMAMOTO Aya	Research Associate
	YAMANAKA Manabu	Senior Researcher
	YAMAUCHI Taro	Professor
	YASUDA Akiko	Research Associate
	YASUNARI Tetsuzo	Director-General
	YASUTOMI Natsuko	Research Associate
	YONEMOTO Shohei	Visiting Professor
	YOSHIDA Takehito	Associate Professor
	YOSHIMIZU Chikage	Researcher
	YUZEN Natsuko	Research Associate

ABE Kenichi

Professor

[Academic Career]

Kyoto University 農学研究科 熱帯農学 (1987)

Kyoto University Faculty of Agriculture 農林生物 (1984)

[Professional Career]

Research Institute for Humanity and Nature 教授 (2008-)

Kyoto University Center for Integrated Area Studies 助教授 (2006-2008)

The Graduate University for Advanced Studies School of Advanced Sciences 助教授（併任） (2000-2006)

National Museum of Ethnology National Museum of Ethnology 助教授 (1999-2006)

National Museum of Ethnology National Museum of Ethnology 助手 (1996-1999)

Research Associate, Centre for Southeast Asian Studies, (1990-1996)

京都大学アジア研究センター 助手 (1989-1996)

Kyoto University

[Fields of Specialization]

Humanities & social sciences > Local studies

Environmental science/Agricultural science > Environmental policy and society

Environmental science/Agricultural science > Environmental impact assessment

Humanities & social sciences > Cultural anthropology and folklore

[Academic Society Memberships]

THE SOCIETY OF BIOSOPHIA STUDIES

JAPAN SOCIETY FOR SOUTHEAST ASIAN STUDIES

INTERNATIONAL SOCIETY OF VOLUNTEER STUDIES

JAPAN SOCIETY OF TROPICAL ECOLOGY

—Achievements—

[Books etc]

・柳澤, 雅之; 阿部, 健一, Mar. 2021, Joint editor, ノーライフ・ノーフォレスト : 熱帯林の「価値命題」を暮らしから問う, v, 290p, 京都大学学術出版会, Japanese, ISBN: 9784814003341

・Yumiko Nara; Tetsuya Inamura, Aug. 2020, Ken-ichi Abe. 'Resilience of Earth System', Contributor, Resilience and Human History, Springer

[Presentations]

・阿部健一, 地域内における GIAHS の認知度向上とシビック プライドの醸成, 世界農業遺産国内認定地域連携会議 令和 2 年度第 2 回研修会, 16 Feb. 2021, Invited, Japanese, Public discourse

・阿部健一, バウンダリー・オブジェクトとしての世界農業遺産ー関係価値の創造ー, GIAHS 地域を事例とした大学・地域連携に関する地域シンポジウム, 19 Dec. 2020, Invited, Japanese, Nominated symposium

・阿部 健一, 農業の再認識：演劇でつなぐアジアの高校生, 日本環境教育学会第 31 回年次大会, 22 Aug. 2020, 21 Aug. 2020 - 23 Aug. 2020, Japanese, Oral presentation

・Ken-ichi Abe, KLaSiCa Workshop to connect rural landscape in Asia through theater, JpgU-AGU Joint Meeting 2020: Virtual, 13 Jul. 2020, 12 Jul. 2020 - 16 Jul. 2020, English, Oral presentation

[Works]

・世界農業遺産 高千穂郷・椎葉山地域アクションプラン戦略 PV 英語版, 2018

[Committee Memberships]

・2016, 副理事長, NPO 法人平和環境もやいネット

・2013, 委員, 京都府， 京都府環境審議会

・2013, 委員, 国東半島宇佐地域世界農業遺産推進協議会
・2012, 幹事, 京都府，KYOTO 地球環境の殿堂
・2012, 推薦委員, 大同生命国際文化基金
・2011, 環境事業選考委員会委員長, りそなアジア・オセアニア財団
・2009, 連携会員, 日本学術会議

AIBA Masahiro

Specially Appointed Assistant Professor

[Fields of Specialization]
Life sciences > Ecology and environmental science

—Achievements—

[Published Papers]
・Junko Morimoto; Masahiro Aiba; Flavio Furukawa; Yoshio Mishima; Nobuhiko Yoshimura; Sridhara Nayak; Tetsuya Takemi; Haga Chihiro; Takanori Matsui; Futoshi Nakamura, Jan. 2021, Risk assessment of forest disturbance by typhoons with heavy precipitation in northern Japan, Forest Ecology and Management, 479, 118521-118521, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.foreco.2020.118521
・Junya Kumagai, Mihoko Wakamatsu, Shizuka Hashimoto, Osamu Saito, Takehito Yoshida, Takehisa Yamakita, Keiko Hori, Takanori Matsui, Michio Oguro, Masahiro Aiba, Rei Shibata, Tohru Nakashizuka, Shunsuke Managi, 2021, Natural capital for nature's contributions to people: the case of Japan, Sustainability Science, the Springer Nature, English, Refereed DOI:10.1007/s11625-020-00891-x
・Kousuke Tachibana; Kei Uchida; Masahiro Aiba; Takehiro Sasaki, Oct. 2020, National geographic distribution and number of TV nature programs across the Japanese archipelago, Ecological Indicators, 121, 107054-107054, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.ecolind.2020.107054
・Masahiro Aiba; Hiroko Kurokawa; Yusuke Onoda; Tohru Nakashizuka, Jul. 2020, Trait-abundance relationships in tree communities along temperature and successional gradients, JOURNAL OF VEGETATION SCIENCE, 31 (4), 551-560, WILEY, English, Refereed, Scientific journal DOI:10.1111/jvs.12878

[MISC]
・柴田嶺; 小黒芳生; 饗庭正寛; 中静透, 2021, Using social media to value outdoor recreation services in Japan, 日本生態学会大会講演要旨(Web), 68th
・饗庭正寛; 山田由美; 瀧健太郎; 一ノ瀬友博; 吉田丈人, Nov. 2020, 機械学習モデルによる浸水ハザードの日本全国評価, グリーンインフラ・ネットワーク・ジャパン全国大会（GIJ2020）
・饗庭正寛; 黒川紘子; 小野田雄介, 2020, A machine learning approach for complicated associations of functional traits of tree species, 日本生態学会大会講演要旨(Web), 67th
・柴田嶺; 饗庭正寛; 小黒芳生; 中静透, 2020, Influence of natural-social factors on trade-offs and synergies between ecosystem services, 日本生態学会大会講演要旨(Web), 67th

[Research Projects]
・Research and Social Implementation of Ecosystem-based Disaster Risk Reduction as Climate Change Adaptation in Shrinking Societies, 総合地球環境学研究所, Research Project / Core Project, 総合地球環境学研究所, Apr. 2016, Mar. 2023

FARABI-ASL Hadi

Researcher

[Professional Career]

Kyoto University, Part-time Lecturer, Part-time Lecturer (2020-)

Research Institute for Humanity and Nature, Researcher (2019-)

Kyushu University, International Institute for Carbon-Neutral Energy Research (I2CNER), Postdoctoral Research Associate (2018-2019)

Akita University, Research Associate (2017-2018)

Akita University, Research Assistant (2014-2017)

[Higher Degrees]

Doctor of Engineering

[Fields of Specialization]

Energy > Earth resource engineering > energy science

[Awards]

Best Presentation Award, Hadi Farabi-Asl, International Conference on Clean and Green Energy Engineering (CGEE2020), International Association of Computer Science and Information Technology, International society (2020)

Best Presentation Award, Hadi Farabi-Asl, International Conference on Clean and Green Energy Engineering (CGEE2020), International Association of Computer Science and Information Technology, Aug. 202

Best Oral Presentation Award, Hadi Farabi-Asl, International Conference of Grand Renewable Energy 2018, Yokohama, Japan (2018)

Monbukagakusho scholarship (36 months), Hadi Farabi-Asl, Japanese Ministry of Education, Culture, Sports, Science and Technology (2014)

Best Presentation Award, Hadi Farabi-Asl, First National Conference of Renewable and Clean Energies, Iran (2013)

Best Article Award, Hadi Farabi-Asl, 7th National Conference of World Environment Day, Iran (2013)

—Achievements—

[Published Papers]

- Saeid Mohammadzadeh Bina; Hikari Fujii; Hiroyuki Kosukegawa; Hadi Farabi-Asl, Nov. 2020, Evaluation of ground source heat pump system's enhancement by extracting groundwater and making artificial groundwater velocity, Energy Conversion and Management, 223, 113298-113298, Elsevier {BV}, Refereed, Scientific journal DOI:10.1016/j.enconman.2020.113298
- Hadi Farabi-Asl; Kenshi Itaoka; Andrew Chapman; Etsushi Kato; Atsushi Kurosawa, Aug. 2020, Key factors for achieving emission reduction goals cognizant of CCS, International Journal of Greenhouse Gas Control, 99, Refereed, Scientific journal DOI:10.1016/j.ijggc.2020.103097
- Andrew Chapman; Dinh Hoa Nguyen; Hadi Farabi-Asl; Kenshi Itaoka; Katsuhiko Hirose; Yasumasa Fujii, 22 Jul. 2020, Hydrogen penetration and fuel cell vehicle deployment in the carbon constrained future energy system, IET Electrical Systems in Transportation, Institution of Engineering and Technology ({IET}), English, Refereed, Scientific journal DOI:10.1049/iet-est.2020.0014
- Farhad Taghizadeh-Hesary; Aline Mortha; Hadi Farabi-Asl; Tapan Sarker; Andrew Chapman; Yosuke Shigetomi; Timothy Fraser, Jul. 2020, Role of energy finance in geothermal power development in Japan, International Review of Economics & Finance, 70, 398-412, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.iref.2020.06.011

[Presentations]

- Hadi Farabi-Asl; Andrew Chapman; Farhad Taghizadeh-Hesary; Saeid Mohammadzadeh Bina, Proposing a renewable heat incentive scheme for GSHP in Japan, a techno-economic analysis, International Conference on Clean and Green Energy Engineering (CGEE2020), International Association of Computer Science and Information Technology, Istanbul, Turkey (online), 05 Aug. 2020, English, Oral presentation

[Committee Memberships]

・Oct. 2020, The Institute of Life Cycle Assessment, Japan (ILCAJ), Society

・Mar. 2016, Geothermal Research Society of Japan (GRSJ), Society

[Research Projects]

・Developing a policy analysis tool for low-carbon residential heating and cooling technology deployment in Japan, Japan Society for the Promotion of Science (JSPS), KAKENHI, Early-Career Scientists, Apr. 2020, Mar. 2022

FUJIYOSHI Rei

Researcher

[Academic Career]

Hokkaido University 大学院環境科学院 地球圏科学専攻 物質循環・環境変遷学コース（博士後期課程） (2011-2016)

Hokkaido University 大学院環境科学院 地球圏科学専攻 物質循環・環境変遷学コース（修士課程） (2009-2011)

Hokkaido University, School of Fisheries Sciences, Department of Fisheries Oceanography and Marine Science (2005-2009)

[Professional Career]

The Research Institute for Humanity and Nature Research Department 研究員 (2017-)

Yamagata University Faculty of Agriculture-Field Science Center 技術補佐員 (2016-2017)

[Higher Degrees]

Hokkaido University (2016)

[Fields of Specialization]

Environmental science/Agricultural science > Environmental dynamics

[Awards]

若手研究者奨励賞 藤吉 麗 大学共同利用機関法人 人間文化研究機構 総合地球環境学研究所 (2019)

Best Poster Award on 1st ISO-FOOD International Symposium on Isotopic and Other Techniques in Food Safety and Quality, Christoph RUPPRECHT, Lei FUJIYOSHI, Steven MCGREEVY, Ichiro TAYASU, ERA Chair in Jozef Stefan Institute, Slovenia (2019)

Best Poster Award on 1st ISO-FOOD International Symposium on Isotopic and Other Techniques in Food Safety and Quality, Christoph RUPPRECHT, Lei FUJIYOSHI, Steven MCGREEVY, Ichiro TAYASU, ERA Chair in

函館市長賞 藤吉麗 北海道函館市 (2009)

—Achievements—

[MISC]

・藤吉麗; 陀安一郎; 藪崎志穂; 原口岳; 由水千景; 大串健一; 古川文美子; 伊藤真之; 山本雄大; 横山正; 三橋弘宗, 2020, Contrasting seasonal dynamics of nitrate and sulfate in Chikusa River watershed, Hyogo, Japan, 日本生態学会大会講演要旨(Web), 67th

・陀安一郎; 藤吉麗; 藪崎志穂; SHIN Ki-Cheol; 中野孝教; 谷口真人, 2020, Environmental studies using environmental traceability methodology, 日本地球惑星科学連合大会予稿集(Web)

HAYASHIDA Sachiko

Professor

[Academic Career]

Nagoya University Graduate School of Science 大気水圏科学 (1982-1985)

Nagoya University, Graduate School of Science, Science of Atmosphere and Hydrosphere (1980-1982)

Kyoto University Faculty of Science 地球物理学 (1976-1980)

[Professional Career]

Research Institute for Humanity and Nature, Research Division, Professor, Prof. Dr. (2019-)

Nara Women's University Faculty of Science Professor (2012-)

Nara Women's University 理学部 情報科学科 Professor (2001-2012)

Nara Womens University, Associate Professor (1994-2001)

Kyoto University, Graduate School of Energy Scienc, Assoiate Proffessor (1999-2000)

国立環境研究所 Senior Scientist (1990-1993)

National Oceanic and Atmospheric Administration, Visiting Researcher (1992-1993)

National Institute for Environmental Studies, Researcher (1985-1990)

[Higher Degrees]

Science, Nagoya University (1985)

[Fields of Specialization]

Natural sciences > Atmospheric and hydrospheric science

Environmental science/Agricultural science > Environmental dynamics

[Academic Society Memberships]

日本エアロゾル学会

日本大気化学会

JpGU

American Geophysical Union

Meteorological Society of Japan

日本リモートセンシング学会

[Awards]

Horiuchi Aword, Japan Meteorological Society (2002)

Best Paper Award, The Remote Sensing Society of Japan (1999)

Nikkei Global Environmental Technology Awards (1992)

—Achievements—

[Published Papers]

- Trang Thi Quynh Nguyen; Wataru Takeuchi; Prakhar Misra; Sachiko Hayashida, 24 Feb. 2021, Technical note: Emission mapping of key sectors in Ho Chi Minh City, Vietnam, using satellite-derived urban land use data, Atmospheric Chemistry and Physics, 21 (4), 2795-2818, Copernicus GmbH, English, Refereed, Scientific journal DOI:10.5194/acp-21-2795-2021
- Prakhar Misra; Ryoichi Imasu; Sachiko Hayashida; Ardhi Adhary Arbain; Ram Avtar; Wataru Takeuchi, 11 Sep. 2020, Mapping Brick Kilns to Support Environmental Impact Studies around Delhi Using Sentinel-2, ISPRS International Journal of Geo-Information, 9 (9), 544-544, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/ijgi9090544
- 山口小雪; 林田佐智子, Sep. 2020, 那覇で観測された対流圏オゾンの増大現象について, Tenki, 67 (8), 445-453, The Meteorological Society of Japan, Japanese, Refereed, Scientific journal
- Surendra K. Dhaka; Chetna; Vinay Kumar; Vivek Panwar; A. P. Dimri; Narendra Singh; Prabir K. Patra; Yutaka Matsumi; Masayuki Takigawa; Tomoki Nakayama; Kazuyo Yamaji; Mizuo Kajino; Prakhar Misra; Sachiko Hayashida, Aug. 2020, PM2.5 diminution and haze events over Delhi during the COVID-19 lockdown period: an interplay between the baseline pollution and meteorology, Scientific Reports, 10 (1), Springer Science and Business Media LLC, English, Refereed, Scientific journal DOI:10.1038/s41598-020-70179-8

・Masayuki Takigawa; Prabir K. Patra; Yutaka Matsumi; Surendra K. Dhaka; Tomoki Nakayama; Kazuyo Yamaji; Mizuo Kajino; Sachiko Hayashida, Apr. 2020, Can Delhi's Pollution be Affected by Crop Fires in the Punjab Region?, SOLA, 16, 86-91, METEOROLOGICAL SOC JAPAN, English, Refereed, Scientific journal DOI:10.2151/sola.2020-015

[MISC]

・犬伏和之; 谷道琢朗; 山本昭範; 小野圭介; 須藤重人; 林田佐智子; 齋藤尚子; AMBETHGAR V., 2021, Relationships among soil color, iron contents and methane production in south India, 熱帯農業研究, 14 (Extra Issue 1)

・林田佐智子, Mar. 2021, Single work, シリーズ三角点 ウィズコロナの時代の地球観測〜衛星から人間活動が見える時代に〜, 月刊測量、日本測量協会

・林田佐智子, Sep. 2020, 会長就任のご挨拶, 日本リモートセンシング学会誌, 40 (4), 1-1, Japanese, Invited, Others

・Sachiko Hayashida and Prakhar Misra, Jun. 2020, How might the unexpected change in air quality caused by the lockdown in India change people's future behaviour?, Newsletter Aakash, 2

・瀬成桂太; 犬伏和之; 山本昭範; 小野圭介; 須藤重人; 林田佐智子; 齋藤尚子; AMBETHGAR V., 2020, Effect of rice straw, biochar and nitrogen on greenhouse gases production in paddy soils in south India (part2), 熱帯農業研究, 13 (Extra Issue 1)

・林田 佐智子, 2020, 何故学会が必要なのか, Journal of the Japan society of photogrammetry and remote sensing, 59 (5), 181-181, Japan Society of Photogrammetry and Remote Sensing, Japanese, Invited, Others DOI:10.4287/jsprs.59.181

[Presentations]

・K.Inubushi; T.Tanimichi; A.Yamamoto; K.Ono; S.Sudo; S.Hayashida; N.Saitoh; V.Ambethgar, Relationships among soil color, iron contents and methane production in south India, 129th Annual Meeting of the Japanese Society for Tropical Agriculture, 16 Mar. 2021, 16 Mar. 2021 - 17 Mar. 2021, Japanese, Oral presentation

・Prakhar Misra, COVID-19 lockdown impacts on NOx emission: top-down estimation over North India, 29th IIS forum "Earth observation, disaster monitoring and risk assessment from space", 12 Mar. 2021, 11 Mar. 2021 - 12 Mar. 2021, English, Oral presentation

・Sachiko Hayashida, Detection of air pollution reduction due to a change of anthropogenic activities after COVID-19 pandemic over south Asia, 29th IIS forum "Earth observation, disaster monitoring and risk assessment from space", 12 Mar. 2021, 11 Mar. 2021 - 12 Mar. 2021, English, Oral presentation

・Sachiko Hayashida, A pathway of social transformation toward clean air, public health and sustainable agriculture - a case in North India., Kick-off Symposium NIES/NU/RIHN on Planetary Health, 18 Feb. 2021, 18 Feb. 2021 - 19 Feb. 2021, Invited, Japanese, Nominated symposium

・Kaho Nitta; Sachiko Hayashida, Intercomparison of TROPOMI and OMI tropospheric NO2 over South Asia, The 69th Conference (2020 Autumn Conference) of the Remote Sensing Society of Japan, 22 Dec. 2020, 21 Dec. 2020 - 22 Dec. 2020, Japanese, Oral presentation

・Misra, P; M. Takigawa; P. Khatri; S. K. Dhaka; A. P. Dimri; K. Yamaji; M. Kajino; W. Takeuchi; R. Imasu; P. K. Patra; S. Hayashida, Detection of significant change in nitrogen oxides concentration and emission during COVID-19 lockdown in North India, AGU Fall Meeting 2020 (Online), 15 Dec. 2020, Dec. 2020, English, Poster presentation

・Nguyen, T. H; S. Hayashida; P. Misra; P. Khatri; Y. Matsumi; T. Nakayama; S. K. Dhaka; A. P. Dimri, Detection of Change in the Aerosol distribution over North-West India during the Covid-19 Lockdown period, AGU Fall Meeting 2020 (Online), 07 Dec. 2020, Dec. 2020, English, Poster presentation

・Hayashida, S; P. Misra; K. Nitta; T. H. Nguyen; P. K. Patra; M. Takigawa; P. Khatri; S. K. Dhaka; A. P. Dimri; K. Yamaji; M. Kajino; W. Takeuchi, Reduction of air pollutants over North-West India observed from space during the Covid-19 lockdown period, AGU fall meeting 2020, 07 Dec. 2020, Dec. 2020, English, Poster presentation

・Hayashida, S, “Aakash: An interdisciplinary study toward clean air, public health and sustainable agriculture: The case of crop residue burning in North India.” Earth Observations of Crop Burning and Air Pollution over India, A Community Response Forum, NASA, 12 Nov. 2020, Nov. 2020, Invited, English, Invited oral presentation

・Sachiko Hayashida, Concept of mission DELHIS: why we want to estimate the anthropogenic emission of air pollutants in Delhi and how, Northern India Air Pollution Meeting, 23 Aug. 2020, 23 Aug. 2020 - 24 Aug. 2020, Invited, English, Nominated symposium

[Committee Memberships]

・Jul. 2020, President, Remote Sensing Society of Japan (RSSJ), Society

・Mar. 2013, Mar. 2021, 臨時委員宇宙開発利用部会委員, 文部科学省科学技術・学術審議会, Government

・Jun. 2011, 委員, 航空機による地球環境観測推進委員会, Others
・May 2011, 委員, 成層圏オゾン層保護に関する検討会, Others
・Apr. 2009, 委員, 京都大学生存圏研究所生存圏フォーラム運営委員会, Others
・May 2006, 対流圏衛星観測検討委員会委員, 大気化学研究会, Society
・Jun. 1999, 班員, 宇宙科学研究所理学委員会「B.太陽系科学分野」, Others

[Research Projects]
・An Interdisciplinary Study toward Clean Air, Public Health and Sustainable Agriculture: The Case of Crop Residue Burning in North India, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, Oct. 2018, Mar. 2025

[Media Coverage]
・GNDU to install portable ambient air quality sensor, The Tribune, Dec. 2020, Paper
・Study tries to assess brick kilns' impact on air, Times of India, Dec. 2020, Paper

HUANG Wanhui

Researcher

[Academic Career]
京都大学大学院 農学研究科 (2010-2013)

[Fields of Specialization]
Environmental science/Agricultural science > Rural environmental engineering and planning
Humanities & social sciences > Local studies
Humanities & social sciences > Tourism studies

[Academic Society Memberships]
環境情報科学センター
農村計画学会
農業農村工学会

—Achievements—

[Books etc]
・グリーンインフラ研究会; 三菱 UFJ リサーチ&コンサルティング; 日経コンストラクション, Jul. 2020, 実践版!グリーンインフラ, 520p, 日経 BP, 日経 BP マーケティング (発売), Japanese, ISBN: 9784296106752

[Published Papers]
・Wanhui Huang, 2021, A Study of the Green Tourism Resources in Taiwan with the Rural Regeneration Project Plans and Location Analysis, 環環境情報科学学術研究論文集, 35, 31-36, Japanese, Refereed, Scientific journal
・黄エン惠; 吉積巳貴, 2020, 和歌山県みなべにおけるインバウンド観光への試みと外国人留学生による景観評価, 環環境情報科学, 49 (3), 90-95, Japanese, Refereed

[Research Projects]

・台湾の農村地域における観光資源の利用実態の解明に向けたビッグデータによる空間分析, 黄 エンケイ, 日本学術振興会, 科学研究費助成事業 若手研究, 若手研究, 総合地球環境学研究所, 01 Apr. 2018, 31 Mar. 2021, 3510000, 2700000, 810000, 研究の内容は４つの方向に分けられ、それぞれは１）農村地域（700 以上の集落を対象として）の観光地域資源データベースの構築、２）台湾全国における観光資源のマッピングと空間分析、３）レジャー農業区の形成と管理評価、４）事例調査となる。 研究開始の 1 年目では農村再生計画事業における観光資源のリストアップとデータベースの整理を目的にしたが、データ量は予定したよりも複雑のため、完成まで 1 年半もかかり、納期が研究期間の 2 年目の上半期まで伸ばした。2 年目の上半期は農村再生計画事業のデータ整理を完成した。6 月中旬には最も多くのレジャー農業区を持つ宜蘭県政府にインタビューを行い、レジャー農業区の管理と評価指標の設定について把握した。また、県内 3 つのレジャー農業区にも現地を調査した。宜蘭県は、高速道路の建築によって台北市から車で一時間に短縮した。宜蘭県の観光業はこの影響で活発になった。レジャー農業の管理は独自の評価基準を設けた。こういった基準の活用はレジャー農業の品質管理に貢献した。8 月下旬には屏東県の原住民集落に位置する地下ダムに調査し、国際交流研究会に参加した。日本人の鳥居信平が建設したレガシーで、日本植民地時代に残した地域資源として有名である。今回の研究会はプログラムの企画と講演者とのやり取りにも貢献した。研究会には日本の水資源・環境学会と台湾の屏東国立大学の研究者、県政府の方々も参加した。地下ダムは伏流水を活用しながら、周辺環境の生態系を最大限に考慮したうえに、作られた。今でもきれいな水が流れ、住民に生活用水と灌漑用水を提供している。2 年目の下半期は、空間地理データと観光に関する統計データの収集とマッピングに専念した。データの統合と分析は次年度に実施する。, 18K18274

ISHII Reiichiro

Associate Professor

[Academic Career]

Kyoto University 理学研究科 生物科学 (1999)

[Professional Career]

- 現職 (2015-)

Japan Agency for Marine-Earth Science and Technology 地球環境変動領域 主任研究員 (2013-2014)

Japan Agency for Marine-Earth Science and Technology 地球環境フロンティア研究センター 研究員 (2005-2012)

Research Institute for Humanity and Nature (2004-2005)

National Institute of Advanced Industrial Science and Technology (2002-2004)

学振特別研究員 PD (1999-2002)

JSPS Post Doctoral Fellow (1999-2001)

学振特別研究員 DC2 (1997-1999)

JSPS Fellow PC2 (1997-1999)

[Higher Degrees]

Kyoto University (1999)

[Fields of Specialization]

Life sciences > Ecology and environmental science

[Academic Society Memberships]

日本生態学会

日本地球惑星科学連合

—Achievements—

[Published Papers]

・Yayoi Takeuchi; Hiroyuki Muraoka; Takehisa Yamakita; Yuichi Kano; Shin Nagai; Touch Bunthang; Mark John Costello; Dedy Darnaedi; Bibian Diway; Tonny Ganyai; Chaiwut Grudpan; Alice Hughes; Reiichiro Ishii; Po Teen Lim; Keping Ma; Aidy M. Muslim; Shin-ichi Nakano; Masahiro Nakaoka; Tohru Nakashizuka; Manabu Onuma; Chan-Ho Park; Runi Sylvester Pungga; Yusuke Saito; Mangal Man Shakya; Mohd Khairulazman Sulaiman; Maya Sumi; Phanara Thach; Yongyut Trisurat; Xuehong Xu; Hiroya Yamano; Tze Leong Yao; Eun-Shik Kim; Sheila Vergara; Tetsukazu Yahara, Mar. 2021, The Asia-Pacific Biodiversity Observation Network: 10-year achievements and new strategies to 2030, Ecological Research, 36 (2), 232-257, Wiley, Refereed, Scientific journal DOI:10.1111/1440-1703.12212

KAJITA Ryosuke

Researcher

[Academic Career]

Kyoto University, Graduate School of Asian and African Area Studies, Division of Southeast Asian Area Studies (2012-2017)

Osaka University, School of Foreign Studies, Department of Foreign Studies, Indonesian (2008-2012)

[Professional Career]

Tenri University Faculty of International Studies Department of Area Studies 非常勤講師 Indonesian Language (2019-)

Research Institute for Humanity and Nature, Research Department, Researcher (2017-2021)

Kyoto University, Center for Southeast Asian Studies, Researcher (2017)

Tohoku University

[Higher Degrees]

Master degree (Area Studies), Kyoto University (2014)

[Fields of Specialization]

Humanities & social sciences > Local studies

[Academic Society Memberships]

Colloquium on Indonesian Studies in Japan

Japan Society for Natural Disaster Science

[Awards]

第 33 回学術講演会 発表優秀賞 1500 年－1940 年のインドネシアの地震 日本自然災害学会 (2014)

—Achievements—

[Published Papers]

・Kajita, R.; Yamanaka, M.D.; Kozan, O., 2021, Reconstruction of rainfall records at 24 observation stations in Sumatera, Colonial Indonesia, from 1879 to 1900, Journal of Hydrometeorology, English, Refereed, Scientific journal

[Presentations]

・梶田諒介; 甲山治, 1810–1850 年のインドネシアの地震および火山噴火に関する植民地期新聞記事の記述内容と歴史的分析, 第 39 回日本自然災害学会学術講演会, 19 Mar. 2021, 19 Mar. 2021 - 20 Mar. 2021, Japanese, Oral presentation

・梶田諒介, 1879–1900 年の植民地期スマトラ島における 24 観測地点の降雨観測記録の復元, インドネシア研究懇話会第 2 回研究大会, 28 Nov. 2020, Japanese, Oral presentation

[Academic Contribution]

・地球研環境教育コメンテーター：洛北高校課題探究 II 環境ゼミアドバンスセミナー中間発表会, 梶田諒介, Review, 地球研-洛北高校, 22 Oct. 2020

・地球研環境教育コメンテーター：洛北高校課題探求 II 課題アイディア発表会, 梶田諒介, Review, 地球研-洛北高校, 04 Jun. 2020

[Research Projects]

・インドネシアにおける歴史地震・火山噴火の被害記録の復元と災害対応の変遷, 梶田 諒介, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Early-Career Scientists, Research Institute for Humanity and Nature, Apr. 2018, Mar. 2022, 4160000, 3200000, 960000, 本研究の目的は、インドネシアにおける歴史地震・火山噴火について、オランダ植民地時代の歴史資料を用いながら過去の地震記録および火山噴火記録を復元し、さらにインドネシアの地域社会における歴史的な災害対応と変遷を明らかにすることである。H30 年度は、主に 1926 年 6 月 28 日に発生したスマトラ島西部地震に関してオランダ語文献の調査を進めた。この地震はスマトラ島西部に位置する西スマトラ州の内陸部を中心に発生したものであり、広い範囲に渡って揺れによる倒壊被害や湖岸沿いの村が津波により被害を受けたものであった。当時の報告書や地方新聞を用いることで、地域社会の被災状況を調査した。 研究成果として、第 37 回日本自然災害学会学術講演会の「地震動・火山・地盤」セッションにおいて、「植民地期報告書や地方新聞を用いた 1926 年 6 月 28 日インドネシア・スマトラ島西部地震による社会的影響の復元」と題した報告を行った。本報告では、上記の研究内容について発表を行い、地震の揺れによる家屋の倒壊状況や地域社会における経済的損害について分析し、考察を加えたものである。本セッションでは自然災害の専門家とも意見交換を行ったことで、インドネシアの地震研究における歴史資料の有用性やその検証について議論ができた。主に地方新聞の記事を中心に分析を試みたため被災地域周辺の状況が中心であったが、今後は貿易報告書や農業報告書といった他史料も用いつつ災害による影響分析を行い、論文執筆につなげる。また、18－19 世紀の地震・火山噴火に関しても地域を広げつつ分析を続けていく計画である。, 18K18269

・Toward the Regeneration of Tropical Peatland Societies: Building International Research Network on Paludiculture and Sustainable Peatland Management, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, Apr. 2013, Mar. 2022

[Teaching Experience]

・Indonesian Level D1, Tenri University, 99 Sep. 2020

・Indonesian Level C1, Tenri University, 20 Apr. 2020

KANEMOTO Keiichiro

Associate Professor

[Fields of Specialization]

Environmental science/Agricultural science > Recycling systems and society

[Awards]

Highly Cited Researcher in the field of Cross-Field, Keiichiro Kanemoto, Clarivate Analytics (2020)

Young Researcher’s Award Keiichiro Kanemoto The Institute of Life Cycle Assessment Japan (2020)

Outstanding Reviewer for Environmental Research Letters, IOP Publishing (2019)

Highly Cited Researcher in the field of Cross-Field, Clarivate Analytics (2019)

Outstanding Reviewer for Environmental Research Letters, IOP Publishing (2018)

Highly Cited Researcher in the field of Cross-Field, Keiichiro Kanemoto, Clarivate Analytics (2018)

Highly Cited Researcher in the field of Cross-Field クラリベイト・アナリティクス (2021)

—Achievements—

[Books etc]

・日本森林学会, Jan. 2021, エコロジカル・フットプリント, 森林学の百科事典, xxi, 659p, 図版 8p, 丸善出版, Japanese, ISBN: 9784621305843

[Published Papers]

- Tesshu Hanaka; Keiichiro Kanemoto; Shigemi Kagawa, 2021, Multi-perspective Structural Analysis of Supply Chain Networks, Economic Systems Research, Accepted, English, Refereed, Scientific journal
- Jemyung Lee; Oliver Taherzadeh; Keiichiro Kanemoto, 2021, The scale and drivers of carbon footprints in households, cities and regions across India, Global Environmental Change, 66, 102205-102205, Elsevier BV, English, Refereed, Scientific journal DOI:10.1016/j.gloenvcha.2020.102205
- Yosuke Shigetomi; Keiichiro Kanemoto; Yuki Yamamoto; Yasushi Kondo, 2021, Quantifying the Carbon Footprint Reduction Potential of Lifestyle Choices in Japan, Environmental Research Letters, 16 (6), 064022, Refereed
- Yin Long; Dabo Guan; Keiichiro Kanemoto; Alexandros Gasparatos, 2021, Negligible impacts of early COVID-19 confinement on household carbon footprints in Japan, One Earth, 4 (4), 553-564, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.oneear.2021.03.003
- Yin Long; Yida Jiang; Peipei Chen; Yoshikuni Yoshida; Ayyoob Sharifi; Alexandros Gasparatos; Yi Wu; Keiichiro Kanemoto; Yusuke Shigetomi; Dabo Guan, 2021, Monthly direct and indirect greenhouse gases emissions from household consumption in the major Japanese cities, Scientific Data, 8 (301), Refereed
- Keisuke Nansai; Susumu Tohno; Satoru Chatani; Keiichiro Kanemoto; Shigemi Kagawa; Yasushi Kondo; Wataru Takayanagi; Manfred Lenzen, 2021, Consumption in the G20 nations causes particulate air pollution resulting in two million premature deaths annually, Nature Communications, 12 (6286), Refereed
- Nguyen Tien Hoang; Keiichiro Kanemoto, 2021, Mapping the deforestation footprint of nations reveals growing threat to tropical forests, Nature Ecology & Evolution, 5 (6), 845-853, English, Refereed, Scientific journal
- Keiichiro Kanemoto; Yosuke Shigetomi; Nguyen Tien Hoang; Keijiro Okuoka; Daniel Moran, 2020, Spatial Variation in Household Consumption-Based Carbon Emission Inventories for 1, 200 Japanese Cities, Environmental Research Letters, 15 (11), 114053, IOP Publishing, English, Refereed, Scientific journal DOI:10.1088/1748-9326/abc045
- Manfred Lenzen; Mengyu Li; Arunima Malik; Francesco Pomponi; Ya-Yen Sun; Thomas Wiedmann; Futu Faturay; Jacob Fry; Blanca Gallego; Arne Geschke; Jorge Gómez-Paredes; Keiichiro Kanemoto; Steven Kenway; Keisuke Nansai; Mikhail Prokopenko; Takako Wakiyama; Yafei Wang; Moslem Yousefzadeh, 2020, Global socio-economic losses and environmental gains from the Coronavirus pandemic, PLOS ONE, 15 (7), e0235654, English, Refereed, Scientific journal
- Keisuke Nansai; Susumu Tohno; Satoru Chatani; Keiichiro Kanemoto; Midori Kurogi; Yuta Fujii; Shigemi Kagawa; Yasushi Kondo; Fumiya Nagashima; Wataru Takayanagi; Manfred Lenzen, 2020, Affluent countries inflict inequitable mortality and economic loss on Asia via PM2.5 emissions, Environment International, 134, 105238, PERGAMON-ELSEVIER SCIENCE LTD, English, Refereed, Scientific journal DOI:10.1016/j.envint.2019.105238

[MISC]

- Daniel Moran; Stefan Giljum; Keiichiro Kanemoto; Javier Godar, 2020, From Satellite to Supply Chain: New Approaches Connect Earth Observation to Economic Decisions, One Earth, 3 (1), 5-8, English, Introduction scientific journal

[Presentations]

- 重富陽介; 金本圭一朗; 山本裕基; 近藤康之, 日本のマイクロ消費データを用いた家計カーボンフットプリントの推定, 日本 LCA 学会, Mar. 2021, Japanese, Oral presentation
- 金本圭一朗; 重富陽介; Nguyen Tien Hoang; 奥岡桂次郎; Daniel Moran, 日本の 1, 200 都市の消費ベースの排出量の推計, 日本 LCA 学会, Mar. 2021, Japanese, Oral presentation
- Nguyen Tien Hoang; Keiichiro Kanemoto, Spatio-temporal changes in global deforestation footprints over 15 years, The 14th EcoBalance, Mar. 2021, English, Oral presentation
- Jemyung Lee; Oliver Taherzadeh; Keiichiro Kanemoto, The scale and drivers of carbon footprints in households, cities and regions across India, The 14th EcoBalance, Mar. 2021, English, Oral presentation

[Research Projects]

- 生物の系統・全ゲノム情報を利用した貿易を通じた種多様性・固有性評価に関する研究, 金本 圭一朗; 高梨 功次郎; 土中 哲秀; 久保田 康裕; 筧 雄介, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (A), Research Institute for Humanity and Nature, Apr. 2020, Mar. 2024, 40430000, 31100000, 9330000, 20H00651
- Mapping the Environmental Impact Footprint of Cities, Companies, and Household, Keiichiro Kanemoto, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, Apr. 2017, Mar. 2024

・FS, フードチェーン全体を通じた食品ロス低減とそれに伴う環境負荷削減に関する研究, 金本圭一朗; 横矢直人; 杉原創; 角谷拓, ムーンショット型農林水産研究開発事業, Dec. 2020, Mar. 2022

・Responsibility footprint analysis of Japanese activities to water resources sustainability in the world considering future changes, 本下 晶晴; 金本 圭一朗; 小澤 暁人; 近藤 康之, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)), National Institute of Advanced Industrial Science and Technology, Oct. 2018, Mar. 2022, 17030000, 13100000, 3930000, 本研究では、将来変化を反映した水資源利用のプラネタリー・バウンダリ指標を開発し、日本の生産・消費活動に起因する世界各国の環境容量超過リスクへの責任をフットプリントとして定量化し、その原因を見える化するために以下に示す 3 課題に取り組んでおり、これまでの研究実績として以下のような成果が得られている。【課題 1：将来における水資源賦存量および水需要の予測】既存の水資源モデルの適合性に関して、海外の研究協力者とともに将来変化推定に向けた重要なパラメータの抽出を行い、各候補となるモデルの適合性に関する検討を行った。【課題 2：将来変化を反映したプラネタリー・バウンダリ指標の開発】現状の水資源賦存量および需要予測に基づいたプラネタリーバウンダリ指標の算定を行い、将来変化を考慮した多面的な評価に向けた複数の側面に関する評価の可能性についての予備的検討を行った。【課題 3：日本の生産・消費活動に起因する責任フットプリントの分析】各国における各セクターの水資源消費量の算定を行うと共に、国際産業連関分析モデルとの接続に向けた対応表の作成ならびにセクターの細分化に向けた検討を進めた。次年度以降の将来変化を反映した水資源利用のプラネタリー・バウンダリ指標と日本の生産・消費活動に起因する世界各国の環境容量超過リスクへの責任の定量化に向けた基礎情報を蓄積できており、今後の研究実施をスムーズに進める基盤が整った。, 18KK0303

・地球規模の空間情報を利用したサプライチェーンに伴う環境負荷の推計, 金本 圭一朗; 奥岡 桂次郎, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), Shinshu University, Jul. 2018, Mar. 2021, 17940000, 13800000, 4140000, 18KT0004

・アジアのバリューチェーンを通じた PM2.5 による健康被害の発生メカニズムの解明, 南齋 規介; 加河 茂美; 金本 圭一朗; 茶谷 聡; 近藤 康之; 東野 達, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (A), National Institute for Environmental Studies, Apr. 2016, Mar. 2021, 40040000, 30800000, 9240000, 本年度は，PM2.5 濃度から健康影響に対する相対リスクの計算に用いる統合曝露反応モデルが定義する PM2.5 濃度と相対リスクの非線形性に注目し，PM2.5 濃度を誘発する消費国の相対リスクに対する寄与を定める方法論を開発した。開発したランダム化相対リスク法の特徴は，グリッド内の PM2.5 濃度域を複数の区間に分割し，その分割した区間毎に相対リスクへの寄与を計算する。そして，中国，日本，米国，ドイツ，イギリスの消費国が各グリッド内で形成する濃度に相当する区間の位置をランダムに定め，該当する区間の相対リスクを集計することで，各国の寄与を決定する。本研究では，濃度域を 200 区間に分割し，6000 通りのランダムな区間位置の選択を行い，その平均値から各国の相対リスクに対する寄与を計算した。また，5 つの消費国が誘引するアジア領域の早期死亡者を年齢階層別に分析するため最新の人口マップデータを採用した。その結果，高齢層に早期死亡者数が多いが，乳幼児への影響も多いことを確認した。計算した年齢別の早期死亡者数から，世界銀行の方法論を援用して男女別の逸失労働所得を国別に求めて乗ずることで，早期死亡者数を所得損失額に換算した。アジアでは中国での損失が大きいが，相対的に所得の高い日本の損失額が早期死亡者数よりもアジアにおける位置付けが相対的に向上することが分かった。さらに，計算対象をアジア領域だけでなく，欧州，北米の領域への計算を開始し，消費国の全球レベルの影響の解明に着手した。, 16H01797

・Environmental Footprints of Cities: A New Approach, Young Research Talents grant, Jul. 2019, 2021

KATAFUCHI Yuya

Researcher

[Academic Career]

Kyushu University, Graduate School of Economics, Doctoral Program, Department of Economic Engineering (2015-2019)

National Taiwan University, College of Social Science, Visiting Ph.D. Student (2017)

Kyushu University, Graduate School of Economics, Master Program, Department of Economic Engineering (2013-2015)

[Professional Career]

Research Institute for Humanity and Nature, Research Department, Researcher (2020-2021)

Research Institute for Humanity and Nature, Research Department, Research Associate (2019-2020)

Kyushu University, Graduate School of Economics, Teaching Assistant (2016-2019)
Kyushu University, Graduate School of Economics, Research Assistant (2016-2019)
Kyushu University, Faculty of Economics, Technical Staff (2018)

[Higher Degrees]
Kyushu University

[Fields of Specialization]
Environmental science/Agricultural science > Environmental impact assessment > Environmental Economics
Natural sciences > Applied mathematics and statistics > Applied Machine Learning
Natural sciences > Applied mathematics and statistics > Statistics
Humanities & social sciences > Economic statistics > Applied Econometrics
Humanities & social sciences > Economic statistics > Econometrics

—Achievements—

[Published Papers]
- Kenichi Kurita; Nobuaki Hori; Yuya Katafuchi, 04 Nov. 2020, Stigma model of welfare fraud and non-take-up: Theory and evidence from OECD panel data, International Journal of Economic Theory, Wiley, English, Refereed, Scientific journal DOI:10.1111/ijet.12295
- Yuya Katafuchi; Augusto Ricardo Delgado Narro, 29 Sep. 2020, Penalised Quantile Regression Analysis of the Land Price in Japan by Using GIS Data, Eurasian Economic Perspectives, 27, 87-105, Springer International Publishing, English, Refereed, In book DOI:10.1007/978-3-030-53536-0_7

[MISC]
- Yuya Katafuchi, Jun. 2020, covid-19_emergency_statement_japan, GitHub, URL: https://github.com/yuya-katafuchi/covid-19_emergency_statement_japan, English, Others

[Presentations]
- Augusto Ricardo Delgado Narro; Yuya Katafuchi, COVID-19, state of emergency, and housing market, 2020 Autumn Conference of Japan Association for Applied Economics, 22 Nov. 2020, 21 Nov. 2020 - 22 Nov. 2020, English, Oral presentation
- Augusto Ricardo Delgado Narro; Yuya Katafuchi, Decomposition of Density into their Components: Analysis for the case of Japan, 2020 Spring Conference of Japanese Association for Applied Economics, 20 Jun. 2020, English, Oral presentation

[Academic Contribution]
- Epidemiology & Infection, Nov. 2020
- Technological Forecasting and Social Change, Sep. 2020
- Economics of Disasters and Climate Change, Sep. 2020
- 2020 Autumn Conference of Japan Association for Applied Economics (Discussant), Academic society etc, Japan Association for Applied Economics, 21 Nov. 2020

[Research Projects]
- Mapping the Environmental Impact Footprint of Cities, Companies, and Household, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, Apr. 2017, Mar. 2024
- 新型コロナウイルス感染症が地価に与える影響に関する実証分析, 片渕 結矢, 日本学術振興会, 科学研究費助成事業 研究活動スタート支援, 研究活動スタート支援, 総合地球環境学研究所, 11 Sep. 2020, 31 Mar. 2022, 2860000, 2200000, 660000, 20K22142

[Media Coverage]
- 新型コロナ禍での緊急事態宣言には確かな効果 総合地球環境学研究所, 財経新聞, 29 Sep. 2020, https://www.zaikei.co.jp/article/20200929/587078.html, Internet

・新型コロナウイルス感染症禍での緊急事態宣言にはやはり外出抑制効果があった～感染リスクとスティグマを考慮した理論分析と実証分析で明らかに, 経済レポート, 25 Sep. 2020, http://www3.keizaireport.com/report.php/RID/429741/, Internet
・新型コロナに対する緊急事態宣言には外出抑制効果があった、地球研が分析, マイナビニュース, 24 Sep. 2020, https://news.mynavi.jp/article/20200924-1333994/, Internet

KIMIJIMA Satomi

Researcher

[Academic Career]
Asian Institute of Technology, School of Engineering and Technology (2012-2018)
お茶の水女子大学大学院 大学院人間文化創成科学研究科 (2007-2010)
Asian Institute of Technology, School of Environment, Resources and Development (2007-2009)

[Professional Career]
Research Institute for Humanity and Nature Research Department 研究員 (2019-)
Yamaguchi University 創成科学研究科 学術研究員 (2018-2019)
Asian Institute of Technology, Research Associate (2012-2018)
Asian Institute of Technology, GIC, Research Associate (2011-2012)
FAO of the United Nations Regional Office for Asia and the Pacific インターン・コンサルタント (2010-2011)

[Higher Degrees]
(2009)

[Fields of Specialization]
Humanities & social sciences > Geography
Environmental science/Agricultural science > Environmental impact assessment

[Awards]
Award of Excellent Paper, Satomi Kimijima, Mobility assessment for sustainable rural development: conversion of conventional mobility data and historical analysis, International Society of Environmental and Rural Development (2017)
Award of Excellent Paper, Satomi Kimijima, Mobility assessment for sustainable rural development: conversion of conventional mobility data and historical analysis, International Society of Environment
Award of Excellent Paper, Satomi Kimijima, Visualization of questionnaire-based person trip and its time-series analysis, Asian Transportation Research Society (2015)
Award of Excellent Paper, Satomi Kimijima, Study of urbanization corresponding to socio-economic activities in Savannaket, Laos using satellite remote sensing, Institution of Geospatial and Remote Sensing Malaysia (2014)
Award of Excellent Paper, Satomi Kimijima, Study of urbanization corresponding to socio-economic activities in Savannaket, Laos using satellite remote sensing, Institution of Geospatial and Remote Sen
Award of Excellent Paper, Satomi Kimijima, Role and opportunities for foreign investment and its risks for rural development in Laos, International Society of Environmental and Rural Development (2012)
Award of Excellent Paper, Satomi Kimijima, Role and opportunities for foreign investment and its risks for rural development in Laos, International Society of Environmental and Rural Development, Jan

—Achievements—

[Published Papers]
・Kimijima, S., Sakakibara, M., Abd. Kadir Mubarak A Amin, Nagai. M. and Arifin, Y., 18 Nov. 2020, Mechanism of the Rapid Shrinkage of Limboto Lake in Gorontalo, Indonesia., Sustainability, 12 (22), English, Refereed DOI:10.3390/su12229598

・Satomi Kimijima; Masayuki Sakakibara; Abd. Kadir Mubarak A Amin; Masahiko Nagai; Yayu Indriati Arifin, 18 Nov. 2020, Mechanism of the rapid shrinkage of Limboto lake in Gorontalo, Indonesia, Sustainability, 12 (22), 9598-9598, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/su12229598

[Research Projects]

・高負荷環境汚染問題に対処する持続可能な地域イノベーションの共創, Research Institute for Humanity and Nature, Research Project, Co-Creation of Sustainable Regional Innovation for Reducing Risk of High-impact Environmental Pollution, Research Institute for Humanity and Nature, Apr. 2015, Mar. 2024

KOBAYASHI Kunihiko

Researcher

[Academic Career]

名古屋大学大学院 環境学研究科（単位取得満期退学） (2014-2018)

Sophia University 地球環境学研究科（博士前期課程） (2011-2013)

[Professional Career]

Gifu University 非常勤講師 (2017-)

Research Institute for Humanity and Nature Research Section プログラム研究員 (2017-)

Bioversity International, Fellowship (2019)

Gifu University Organization for Research and Community Developement 特任助教 (2015-2017)

Ministry of the Environment 自然環境局生物多様性地球戦略企画室 非常勤職員 (2012-2014)

[Higher Degrees]

(2013)

[Fields of Specialization]

Environmental science/Agricultural science > Environmental policy and society

Humanities & social sciences > New fields in law

[Academic Society Memberships]

CENTER FOR ENVIRONMENTAL INFORMATION SCIENCE

THE ASSOCIATION FOR REGIONAL AGRICULTURAL AND FORESTRY ECONOMICS

ASSOCIATION OF WILDLIFE AND HUMAN SOCIETY

INTELLECTUAL PROPERTY ASSOCIATION OF JAPAN

JAPAN ASSOCIATION FOR ENVIRONMENTAL LAW AND POLICY

[Awards]

RIHN Young Researcher Incentive Award, Kobayashi Kunihiko, Research Institute for Humanity and Nature (2018)

—Achievements—

[Books etc]

・脇田, 健一; 谷内, 茂雄; 奥田, 昇, Dec. 2020, ラグナ湖流域における人口の急速な増加と開発——流域管理の課題（4-1）, Contributor, 流域ガバナンス : 地域の「しあわせ」と流域の「健全性」, xi, 454p, 図版[4]p, 京都大学学術出版会, Japanese, ISBN: 9784814003037

[Published Papers]

・Kunihiko Kobayashi; Eiji Domon; Kazuo Watanabe, Aug. 2020, Interaction of scientific knowledge and implementation of the Multilateral Environment Agreements in relation to digital sequence information on genetic resources, Frontiers in Genetics: ELSI in Science and Genetics, 1-11, English, Refereed, Scientific journal

・Kobayashi Kunihiko, Jun. 2020, Balance of the public interest between conservation and utilization of resources, Japanese journal of tropical agriculture, 13 (1), 1-7, Japanese, Refereed, Scientific journal

[MISC]

・Kunihiko Kobayashi, May 2020, The legal system concerning seeds through discussions on the revision of the Plant Variety Protection and Seed Act (Written in Japanese), Global Net, (354 号), Japanese, Invited, Introduction commerce magazine

[Presentations]

・小林邦彦, Comment and Question to presentation by Amber, 生物遺伝資源 国際ワークショップ【第２部】 「生物多様性条約におけるデジタル配列情報(DSI)の課題」, 09 Dec. 2020, Invited, Japanese, Nominated symposium

・Kunihiko Kobayashi, Changes in the “public interest“ regarding exceptions to plant variety protection, 4 th Asia Pacific Society for Agricultural and Food Ethics Conference, 03 Dec. 2020 - 16 Dec. 2020, English, Oral presentation

・Kunihiko Kobayashi, Current status of negotiations on DSI in the multilateral agreement, 第 7 回 アジア植物遺伝資源 (PGRAsia) シンポジウム, 農研機構遺伝資源センター PGRAsia 事務局, 17 Nov. 2020, Invited, Japanese, Nominated symposium

・Kunihiko Kobayashi, digital sequence information and sharing system, Regional Expert Consultation on Agriculturally Important Microorganisms – Virtual, Asia-Pacific Association of Agricultural Research Institutions, 28 Oct. 2020, Invited, English

・小林邦彦; 西川芳昭; 松島憲一, Agricultural strategy of sub-national governments from the viewpoint of variety registration based on the PVP Law, The 70th Annual Meeting of the Association of Regional Agriculture and Forestry Economics, 11 Oct. 2020, 10 Oct. 2020, Japanese, Oral presentation

[Research Projects]

・アジア諸国を事例とした遺伝資源取得手続きと公益性確保の比較, 国立大学法人筑波大学 つくば機能植物イノベーション研究センター 遺伝子実験センター,「形質転換植物デザイン研究拠点」共同利用・共同研究課題, Apr. 2020

KOBAYASHI Mai

Researcher

[Academic Career]

Kyoto University Graduate School of Global Environmental Studies, Landscape Ecology and Planning, PhD in Global Environmental Studies (2012-2016)

Kyoto University Graduate School of Global Environmental Studies, Terrestrial Ecosystem Management, MA in Environmental Management (2010-2012)

Smith College, Geology, Environmental Science, BA in Liberal Arts (2002-2006)

[Professional Career]

Research Institute for Humanity and Nature, Research, Project Researcher (2016-2021)

NGO Project Bona Fide ボランティアコーディネーター (2007-2008)

Watershed Stewards Project, US Forest Service, Casper Creek Watershed Study, Field Researcher (2006-2007)

[Fields of Specialization]

Environmental science/Agricultural science > Recycling systems and society

Humanities & social sciences > Sociology > Environmental Sociology > Rural Sociology > Political Science of Food

—Achievements—

[Books etc]

・田村, 典江; Rupprecht, Christoph D. D.; McGreevy, Steven R., Mar. 2021, アグロエコロジーとパーマカルチャー（69-72 頁）; 食の主権（88-92 頁）; 手を取り合う農家と八百屋—京都オーガニックアクション（159-161 頁）; 買い物を通じて考える一京都ファーマーズマーケット（162-165 頁）, Contributor, みんなでつくる「いただきます」: 食から創る持続可能な社会, vii, 192p, 昭和堂, Japanese, ISBN: 9784812220290

・Kobayashi, Mai; Rekha Chhetri, Dec. 2020, Joint work, ZACHUM FEAST GOCHISOU – Life around the Bhutanese plate, Research Institute for Humanity and Nature

[Published Papers]

・Steven R. McGreevy; Norie Tamura; Christoph D. D. Rupprecht; Kazuhiko Ota; Mai Kobayashi; Maximilian Spiegelberg, Mar. 2021, Learning About, Playing With, and Experimenting in Critical Futures Through Soft Scenarios - Directions for Food Policy -, ENVIRONMENTAL SCIENCE, 34 (2), 46-65, SOCIETY OF ENVIRONMENTAL SCIENCE, JAPAN, Japanese, Refereed, Invited, Scientific journal DOI:10.11353/sesj.34.46

・Nicholls C.I; Altieri M.A; Kobayashi, M; Tamura, N; McGreevy, S; Hitaka, K, Dec. 2020, Assessing the agroecological status of a farm: a principle-based assessment tool for farmers, Agro Sur, 48 (2), 29-41, English, Refereed, Scientific journal

[Presentations]

・Mai Kobayashi, life in a place with unattended food stalls, KIRI WISDOM Online Session 「新しい日常を耕す：地域から始まるアフターコロナの生活様式」, 20 Jun. 2020, 14 Jun. 2020 - 12 Jul. 2020, Invited, Japanese, Public discourse

[Research Projects]

・アグロエコロジーから見た持続可能な食料生産と景観保全—日本とアメリカの協働—, 羽生淳子, 住友財団, 環境研究助成, Nov. 2019, Nov. 2023

・The "Ulam School": A Food Education Transborders' Network to Foster Solidarity and Edible Flora Preservation for Sustainable and Healthy Lifestyle Among Neighboring Countries, Eric Jose; Olmedo Panal, Toyota Foundation, International Grant Program, Oct. 2018, Oct. 2020, 0, 0, 0, Competitive research funding

KONDO Yasuhisa

Associate Professor

[Academic Career]

The University of Tokyo, Graduate School of Humanities and Social Sciences, Ph.D. Archaeology (2006-2009)

The University of Tokyo, Graduate School of Humanities and Social Sciences, M.A. Archaeology (2002-2005)

The University of Tokyo, Faculty of Letters, Department of Archaeology (2000-2002)

The University of Tokyo, College of Arts & Sciences, Humanities III (1998-2000)

Asahigaoka High School 普通科 (1995-1998)

[Professional Career]

Science Council of Japan, Member (2020-)

Biwako Chishin (Non-Profit Organization), Vice Chair (2020-)

Research Institute for Humanity and Nature, Research Department, Associate Professor (cross-appointed), Project Leader (2018-)

Research Institute for Humanity and Nature, RIHN Center, Associate Professor (2016-)

The University of Tokyo, Center for Spatial Information Science, Visiting Researcher (2010-)

National Institute of Science and Technology Policy, Science and Technology Foresight Center, Visiting Researcher (2016-2020)

Research Institute for Humanity and Nature, Center for Research Promotion, Associate Professor (2014-2016)

Tokyo Institute of Technology, Department of Computer Science, JSPS Research Fellow (PD) (2011-2014)

The University of Tokyo, The University Museum, Project Research Fellow (2010-2011)

The University of Tokyo, Graduate School of Humanities and Social Sciences, Research student (2010)
The University of Tokyo, Department of Archaeology, JSPS Research Fellow (PD) (2009-2010)
The University of Tokyo, Department of Archaeology, JSPS Research Fellow (DC2) (2008-2009)
The University of Tokyo, Graduate School of Humanities and Social Sciences, Research student (2005-2006)

[Higher Degrees]

Ph.D., The University of Tokyo (2010)

[Fields of Specialization]

Humanities & social sciences > Sociology/history of science and technology > Science and Technology for Society
Environmental science/Agricultural science > Environmental policy and society
Humanities & social sciences > Human geography > Geographical Information Systems
Humanities & social sciences > Library/information science > humanistic/social informatics
Humanities & social sciences > Archaeology > Asian archaeology

[Academic Society Memberships]

Japan Consortium for International Cooperation in Cultural Heritage
Japan ICOMOS
European Geosciences Union
CIPA Heritage Documentation
International Association for Geomorphologists
THE ASSOCIATION OF JAPANESE GEOGRAPHERS
日本地球惑星科学連合
日本旧石器学会
THE ANTHROPOLOGICAL SOCIETY OF NIPPON
OSGeo Foundation Japan
GISA (GIS Association of Japan)
考古学研究会
地理情報システム学会
JSWAA (Japanese Society for West Asian Archaeology)
日本西アジア考古学会
JSAI (Japanese Society for Archaeological Information)
Computer Applications and Quantitative Methods in Archaeology

[Awards]

Kurita Water and Environment Research Award, Yasuhisa Kondo, Kurita Water and Environment Foundation, Publisher (2016)
Best Presenter Award, Yasuhisa Kondo, An application of ecological predictive modeling to archaeology, CSIS DAYS 2011 (2011)
Katata Award, Yasuhisa Kondo, Japanese Society for Archaeological Information (JSAI) (2008)

—Achievements—

[Books etc]

・近藤康久; 大西秀之, 01 Mar. 2021, はじめに、8 章「琵琶湖の水草－ひらかれた協働研究の理想と現実」, 4-15; 114-126, Joint editor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, General book, ISBN: 9784780311440
・近藤康久; 酒井陽一郎; 大園享司, 25 Dec. 2020, 2-6 南湖の水草問題をめぐる重層的なアプローチ, 190-212, Contributor, 流域ガバナンス : 地域の「しあわせ」と流域の「健全性」, 454, 京都大学学術出版会, Japanese, Scholarly book, ISBN: 9784814003037
・松木武彦; 近藤康久, 30 Sep. 2020, 第 5 章 岡山平野における居住高度の通時的推移と気候変動－弥生・古墳時代を対象に－, 131-148, Contributor, 先史・古代の気候と社会変化, 304, 臨川書店, Japanese, Refereed

[Published Papers]

- Yasuhisa Kondo; Eiichi Fujisawa; Kanako Ishikawa; Satoe Nakahara; Kyohei Matsushita; Satoshi Asano; Kaoru Kamatani; Satoko Suetsugu; Kei Kano; Terukazu Kumazawa; Kenichi Sato; Noboru Okuda, 29 Mar. 2021, Community capability building for environmental conservation in Lake Biwa (Japan) through an adaptive and abductive approach, Socio-Ecological Practice Research, 3 (2), 167-183, Springer Nature, English, Refereed, Scientific journal DOI:10.1007/s42532-021-00078-3
- Takehiro Miki; Taichi Kuronuma; Hiroyuki Kitagawa; Atsushi Noguchi; Yasuhisa Kondo, Oct. 2020, Bronze Age vessel remains from the cave of Mugharat al Kahf in the Wādī Tanūf: a preliminary report of the 2017/18 and 2018/19 seasons, The Journal of Oman Studies, 21, 128-143, English, Refereed
- 近藤康久, Sep. 2020, コロナ時代の共同研究とオンラインツール, 農村計画学会誌, 39 (2), 104-107, 農村計画学会, Japanese, Invited, Scientific journal DOI:10.2750/arp.39.104
- 齋藤 晃; 近藤康久; 溝田のぞみ; 小山朋子, Sep. 2020, アンデス植民地史への人文情報学的アプローチ–先住民の総集住化の事例–, 歴史学研究, (1000), 32-38, 績文堂出版, Japanese, Invited

[MISC]

- 近藤康久; 北川浩之; 三木健裕; 黒沼太一, 31 Mar. 2021, アラビア半島におけるホモ・サピエンスの定着：オマーン内陸部ワディ・タヌーフ 1 号洞穴遺跡の土層堆積状況と年代について, パレオアジア文化史学 計画研究 A03 2020 年度研究報告書, 1-4, Japanese, Technical report
- Yasuhisa Kondo, Feb. 2021, Open Team Science as a methodology of transparent collaborative research, Trends in the Sciences, 26 (2), 102-107, 日本学術協力財団, Japanese, Invited, Introduction scientific journal DOI:10.5363/tits.26.2_102

[Presentations]

- Yasuhisa Kondo; Takeshi Osawa, Protect area selection procedure for Japan, 3rd PARSEC Synthesis Meeting, PARSEC Project, Zoom, 19 Jan. 2021, 19 Jan. 2021 - 22 Jan. 2021, English, Oral presentation
- Yasuhisa Kondo; Hideyuki Ōnishi; Yoko Iwamoto; Ui Ikeuchi; Ken'ichiro Nakashima, Interdisciplinary challenges of the PaleoAsia project: Summary of the research mindset surveys and future directions, The 10th Conference on Cultural History of PaleoAsia, Cultural History of PaleoAsia Project, Zoom, 20 Dec. 2020, 18 Dec. 2020 - 20 Dec. 2020, Japanese, Oral presentation
- Yasuhisa Kondo; Takehiro Miki; Taichi Kuronuma; Hiroyuki Kitagawa, Human settlement and environment in a piedmont canyon in Southeast Arabia: summary of four years of fieldwork and future directions for research, The 10th Conference on Cultural History of PaleoAsia, Cultural History of PaleoAsia Project, Zoom, 20 Dec. 2020, 18 Dec. 2020 - 20 Dec. 2020, Japanese, Oral presentation
- Yutaka Kobayashi; Kohei Tamura; Miho Suzuki; Mitsuhiro Nakamura; Shinji Kato; Kazuya Nakagawa; Jun Takakura; Takuya Yamaoka; Atsushi Noguchi; Yasuhisa Kondo; Yoshihiro Nishiaki, Exploratory statistical analyses of the Paleo-Asia Mode presence/absence data, The 10th Conference on Cultural History of PaleoAsia, 科研費新学術領域研究「パレオアジア文化史学 : アジア新人文化形成プロセスの総合的研究」, Zoom, 18 Dec. 2020, 18 Dec. 2020 - 20 Dec. 2020, Japanese, Oral presentation
- 近藤康久; 三木健裕; 黒沼太一, 南東アラビア前２千年紀ワディ・スーク文化の再検討 : ハジャル山脈南麓タヌーフ峡谷での調査から, 金沢大学国際文化資源学研究センター公開シンポジウム 2020「西アジアにおける先史遊牧民と古代文明の成立」, 金沢大学国際文化資源学研究センター, Zoom, 12 Dec. 2020, Invited, Japanese, Invited oral presentation
- 近藤康久, コロナ時代の共同研究：オンラインツール利用状況調査をふまえて, 第 29 回地理情報システム学会研究発表大会企画セッション「COVID-19 における「GIS と社会」を考える〜情報流通とデジタル地図における役割・課題・展望〜」, 地理情報システム学会, オンライン開催, 23 Oct. 2020, 23 Oct. 2020 - 25 Oct. 2020, Invited, Japanese, Nominated symposium
- 近藤康久, オープンチームサイエンス〜ひらかれた協働研究の方法論〜, 第 6 回人文・社会科学系研究推進フォーラム, 北海道大学 大学力強化推進本部 研究推進ハブ URA ステーション, オンライン開催, 03 Oct. 2020, Invited, Japanese, Keynote oral presentation
- Yasuhisa Kondo, Interdisciplinary challenges of the Cultural History of PaleoAsia project and its database development: Lessons learnt, Human Origins - Digital Future (HODiF) ROCEEH Online Conference 2020, ROCEEH, Zoom, 30 Jul. 2020, 27 Jul. 2020 - 31 Jul. 2020, Invited, Japanese, Invited oral presentation
- 近藤康久, 研究をコミュニティに「ひらく」とはどういうことか, Japan Open Science Summit 2020 Cyber Week, Japan Open Science Summit, Zoom, 29 Jul. 2020, 27 Jul. 2020 - 31 Jul. 2020, Invited, Japanese, Public symposium

・Yasuhisa Kondo; Kei Kano; Terukazu Kumazawa; Satoe Nakahara; Ken'ichiro Nakashima; Noboru Okuda; Hideyuki Ōnishi; Takeshi Osawa; Kazuhiko Ota, Five key elements to enable open science for society, JpGU-AGU Joint Meeting 2020: Virtual, Japan Geosciences Union, Online, 14 Jul. 2020, 12 Jul. 2020 - 16 Jul. 2020, Japanese, Poster presentation

・Yasuhisa Kondo, Mapping possible migration routes of early modern humans through an integrative spatial analysis of archaeological and palaeoecological data, JpGU-AGU Joint Meeting 2020: Virtual, Japan Geosciences Union, Online, 13 Jul. 2020, 12 Jul. 2020 - 16 Jul. 2020, English, Poster presentation

・近藤康久, コロナと共に生きる世界における共創型研究の自己点検項目を考える, 実践における市民の皆さんとの付き合い方談話会, Zoom, 21 May 2020, Japanese, Oral presentation

[Committee Memberships]

・Apr. 2015, ISC 委員（CIPA 担当）, 日本イコモス国内委員会, Society

・Sep. 2013, Secretary General, Working Group on Geoarchaeology, International Association of Geomorphologists, Society

・Aug. 2014, May 2020, 情報システム副委員長, 日本地球惑星科学連合, Society

・Oct. 2020, 心理学・教育学委員会・言語・文学委員会・哲学委員会・社会学委員会・史学委員会・地域研究委員会・情報学委員会合同 デジタル時代におけるあたらしい人文学・社会科学に関する分科会・委員, 日本学術会議, Government

・Oct. 2020, 地球惑星科学委員会 地球・惑星圏分科会 学術データ共有小委員会・委員, 日本学術会議, Government

・Oct. 2020, 地球惑星科学委員会 IGU 分科会・委員, 日本学術会議, Government

・Oct. 2020, 情報学委員会 国際サイエンスデータ分科会・委員, 日本学術会議, Government

・Oct. 2020, フューチャー・アースの推進と連携に関する委員会・委員, 日本学術会議, Government

・Oct. 2020, 若手アカデミー 情報発信分科会・委員, 日本学術会議, Government

・Oct. 2020, 若手アカデミー 地域活性化に向けた社会連携分科会・幹事, 日本学術会議, Government

・Oct. 2020, 若手アカデミー・会員, 日本学術会議, Government

・Apr. 2018, Dec. 2020, 情報学委員会国際サイエンスデータ分科会 WDS 小委員会・幹事, 日本学術会議, Government

[Research Projects]

・Restoration and inheritance of living heritage under a vulnerable social environment of a port city in southern Oman, 近藤康久; 松本直之; 石村 智; 大西秀之, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)), Research Institute for Humanity and Nature, Oct. 2020, Mar. 2025, 18720000, 14400000, 4320000, 20KK0020

・Building New Tools for Data Sharing and Re-use through a Transnational Investigation of the Socioeconomic Impacts of Protected Areas (PARSEC), Yasuhiro Murayama; Yasuhisa Kondo, Japan Science and Technology Agency, Belmont Forum Collaborative Research Action (CRA), Science-driven e-Infrastructure and Innovation, National Institute of Information and Computer Technologies, May 2019, Mar. 2023, 22177000, 20163000, 2014000, 契約番号 21-191029671, Competitive research funding

・Information Asymmetry Reduction in Open Team Science in Socio-environmental Cases, Yasuhisa Kondo, Research Institute for Humanity and Nature, Core Project Full Research, Research Institute for Humanity and Nature, Apr. 2018, Mar. 2021, 30000000, 30000000, 0, Competitive research funding

・Changing climate and resident-environment in the migrations and expansions of Homo sapience across the continent of Asia, 北川 浩之; 藤木 利之; 田村 亨; 長谷川 精; 近藤 康久; 奈良 郁子, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research on Innovative Areas (Research in a proposed research area), Nagoya University, Jun. 2016, Mar. 2021, 120510000, 92700000, 27810000, 約 20 万年前頃のアフリカ大陸で誕生したホモ・サピエンス（現生人類）は、10〜5 万年前頃以降、ユーラシア各地の多様な環境に適応しつつ拡散し、先住者たる旧人たちと交替した。新学術領域「パレオアジア文化史学 ー アジア新人文化形成プロセスの総合的研究ー」（パレオアジア文化史学）の計画研究 A03「アジアにおけるホモ・サピエンス定着期の気候変動と居住環境の解明」では、新人がアジアに拡散し定着した時代の気候・環境に関わる各種拠を多面的に解析し、アジア各地の新人の居住環境や生活様式（生活の痕跡）を探り、考古学的・人類学的な証拠と関連づけることで、新人文化の形成過程の解明を目指す。 平成 30 年度は、領域内の他の計画研究や現地研究者と連携して、モンゴル・オマーン・インド・パキスタンでの考古・古環境研究を目的とした調査を実施した。今年度は重点的にアジアへの現生人類の拡散のヒマラヤ以北ルートのモンゴルの湖沼堆積物の採集および堆積学・鉱物学・地球化学分析・古植生解析を実施した。その研究成果は、2018 年度研究報告書に取りまとめた。アラビア半島における現生人類の定着について検討するために、第三次オマーンで考古・古環境研究を目的とした現地調査および編年学的研究を実施した。アジア各地の考古・古環境データを融合し、アジアにおけるホモ・サピエンス定着期の気候変動と居住環境の解明するために、アジア各地の気候の類似性の定量的な扱い、エージェント・ベース・モデルを使ったホモ・サピエンスのアジアへの拡散モデルの開発を進めた。これらの研究成果に関しては、パレオアジア文化史学の研究大会や 2018 年度研究報告書で公表した。, Competitive research funding, 16H06410

・パレオアジア文化史学研究の連携推進と総括および成果発信, 西秋良宏; 近藤康久, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research on Innovative Areas (Research in a proposed research area), The University of Tokyo, Jun. 2016, Mar. 2021, 77870000, 59900000, 17970000, 本領域研究の全体目標は、約 20 万年前頃のアフリカ大陸で誕生したホモ・サピエンス（新人）がいつ、どのようにアジアに拡散し定着したか、その地理的変異がどのように生じたのかを文化史的観点から論じることにる。そのため、具体的な拡散過程や文化適応の諸相を調べる考古学・人類学・環境科学などのフィールド サイエンスと、多様性を解釈するための文化人類学、現象数理科学などのモデル研究の融合を目指している。 総括班は、それを達成し、かつ成果を内外に発信するため、2019 年度は次のような活動を実施した。 (1)連携研究の企画、推進。5 月、12 月に研究大会を開催し、全ての領域研究者が一堂に会し、各自が実施した研究の進捗状況の報告、意見交換、連携研究推進の場を提供した。いずれもワークショップ形式とし、複数計画研究班の共同発表、意見交換する機会とした。(2)共用データベースの運用。大型遺跡データベース PaleoAsiaDB を提供して、考古学データと理論モデル研究者の共同研究を推進した。(3) 研究成果の総括、発信。ホームページで各種行事の案内をおこなったほか、内外のパレオアジア関連研究者群には領域の成果物『PaleoAsia Project Series』 Nos. 24 ー 29（A4 版）を発行、発送した。それらはホームページでも全文公開した。 (4)連絡調整。評価担当委員をふくむ総括班会議を開催し、各研究項目、連携 研究の進捗状況を点検・評価、研究の調整、指導を実施した。連絡調整の推進のための SNS の運用も継続した。(5)国際会議等の開催。国内外で成果発信のための国際研究集会を複数回、開催した。また、研究大会は一般公開とし、関連最先端研究動向を一般国民にも公開した。, 16H06407

・Local community development to utilize waterweed resources in the Lake Biwa catchment through integrating methodologies of open science and transdisciplinary research, Yasuhisa Kondo; Kenichi Sato; Noboru Okuda; Terukazu Kumazawa; Kei Kano; Satoshi Asano; Sayoko Shimoyama; Kanako Ishikawa; Kaoru Kamatani; Eiichi Fujisawa; Ken'ichi Wakita; Kyohei Matsushita; Satoe Nakahara; Satoko Suetsugu, Mitsui & Co. Environmental Fund, Research Grant, Apr. 2017, Apr. 2020, 6000000, 5454000, 546000, Competitive research funding

・Prehistoric archaeology of resource use behaviors and the development of modern human societies in the arid inland Levant, Seiji Kadowaki; Kazunobu Ikeya; Toru Tamura; Kazuhiro Tsukada; Hitoshi Hasegawa; Yasuhisa Kondo; Tsuyoshi Yamamoto, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (A), Nagoya University, Apr. 2020, Mar. 2025, 44330000, 34100000, 10230000, Competitive research funding, 20H00026

KOZAN Osamu

Associate Professor

[Academic Career]
Kyoto University 工学研究科 環境地球工学専攻 (2005)

Kyoto University, Graduate School, Division of Engineering, Global Environment Engineering (2005)
Kyoto University, Faculty of Engineering, School of Global Engineering (2000)
Kyoto University, Faculty of Engineering, Global Engineering (2000)

[Professional Career]

Research Institute for Humanity and Nature, Research Department, Associate Professor (2019-)
Kyoto University 東南アジア地域研究研究所 准教授 (2017-)
Kyoto University Center for Southeast Asian Studies 准教授 (2009-2016)
Kyoto University Center for Southeast Asian Studies 特定助教 (2008-2009)
Kyoto University Pionnering Research Unit for Next Generation 研究員 (2007-2008)
University of Yamanashi Department of Research Interdisciplinary Graduate School of Medicine and Engineering, Social System Engineering, Hydrological Systems Engineering, COE Postdoctoral Fellow (2005-2007)
University of Yamanashi Department of Research Interdisciplinary Graduate School of Medicine and Engineering, Social System Engineering, Hydrological Systems Engineering, COE Po (2005-2007)

[Fields of Specialization]

Humanities & social sciences > Local studies
Natural sciences > Atmospheric and hydrospheric science
Social infrastructure (civil Engineering > architecture > disaster prevention) > Hydroengineering

[Academic Society Memberships]

The Japan Society of Hydrology and Water Resources
Japan Society of Civil Engineers

—Achievements—

[Published Papers]

- Muhammad Arif Rahman; Devis Styo Nugroho; Manabu D. Yamanaka; Masahiro Kawasaki; Osamu Kozan; Masafumi Ohashi; Hiroyuki Hashiguchi; Shuichi Mori, Jan. 2021, Weather radar detection of planetary boundary layer and smoke layer top of peatland fire in Central Kalimantan, Indonesia, Scientific Reports, 11 (1), Springer Science and Business Media LLC, English, Refereed, Scientific journal DOI:10.1038/s41598-020-79486-6
- Ali, M. R; M. R. Islam; M. H. Islam; O. Kozan; K. Mizuno, Dec. 2020, Potential of peatlands in Bangladesh and sustainable management strategy, Agricultural Engineering International: CIGR Journal, 22 (4), 65-74, English, Refereed, Scientific journal
- Taishin Kameoka; Osamu Kozan; Sunawiruddin Hadi; Asnawi, Hasrullah, Nov. 2020, Mapping Peatland Fires Using a Drone Equipped with a Thermal Camera, Japan Society of Photogrammetry and Remote Sensing, 59 (5), 214-220, English, Refereed, Scientific journal
- Nina Yulianti; Kitso Kusin; Daisuke Naito; Masahiro Kawasaki; Osamu Kozan; Kurniawan Eko Susatyo, 13 Jul. 2020, The Linkage of El Niño-induced Peat Fires and Its Relation to Current Haze Condition in Central Kalimantan, Journal of Wetlands Environmental Management, 8 (2), 100-100, Center for Journal Management and Publication, Lambung Mangkurat University, English, Refereed, International conference proceedings DOI:10.20527/jwem.v8i2.221
- Nina Yulianti; Kitso Kusin; Elvi Murni; Betrixia Barbara; Daisuke Naito; Osamu Kozan; Yusurum Jagau; Ici Piter Kulu; Fengky Florante Adji; Kurniawan Eko Susetyo, 30 Jun. 2020, PRELEMINARY ANALYSIS OF CAUSE-EFFECT ON FOREST-PEATLAND FIRES PRIOR TO 2020 IN CENTRAL KALIMANTAN, ECOTROPHIC : Jurnal Ilmu Lingkungan (Journal of Environmental Science), 14 (1), 62-62, Universitas Udayana, English, Refereed, Scientific journal DOI:10.24843/ejes.2020.v14.i01.p06
- 塩寺 さとみ; 伊藤 雅之; 甲山 治, May 2020, 熱帯泥炭湿地林の人為的攪乱とその回復可能性, 日本生態学会誌, 70 (1), 15-29, Japanese, Refereed, Scientific journal

[Presentations]

- Osamu Kozan, JICA Partnership Program (JPP) di Desa Tanjung Leban Hidlogi dan Sekat kanal, Mangrove and Peatland Restoration Agency Symposium in Tanjung Leban, 27 Mar. 2021, Invited, Indonesian, Nominated symposium
- 泥炭火災適応策としての再湿地化と在来種植林による泥炭生態系の回復, 京大アジアアフリカ塾「インドネシア・デイ」, 22 Mar. 2021, Invited, Japanese, Invited oral presentation

・Arifudin; O. Kozan, Small is Beautiful: Lesson Learned of Implementing Peatland Restoration Program with the Villagers, Kyoto University International ONLINE Symposium 2020 on Education and Research in Global Environmental Studies in Asia, 01 Dec. 2020, Invited, English, Nominated symposium

・甲山 治, 泥炭地火災ってなんだろう？, 総合地球環境学研究所オープンハウス 2020, 15 Nov. 2020, Invited, Japanese, Public discourse

・山中大学, 甲山治, 杉原薫, 人間活動の偏在による災害・環境諸問題の深刻化, 日本気象学会 2020 年度秋季大会, 29 Oct. 2020, 25 Oct. 2020 - 31 Oct. 2020, Japanese, Oral presentation

・Osamu KOZAN, Hydrological Science and the Dynamics of Rewetting in Peat Sites Towards Permanent Restoration of Tropical Peatland Ecosystem Landscapes, Webinar Series V: Online Focused Scientific Discussion, BRG Indonesia, 29 Sep. 2020, Invited, English, Public discourse

・小川まり子・山中大学・Awaluddin・A. Darmawan・A. Sulaiman・甲山治, スマトラ東部沿岸部における降雨日変化: 泥炭地域レーダー観測結果, MU レーダー;赤道レーダーシンポジウム, 14 Sep. 2020, Japanese, Public symposium

・Yamanaka, M. D; O. Kozan; K. Sugihara, Population density, personal distance and social distancing in the anthroposphere: Implications from the COVID-19 disaster, JpGU-AGU 2020, 13 Jul. 2020, Invited, English, Invited oral presentation

[Research Projects]

・Development of disaster and hydro-meteorological information management system in tropical peatland, Indonesia, 甲山 治; 小川 まり子; 亀田 尭宙, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)), Kyoto University, 07 Oct. 2019, 31 Mar. 2023, 18460000, 14200000, 4260000, 19KK0106

・東南アジア熱帯低湿地火災への多面的アプローチによる熱帯低湿地学の構築, 嶋村 鉄也; 大出 亜矢子; 内藤 大輔; 甲山 治; 杉元 宏行; 伊藤 雅之; 御田 成顕; 久米 崇; 増田 和也, 日本学術振興会, 科学研究費助成事業 基盤研究(A), 基盤研究(A), 愛媛大学, 01 Apr. 2019, 31 Mar. 2023, 45890000, 35300000, 10590000, 19H00560

・データベースをつうじた地域と科学の知の統合による気候応答型居住環境の創出, 山田 協太, 日本学術振興会, 科学研究費 基盤研究 C, Apr. 2018, Mar. 2022, 0, 0, 0, Competitive research funding

・Toward the Regeneration of Tropical Peatland Societies: Building International Research Network on Paludiculture and Sustainable Peatland Management, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, Apr. 2013, Mar. 2022

KUANG Xiaoxu

Researcher

[Fields of Specialization]

Nanotechnology/Materials > Analytical chemistry

[Academic Society Memberships]

Japan Society of Material Cycles and Waste Management (2019-)

—Achievements—

[Published Papers]

・Win Thiri Kyaw; Xiaoxu Kuang; Masayuki Sakakibara, Sep. 2020, Health Impact Assessment of Artisanal and Small-Scale Gold Mining Area in Myanmar, Mandalay Region: Preliminary Research, International Journal of Environmental Research and Public Health, 17 (18), 6757-6769, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/ijerph17186757

[Research Projects]

・Co-creation of Sustainable Regional Innovation for Reducing Risk of High-impact Environmental Pollution, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, Apr. 2015, Mar. 2024

KUMAZAWA Terukazu

Associate Professor

[Academic Career]

Tokyo Institute of Technology 大学院総合理工学研究科 環境理工学創造専攻 博士後期課程 (2001-2006)
Tokyo Institute of Technology 大学院総合理工学研究科 環境理工学創造専攻 修士課程 (1999-2001)
Tokyo Institute of Technology 工学部 社会工学科 (1995-1999)

[Professional Career]

Research Institute for Humanity and Nature, RIHN Center, Associate Professor (2016-)
Research Institute for Humanity and Nature, RIHN Center, Assistant Professor (2016)
Research Institute for Humanity and Nature, Center for Research Promotion, Assistant Professor (2013-2016)
Research Institute for Humanity and Nature Center for Coordination Promotion and Communication 助教 (2011-2013)
Osaka University Center of Environmental Innovation Design for Sustainability 特任助教（非常勤） (2010-2012)
Ritsumeikan University Ritsumeikan-Global Innovation Research Organization ポストドクトラルフェロー (2010-2011)
International Institute for Applied Systems Analysis (IIASA), Research Scholar (2010)
Osaka University サステイナビリティ・デザイン・センター 特任助教（非常勤） (2010)
Osaka University サステイナビリティ・サイエンス研究機構 特任助教（常勤） (2007-2010)
Ritsumeikan University Research Center for Disaster Mitigation of Urban Cultural Heritage 客員研究員 (2007-2010)
Tokyo Institute of Technology 特別研究員 (2006-2007)
Tokyo Institute of Technology Interdisciplinary Graduate School of Science and Engineering 特別研究員 (2006)

[Fields of Specialization]

Environmental science/Agricultural science > Environmental policy and society > Sustainable Development

[Academic Society Memberships]

ARCHITECTURAL INSTITUTE OF JAPAN
THE WOOD CARBONIZATION RESEARCH SOCIETY
Society of Environmental Science, Japan
JAPANESE ASSOCIATION FOR ENVIRONMENTAL SOCIOLOGY
JAPAN ASSOCIATION OF SIMULATION & GAMING
THE JAPANESE SOCIETY FOR ARTIFICIAL INTELLIGENCE
CENTER FOR ENVIRONMENTAL INFORMATION SCIENCE
JAPAN ASSOCIATION FOR PLANNING AND PUBLIC MANAGEMENT
THE CITY PLANNING INSTITUTE OF JAPAN

[Awards]

2019 年度環境情報科学 研究発表大会 ポスターセッション 一般の部 理事長賞 木村道徳;王智弘;熊澤輝一 豊かさを実感できる将来像の実現に向けた市民・行政・研究者の協働によるまちづくり調査 環境情報科学センター Japan society (2019)
Poster Competition Award, KUMAZAWA;Terukazu;MATSUI;Takanori;KIMURA Michinori, Development of Ontology System towards Implementing a Knowledge Platform for Utilizing Natural Resources in a Regional Community, Pacific Neighborhood Consortium Annual Conference (PNC 2011) (2011)
Poster Competition Award, KUMAZAWA;Terukazu;MATSUI;Takanori;KIMURA Michinori, Development of Ontology System towards Implementing a Knowledge Platform for Utilizing Natural Resources in a Regional Com
環境共生学術賞（著作賞） 原科 幸彦 ほか 市民参加と合意形成―都市と環境の計画づくり 日本環境共生学会 (2006)
第 17 回 学術賞・論文賞 鐘ヶ江 秀彦;熊澤 輝一 遺伝的アルゴリズムを用いた「身のまわりの環境」計画の合意形成過程の記述に関する基礎的研究 日本計画行政学会 (2005)

—Achievements—

[Books etc]

・熊澤輝一, 01 Mar. 2021, 31-43, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, ISBN: 9784780311440

・三村豊; 熊澤輝一; 遠山真理; 寺田匡宏; 柴田宣史, Mar. 2021, Joint editor, 未来会話からつくる社会－未来を見立て、問いを育てる環境教育ガイドブック, 10, 総合地球環境学研究所 未来社会の風土論 研究グループ, Japanese, Others

・近藤, 康久; 大西, 秀之, Mar. 2021, 地域の未来デザイン力を向上する知識のネットワーク化, pp.32-44, Contributor, 環境問題を解く : ひらかれた協働研究のすすめ, 227p, かもがわ出版, Japanese, Scholarly book, ISBN: 9784780311440

[Published Papers]

・Yasuhisa Kondo; Eiichi Fujisawa; Kanako Ishikawa; Satoe Nakahara; Kyohei Matsushita; Satoshi Asano; Kaoru Kamatani; Satoko Suetsugu; Kei Kano; Terukazu Kumazawa; Kenichi Sato; Noboru Okuda, 29 Mar. 2021, Community capability building for environmental conservation in Lake Biwa (Japan) through an adaptive and abductive approach, Socio-Ecological Practice Research, Springer Science and Business Media LLC, English, Refereed, Scientific journal DOI:10.1007/s42532-021-00078-3

・KIMURA Michinori; MATSUI Takanori; BABA Kenshi; IWAMI Asako; KUMAZAWA Terukazu; OH Tomohiro; KAWASE Reina; KIM Jaegyu; ONO Satoru; HORI Keiko; UWASU Michinori, Mar. 2021, An Attempt to Create a Vision of the Future Society of the Region with the Participation of Citizens and an Examination of Acceptance Factors—Case of Takashima City, Shiga Prefecture—, ENVIRONMENTAL SCIENCE, 34 (2), 108-123, SOCIETY OF ENVIRONMENTAL SCIENCE, JAPAN, Japanese, Refereed, Invited, Scientific journal DOI:10.11353/sesj.34.108

[MISC]

・熊澤輝一, May 2020, まちづくりを考えるとはどういうことか, びわ湖の水草ニューズレター, (3), 4-4, 三井物産環境基金 2016 年度研究助成：オープンサイエンスと社会協働の融合に基づく琵琶湖流域圏水草資源活用コミュニティーの形成, Japanese, Introduction other

[Presentations]

・熊澤輝一, デジタルとアナログのあいだで考える人と自然, デジタルとアナログのあいだー新しい風土論に向けて（2020 年度環境情報科学 研究発表大会 企画セッション４）, 環境情報科学センター, オンライン開催, 17 Dec. 2020, 11 Dec. 2020 - 18 Dec. 2020, Japanese, Nominated symposium

・熊澤輝一, 持続可能性行動を動機づけるゲーミフィケーションのパターンの探索, 日本シミュレーション＆ゲーミング学会 2020 年度秋期全国大会, 日本シミュレーション＆ゲーミング学会, オンライン開催, 06 Dec. 2020, 05 Dec. 2020 - 06 Dec. 2020, Japanese, Oral presentation

・三村豊; 熊澤輝一; 遠山真理; 寺田匡宏, 未来社会の会話づくりー未来への洞察と現在の備え, 環境芸術学会第 21 回大会, 環境芸術学会, オンライン開催, 08 Nov. 2020, 07 Nov. 2020 - 08 Nov. 2020, Japanese, Oral presentation

・小野聡; 熊澤輝一; 寺田匡宏, リスク情報受容の規定因としての科学技術の「風土化」, 環境科学会 2020 年会, 環境科学会, オンライン開催, 19 Sep. 2020 - 20 Sep. 2020, Japanese, Oral presentation

・谷口真人; 若松永憲; 山下瞳; 熊澤輝一, 文理融合型学際研究を進める総合地球環境学研究所における多様性指標の活用, RA 協議会第 6 回年次大会, RA 協議会, オンライン開催, 17 Sep. 2020, 17 Sep. 2020 - 18 Sep. 2020, Invited, Japanese, Oral presentation

・Yasuhisa Kondo; Kei Kano; Terukazu Kumazawa; Satoe Nakahara; Ken'ichiro Nakashima; Noboru Okuda; Hideyuki Ōnishi; Takeshi Osawa; Kazuhiko Ota, Five key elements to enable open science for society., JpGU-AGU Joint Meeting 2020: Virtual. MGI36-06., Jul. 2020, English, Oral presentation

[Academic Contribution]

・デジタルとアナログのあいだー新しい風土論に向けて（2020 年度環境情報科学 研究発表大会 企画セッション４）, Academic society etc, 環境情報科学センター, 17 Dec. 2020, オンライン開催

[Committee Memberships]

・Jul. 2020, 理事, 日本計画行政学会 関西支部, Society

・Apr. 2019, 編集委員会委員, 環境科学会, Society

[Research Projects]

・シビックテックを目指した気候変動の「自分事化」に基づくオンライン合意形成手法の開発と政策形成プロセスへの実装, 馬場健司, 科学技術振興機構（JST）社会技術開発センター（RISTEX）, 戦略的創造研究推進事業（社会技術研究開発）令和 2 年度「科学技術イノベーション政策のための科学 研究開発プログラム」, Oct. 2020, Mar. 2024, 27300000, 21000000, 6300000, Competitive research funding

・ゲーミング・シミュレーションに基づく住民参加への「棋譜」の活用可能性, 小野 聡, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (C), Ritsumeikan University, Apr. 2020, Mar. 2023, 3770000, 2900000, 870000, 20K12309

・オンラインゲームと社会を結ぶ PBL を通したメンタライジングの発見と支援, 田口 純子, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), The University of Tokyo, Apr. 2020, Mar. 2023, 8450000, 6500000, 1950000, 20H04468

・“Fudo”-nization of Advanced technology: How to imagine plausible future of human-computer interdependency, KUMAZAWA, Terukazu, The Toyota Foundation, Research Grant Program 2018, Special Topic "Co-Creating New Society with Advanced Technologies", May 2019, Apr. 2021, 0, 0, 0, Competitive research funding

・Ontology Framework for Harmonizing Knowledge Integration across domains with Semantic Processing of Deep Domain knowledge, 古崎 晃司; 来村 徳信; 熊澤 輝一; 山本 泰智, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), Apr. 2017, Mar. 2021, 17420000, 13400000, 4020000, 平成 30 年度は，前年度に行った基本設計に基づき，領域横断型知識統合および領域深造型意味処理フレームワークの開発を行った．具体的には，下記の項目にそって実施した． (1)オントロジー利用フレームワークの開発：前年度に検討した基本設計に基づいて，領域横断型知識統合および領域深造型意味処理フレームワークの部分的な実装を行った．技術的には，法造の API を用いた Java による実装と，大規模 DB への対応するための RDF データベースと SPARQL クエリを用いた実装の 2 種類を用意し，利用者がニーズに応じて使い分けられるようにした． (2)領域横断型知識統合の各領域における事例開発：前年度に考察したニーズに対応した領域横断型知識統合の事例を，(1)で開発した領域横断型知識統合フレームワークを用いて開発した．生命科学分野においては生命科学分野全般をカバーする汎用オントロジーを利用した，データベースの横断検索システムを試作した．一方，サステナビリティ学分野では，環境基本計画を事例として国レベル/都道府県レベル/市町村レベルといったスケールの違いを横断した知識統合の事例の開発を検討した． (3)領域深造型意味処理の各領域における事例開発：前年度に考察したニーズに対応した領域深造型意味処理の事例を，(1)で開発した領域深造型意味処理フレームワークを用いて開発することを検討した．事例としては，サステナビリティ学領域におけるステークホルダー間のトレードオフ問題を，その因果構造を中心にして分析するためにオントロジー探索技術を利用することを想定した．, 17H01789

LAMBINO Ria

Specially Appointed Associate Professor

[Academic Career]

Kyoto University Graduate School of Global Environmental Studies, Global Environmental Policy, PhD in Global Environmental Studies (2011-2014)

Kyoto University, Graduate School of Global Environmental Studies, MA in Environmental Management (2009-2011)

University of the Philippines, College of Science, B.S. Applied Physics (1991-1996)

[Professional Career]

Research Institute for Humanity and Nature, Biodiversity-driven Nutrient Cycling and Human Well-being in Social-Ecological Systems, Researcher (2017-2019)

[Academic Society Memberships]

International Association for the Study of the Commons (2020)

[Awards]

Best Presentation Award (Oral), Ria Lambino, Ibaraki Prefecture 17th World Lake Conference in Japan (2018)

Ibaraki Kasumigaura Prize (Distinguished Paper Award), Ibaraki Prefecture 17th World Lake Conference in Japan (2018)

—Achievements—

[Books etc]

- Jan. 2021, Coordinating Writer and co-author, Joint work, 10 New Insights in Climate Science 2020, Future Earth, Earth League & WRCP
- K. Wakita; S. Yachi; N. Okuda, Dec. 2020, Co-author Chapter 4, Contributor, Watershed governance - community-based "well-being" and "social-ecological health" of the watershed., Kyoto University Press

[Published Papers]

- Erik Pihl; Eva Alfredsson; Magnus Bengtsson; Kathryn J Bowen; Vanesa Castan Broto; Kuei Tien Chou; Helen Cleugh; Kristie Ebi; Clea M Edwards; Eleanor Fisher; Pierre Friedlingstein; Alex Godoy-Faúndez; Mukesh Gupta; Alexandra R Harrington; Katie Hayes; Bronwyn M Hayward; Sophie R Hebden; Thomas Hickmann; Gustaf Hugelius; Tatiana Ilyina; Robert B Jackson; Trevor F Keenan; Ria A Lambino; Sebastian Leuzinger; Mikael Malmaeus; Robert I McDonald; Celia McMichael; Clark A Miller; Matteo Muratori; Nidhi Nagabhatla; Harini Nagendra; Cristian Passarello; Josep Penuelas; Julia Pongratz; Johan Rockström; Patricia Romero-Lankao; Joyashree Roy; Adam A Scaife; Peter Schlosser; Edward Schuur; Michelle Scobie; Steven C Sherwood; Giles B Sioen; Jakob Skovgaard; Edgardo A Sobenes Obregon; Sebastian Sonntag; Joachim H Spangenberg; Otto Spijkers; Leena Srivastava; Detlef B Stammer; Pedro HC Torres; Merritt R Turetsky; Anna M Ukkola; Detlef P van Vuuren; Christina Voigt; Chadia Wannous; Mark D Zelinka, 27 Jan. 2021, 10 New Insights in Climate Science 2020 - a Horizon Scan, Global Sustainability, 1-65, Cambridge University Press (CUP), English, Refereed, Scientific journal DOI:10.1017/sus.2021.2
- Boone, Christopher G., Steward T. A. Pickett, Gabriele Bammer, Kamal Bawa, Jennifer A. Dunne, Iain J. Gordon, David Hart, Jessica Hellmann, Alison Miller, Mark New, Jean P. Ometto, Ken Taylor, Gabriel, 31 May 2020, Preparing interdisciplinary leadership for a sustainable future, Sustainability Science, Springer DOI:https://doi.org/10.1007/s11625-020-00823-9

[Presentations]

- Lambino Ria, Future Earth in Asia Updates and Outlook, Scientific Steering Committee Meeting of Monsoon Asia Integrated Research for Sustainability-FE Beijing, Future Earth Beijing, China (online), 17 Dec. 2020
- Lambino Ria, Unpacking the 17 SDGs: Challenges & Exemplar, National Workshop on SDG Futures, Pathways & Initiatives, Philippines (online workshop), Philippines, Philippines, 16 Dec. 2020
- Lambino Ria, Future Earth in Asia and Early Career Networks, Principal Investigators and Project Proposal Development Training workshop, Mongolia Academy of Sciences (online workshop), Mongolia, 08 Dec. 2020
- Lambino Ria, Boundary Crossing: Role of Transdisciplinarity in Environmental Studies, Kyoto University International Online Symposium 2020 on Education and Research in Global Environmental Studies in Asia, Kyoto University, Kyoto (Online), 01 Dec. 2020

LEE Jemyung

Researcher

[Academic Career]

Seoul National University, Department of Landscape Architecture and Rural System Engineering, Doctorate (2008-2014)

Seoul National University, Department of Landscape Architecture and Rural System Engineering, Master (2005-2007)

Seoul National University, Department of Biological Resource and Materials Engineering, Bachelor (2000-2005)

[Professional Career]

Research Institute for Humanity and Nature, Research Department, Researcher, Researcher (2019-)

Kyoto University, Faculty/Graduate School of Agriculture, Rural Planning, Researcher (2018-2019)

[Fields of Specialization]

Environmental science/Agricultural science > Rural environmental engineering and planning

Environmental science/Agricultural science > Environmental impact assessment > Carbon Footprint/Global Supply Chain/Environmental Economics

Informatics > Information theory

—Achievements—

[Published Papers]

・Jemyung Lee; Oliver Taherzadeh; Keiichiro Kanemoto, Jan. 2021, The scale and drivers of carbon footprints in households, cities and regions across India, Global Environmental Change, 66, 102205-102205, Elsevier BV, English, Refereed, Scientific journal DOI:10.1016/j.gloenvcha.2020.102205

[Media Coverage]

・India's Biggest Spenders Cause 7 Times More Emissions Than The Poor, Other than myself, IndiaSpend, Jan. 2021, Paper

・Gurugram has highest carbon footprint, 4 times national average, shows study, Other than myself, The Times of India, Jan. 2021, Paper

[Teaching Experience]

・Foreign Food and Environmental Economics III, Kyoto University, 20 Oct. 2020

・The environmental management seminar A (1 class), Kyoto University, 20 Apr. 2020

LEE Sanghyun

Assitant Professor

[Fields of Specialization]

Environmental science/Agricultural science > Agricultural environmental and information engineering

—Achievements—

[Published Papers]

・Minki Hong; Sang-Hyun Lee; Seung-Jae Lee; Jin-Yong Choi, Jan. 2021, Application of high-resolution meteorological data from NCAM-WRF to characterize agricultural drought in small-scale farmlands based on soil moisture deficit, Agricultural Water Management, 243, 106494-106494, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.agwat.2020.106494

・Sang-Hyun Lee; Jin-Yong Choi; Seung-Oh Hur; Makoto Taniguchi; Naoki Masuhara; Kwang Soo Kim; Shinwoo Hyun; Eunhee Choi; Jae-hoon Sung; Seung-Hwan Yoo, Dec. 2020, Food-centric interlinkages in agricultural food-energy-water nexus under climate change and irrigation management, Resources, Conservation and Recycling, 163, 105099-105099, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.resconrec.2020.105099

・Sang-Hyun Lee; Amjad T. Assi; Bassel Daher; Fatima E. Mengoub; Rabi H. Mohtar, 05 Oct. 2020, A Water-Energy-Food Nexus approach for conducting trade-off analysis: Morocco's phosphate industry in the Khouribga region, Hydrology and Earth System Sciences, 24 (10), 4727-4741, Copernicus GmbH, Refereed, Scientific journal DOI:10.5194/hess-24-4727-2020

・Sang-Hyun Lee; Sungtae Shin; Jin-Yong Choi; Jihoon Park; Seung-Hwan Yoo, Jun. 2020, Assessing the Resilience of Agricultural Reservoirs in Ungauged Catchments under Climate Change Using a Ratio Correction Factors-Based Calibration and Run Theory, WATER, 12 (6), MDPI, English, Refereed, Scientific journal DOI:10.3390/w12061618

[Research Projects]

・Development of data driven decision support platform based on sustainable life cycle assessment of SDGs Nexus, Research Institute for Humanity and Nature, Core Project, Research Institute for Humanity and Nature, Apr. 2020, Mar. 2021

MALLEE Hein

Professor

[Professional Career]

Research Institute for Humanity and Nature, Deputy Director General (2018-)

Future Earth Regional Center for Asia, Director (2015-)

Research Institute for Humanity and Nature, RIHN Center, Professor (2014-)

Research Institute for Humanity and Nature, Center for Research Development, Specially Appointed Professor (2013-2014)

International Development Research Center, Rural Poverty & Environment Program; Ecosystems & Human Health Program, Senior Program Specialist (2004-2013)

Ford Foundation, Environment & Development Program, Beijing Office, Program Officer (1999-2003)

Netherlands Ministry of Development Cooperation, China-Netherlands Poverty Alleviation Project, Anhui Province, Huoshan County, Director (1997-1999)

—Achievements—

[Published Papers]

- Tamura Norie, Hein Mallee, Dec. 2020, Japan's Fishery Forest Movement as a Sustainability Transition, Asia Pacific Society for Agricultural and Food Ethics Conference 2020 Proceedings, APSAFE, English, Refereed
- Hein Mallee, Nov. 2020, A time for transdisciplinarity, Current Opinion in Environmental Sustainability, Elsevier BV, Refereed, Invited, Scientific journal DOI:10.1016/j.cosust.2020.09.011
- Hein Mallee, Oct. 2020, A Time for Transdisciplinarity, Current Opinion in Environmental Sustainability, 46, 16-17
- Boone, Christopher G., Steward T. A. Pickett, Gabriele Bammer, Kamal Bawa, Jennifer A. Dunne, Iain J. Gordon, David Hart, Jessica Hellmann, Alison Miller, Mark New, Jean P. Ometto, Ken Taylor, Gabriel, 31 May 2020, Preparing interdisciplinary leadership for a sustainable future, Sustainability Science, Springer DOI:https://doi.org/10.1007/s11625-020-00823-9
- Christopher G. Boone; Steward T. A. Pickett; Gabriele Bammer; Kamal Bawa; Jennifer A. Dunne; Iain J. Gordon; David Hart; Jessica Hellmann; Alison Miller; Mark New; Jean P. Ometto; Ken Taylor; Gabriele Wendorf; Arun Agrawal; Paul Bertsch; Colin Campbell; Paul Dodd; Anthony Janetos; Hein Mallee, May 2020, Preparing interdisciplinary leadership for a sustainable future, SUSTAINABILITY SCIENCE, SPRINGER JAPAN KK, English, Refereed, Scientific journal DOI:10.1007/s11625-020-00823-9

[MISC]

- R. Lambino as co-author in Future Earth, 27 Jan. 2021, The Earth League, WCRP, 10 New Insights in Climate Science, Future Earth

[Presentations]

- Hein Mallee, From Ecosystem Health to Planetary Health — The Development of Health, National Institute for Environmental Studies-Nagasaki University-RIHN Symposium on Planetary Health, 19 Feb. 2021
- Hein Mallee, From Ecosystem Health to Planetary Health — The Development of 'Health' as an Ecological Concept, National Institute for Environmental Studies-Nagasaki University-RIHN Symposium on Planetary Health, 09 Feb. 2021, Invited, English, Oral presentation
- Hein Mallee, 食と感染症, ウェビナーシンポジウム「アフターコロナ-食の行方を考える, 京都府立大学和食文化センター, 京都市, 18 Sep. 2020
- Hein Mallee, 食と感染症, 京都府立大学和食文化センター、ウェビナーシンポジウム「アフターコロナ-食の行方を考える」, 18 Sep. 2020, Invited, Japanese

MASUHARA Naoki

Senior Researcher

[Professional Career]

Research Institute for Humanity and Nature, Research Department, Senior researcher (2018-2021)

Research Institute for Humanity and Nature, Department of Research, Project researcher (2013-2018)

[Higher Degrees]

(2017)

[Fields of Specialization]

Humanities & social sciences > Politics > Public administration studies

Environmental science/Agricultural science > Environmental policy and society

[Academic Society Memberships]

環境科学会 (2004-)

[Awards]

優秀ポスター賞 増原 直樹 日本の自治体における SDGs の認識状況 : 未来都市の計画・事業内容を題材として 一般社団法人環境情報科学センター (2018)

優秀発表賞 増原 直樹 地熱・温泉資源量と開発目標，規制と紛争の実態―全国 47 都道府県別の分析― 日本計画行政学会 (2017)

奨励賞 増原 直樹 地方自治体の環境政策分析と分析結果を活用した実践の課題 環境科学会 (2012)

Best Poster Award 増原直樹;岩見麻子;松井孝典;川久保俊 Analysis on Effects of Social Situation Change for Local SDGs Policies Center for Environmental Information Science (2021)

―Achievements―

[Published Papers]

- Masuhara, Naoki, 2021, "Mizu Enerugi Nekusasu ni Taisuru Gakusai Cho-Gakusai teki Apurochi no Seika to Kadai: Beppu-shi ni Okeru Onsen Kanko to Chinetsu Hatsuden ni Kansuru Shinario Puranningu no Jirei (Achievements and Challenges of Interdisciplinary and Transdisciplinary Approaches to Water and Energy Nexus: Case Study of Scenario Planning for Hot Spring/Tourism and Geothermal Issues in Beppu City)",
- Masuhara, Naoki, 2021, Geothermal Power Developments and Related Disputes under FIT Scheme in Japan, Journal of Environmental Information Science, 2021 (1), English, Refereed, Scientific journal
- Sang Hyun Lee; Jin Yong Choi; Seung Oh Hur; Makoto Taniguchi; Naoki Masuhara; Kwang Soo Kim; Shinwoo Hyun; Eunhee Choi; Jae hoon Sung; Seung Hwan Yoo, Dec. 2020, Food-centric interlinkages in agricultural food-energy-water nexus under climate change and irrigation management, Resources, Conservation and Recycling, 163, 105099-105099, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.resconrec.2020.105099

[MISC]

- Masuhara, Naoki, 2020, "Rokaru SDGs kara Mieru Chiiki no Tsuyomi: Fuji Sanroku Jichitai o Jirei toshite (Local Advantages from Viewpoint of Local SDGs Indicators: Case Study of Local Governments around Mt. Fuji)",
- 安藤響太; 松井孝典; 岩見麻子; 増原直樹; 町村尚, 2020, 自然言語処理と機械学習を利用した自治体の総合計画を SDGs 目標に写像するための分類器の開発, 環境情報科学, 49 (1)

[Presentations]

- Masuhara, Naoki, "Chiho Toshi ni Okeru SDGs no Igi to Torikumi Doko (Importance and Trend of Action regarding SDGs at Local Level)", Reiwa 3 Nen Dai 1 Kai Machidukuri Shokuin Toku (The 1st City Officer's Workshop on City Planning at Joetsu City), Joetsu Shiyakusho (Joetsu City Office), Niigata, 26 Mar. 2021, Invited
- Masuhara, Naoki; Makoto Taniguchi; Kaoru Sugihara, "Shigen Kanri ni Kakawaru SDGs no Shinaji to Toredoofu Bunseki (Synergy and Tradeoff Analysis on SDGs regarding Resource Management)", Dai 17 Kai Kankyo Joho Kagaku Posuta Sesshon (The 17th Poster Session of Environmental Information Science), Online, 11 Dec. 2020

・Naoki Masuhara; Sanghyun Lee; Makoto Taniguchi, Hydro-power Generation as Energy-Water-Land Interactions from Historical Perspective, AGU Fall Meeting 2020, 10 Dec. 2020, 01 Dec. 2020 - 17 Dec. 2020, English, Poster presentation

・Masuhara, Naoki, "Dai Toshi ni Okeru Paburikku Komento: Kyoto-shi o Jirei to Shite (Public Comments of Big Cities: Case Study of Kyoto City)", Dai 43 Kai Nihon Keikaku Gyosei Gakkai Zenkoku Taikai (The 43rd National Conference of Japanese Planning Administration Association), Online, 27 Nov. 2020

・Masuhara, Naoki, "Sengo Nihon no Mizu-Shigen Kaihatu to Suiryoku Hatsuden: Kinki Ken no Jirei wo Chuusin ni (Water Resource Development and Hydropower Generation after World War II in Japan: Case Study of Kinki Region)", Jissen Puroguramu 1: ‘Kankyo Hendo ni Junan ni Taioushiuru Shakai eno Tenkan' -Ajia no Tayousei ni Taioushita Shosou: Mizu Shigen Kaihatsu to Suiryoku Hatsuden ni Kansuru Jirei Kenkyu (Indo to Nihon)- (Research Program 1 Workshop on ‘Societal Transformation under Environmental Change': Patterns of Development Seen in the Context of Asia’s Diversity - Case Studies on Water Resources Development and Hydroelectric Power in India and Japan -), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 09 Nov. 2020

・Masuhara, Naoki, "SDGs Mirai Toshi ni Okeru Gurin Infura no Kanousei (Possibility for Green Infrastructure in SDGs Future Cities in Japan)", Gurin Infura Nettowaku Japan Zenkoku Taikai (National Conference of Green Infrastructure Network Japan), Online, 07 Nov. 2020

・増原直樹; 西條辰義, 教育研究機関におけるカーボンフットプリントの現状:総合地球環境学研究所の事例を中心に, 環境科学会 2020 年会, 19 Sep. 2020, 19 Sep. 2020 - 20 Sep. 2020, Japanese, Oral presentation

・増原直樹, 地球研のエコロジカル・フットプリント:現状と削減の方向性, 総合地球環境学研究所コアプログラム研究会第 3 回「環境フットプリントと SDGs」, 27 Aug. 2020, Invited, Japanese, Invited oral presentation

・Masuhara, Naoki, "Kogyo Yosui kara Mita Seizogyo no Ricchi to Henyo: Shouwa 30 Nenndai kara no Kokudokaihatsu to Ciiki eno Eikyo (Location and Transformation of Manufacturing Industry from Industrial Water Perspective: National Land Development and Its Local Impact from 1955)", Jissen Puroguramu 1: ‘Kankyo Hendo ni Junan ni Taioushiuru Shakai eno Tenkan’: Sengo Nihon no Kogyo Ricchi ni okeru Kogyo Yosui no Yakuwari (Research Program 1 Workshop on ‘Societal Transformation under Environmental Change’: The Role of Industrial Water in Industrial Areas of Post-war Japan), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 01 Jun. 2020

[Committee Memberships]

・Sep. 2018, Editorial member, Society of Environmental Science, Japan, Society

・Oct. 2014, Member of research committee for groundwater law and system, Saijo City, Ehime, Autonomy

・Jul. 2012, Member of advisory committee for the environment, Odawara City, Kanagawa, Autonomy

・Dec. 2018, Mar. 2021, Chairperson of city planning committee, Oshino Village, Yamanashi, Autonomy

[Research Projects]

・Program 1: Societal transformation under environmental change, Research Institute for Humanity and Nature, Research Program, Research Institute for Humanity and Nature, Apr. 2016, Mar. 2022

MATSUMOTO Tae

Associate Professor

[Academic Career]

Nara Women's University, Graduate School of Humanities and Sciences (2013)

[Professional Career]

Research Institute for Humanity and Nature 研究基盤国際センター 准教授 (2020-)

Shimane University Organization for Research and Academic Information General Information Processing Center 講師 (2016-2020)

Kanto Gakuin University 助教 (2015-2016)

[Fields of Specialization]

Informatics > Learning support systems

Informatics > Database science

[Academic Society Memberships]
COMMUNITY FOR INNOVATION OF EDUCATION AND LEARNING THROUGH COMPUTERS AND COMMUNICATION NETWORKS
情報処理学会 (2016-)

—Achievements—

[Published Papers]
・Tae Matsumoto, Mar. 2021, Remodeling an old Japanese house by remote and Development of e-learning content, Proceedings of the CIEC Spring Conference2021, Vol.12, Refereed

[Presentations]
・松本多恵, リモート古民家再生と e ラーニング教材の開発, CIEC 春季カンファレンス会議, 20 Mar. 2021
・松本多恵, リモートによる古民家再生と潜在資格者（建築士）へのオンライン学習システムの構築, ビジネスシミュレーション研究拠点会議（横浜国立大学ビジネスゲーム）, 20 Feb. 2021, Public discourse

[Research Projects]
・AI を活用したリモート古民家再生プロジェクト, 松本多恵, 人間文化研究機構 総合地球環境学研究所, 令和 2 年度博物館・展示を活用した先端研究の可視 化・高度化事業, Oct. 2020, Mar. 2021

MCGREEVY Steven Robert

Associate Professor

[Academic Career]
Kyoto University, Graduate School of Agriculture, Division of Natural Resource Economics (2008-2012)

[Fields of Specialization]
Humanities & social sciences > Sociology/history of science and technology > Environmental Sociology

[Academic Society Memberships]
Japanese Association for Environmental Sociology (2017-)
American Association of Geographers (2017-)
Japan Biochar Association (2009-)
Japanese Association for Rural Studies (2009-)
Global Alliance for Inter- and Transdisciplinary Research and Education (2019)
International Association for the Study of the Commons (2013-2015)
Rural Sociology Society (2010-2014)

[Awards]
MEXT Scholarship, Ministry of Education, Culture, Sports, Science and Technology (2008)
'1.5 Degree Lifestyles: Our Visions of the Future' Multimedia Contest, Spiegelberg, Maximilian;McGreevy;Steven R, School Lunch 2050, Hot or Cool Institute, Publisher (2021)

—Achievements—

[Books etc]
・Tamura Norie; Christoph D; D. Rupprecht; Steven R. McGreevy, Mar. 2021, Joint editor, A feast of our making — participatory futures of food and agriculture, Japanese, General book, ISBN: 9784812220290

・Steven R. McGreevy, Mar. 2021, Zachum Feast Gochisou: Life around a Bhutanese plate (by Mai Kobayashi & Rehka Chhetri), 76-77, Single work, Mountains of Possibility, a Closing: from the FEAST Project, 2, Mai Kobayashi, General book, ISBN: 9784906888757

[Published Papers]

・Steven R. MCGREEVY; Norie TAMURA; Christoph D. D. RUPPRECHT; Kazuhiko OTA; Mai KOBAYASHI; Maximilian; SPIEGELBERG, 31 Mar. 2021, Learning about, Playing with, and Experimenting in Critical Futures through Soft Scenarios: Directions for Food Policy, Environmental Science, 34 (2), 46-65, SOCIETY OF ENVIRONMENTAL SCIENCE, JAPAN, Japanese, Refereed, Scientific journal DOI:10.11353/sesj.34.46

・Simona Zollet; Luca Colombo; Paola De De Meo; Davide Marino; Steven R. McGreevy; Nora McKeon; Simona Tarra, 24 Feb. 2021, Towards Territorially Embedded, Equitable and Resilient Food Systems? Insights from Grassroots Responses to COVID-19 in Italy and the City Region of Rome, Sustainability, 13 (5), 2425-2425, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/su13052425

・Kazuaki Tsuchiya; Katsunori Iha; Adeline Murthy; David Lin; Selen Altiok; Christoph D.D. Rupprecht; Kiyono Hisako; Steven R. McGreevy, Jan. 2021, Decentralization & local food: Japan’s regional Ecological Footprints indicate localized sustainability strategies, Journal of Cleaner Production, 126043-126043, Elsevier BV, English, Refereed, Scientific journal DOI:10.1016/j.jclepro.2021.126043

・Christoph D. D. Rupprecht; Joost Vervoort; Chris Berthelsen; Astrid Mangnus; Natalie Osborne; Kyle Thompson; Andrea Y. F. Urushima; Maya Kóvskaya; Maximilian Spiegelberg; Silvio Cristiano; Jay Springett; Benedikt Marschütz; Emily J. Flies; Steven R. McGreevy; Laÿna Droz; Martin F. Breed; Jingchao Gan; Rika Shinkai; Ayako Kawai, Dec. 2020, Multispecies sustainability, Global Sustainability, 3, Cambridge University Press (CUP), English, Refereed, Scientific journal DOI:10.1017/sus.2020.28

・McGreevy; Steven R, Dec. 2020, Raising critical voices in strategic ways: Food transition in Northern Shinshu, 環境社会学研究会, English, Refereed, Symposium

・Nicholls, C.I; Altieri M.A; Kobayashi, M; Tamura, N; McGreevy, S; Hitaka, K, Dec. 2020, Assessing the agroecological status of a farm: a principle-based assessment tool for farmers, Agro Sur, 48 (2), 29-41, English, Refereed, Scientific journal

・C.I. Nicholls; M.A. Altieri; M. Kobayashi; N. Tamura; S. McGreevy; K. Hitaka, 2020, Assessing the agroecological status of a farm:a principle-based assessment tool for farmers, Agro Sur, 48 (2), 29-41, Sistema de Bibliotecas UACH, Scientific journal DOI:10.4206/agrosur.2020.v48n2-04

[MISC]

・Yoshida Momosuke; Steven R. McGreevy, Mar. 2021, Aiming for future school lunch 30 years from now: the case of Obuse Town, Nagano University, Agriculture and Economics, 87 (4), 62-67, Japanese, Invited, Introduction scientific journal

・Steven R. McGreevy; Norie Tamura, Jun. 2020, World's apart-- Japan's urban and rural experiences of the COVID-19 pandemic, Countryside and Community Research Institute Blog, English, Invited, Others

・McGreevy; Steven R, 2020, Working towards post-COVID Sustainable Transitions, FEAST Project Blog, English, Others

[Presentations]

・Kanang Kantamaturapoj; Steven R. McGreevy; Natapol Thongplew; Motoki Akitsu; Joost Vervoort; Astrid Mangnus; Kazuhiko Ota; Christoph D. D. Rupprecht; Norie Tamura; Maximillian Spiegelberg; Mai Kobayashi; Sittidaj Pongkijvorasin; Suwit Wibulpolprasert, Constructing Practice-oriented Participatory Policy for Sustainable Everyday Urban Food Futures in Bangkok, 15th RIHN International Symposium "Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-growth Future", 14 Jan. 2021, Invited, English, Invited oral presentation

・Steven R. McGreevy, Introduction to 15th RIHN International Symposium, 15th RIHN International Symposium "Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-growth Future", 13 Jan. 2021, English, Public symposium

・McGreevy; Steven R, Ethical implications of transitioning to a 1.5 degree food system, APSAFE 2020, 11 Dec. 2020, Invited, English, Keynote oral presentation

・Steven R. McGreevy, Raising critical voices in strategic ways: Food transition in Northern Shinshu, Japanese Association for Environmental Studies 62nd Symposium, 06 Dec. 2020, Japanese, Oral presentation

・伊波克典; 清野比咲子; 土屋一彬; Steven R. McGreevy; Christoph; D.D. Rupprecht, How many Earths does your city depend upon? How to Use the Ecological Footprint for Municipalities, Green Infrastructure Network Japan 2020, 08 Nov. 2020, Japanese, Poster presentation

・McGreevy; Steven R, Transitioning to 1.5 degree food systems, Global Nitrous Oxide Budget 2020 and our food system – Public Forum, 29 Oct. 2020, Invited, English, Public discourse

・Steven R. McGreevy; Norie Tamura, Japan's COVID-19 experience and what it means for agriculture, the countryside, and sustainability, Countryside and Community Research Institute Seminar- Food Citizenship plus Food in Japan during COVID-19, 25 Aug. 2020, Invited, English, Invited oral presentation

・McGreevy; Steven R; Ashley Colby, From "locking-down" to "locking-in": glocal dialogues and a glimpse into changes to everyday life and social practices, Future Earth Systems of Sustainable Consumption and Production Knowledge-Action Network Virtual Mini-Conference COVID-19 and Sustainability Transitions, 27 May 2020, English, Oral presentation

[Committee Memberships]

・2016, Management Team, Steering Committee, Future Earth Systems of Sustainable Consumption and Production Knowledge Action Network, Society

・2020, Editorial Board, Circular Economy and Sustainability (Springer Journal), Society

・2021, Editorial Board, Frontiers in Sustainability (Sustainable Consumption), Editorial Board, Others

・2021, Editorial Board, Journal of Agriculture, Food Systems, and Community Development, Editorial Board, Others

[Research Projects]

・The role of informal food practices in convivial post-growth rural lifestyles, Steven R. McGreevy, Japan Society for the Promotion of Science, Kaken (Young Researchers), Apr. 2019, Mar. 2022, 0, 0, 0, Competitive research funding

・Lifeworlds of Sustainable Food Consumption and Production: Agrifood Systems in Transition, Steven R. McGreevy; Christoph D. D. Rupprecht, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, Apr. 2016, Mar. 2021, 0, 0, 0, The FEAST project takes an action research approach to explore the realities and potential for sustainable agrifood transition at sites in Japan, Thailand, Bhutan, and China, while also exploring their general significance in Asia. We will analyze patterns of food consumption, food-related social practices and their socio-cultural meanings, and the potential of consumer-based agency to change deeply-held cultural notions and institutions. The notion of “lifeworld” captures the meaning behind the shared everyday lived experience of food consumption and production, and allows us to more deeply investigate and understand the “inner dimensions” that can catalyze socio-cultural change., Competitive research funding

MIMURA Yutaka

Researcher

[Academic Career]

The University of Tokyo The Graduate School of Engineering Department of Architecture 単位取得退学 (2007-2012)

Kokushikan University, Graduate School of Engineering, Construction engineering (2004-2006)

Kokushikan University, Faculty of Engineering, Department of Architecture (2000-2004)

[Professional Career]

Research Institute for Humanity and Nature, RIHN Center, Center Researcher (2018-)

Research Institute for Humanity and Nature RIHN Center センター研究推進員 (2016-2018)

Research Institute for Humanity and Nature, Center for Research Promotion, Center Research Associate (2016)

Research Institute for Humanity and Nature, Research Department, Researcher (2012-2015)

[Fields of Specialization]

Humanities & social sciences > Aesthetic practices

Social infrastructure (civil Engineering > architecture > disaster prevention) > Architectural history and design > History of Architecture and Urban in Indonesia

[Academic Society Memberships]

Institute of Environmental Art and Design (2019-)

Japan Association for Asian Studies (2017-)

Japan society for Southeast Asian Studies (2016-)

GIS Association of Japan (2010-)
日本建築学会 (2004-)

[Awards]
The Japan Consortium for Area Studies Award for Social Collaboration Yutaka Mimura 笑う怒田プロジェクト Japan Consortium for Area Studies (2020)

—Achievements—

[Books etc]
・三村豊; 熊澤輝一; 遠山真理; 寺田匡宏; 柴田宣史, Mar. 2021, Editor, 未来会話からつくる社会, 総合地球環境学研究所 未来社会の風土論 研究グループ

[Published Papers]
・MIMURA Yutaka; KUMAZAWA Terukazu; TOYAMA Mari; TERADA Masahiro, 07 Nov. 2020, Creating Conversations for Future Society—Approach to Forecasting and Backcasting, 環境芸術, (25), 30, Japanese, Scientific journal

[Presentations]
・Yutaka Mimura, Analysis of Development Trends in Post-war Jakarta Using Reconnaissance Satellite Imagery GAMBIT（KH- 7） and HEXAGON(KH-9), 東南アジア学会第 102 回研究大会（オンライン開催）, 20 Dec. 2020, 19 Dec. 2020 - 20 Dec. 2020, Japanese, Oral presentation
・三村豊, 共に創る未来社会への備えーいかに創造的な思考を育むか, 2020 年度 環境情報科学 研究発表大会（オンライン開催）, 17 Dec. 2020, 11 Dec. 2020 - 18 Dec. 2020, Japanese, Oral presentation

[Research Projects]
・熱帯脆弱環境での生業複合による持続的保全型生業システムの強靭化とその実践展開, 田中 樹, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (A), Research Institute for Humanity and Nature, Apr. 2020, Mar. 2025, 44590000, 34300000, 10290000, 20H00049
・人間と計算機が知識を処理し合う未来社会の風土論, 熊澤輝一, トヨタ財団 2018 年度研究助成プログラム, 特定課題「先端技術と共創する人間社会」, May 2019, Oct. 2021, 4800000, Competitive research funding

MISRA Prakhar

Researcher

[Higher Degrees]
The University of Tokyo (2018)

[Academic Society Memberships]
American Geophysical Union (2020-2021)

[Awards]
Tateishi Science and Technology Foundation International Travel Grant, Tateishi Science and Technology Foundation (2019)
International research meeting dispatch grant, Institute of Industrial Science, University of Tokyo (2019)

—Achievements—

[Published Papers]
・Trang Thi; Quynh Nguyen; Wataru Takeuchi; Sachiko Hayashida; Prakhar Misra, 02 Jan. 2021, Technical note: Emission mapping of key sectors in Ho Chi Minh city, Vietnam using satellite derived urban land-use data, Atmospheric Chemistry and Physics, Copernicus GmbH, Refereed, Scientific journal DOI:10.5194/acp-2020-895

- Ram Avtar; Deepak Singh; Deha Agus Umarhadi; Ali P. Yunus; Prakhar Misra; Pranav N. Desai; Asma Kouser; KBVN Phanindra, Jan. 2021, Impact of COVID-19 Lockdown on the Fisheries Sector: A Case Study from Three Harbors in Western India, Remote Sensing, 13 (2), 183-183, {MDPI} {AG}, Refereed, Scientific journal DOI:10.3390/rs13020183
- Ram Avtar; Asma Kouser; Ashwani Kumar Aggarwal; Deepak Singh; Prakhar Misra; Ankita Gupta; Ali P. Yunus; Pankaj Kumar; Brian Johnson; Rajarshi DasGupta; Dr. Netrananda Sahu; Andi Besse Rimba, Jan. 2021, Remote Sensing for International Peace and Security: Its Role and Implications, Remote Sensing, Refereed, Scientific journal DOI:10.3390/rs13030439
- Prakhar Misra; Masayuki Takigawa; Pradeep Khatri; Surendra Dhaka; A. Dimri; Kazuyo Yamaji; Mizuo Kajino; Wataru Takeuchi; Ryoichi Imasu; Prabir Patra; Sachiko Hayashida, 08 Dec. 2020, Nitrogen Oxides Concentration and Emission Change Detection During COVID-19 Restrictions in North India, Research Square DOI:10.21203/rs.3.rs-116325/v1
- Prakhar Misra; Ryoichi Imasu; Sachiko Hayashida; Ardhi Adhary Arbain; Ram Avtar; Wataru Takeuchi, 11 Sep. 2020, Mapping Brick Kilns to Support Environmental Impact Studies around Delhi Using Sentinel-2, ISPRS International Journal of Geo-Information, 9 (9), 544-544, MDPI AG, English, Scientific journal DOI:10.3390/ijgi9090544
- Surendra K. Dhaka; Chetna; Vinay Kumar; Vivek Panwar; A. P. Dimri; Narendra Singh; Prabir K. Patra; Yutaka Matsumi; Masayuki Takigawa; Tomoki Nakayama; Kazuyo Yamaji; Mizuo Kajino; Prakhar Misra; Sachiko Hayashida, Aug. 2020, PM2.5 diminution and haze events over Delhi during the COVID-19 lockdown period: an interplay between the baseline pollution and meteorology, Scientific Reports, 10 (1), 13442-13442, Springer Science and Business Media LLC, English, Refereed, Scientific journal DOI:10.1038/s41598-020-70179-8
- Md. Mustafizur Rahman; Ram Avtar; YunusAli Pulpadan; jie dou; Prakhar Misra; Wataru Takeuchi; Dr. Netrananda Sahu; Pankaj Kumar; Brian Johnson; Rajarshi Dasgupta; Ali Kharrazi; Shamik Chakraborty; Tonni Agustiono Kurniawan, Apr. 2020, Monitoring Effect of Spatial Growth on Land Surface Temperature in Dhaka, Remote Sensing, 12 (7), 1191-1191, {MDPI} {AG}, English, Refereed, Scientific journal DOI:10.3390/rs12071191
- Prakhar Misra; Wataru Takeuchi; Ryoichi Imasu, 2020, Brick kiln detection in north India with sentinel imagery using deep learning of small datasets, 40th Asian Conference on Remote Sensing, ACRS 2019: "Progress of Remote Sensing Technology for Smart Future", International conference proceedings

[MISC]

- Sachiko Hayashida; Prakhar Misra, Jun. 2020, How might the unexpected change in air quality caused by the lockdown in India change people's future behaviour?, RIHN Newsletter, (2)
- Prakhar Misra, Apr. 2020, Clean Air and Imagined Sustainability:The case of India, Newsletter Aakash, 1
- Prakhar Misra, Apr. 2020, Clean Air and Imagined Sustainability: The case of India, RIHN Newsletter, (1), English, Introduction research institution

[Presentations]

- Prakhar Misra; Masayuki Takigawa; Pradeep Khatri; S.K.Dhaka; A.P. Dimri; Kazuyo Yamaji; Mizuo Kajino; Wataru Takeuchi; Ryoichi Imasu; Prabir K. Patra; Sachiko Hayashid, COVID-19 lockdown impacts on NOx emission: top-down estimation over North India, 29 IIS Forum "Earth observation, disaster monitoring and risk assessment from space", 12 Mar. 2021
- Prakhar Misra, How well does KBDI compare with soil moisture for crops? A cal/val study in Thailand, 29 IIS Forum "Earth observation, disaster monitoring and risk assessment from space", 12 Mar. 2021, Oral presentation
- Prakhar Misra; Masayuki Takigawa; Pradeep Khatri; S K Dhaka; A P Dimri; Kazuyo Yamaji; Mizuo Kajino; Wataru Takeuchi; Ryoichi Imasu; Prabir Kumar Patr; Sachiko Hayashida, Detection of significant change in nitrogen oxides concentration and emission during COVID-19 lockdown in North India, AGU Fall Meeting 2020, 15 Dec. 2020, English, Oral presentation
- Sachiko Hayashida; Prakhar Misra; Kaho Nitta; Thuy Huong Nguyen; Prabir Kumar Patra; Masayuki Takigawa; Pradeep Khatri; S K Dhaka; A P Dimri; Kazuyo Yamaji; Mizuo Kajino; Wataru Takeuchi; Scientific Team; of; Mission DELHIS; Aakash Project, RIHN, Reduction of air pollutants over North-West India observed from space during the Covid-19 lockdown period, AGU Fall Meeting 2020, 07 Dec. 2020, English, Poster presentation
- Thuy Huong Nguyen; Sachiko Hayashida; Prakhar Misra; Pradeep Khatri; Yutaka Matsumi; Tomoki Nakayama; S K Dhaka; A P Dimri; Scientific Team of Mission DELHIS, Aakash Project, RIHN, Detection of Change in the Aerosol distribution over North-West India during the Covid-19 Lockdown period, AGU Fall Meeting 2020, 07 Dec. 2020, English, Poster presentation

・Prakhar Misra; Ryoichi Imasu; Sachiko Hayashida; Ardhi Adhary Arbain; Ram Avtar; Wataru Takeuchi, Spatial Distribution of Brick Kilns revealed by Remote Sensing: Transfer Learning based Detection around Delhi, 11th ISAJ Annual Symposium, 04 Dec. 2020, Invited, English, Invited oral presentation

・Prakhar Misra, Multi-temporal land-cover classification using Google Earth Engine, Knowledge Sharing Symposium on Machine Learning and Deep Learning in Geoinformatics, 01 Dec. 2020, Invited, English, Public discourse

・Prakhar Misra, Impact of COVID-19 lockdown on NOx emission in North India, Knowledge Sharing Symposium on Machine Learning and Deep Learning in Geoinformatics, 30 Nov. 2020, Invited, English

・Prakhar Misra, Environmental Monitoring in India: Remote Sensing for Air Quality Management, Seminar, Department of Geography and Environment, Pabna University of Science and Technology, 24 Nov. 2020, Invited, English, Public discourse

・Prakhar Misra, Impact of Urban Growth on Air Quality in Indian Cities, FTSP New Normal Webinar, Institut Teknologi Nasional, Bandung, Indonesia, 25 Jun. 2020, Invited

[Media Coverage]

・Covid-19 Has Led To Significant Fall In Pollution Level In Delhi, Other than myself, IPA Newspack, Aug. 2020, https://ipanewspack.com/2020/08/13/covid-19-has-led-to-significant-fall-in-pollution-level-in-delhi/, Internet

MURAO Rumiko

Researcher

[Academic Career]

Kyoto University 大学院アジア・アフリカ地域研究研究科 アフリカ地域研究専攻 (2000-2007)

Utsunomiya University Faculty of Applied Biological Science 植物生産学コース (1998-2000)

[Professional Career]

Research Institute for Humanity and Nature 研究員 (2020-)

Rikkyo University Graduate School of Social Design Studies 特定課題研究員 (2019-2020)

RIKKYO UNIVERSITY, Graduate School of Social Design Studies Field of Study: Business Administration in Network and Social Organization, Assistant Professor (2014-2019)

RIKKYO UNIVERSITY, Graduate School of Social Design Studies Field of Study: Business Administration in Network and Social Organization, Assistant Professor (2014-2019)

[Fields of Specialization]

Humanities & social sciences > Cultural anthropology and folklore

—Achievements—

[Books etc]

・Aug. 2020,「第 17 章ロジ(128 - 131)」,「コラム クォンボカ祭り(132 - 134)」,「第 53 章アンゴラ難民の暮らし(337 - 340) 」,『ザンビアを知るための 55 章;エリア・スタディーズ』, 島田 周平;大山 修一 ;編, 明石書店

NAKAHARA Satoe

Researcher

[Academic Career]

Kobe University Graduate School of Cultural Studies and Human Science 総合人間科学研究科博士後期課程(再入学) (2007-2008)

Kobe University Graduate School of Cultural Studies and Human Science 総合人間科学研究科博士後期課程(単位取得退学) (1999-2004)
Kobe University Graduate School of Cultural Studies and Human Science 総合人間科学研究科博士前期課程 (1997-1999)
Osaka University of Foreign Studies 二部外国語学部 英語学科 (1992-1997)
Toyo University 観光学科 (1984-1986)

[Professional Career]

Research Institute for Humanity and Nature Research Department 研究員 (2018-2021)
Chukyo University Institute for Research in Social Science 特任研究員 (2008-2018)
Chukyo University 非常勤講師 (2004-2018)
ITW インダストリー株式会社 (1993-1997)
インターメドジャパン株式会社 (1991-1993)
等松トウシュ・ロス・コンサルティング株式会社 (1987-1990)
株式会社初穂 (1987-1988)
東和ホリデーセンター株式会社 (1986-1987)

[Fields of Specialization]

Humanities & social sciences > Cultural anthropology and folklore

—Achievements—

[Books etc]

- 中原聖乃, 01 Mar. 2021, 166-177, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, General book, ISBN: 9784780311440
- 近藤康久・大西秀之共編著, Mar. 2021, 専門家と非専門家の異なる回路をさぐる, Joint work, 環境問題を解く, かもがわ出版
- 中原聖乃, 2020, 同位体環境学がえがく世界：2020 年版, 総合地球環境学研究所, ISBN: 9784906888764

[Published Papers]

- Yasuhisa Kondo; Eiichi Fujisawa; Kanako Ishikawa; Satoe Nakahara; Kyohei Matsushita; Satoshi Asano; Kaoru Kamatani; Satoko Suetsugu; Kei Kano; Terukazu Kumazawa; Kenichi Sato; Noboru Okuda, 19 Feb. 2021, An adaptive and abductive approach to develop community capability for environmental conservation in Lake Biwa (Japan), Research Square, Research Square DOI:10.21203/rs.3.rs-215768/v1

[Presentations]

- Satoe Nakahara, Auto-ethnography of Research Project on Solving Local Environmental Issues, Date, Vienna Anthropology Days (VANDA), Austria (Online), 01 Oct. 2020, English, Oral presentation
- Satoe Nakahara, Auto-ethnography of Research Project on Solving Local Environmental Issues, Vienna Anthropology Days (VANDA), 01 Oct. 2020, English, Oral presentation
- 中原聖乃, TD 研究による『異なる回路』の発見プロセスの可視化—環境トレーサビリティープロジェクトホームページ作成の現場から, 第 21 回 OpenTS ウェビナー, RIHN(online), 23 Sep. 2020, Japanese, Oral presentation
- 中原聖乃, びわ湖湖畔でのたったひとりの清掃活動の意味を考える, 第 19 回 OpenTS ウェビナー, RIHN(online), 29 Jul. 2020, Japanese, Oral presentation
- Satoe Nakahara, Action Research on Community Formation to Use Waterweed as a Fertilizer in Lake Biwa, IASC-RIHN Online Workshop on Commons, 21 Jul. 2020, 21 Jul. 2020 - 22 Jul. 2020, English, Oral presentation
- Satoe Nakahara, Action Research on Community Formation to Use Waterweed as a Fertilizer in Lake Biwa., IASC-RIHN Online Workshop on Commons, IASC, RIHN, online, 20 Jul. 2020, 20 Jul. 2020 - 22 Jul. 2020, English, Oral presentation
- Satoe Nakahara, Action Research on Community Formation to Use Waterweed as a Fertilizer in Lake Biwa, The International Science of Team Science Conference, 02 Jun. 2020, English, Oral presentation
- Satoe Nakahara, Action Research on Community Formation to Use Waterweed as a Fertilizer in Lake Biwa., The 11th Annual International Science of Team Science Conference, Duke University, Duke USA, United States, 01 Jun. 2020, 01 Jun. 2020 - 04 Jun. 2020, English, Oral presentation

[Academic Contribution]

・OpenTS ウェビナー, Academic society etc, 総合地球環境学研究所 オープンチームサイエンス, Sep. 2018, Dec. 2020

・2020 年度第 2 回 同位体座談会, Others, 総合地球環境学研究所 可視化高度化事業, 29 Nov. 2020

・2020 年度第 1 回 同位体座談会, Others, 総合地球環境学研究所 可視化高度化事業, 29 Oct. 2020

[Research Projects]

・Regional Reconstruction in the Marshall Islands and French Polynesia after Nuclear Tests: Adopting Ethnography of Physical Practice, 桑原 牧子; 中原 聖乃; 黒崎 岳大; 吉村 健司, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), Kinjo Gakuin University, Apr. 2020, Mar. 2024, 12480000, 9600000, 2880000, 20H01410

・写真着彩技術と対話を活用した持続可能な被ばくコミュニティ形成の応用人類学的研究, 中原 聖乃; 渡邉 英徳, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (C), Research Institute for Humanity and Nature, Apr. 2019, Mar. 2023, 4420000, 3400000, 1020000, 19K01237

NAKAO Seiji

Researcher

[Academic Career]

Nanzan University 人間文化研究科 人類学専攻博士後期課程 (2012-2017)

Nanzan University 人間文化研究科 人類学専攻博士前期課程 (2009-2012)

Tokyo University of Foreign Studies Faculty of Foreign Studies アラビア語専攻 (2005-2009)

[Professional Career]

Daito Bunka University Faculty of Foreign Languages 非常勤講師 (2020-)

Research Institute for Humanity and Nature Research Department 特任助教 (2019-2021)

Research Institute for Humanity and Nature Research Department 上級研究員 (2019)

Research Institute for Humanity and Nature プロジェクト研究員 (2017-2019)

Chukyo University School of Contemporary Sociology 非常勤講師 (2016-2018)

日本学術振興会 特別研究員(DC-1) (2012-2015)

[Fields of Specialization]

Humanities & social sciences > History - Asia/Africa

Humanities & social sciences > Cultural anthropology and folklore

[Academic Society Memberships]

THE JAPANESE SOCIETY OF CULTURAL ANTHROPOLOGY

JAPAN ASSOCIATION FOR AFRICAN STUDIES

[Awards]

若手研究者奨励賞 中尾 世治 総合地球環境学研究所 (2018)

ポスター賞 林 耕次;中尾 世治;山内 太郎 狩猟採集民の排泄行動―カメルーン，バカ・ピグミーの個体追跡による時間・空間分析から 日本アフリカ学会第 55 回学術大会 (2018)

Honorable Award, Kobayashi Hirohide;Shimizu Takao;Ito Miku;Nakao Seiji, Transforming Kasena houses and indigenous building technology in Burkina Faso, International Conference on Vernacular Earthen Architecture, Conservation and Sustainability (2017)

Honorable Award, Kobayashi Hirohide;Shimizu Takao;Ito Miku;Nakao Seiji, Transforming Kasena houses and indigenous building technology in Burkina Faso, International Conference on Vernacular Earthen Ar

東京外国語大学優秀卒業論文賞 東京外国語大学 (2009)

第 33 回研究奨励賞 中尾世治 『西アフリカ内陸の近代：国家をもたない社会と国家の歴史人類学』に対して 日本アフリカ学会 (2021)

—Achievements—

[Books etc]

・中尾世治, Aug. 2020, Single work, 西アフリカ内陸の近代：国家をもたない社会と国家の歴史人類学, 風響社

[Published Papers]

・中尾世治; 廣田緑, Mar. 2021, アートと人類学の対称性へ：《trial 003: as if archaeologists》の意味の遡及的探求, arts/, 37, 115-125, Japanese, Refereed, Scientific journal

・廣田緑; 中尾世治, Mar. 2021, 『作品（アート）⇔研究（人類学)』: トラーンスフェリムスの実践、あるいは《トライアル 003》, FAB, 1, 148-174, Japanese, Refereed, Research institution

・中尾世治, Jun. 2020, 言説的伝統と文字言語の社会的布置——20 世紀半ばの仏領西アフリカにおけるボボ・ジュラソのメデルサ設立運動の断絶と連続, 年報人類学研究, 11, 96-118, Japanese, Refereed, Scientific journal

・中尾世治; 池邉智基; 末野孝典; 平山草太, Jun. 2020, 西アフリカ・イスラーム研究の新潮流——教団、思想、言説的伝統, 年報人類学研究, 11, 51-72, Japanese, Refereed, Scientific journal

・中尾世治; 池邉智基; 末野孝典; 平山草太, Jun. 2020, 文献学的研究と人類学・民族誌学的研究の結合と乖離——1990 年代までの西アフリカ・イスラーム研究の変遷, 年報人類学研究, 11, 32-50, Japanese, Refereed, Scientific journal

・中尾世治, Jun. 2020, 特集・序——西アフリカ・イスラーム研究の新展開, 年報人類学研究, 11, 16-31, Japanese, Refereed, Scientific journal

[MISC]

・中尾世治; 斉藤尚文, Mar. 2021, 斉藤尚文さんとの対話——ある人類学者の半生について(3), 南山考人, (49), 21-49, Japanese, Report research institution

・大澤隆将; 金セッピョル; 中尾世治; 中原聖乃, Feb. 2021, 人類学者のジレンマと超学際的アプローチのなかでの可能性, Humanity & Nature Newsletter 地球研ニュース, 83, 12-15, Japanese, Others

・熊澤輝一; 中尾世治, Feb. 2021, 知識工学×人類学 地球環境学ビジュアルキーワードマップを切り口として, Humanity & Nature Newsletter 地球研ニュース, 83, 2-6, Japanese, Others

・Nakao, S, Feb. 2021, The Ethics of Sanitation Its Realms and Prospects, Sanitation Value Chain, 5 (1), 60, English

・K. Hayashi; T. Shimizu; H. Harada; S.=P. Etoga; Ch.-J. Nsonkali; V. Messe; G. Mbarga; Ch. Zobome; S. Nakao; T. Yamauchi, Feb. 2021, Co-Creation Practices on Sanitation in the Communities of Cameroon, Sanitation Value Chain, 5 (1), 51, English, Summary international conference

・中尾世治, May 2020, 国際ワークショップ「西アフリカにおける貨幣：商品から植民地通貨への転換についての経済・社会史」参加報, アフリカ研究, (97), 55-58, Japanese, Report scientific journal

[Presentations]

・清水貴夫; 小林広英; 中尾世治; 伊東未来, 継承困難な「伝統」技術を伝える試み. ブルキナファソ・カッセーナの伝統家屋の保全に向けて, Things. 工芸から覗く未来. 京都精華大学伝統産業イノベーションセンター×Kyoto Kougei Week 2021 シンポジウム, 21 Feb. 2021, Invited, Japanese, Nominated symposium

・K. Hayashi; T. Shimizu; H. Harada; S.=P. Etoga; Ch.-J. Nsonkali; V. Messe; G. Mbarga; Ch. Zobome; S. Nakao; T. Yamauchi, Co-creation practices on sanitation in the communities of Cameroon., Online International Symposium on Sanitation Value Chain 2020, 09 Dec. 2020, English, Poster presentation

・S. Nakao, The Ethics of Sanitation: Its Realms and Prospects., Online International Symposium on Sanitation Value Chain 2020, 09 Dec. 2020, English, Poster presentation

・中尾世治, 学際・超学際研究の促進のためのメタ研究——サニテーションプロジェクトでの試み, 高知大地球研サニテーションプロジェクト合同勉強会, 02 Dec. 2020, Invited, Japanese, Others

・中尾世治, 西アフリカ内陸の近代史と歴史人類学の新しい可能性 : 史資料の偏在とパースペクティブ, 第 52 回 ASC セミナー・日本アフリカ学会関東支部 2020 年度第 3 回例会, 30 Oct. 2020, Invited, Japanese, Public discourse

・S. Nakao; T. Osawa, Anthropologists at the interfaces of knowledge: Possibilities of anthropology in environmental issues., Vienna Anthropology Days 2020, 01 Oct. 2020, 29 Sep. 2020 - 01 Oct. 2020, English, Oral presentation

・廣田緑; 中尾世治, アートと人類学 : 往還の先に見える可能性, 民族藝術学会第 36 回大会, 26 Jul. 2020, Japanese, Oral presentation

・林耕次; 清水貴夫; 中尾世治; 山内太郎, 定住した狩猟採集民のサニテーションを Co-create する試み: カメルーン東部州の事例より, 日本アフリカ学会第 57 回学術大会, 23 May 2020, 23 May 2020 - 24 May 2020, Japanese, Oral presentation

・清水貴夫; 中尾世治, 汚泥の農業利用をめぐるサニテーションを Co-create する：ブルキナファソ中北部州 Ronguin 村とローカル NGO との協働の事例から, 日本アフリカ学会第 57 回学術大会, 23 May 2020, 23 May 2020 - 24 May 2020, Japanese, Oral presentation

・中尾世治, タカラガイの季節的暴落：仏領西アフリカの内陸における植民地通貨導入直後の貨幣状況, 日本アフリカ学会第 57 回学術大会, 23 May 2020, 23 May 2020 - 24 May 2020, Japanese, Oral presentation

[Committee Memberships]

・Apr. 2018, Sanitation Value Chain Deputy editor-in-chief, Others

・2017, Editorial Board, Sanitation Value Chain, Others

[Research Projects]

・トイレを必要とする条件とは：狩猟採集民、農耕民、都市生活者の排泄と衛生条件の比較, 中尾世治(研究分担者), Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)), Research Institute for Humanity and Nature, Oct. 2019, Mar. 2024, 18330000, 14100000, 4230000, 19KK0026

・宗教組織の経営プロセスについての文化人類学的研究, 中尾世治(研究分担者), Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), The University of Tokyo, Apr. 2018, Mar. 2022, 17160000, 13200000, 3960000, 本年度は、合計 2 回の全体研究会とフィールドワークを実施した。 （1）第 1 回研究会（2018 年 7 月 21 日）: 研究代表者から研究会の趣旨についての説明し、それを踏まえて研究分担者とともに本研究会の射程、今後の方針・計画について議論を行った。同時に今年度のフィールドワークの計画についての意見交換をした。 （2）夏期フィールドワーク（2018 年 7-9 月）: 第 1 回研究会での議論を踏まえ、各メンバーがフィールドワークを実施した。①藏本龍介はミャンマーおよび日本で仏教僧院および仏教 NGO の経営について、②岡部真由美はタイ北部における仏塔修復プロジェクトについて、③門田岳久は沖縄県の宗教組織における拝観料・入場料の取り扱われ方について、④田中鉄也はインドのヒンドゥー寺院における聖地／聖なるモノの管理について、⑤東賢太朗はフィリピンのカトリシズムの現代的展開について、⑥清水貴夫はブルキナファソにおけるイスラーム教師による世俗ビジネスについて、⑦中尾世治はブルキナファソにおけるムスリム文化連合の活動について、それぞれ調査した。 （3）第 2 回研究会（2018 年 12 月 1 日）: 夏期フィールドワークの成果を互いに報告し、意見交換を行った。また「宗教組織」や「経営」といった概念について、各メンバーのフィールドワークの成果を踏まえて再検討を行った。（4）冬期フィールドワーク（2019 年 2-3 月）: 一部のメンバー（岡部、東、清水）が夏期と同様のテーマでフィールドワークを実施した。, 18H00781

・独立直前の西アフリカにおけるリテラシーの社会的位置づけ：ハンパテ・バの活動から, 中尾 世治, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Early-Career Scientists, Research Institute for Humanity and Nature, Apr. 2018, Mar. 2022, 4160000, 3200000, 960000, 2018 年度は、フランス国立海外公文書館及びマリ国立公文書館において、アマドゥ・ハンパテ・バに関連する史料調査を行った。フランス国立海外公文書館では、ハンパテ・バの所属していたフランス黒アフリカ研究所の年次報告、ハンパテ・バによる雑誌記事などの史料の収集を行った。マリ国立公文書館では、ハンパテ・バによる 1950 年代の対抗-改革運動に関連する史料調査を行ったが、これについては、セグー管区四半期報告書がほとんど残存しておらず、史料の収集は部分的なものにとどまった。これらの一次資料の収集に加え、ハンパテ・バについて論じた二次文献の収集を行った。これらによって、ハンパテ・バ研究のための基礎的な一次資料及び二次資料をある程度の水準にまで収集することができた。 こうした基礎的な調査に加え、研究成果の発信を研究発表のかたちで行った。 第一に、2018 年度アジア・アフリカ言語文化研究所フィールドネット・ラウンジ企画「西アフリカ・イスラーム研究の新展開」を代表者が企画し、ハンパテ・バを含む西アフリカのイスラーム研究の現状を議論する場を設けた。 第二に、2018 年度第 3 回研究会 AA 研共同利用・共同研究課題「『プレザンス・アフリケーヌ』研究（2）テキスト・思想・運動」研究会において、「西アフリカにおける文字言語間の競合と『プレザンス・アフリケーヌ』: アマドゥ・ハンパテ・バにおける文字・印刷物／手稿書・転写」と題した発表を行い、西アフリカの文学・思想・政治のコンテクストのなかでのハンパテ・バの位置づけを明らかにした。, 18K12532

・The Sanitation Value Chain: Designing Sanitation Systems as Eco-Community-Value System, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, Apr. 2015, Mar. 2021

[Media Coverage]

・書評・西アフリカ内陸の近代, Other than myself, 読売新聞, 18 Oct. 2020, Paper

[Teaching Experience]

・Africa Area Studies, Daito Bunka University, 99 Apr. 2020

NGUYEN Hoang

Senior Researcher

[Fields of Specialization]

Natural sciences > Solid earth science

Environmental science/Agricultural science > Environmental dynamics

[Awards]

日本情報地質学会奨励賞 (2018)

資源・素材学会関西支部第 12 回若手研究者・学生のための研究発表会・優秀発表賞 (2015)

日本情報地質学会奨励賞 (2015)

若手研究者奨励賞 国際資源探査会議 (2014)

日本政府（文部科学省）奨学金 (2013)

—Achievements—

[Published Papers]

- Nguyen Tien Hoang; Keiichiro Kanemoto, 29 Mar. 2021, Mapping the deforestation footprint of nations reveals growing threat to tropical forests, Nature Ecology & Evolution, 5, 845-853, Springer Science and Business Media LLC, Refereed, Scientific journal DOI:10.1038/s41559-021-01417-z
- Keiichiro Kanemoto; Yosuke Shigetomi; Nguyen Tien Hoang; Keijiro Okuoka; Daniel Moran, 12 Oct. 2020, Spatial variation in household consumption-based carbon emission inventories for 1, 200 Japanese cities, Environmental Research Letters, 15 (11), IOP Publishing, Refereed, Scientific journal DOI:10.1088/1748-9326/abc045
- Dang Thi Nhu Y; Nguyen Tien Hoang; Pham Khac Lieu; Hidenori Harada; Keisuke Koba; Natacha Brion; Duong Van Hieu; Nguyen Van Hop; Tim Sierens; Harry Olde Venterink, Jul. 2020, Interspecific variation in foliar nutrients and isotopes of submerged macrophytes in the Cau Hai Lagoon, the typical brackish lagoon in Vientam, Botanica Pacifica, 9 (2), 61-72, Botanical Garden - Institute of the Far Eastern Branch of the RAS, Refereed, Scientific journal DOI:10.17581/bp.2020.09207

[MISC]

- Nguyen Tien Hoang; Keiichiro Kanemoto, Mar. 2021, Spatio-temporal changes in global deforestation footprints over 15 years, The 14th Biennial International Conference on EcoBalance, English, Summary international conference
- Yuya Kubo; Hoang Nguyen; Katsuaki Koike; Shuho Noda; Yukie Asano; Yu Kawakami; Kazuo Masuda, Oct. 2020, Increases in spectral and spatial resolutions of satellite imagery using airborne hyperspectral imagery with an application to mineral mapping in a metal deposit area, GEOINFORUM-2020, Japanese, Summary national conference

NILES Daniel

Associate Professor

—Achievements—

[Books etc]

- 寺田, 匡宏; Niles, Daniel, Mar. 2021, 人新世を問う：環境、人文、アジアの視点, vi, 494p, 図版 [4] p, 京都大学学術出版会, Japanese, ISBN: 9784814003174

[Presentations]

・D. Niles; K. Abe, The cultural dimensions of agricultural sustainability, 15th RIHN International Symposium: Transitioning Cultures of Everyday Food Consumption and Production: Stories from a Post-Growth Future", 16 Jan. 2021, 13 Jan. 2021 - 16 Jan. 2021, Invited, English, Invited oral presentation

・D. Niles, World in a Basket. In: Waza on the Move: Ineffable arts of learning., France/Japan Joint Workshop for Techniques & Culture, 23 Oct. 2020, Invited, English, Invited oral presentation

ODA Kimisato

Researcher

[Academic Career]

Kyoto University, Graduate School of Agriculture, Landscape architecture, doctoral course, Division of Forest and Biomaterials Science (2010-2019)

Kyoto University, Graduate School of Agriculture, Landscape architecture, master course, Division of Forest and Biomaterials Science (2008-2010)

Kyoto University, Faculty of Agriculture, Department of Forest and Biomaterials Science (2004-2008)

Koyo Gakuin High School (2001-2004)

[Professional Career]

Nara Prefectural University Faculty of Regional Promotion 兼任講師 担当講義「科学技術と社会」 (2019-2021)

Research Institute for Humanity and Nature, FEAST Project, Researcher (2019-2021)

Educational Unit for Studies, Connectivity of Hills, Humans and Oceans [CoHHO], Researcher (2019-2020)

Osaka Sangyo University Faculty of Design Technology Department of Environmental Science and Technology 非常勤契約助手 フィールドスタジオ演習I，II (2019-2020)

Research Institute for Humanity and Nature (RIHN), FEAST Project, Research Assistant (2016-2019)

[Higher Degrees]

(2010)

[Fields of Specialization]

Environmental science/Agricultural science > Landscape science

Environmental science/Agricultural science > Environmental agriculture

[Academic Society Memberships]

The Association of Rural Planning (2020-)

JAPANESE SOCIETY OF REVEGETATION TECHNOLOGY (2015-)

JAPANESE INSTITUTE OF LANDSCAPE ARCHITECTURE (2014-)

—Achievements—

[Books etc]

・田村典江; Rupprecht Christoph D. D; McGreevy Steven R, 31 Mar. 2021, 「共生する都市計画、食べられる景観、都市農業」, Contributor, みんなでつくる「いただきます」: 食から創る持続可能な社会, vii, 192p, 昭和堂, Japanese, ISBN: 9784812220290

[Published Papers]

・貫名涼; 張平星; 小田龍聖; 井原 縁, 2020, 文化的景観におけるタケ類の現状と位置付けに関する予備的研究－大阪府日根荘大木の事例－, 景観生態学, 25 (2), 147-151, Refereed, Scientific journal

[Committee Memberships]

・Aug. 2019, Mar. 2021, ランドスケープ遺産研究部会事務局, 日本造園学会（関西支部）, Society

OTA Kazuhiko

Researcher

[Academic Career]

Tokyo University of Agriculture and Technology, United Graduate School of Agricultural Science, Department of Science on Agricultural Economy and Symbiotic Society, Ph.D (2010-2013)

Tokyo University of Agriculture and Technology, Graduate School of Agriculture (2008-2010)

Tokyo University of Agriculture and Technology, Ecoregion Science (2003-2008)

[Professional Career]

Research Institute for Humanity and Nature FEAST プロジェクト Assistant Professor (2020-2021)

Research Institute for Humanity and Nature, FEAST project, Researcher (2016-2020)

Nanzan University, Faculty of Policy Studies, Associate Professor (2021-)

General Incorporated Association Asian Soil Conservation Network, Auditor (2014-2016)

Toho High School Junior High School, Department of Biology, Part-time lecturer (2013-2016)

Musashi High School Junior High School, Biology Department, Part-time lecturer (2010-2014)

[Fields of Specialization]

Humanities & social sciences > Philosophy and ethics > food ethics

Humanities & social sciences > Philosophy and ethics > environmental ethics

Environmental science/Agricultural science > Social-ecological systems > sustainability transition

Humanities & social sciences > Philosophy and ethics > millau studies

[Academic Society Memberships]

The Japanese Association for Environmental Sociology (2018-)

The Japan Sociological Society (2016-)

American Association of Geographers (AAG) (2016-)

International Society for Environmental Ethics (ISEE) (2015-)

Japanese Society of Soil Science and Plant Nutrition (2015-)

Japan Association for the Contemporary and Applied Philosophy (2013-)

The Society for the Study of Environmental Thought and Education (2010-)

Japanese Association for Comparative Philosophy (2010-)

The Association for Kyosei Studies (2010-)

The Japan Association for Philosophy of Science (2019)

Japan Society for Research Policy and Innovation Management (2018)

[Awards]

RIHN Young Researcher Special Encouragement Award, Research Institute for Humanity and Nature (2018)

—Achievements—

[Books etc]

・太田和彦, 01 Mar. 2021, Contributor, 太田和彦, 環境問題を解く ひらかれた協働研究のすすめ, かもがわ出版, Japanese, ISBN: 9784780311440

・Kazuhiko, Ota, Mar. 2021, Single translation, From Field to Fork: Food Ethics for Everyone, 勁草書房

・近藤康久; 大西秀之編著, Mar. 2021, 執筆担当部分：超学際的エクササイズとしてのシリアスボードゲームジャム、pp. 102-113. (12p.), Contributor, 環境問題を解く：ひらかれた協働研究のすすめ, かもがわ出版

・田村, 典江; Rupprecht, Christoph D. D.; McGreevy, Steven R., Mar. 2021, 「フードポリシー・カウンシル」「持続可能性、レジリエンス、ウェルビーイング」「調査と議論を通じて、次の世代にバトンをつなぐ（秋田県能代市）」, Contributor, みんなでつくる「いただきます」：食から創る持続可能な社会, vii, 192p, 昭和堂, Japanese, ISBN: 9784812220290

・太田和彦, Oct. 2020, 207-222, 環境倫理学. 3STEP シリーズ, 2, 259, 昭和堂, ISBN: 9784812219348

・太田和彦, Oct. 2020, 71-86, 環境倫理学. 3STEP シリーズ, 2, 259, 昭和堂, ISBN: 9784812219348

・Akihiro Yohinaga; Tsuyoshi Teramoto, Oct. 2020, 「土地倫理―アメリカの環境倫理学の出発点」、「食農倫理学―私たちにとっての理想的な食とは」, Contributor, Environmental ethics, vii, 259p, Showa-do, Japanese, ISBN: 9784812219348

[Published Papers]

・マックグリービー スティーブン R; 田村 典江; ルプレヒト クリストフ D. D; 太田 和彦; 小林 舞; スピーゲルバーグ; マキシミリアン, Mar. 2021, 未来を知り、遊び、実験する：ソフトシナリオ手法を通じたフードポリシーの共創, 環境科学会誌, 34 (2), 46-65, Japanese, Refereed, Scientific journal

・太田和彦, May 2020, レジリエンス研究における和辻風土論の寄与―生の哲学との比較と「旅行者の体験における弁証法」, 比較思想研究, (46), 109-117, Refereed, Scientific journal

・太田和彦, May 2020, レジリエンス研究における和辻風土論の寄与：生の哲学との比較と「旅行者の体験における弁証法」, 比較思想研究, 46, 109-117, Japanese

・Kazuhiko OTA, May 2020, The Anthropocene Narrative: New Geological Ages, One Earth, Many Worlds, 福音と世界, 5 月号, 12-17, Japanese

[MISC]

・Kazuhiko OTA, Mar. 2021, An Introduction to Food Ethics, α-Synodos, 285, Japanese, Invited, Introduction commerce magazine

・太田和彦, May 2020, 人新世という物語：新たな地質年代、一つの地球、いくつもの世界, 福音と世界, 2020 年 5 月号, 12-17, Japanese

[Presentations]

・Kazuhiko OTA; Tomohiro OH, How does milieu connect with the narrative of modern Japanese environmental thought?: Suggestions from literature reviews, International Association for Japanese Philosophy 2021, 14 Mar. 2021, English, Oral presentation

・太田和彦; 井上明人; 藤枝侑夏; 大谷通高, Ecosystem of Serious Board Game Jam: Case Studies from SBGJ2018 and SBGJ2019, 日本デジタルゲーム学会 2021 年度大会, 13 Mar. 2021, Japanese, Nominated symposium

・Kazuhiko OTA, Introduction to the SDGs: 17 Goals from the Perspective of Community Development, Akita Prefectural Noshiro High School: Sustainable Society, 04 Mar. 2021, Invited, Japanese, Public discourse

・Kazuhiko OTA, NASA game: Think alone × Think with team, Sakaki Municipal Sakaki Junior High School, 27 Jan. 2021, Invited, Japanese, Public discourse

・Kazuhiko OTA, Frontiers of Food and Agricultural Ethics: In Asia Pacific, 南山大学・講義「サステイナビリティ・スタディーズ概論」, 28 Dec. 2020, Invited, Japanese, Public discourse

・Kazuhiko OTA, Where does ethics find its place in "eating"? -A Long Journey in Food Ethics, 神戸大学・メタ科学技術研究ワークショップ, 26 Nov. 2020, Invited, Japanese, Public discourse

・Kazuhiko OTA, The effectiveness and limitations of serious games as a tool to promote sustainability transition, 日本社会学会 2021 年度大会, 31 Oct. 2020, Japanese, Oral presentation

・Kazuhiko OTA, Aspects of Soil Narratives in the Anthropocene: A Perspective on Improving Regional Resilience, 日本土壌肥料学会 2020 年度大会, 09 Sep. 2020, Japanese, Oral presentation

・太田和彦, Serious Board Game Jam: Collaborative Visualization of Social Issues and Scientific Knowledge., International Conference on Game Jams, Hackathons, and Game Creation Events (ICGJ 2020), Online, 24 Aug. 2020 - 25 Aug. 2020, English

・Kazuhiko Ota, Serious Board Game Jam: Collaborative Visualization of Social Issues and Scientific Knowledge, International Conference on Game Jams, Hackathons, and Game Creation Events (ICGJ 2020), 24 Aug. 2020, English, Oral presentation

・Kazuhiko Ota, Akito Inoue, Yuka Fujieda, Commons and Serious Games., Kyoto 2020: IASC-RIHN Online Workshop, Online, 20 Jul. 2020 - 22 Jul. 2020, English

・Kazuhiko Ota; Akito Inoue; Yuka Fujieda, Commons and Serious Games, IASC-RIHN Online Workshop 2020, Jul. 2020, English, Oral presentation

・Kazuhiko OTA; Yoshimitsu TANIGUCHI, Continuing Effects of Active Learning on Students' Learning about Sustainable Food Systems, 環境社会学会 2020 年度大会, 14 Jun. 2020, Japanese, Oral presentation

・太田和彦, 持続可能なフードシステムに関する学習に 果たすアクティブ・ラーニングの継続的効果., 応用哲学会 2020 年度大会, 信州大学（オンライン）, 25 Apr. 2020 - 26 Apr. 2020, Japanese

・太田和彦, フードシステムの持続可能性の向上を目指す取り組みへの 食農倫理学の寄与の方向性, 応用哲学会 2020 年度大会, 信州大学（オンライン）, 25 Apr. 2020 - 26 Apr. 2020, Japanese
・太田和彦, 都市における持続可能性、技術、ウェルビーイング、倫理的諸問題, 応用哲学会 2020 年度大会, 信州大学（オンライン）, 25 Apr. 2020 - 26 Apr. 2020, Japanese
・太田和彦, 超学際的実践のなかの省察 : サマースクール「フードスケープをつなぐ」を事例として, 応用哲学会 2020 年度大会, 信州大学（オンライン）, 25 Apr. 2020, 26 Apr. 2020, Japanese
・Kazuhiko OTA, Sustainability, technology, wellbeing, and ethical issues in cities, 応用哲学会 2020 年度大会, 25 Apr. 2020, Japanese, Public symposium
・Kazuhiko OTA, Reflection in Transdisciplinary Practice: A Case Study of the Summer School "Connecting Foodscapes, 応用哲学会 2020 年度大会, 25 Apr. 2020, Japanese, Oral presentation
・Kazuhiko OTA, What is the premise on "sustainable society"?: Philosophy and Ethics in Transdisciplinary Studies, 応用哲学会 2019 年度大会, 京都大学, 20 Apr. 2020, Japanese, Oral presentation

[Works]
・Urban Food Policy Starter Kits, Takashi TOKUMA; Kazuhiko OTA, 31 Jan. 2021

[Academic Contribution]
・Organize for the 4th Asia Pacific Society for Agricultural and Food Ethics Conference (APSAFE 2020)), Competition etc, Kazuhiko Ota, Nobutsugu Kanzaki, 03 Dec. 2020, 16 Dec. 2020

[Committee Memberships]
・Oct. 2019, Administrator, The Association for Kyosei Studies, Society

[Research Projects]
・Construction of a renewed framework of engineering ethics corresponding to interdisciplinary development of engineering, Atsushi Fujiki; Tsuyoshi Matsuda; Nobutsugu Kanzaki; Yusuke Inoue; Kazuhiko Ota, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), Kobe City College of Nursing, Apr. 2020, Mar. 2024, 17550000, 13500000, 4050000, 20H01179
・持続可能な地域づくりに資する“思考の補助線”としての風土概念の有効性の検討, 太田 和彦, 日本学術振興会, 科研費（若手研究）, Apr. 2019, Mar. 2022, 0, 0, 0, Competitive research funding
・倫理を結節点とした都市の学際研究：持続可能性・安全・情報・ウェルビーイングの連環, Nonustugu Kanzaki; Kazuhiko Ota; Norifumi Saito; Kazuki Kagohashi; Koshiro Suzuki, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Challenging Research (Exploratory), Nanzan University, Jun. 2019, Mar. 2021, 5070000, 3900000, 1170000, 19K21619
・Development of a Learning Program Based on Mitigation and Adaptation Initiatives for the Anthropocene in Local Communities: From the Perspective of Local Environmental Ethics, Kazuhiko OTA, The Uehiro Foundation on Ethics Education, Research grant, Jan. 2020, Feb. 2021

ONISHI Yuko

Assitant Professor

—Achievements—

[Research Projects]
・Methods and Tactics to Foster Knowledge Co-creation: a Practical Framework for Implementing Transdisciplinary Research, Research Institute for Humanity and Nature, Core Project, Research Institute for Humanity and Nature, Apr. 2019, Mar. 2023

・Phenological impacts of climate change on Japanese plants and animals, 大西 有子, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Research Activity Start-up, Research Institute for Humanity and Nature, 30 Aug. 2019, 31 Mar. 2021, 2860000, 2200000, 660000, 本研究では、気候変動が生態系に与える影響を、さまざまな動植物の生物季節の変化を分析、予測することで評価することを目指している。今年度は、研究を始めるにあたり、まず、気候変動の生態系への影響と、温暖化影響評価モデルに関して、文献のレビューを行った。生態系への影響に関しては、多くの生物で高緯度や高標高への移動や、生物季節の変化が観測され続けており、近年では、温暖化の速度と動植物の移動の速度に関する研究に多くの関心が寄せられていることが明らかとなった。これらのレビューをもとに、国際的な研究組織である Future Earth による主要な出版物の一つ「10 New Insights in Climate Science 2019」にレビュワーとして参加し、特に生態系の変化の章に関して、引用論文の推薦やドラフトの修正等に貢献した。 また、モデリングで利用するデータを整備するための準備として、インターネットで提供されている生物季節の記録を、一括してデータとして取り込む手法を検討した。研究開始当初は、アルバイトの雇用を想定していたが、新型コロナウイルス感染拡大措置による外出自粛や在宅勤務により、新規の人材の雇用による実施が難しくなったため、人材に頼らず研究を進める方法を探索した。合わせて、専門家への聞き取り調査や研究協力者との会合に関して、テレビ会議システムや、オンラインで共同作業を行うツール等を検討した。本研究では、さまざまな動植物の生物季節観測が行われている現地に赴き、観測現場を視察することを、非常に重要な要素として位置づけていた。来年度の少なくとも前半には、観測地における調査ができない可能性も考え、計画内容の優先順位付けと修正を行った。, 19K24390

OSAWA Takamasa

Researcher

[Academic Career]

The University of Edinburgh, School of Social and Political Science, Social Anthropology (2010-2016)

London School of Economics and Political Science, Department of Anthropology, Social Anthropology (2009-2010)

Tokyo University of Marine Science and Technology, Graduate School of Marine Science and Technology, Course of Marine Environmental Studies (2005-2009)

Waseda University School of Letters Arts and Sciences I 総合人文学科 (2003)

[Professional Career]

Research Institute for Humanity and Nature Research Department 研究員 (2017-2021)

National Museum of Ethnology 共同研究員 (2018-2022)

Kyoto University 東南アジア地域研究研究所 連携研究員 (2020)

Tokyo University of Marine Science and Technology Faculty of Marine Technology 博士研究員 (2016-2017)

[Fields of Specialization]

Humanities & social sciences > Local studies

Humanities & social sciences > Cultural anthropology and folklore > Social Anthropology

[Academic Society Memberships]

The International Society for Hunter Gatherer Research

THE JAPANESE SOCIETY OF CULTURAL ANTHROPOLOGY

インドネシア研究懇話会(KAPAL) (2018-)

—Achievements—

[MISC]

・金セッピョル; 中尾世治; 中原聖乃; 大澤隆将, Feb. 2021,「人類学者のジレンマと超学際的アプローチのなかでの可能性」,『Humanity & Nature Newsletter－地球研ニュース』, 83, 12-15, Japanese, Refereed, Invited, Meeting report

・Takamasa Osawa, 2021, 書評：Kata penutup: Kebudayaan, emosi dan ingatan: Kesan dari perspektif antropologi (Griven H Putera 著 (2020) Nisan Bunga のあとがき), Nisan-Nisan Berbunga: Kumpulan Cerpen. Yogyakarta: Gambang, 178-181, Indonesian, Refereed, Invited, Book review

・Osawa, Takamasa; Nakao, Seiji, May 2020, Anthropologists at the interfaces of knowledge: Possibilities of anthropology in environmental issues, Scientific Program of Vienna Anthropology Days 2020, English, Refereed, Summary international conference, Session_Schedule___Abstracts_Session_8(4).pdf

[Presentations]

・大澤隆将, Online interview, land recognition and Local knowledge, International workshop of the governance group, Peatland Society Project, 18 Mar. 2021, Invited, English, Nominated symposium

・Akhwan Binawan; Takamasa Osawa, Collaborative Research in a Fishing Village around Tropical Peatland in Riau, Indonesia, ASEAN Research Platform Annual Meeting FY 2020/21, 19 Feb. 2021, Invited, English, Nominated symposium

・大澤隆将, スク・アスリの先住民性と宗教選択, インドネシア研究懇話会(KAPAL)第二回研究大会（東洋大学：オンライン開催）, 30 Nov. 2020, 29 Nov. 2020 - 30 Nov. 2020, Japanese, Oral presentation

・Seiji Nakao; Takamasa Osawa, Introduction, Vienna Anthropology Days 2020, 01 Oct. 2020, 28 Sep. 2020 - 01 Oct. 2020, English, Public symposium

・Takamasa Osawa, Political communication between "indigenous people" and the government in Bengkalis, Webinah Kuliah Umum Jurusan Pemerintahan FISIP UNRI, Riau University (Online), Pekanbaru, 21 Sep. 2020, Invited, Indonesian, Public discourse

[Academic Contribution]

・Organizing a Panel Session in an International Conference: 'Anthropologists at the interfaces of knowledge: Possibilities of anthropology in environmental issues.', Takamasa Osawa, Competition etc, Vienna Anthropology Days 2020, 30 Oct. 2020

[Research Projects]

・Comparative study of ethnicity in eastern Sumatra: Resource use and the choice of livelihoods, 大澤 隆将, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Early-Career Scientists, Research Institute for Humanity and Nature, Apr. 2020, Mar. 2023, 4290000, 3300000, 990000, 20K13293

・統治のフロンティア空間をめぐる人類学, 佐川徹, 国立民族学博物館, 共同研究, Oct. 2018, Sep. 2021, 0, 0, 0, Competitive research funding

・「インドネシアにおける土地所有権と泥炭地回復」, 水野広祐, 日本学術振興会, 科学研究費助成事業（基盤研究 B）, Apr. 2019, Mar. 2021, 0, 0, 0, Competitive research funding

・Toward the Regeneration of Tropical Peatland Societies: Building International Research Network on Paludiculture and Sustainable Peatland Management, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, Apr. 2013, Mar. 2022

RUPPRECHT Christoph D.D.

Senior Researcher

[Academic Career]

Griffith University, Environmental Futures Research Institute, PhD course (2011-2015)

Ludwig-Maximilian Universität Faculty of Cultural Studies Japanese Studies MA course (2003-2009)

[Professional Career]

Research Institute for Humanity and Nature, Research Department, Senior Researcher (2018-2021)

Doshisha University, Graduate School of Global Studies, Adjunct Lecturer (2017-2021)

Kyoto University, Faculty of Agriculture, Adjunct Lecturer (2017-2020)

Research Institute for Humanity and Nature, Research Department, Project Researcher (2016-2018)

The University of Tokyo, Graduate School of Agricultural and Life Sciences, Adjunct Lecturer (2017)

[Higher Degrees]

MA Ludwig-Maximilian-Universität (2009)

[Fields of Specialization]

Environmental science/Agricultural science > Landscape science > Including urban geography > urban planning > food and agriculture geography

Environmental science/Agricultural science > Environmental agriculture > Including urban geography > urban planning > food and agriculture geography

[Academic Society Memberships]

Human Geographical Society of Japan (2020-)

The City Planning Institute of Japan (2020-)

JAPANESE INSTITUTE OF LANDSCAPE ARCHITECTURE (2016-)

Royal Geographic Society (2016-)

Association of American Geographers (2015-)

JAPAN GEOSCIENCE UNION (2013-)

[Awards]

Early Career Researcher Special Award, Christoph D. D. Rupprecht, Research Institute for Humanity and Nature (2020)

RIHN Young Researcher Award, Christoph D;D. Rupprecht, Research Institut for Humanity and Nature (2019)

Urban Geography Specialty Group Dissertation Award, Christoph D;D. Rupprecht, American Association of Geographers (2016)

Outstanding Student Presentation Award, Christoph D;D. Rupprecht, Japan Geoscience Union (2013)

—Achievements—

[Books etc]

・田村典江; クリストフ・D・D・ルプレヒト; スティーブン・R; マックグリービー, Mar. 2021, Joint editor, みんなでつくる「いただきます」 食から創る持続可能な社会, 昭和堂

[Published Papers]

・Lihua Cui; Christoph D. D. Rupprecht; Shozo Shibata, 03 Mar. 2021, Climate-Responsive Green-Space Design Inspired by Traditional Gardens: Microclimate and Human Thermal Comfort of Japanese Gardens, Sustainability, 13 (5), 2736-2736, MDPI AG, Refereed, Scientific journal DOI:10.3390/su13052736

・Kazuaki Tsuchiya; Katsunori Iha; Adeline Murthy; David Lin; Selen Altiok; Christoph D.D. Rupprecht; Kiyono Hisako; Steven R. McGreevy, Jan. 2021, Decentralization & local food: Japan’s regional Ecological Footprints indicate localized sustainability strategies, Journal of Cleaner Production, 292, 126043-126043, Elsevier BV, English, Refereed, Scientific journal DOI:10.1016/j.jclepro.2021.126043

・MCGREEVY Steven R.; TAMURA Norie; RUPPRECHT Christoph D. D.; OTA Kazuhiko; KOBAYASHI Mai; SPIEGELBERG Maximilian, 2021, Learning About, Playing With, and Experimenting in Critical Futures Through Soft Scenarios—Directions for Food Policy—, ENVIRONMENTAL SCIENCE, 34 (2), 46-65, SOCIETY OF ENVIRONMENTAL SCIENCE, JAPAN, Japanese, Refereed, Scientific journal DOI:10.11353/sesj.34.46

・Christoph D. D. Rupprecht; Joost Vervoort; Chris Berthelsen; Astrid Mangnus; Natalie Osborne; Kyle Thompson; Andrea Y. F. Urushima; Maya Kóvskaya; Maximilian Spiegelberg; Silvio Cristiano; Jay Springett; Benedikt Marschütz; Emily J. Flies; Steven R. McGreevy; Laÿna Droz; Martin F. Breed; Jingchao Gan; Rika Shinkai; Ayako Kawai, Dec. 2020, Multispecies sustainability, Global Sustainability, 3, e34, Cambridge University Press (CUP), Refereed, Scientific journal DOI:10.1017/sus.2020.28

・Christoph Rupprecht, Dec. 2020, Edible green infrastructure or edible landscapes? A case for co-stewardship in multispecies commons, Proceedings of the 4th APSAFE Symposium, 79-85, Refereed, International conference proceedings

・Christoph Rupprecht, Nov. 2020, Novel, An A-Z of Shadow Places CONCEPTS, Refereed, Scientific journal

・Mallika Sardeshpande; Christoph Rupprecht; Alessio Russo, Nov. 2020, Edible urban commons for resilient neighbourhoods in light of the pandemic, Cities, 103031-103031, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.cities.2020.103031

・Rika Shinkai; Maximilian Spiegelberg; Christoph Rupprecht; Norie Tamura, Oct. 2020, The importance of collecting basic data on beekeeping in Japan: issues and ideas for reform based on an analysis of differences between prefectural application forms for beekeeping registrations, Sustainable Livestock Production and Human Welfare, 74 (11), 921-929, Japanese, Scientific journal

・Kim Minseo; Rupprecht Christoph D.D.; Furuya Katsunori, 2020, Typology and Perception of Informal Green Space in Urban Interstices::A case study of Ichikawa City, Japan, International Review for Spatial Planning and Sustainable Development, 8 (1), 4-20, International Community of Spatial Planning and Sustainable Development, English, Refereed DOI:10.14246/irspsd.8.1_4

[Presentations]

・Christoph D. D. Rupprecht, Multispecies thinking, 8th SRIREP Project seminar, 14 Dec. 2020, Invited, Japanese, Public discourse

・Christoph D. D. Rupprecht; Aoi Yoshida; Lihua Cui, Multispecies Community Garden：縮小都市の豊かな暮らしに向けて、人間の枠を超えた共生のデザインコンセプト提案, Japanese Institute of Landscape Architecture Annual Meeting, 01 May 2020, Japanese, Poster presentation

[Works]

・Ecokana, FEAST Project WG5, 2020

[Committee Memberships]

・Oct. 2017, Editorial Board, Bulletin of Geography Socioeconomic Series, Others

・Jul. 2017, Jun. 2021, 編集委員会, 造園学会, Society

・Jun. 2017, International Advisory Board, ACME International Journal for Critical Geographies, Others

[Research Projects]

・グリーンインフラを用いた雨水管理による都市の防災機能強化に関する研究, 永瀬 彩子, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Challenging Research (Exploratory), Challenging Research (Exploratory), Chiba University, Jul. 2020, Mar. 2023, 6240000, 4800000, 1440000, 20K21030

・Exploring the potential of edible landscapes for socio-ecological restoration of vacant land in shrinking Japanese cities, Christoph Rupprecht, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Early-Career Scientists, Research Institute for Humanity and Nature, Apr. 2020, Mar. 2023, 4160000, 3200000, 960000, 20K15552

・Institutions and methods for protecting nector source plants in managed forests, Norie Tamura, Yamada Research Grant, Bee Research Grant, Oct. 2018, Sep. 2020, 0, 0, 0, Competitive research funding

SAIJO Tatsuyoshi

Specially Appointed Professor

[Higher Degrees]

Ph.D. (Minnesota)

[Fields of Specialization]

Humanities & social sciences > Theoretical economics

—Achievements—

[Books etc]

・Tatsuyoshi Saijo (ed), 2020, Future Design: Incorporating Preferences of Future Generations for Sustainability, Springer

[Published Papers]

・Arpana Pandit; Yoshinori Nakagawa; Raja Rajendra Timilsina; Koji Kotani; Tatsuyoshi Saijo, 23 Mar. 2021, Taking the Perspectives of Future Generations as an Effective Method for Achieving Sustainable Waste Management, Sustainable Production and Consumption, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.spc.2021.03.019

・Yukako Inoue; Toshiyuki Himichi; Nobuhiro Mifune; Tatsuyoshi Saijo, 08 Mar. 2021, People prefer joint outcome prosocial resource distribution towards future others, Scientific Reports, 11 (1), Springer Science and Business Media LLC, Refereed, Scientific journal DOI:10.1038/s41598-021-84796-4

・Keishiro Hara; Yoko Kitakaji; Hiroaki Sugino; Ritsuji Yoshioka; Hiroyuki Takeda; Yoichi Hizen; Tatsuyoshi Saijo, 18 Feb. 2021, Effects of experiencing the role of imaginary future generations in decision-making: a case study of participatory deliberation in a Japanese town, Sustainability Science, Springer Science and Business Media LLC, Refereed, Scientific journal DOI:10.1007/s11625-021-00918-x

・Yoshinori Nakagawa; Tatsuyoshi Saijo, 13 Feb. 2021, A visual narrative for taking future generations' perspectives, Sustainability Science, Springer Science and Business Media LLC, Refereed, Scientific journal DOI:10.1007/s11625-021-00916-z

・Mostafa E. Shahen; Koji Kotani; Tatsuyoshi Saijo, 28 Jan. 2021, Intergenerational sustainability is enhanced by taking the perspective of future generations, Scientific Reports, 11 (1), Springer Science and Business Media LLC, Refereed, Scientific journal DOI:10.1038/s41598-021-81835-y

・Zhang Jingchao; Koji Kotani; Tatsuyoshi Saijo, 05 Jan. 2021, Are societies becoming proself? A topographical difference under fast urbanization in China, Environment, Development and Sustainability, Springer Science and Business Media LLC, Refereed, Scientific journal DOI:10.1007/s10668-020-01195-x

・Yoshinori Nakagawa; Tatsuyoshi Saijo, Dec. 2020, Can individuals caring little about future generations serve as their representatives?, Futures, 124, 102626-102626, Elsevier BV, Refereed, Scientific journal DOI:10.1016/j.futures.2020.102626

・Raja R. Timilsina; Koji Kotani; Yoshinori Nakagawa; Tatsuyoshi Saijo, Oct. 2020, Concerns for future generations in societies: A deliberative analysis of the intergenerational sustainability dilemma, Journal of Behaviral and Experimental Economics, Refereed

・Yoshinori Nakagawa; Tatsuyoshi Saijo, Sep. 2020, Future Design as a Metacognitive Intervention for Presentism, Sustainability, 12 (18), 7552, English, Refereed, Scientific journal

・Mostafa E. Shahen; Wada Masaya; Koji Kotani; Tatsuyoshi Saijo, 30 Aug. 2020, Motivational factors in intergenerational sustainability dilemma: A post-interview analysis, Sustainability, 12 (17), 7078-7078, MDPI AG, Refereed, Scientific journal DOI:10.3390/su12177078

・Tatsuyoshi Saijo, 11 Aug. 2020, Future Design: Bequeathing Sustainable Natural Environments and Sustainable Societies to Future Generations, Sustainability, 12 (16), 6467-6467, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/su12166467

・Tatsuyoshi Saijo, 2020, Future Design: An Introduction, Future Design: Incorporating Preferences of Future Generations for Sustainability Editors: Saijo, Tatsuyoshi (Ed.), English

・中川善典; 西條辰義, 2020, ポスト・コロナのフューチャー・デザイン, 小林慶一郎・森川正之編『コロナ危機の経済学』, 日本経済新聞社, Japanese, Invited

・Yayan Hernuryadin; Koji Kotani; Tatsuyoshi Saijo, 2020, Time Preferences of Food Producers: Does 'Cultivate and Grow' Matter?, Land Economics, 96 (1), 132-148, English, Refereed, Scientific journal

・J. Konow; T. Saijo; K. Akai, 2020, Equity versus Equality: Spectators, Stakeholders and Groups, Journal of Economic Psychology, 77, 102071, English, Refereed, Scientific journal

[MISC]

・Tatsuyoshi SAIJO, 01 Feb. 2021, The Purpose of This Special Feature, TRENDS IN THE SCIENCES, 26 (2), 45-45, Japan Science Support Foundation, Japanese, Introduction scientific journal DOI:10.5363/tits.26.2_45

[Presentations]

・西條辰義, フューチャー・デザイン：新たなパースペクティブ, フューチャー・デザイン・ワークショップ, 23 Jan. 2021, 23 Jan. 2021 - 24 Jan. 2021, Japanese, Invited oral presentation

・西條辰義, Future Design for Sustainable Nature and Societies, 第 24 回実験社会科学カンファレンス, 22 Jan. 2021, Invited, English, Keynote oral presentation

・西條辰義, フューチャー・デザイン ～持続可能な自然としあわせな社会を将来世代に残すために～, 一般社団法人しあわせ推進会議, 09 Dec. 2020, Invited, Japanese, Keynote oral presentation

・西條辰義, フューチャー・デザインで今と未来を考える, シンポジウム「宇治の今と未来を地域からつくる」, 03 Nov. 2020, Invited, Japanese, Keynote oral presentation

・Tatsuyoshi Saijo, Supporting Climate Action – Beyond the Why to Policies and Collective Mitigation, T20 Summit, 31 Oct. 2020, 31 Oct. 2020 - 01 Nov. 2020, Invited, English, Invited oral presentation

[Media Coverage]

・『未来人になりきる』発想で変わった町 今がよければいいはずがない, 朝日新聞 DIGITAL, Jan. 2021, Internet

・In Japan, we slip into the skin of the future humans, Other than myself, Usbek & Rica, Fall 2021, 2021, Internet

SAKAKIBARA Masayuki

Professor

[Academic Career]

Hokkaido University 理学研究科 地質学鉱物学 (1987)
Hokkaido University, Graduate School, Division of Natural Science (1987)
Hokkaido University 理学研究科 地質学鉱物学 (1984)
Hokkaido University, Graduate School, Division of Natural Science, Geology and Mineralogy (1984)
Hokkaido University School of Science 地質学鉱物学 (1982)
Hokkaido University, Faculty of Science, Geology and Mineralogy (1982)

[Professional Career]

愛媛大学大学院人文社会科学研究科産業システム創成専攻教授 (2020-)
大学共同利用機関法人人間文化研究機構 総合地球環境学研究所 教授 (2018-)
Ehime University Institution for Collaborative Relations Center 教授 (2016-)
Ehime University Institution for Collaborative Relations Center for Disaster Management Informatics Research 教授 (2016-)
Ehime University Faculty of Collaborative Regional Innovation Dept of Environmental Design 教授 (2016-)
Ehime University Mathematics Physics and Earth Sciences Graduate School of Science and Engineering 教授 (2006-)
Ehime University 教育研究評議会 評議員 (2018-2019)
Ehime University 国際連携推進機構 副機構長 (2018-2019)
Ehime University 学長特別補佐 (2018-2019)
Ehime University SUIJI(Six University Initiative Japan Indonesia) 推進室室長 (2015-2019)
Ehime University Institute for International Relations センター長 (2013-2019)
Ehime University Faculty of Collaborative Regional Innovation 副学部長 (2016-2018)
Ehime University Mathematics Physics and Earth Sciences Graduate School of Science and Engineering 数理物質科学専攻地球進化学コース長 (2011-2014)
Ehime University Mathematics Physics and Earth Sciences Graduate School of Science and Engineering 専攻長 (2012-2013)
Ehime University Mathematics Physics and Earth Sciences Graduate School of Science and Engineering 副理学系長 (2009-2011)
Ehime University Faculty of Science Department of Earth Sciences 教授 (2005-2006)
- Graduate School of Science and Engineering, EHIME UNIVERSITY (2006)
Ehime University Faculty of Science 助教授 (1996-2005)
Department of Biology and Earth Science, Faculty of Science, Ehime University (2002-2005)
Ehime University Faculty of Science Department of Earth Sciences 助教授 (1993-1996)
Ehime University Faculty of Science Department of Earth Sciences 助手 (1988-1993)
日本学術振興会 特別研究員 (1988)

[Higher Degrees]

Doctor of Science, Hokkaido University

[Fields of Specialization]

Natural sciences > Space and planetary science
Natural sciences > Solid earth science

[Academic Society Memberships]

THE JAPAN SOCIETY FOR INTERNATIONAL DEVELOPMENT
日本火山学会
日本鉱物学会
日本地質学会
THE MINING AND MATERIALS PROCESSING INSTITUTE OF JAPAN (2015-)
地域活性学会 (2020-)
廃棄物資源循環学会 (2019-)

[Awards]

Excellent Lecture Award Basri;Sakakibara M. Main source of mercury pollution in artisanal and small-scale gold mining Bombana Southeast Sulawesi. 第 17 回日本地質学会四国支部総会・講演会 (2017)
Excellent Lecture Award Hendra Prasetia;Masayuki Sakakibara Impact assessment research on atmospheric Hg contamination by using tree bark analysis of an ASGM area in North Gorontalo Regency Indonesia 第 17 回日本地質学会四国支部総会・講演会 Japan society (2017)
Excellent Lecture Award, Hendra Prasetia;Masayuki Sakakibara, Impact assessment research on atmospheric Hg contamination by using tree bark analysis of an ASGM area in North Gorontalo Regency, Indones
Excellent postar award, Febryanto Masulili;Sakakibara, M, Field observation of peperite-like texture at contact between Middle Miocene andesitic dyke and granitic fault gouge, northwestern Matsuyama, Japan, International Conference on Transdisciplinary Approach Research (ICTAR), International society (2017)
Excellent postar award, Febryanto Masulili;Sakakibara, M, Field observation of peperite-like texture at contact between Middle Miocene andesitic dyke and granitic fault gouge, northwestern Matsuyama,
excellent lecture award Hasriwiani Habo Abbas;Masayuki Sakakibara;Koichiro Sera Urban medical geology of mercury pollution on traditional gold smelting in Makassar City Indonesia 第 16 回日本地質学会四国支部総会・講演会 (2016)
excellent lecture award Hasriwiani Habo Abbas;Masayuki Sakakibara;Koichiro Sera Urban medical geology of mercury pollution on traditional gold smelting in Makassar City Indonesia 第 16 回日本地質学会四国支部総会・
excellent poster award Nurfitri Abdul Gafur;Masayuki Sakakibara;Koichiro Sera Phytoremediation of heavy metal-polluted mine drainage by Eleocharis acicularis 第 16 回日本地質学会四国支部総会・講演会 Japan society (2016)
excellent poster award Nurfitri Abdul Gafur;Masayuki Sakakibara;Koichiro Sera Phytoremediation of heavy metal-polluted mine drainage by Eleocharis acicularis 第 16 回日本地質学会四国支部総会・講演会 Japan (2016)
地質汚染ー医療地質ー社会地質学会奨励賞 大川佳子;榊原正幸;迫田昌敏;世良耕一郎;佐野 栄 廃止鉱山における重金属に富む坑廃水のカヤツリグサ科マツバイによるファイトレメディエーション Japan society (2014)
地質汚染ー医療地質ー社会地質学会奨励賞 末岡裕理;榊原 正幸 西南日本廃止鉱山残土堆積場における製錬スラグ風化過程の解明 Japan society (2013)
Incentive award Yayu I. Arfin;Masayuki Sakakibara;Sayaka Takakura;Mohamad Jahja;Fitriane Lihawa;Marike Machmud Artisanal and Small scale Gold Mining in Gorontalo Utara regency Indonesia 地質汚染ー医療地質ー社会地質学会 Japan society (2013)
Incentive award Yayu I. Arfin;Masayuki Sakakibara;Sayaka Takakura;Mohamad Jahja;Fitriane Lihawa;Marike Machmud Artisanal and Small scale Gold Mining in Gorontalo Utara regency Indonesia 地質汚染ー医療地質ー社
優秀ポスター賞 竹原明成;榊原正幸;佐野 栄;世良耕一郎 カヤツリグサ科ハリイ属マツバイの Cs 吸収に関する水耕栽培実験 Japan society (2012)
地質汚染ー医療地質ー社会地質学会優秀講演賞 榊原 正幸;大森優子;Ha N.T;H;佐野栄;世良耕一郎;堀利栄 カヤツリグサ科マツバイによるファイトレメディエーション技術の実用性 Japan society (2009)
ポスター賞 (2008)
学生優秀講演賞ポスター発表 (2007)
研究発表優秀者賞 (2007)
優秀ポスター発表賞 (2005)
学生優秀講演賞口頭発表 (2004)
学生優秀講演賞口頭発表 (2004)
第 111 年日本地質学会年会（千葉大会）優秀講演賞（ポスター発表） (2004)
第 111 年日本地質学会年会（千葉大会）優秀講演賞（ポスター発表） (2004)

第 111 年日本地質学会年会（千葉大会）優秀講演賞（ポスター発表） (2004)

—Achievements—

[Published Papers]

- Zaenal Abidin; Vicky Prajaputra; Sri Budiarti; Dyah Tjahyandari Suryaningtyas; Naoto Matsue; Masayuki Sakakibara, 07 Jan. 2021, Effect of Alkaline Concentrations on the Synthesis of Volcanic Soil-Based Zeolite for Methylene Blue Removal by Fenton-Like Oxidation Process, Revista de Chimie, 71 (12), 47-55, Revista de Chimie SRL, English, Refereed, Scientific journal DOI:10.37358/rc.20.12.8385
- Arifin, Y. I, Sakakibara, M., Takakura, S., Mohamad, J., Lihawa, F. and Sera, K., 29 Nov. 2020, Artisanal and small-scale gold mining activities and mercury exposure in Gorontalo Utara Regency, Indonesia, Toxicological & Environmental Chemistry, 1-22, Informa UK Limited, English, Refereed, Scientific journal DOI:10.1080/02772248.2020.1839074
- K Okazaki; T Kurahashi; S Yamazaki; M Sakakibara, 19 Nov. 2020, Temperature dependence for purification of leachate containing heavy metals by phytoremediation using the artificial channel, IOP Conference Series: Earth and Environmental Science:Proceeding of the 3rd International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia(TREPSEA2018), 589, 012019-012019, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/589/1/012019
- Abbas, H. H., Sakakibara, M., Sera, K., Arma, L. H. and Sididi, M., 19 Nov. 2020, Socioeconomic and Mercury Exposure to The Goldsmiths in Manggal Subdistrict of Urban Artisanal Gold Mining (UAGM) Area in Makassar, South Sulawesi, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the 3rd International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia(TREPSEA2018), 589, 012015-012015, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/589/1/012015
- Komatsu, S; Tanaka, T; Sakakibara, M; Arifin, Y. I; Pateda, S. M; Manyoe, I. M, 19 Nov. 2020, Sociodemographic Attributes and Dependency on Artisanal and Small-scale Gold Mining: the Case of Rural Gorontalo, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the 3rd International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia(TREPSEA2018), 589, 012020-012020, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/589/1/012020
- A K M A Amin; M Sakakibara; Y I Arifin; N Akase, 19 Nov. 2020, Facies Study of Lake Deposits Formation (Qpl) To Determine Deposition Environment of Ancient Limboto Lake: a Preliminary Result, IOP Conference Series: Earth and Environmental Science:The 3rd International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia 11-12 August 2018(TREPSEA2018), Negeri Gorontalo, Indonesia, 589, 012007-012007, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/589/1/012007
- Arifin, Y. I, Sakakibara, M., Sera, K., Puluhulawa, F. U. and Lihawa, F., 19 Nov. 2020, Mercury exposure from small scale gold mining activities and neurological symptoms on inhabitants and miners: a case study in Bolaang Mongondow, North Sulawesi Province, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the 3rd International conference of the Transdisciplinary Research on Environmental Problems in Southeast Asia(TREPSEA2018), 589, 012013-012013, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/589/1/012013
- Kimijima, S; Sakakibara, M; Abd. Kadir; Mubarak A Amin; Nagai. M; Arifin, Y. I, 18 Nov. 2020, Mechanism of the Rapid Shrinkage of Limboto Lake in Gorontalo, Indonesia, Sustainability, 12 (22), 9598-9598, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/su12229598
- Kyaw, W.T; Kuang, X; Sakakibara, M, 16 Sep. 2020, Health Impact Assessment of Artisanal and Small-Scale Gold Mining Area in Myanmar, Mandalay Region: Preliminary Research, International Journal of Environmental Research and Public Health, 17 (18), 6757-6757, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/ijerph17186757
- Abbas, H. H., Sakakibara, M., Sera, K., Nurgahayu and Andayanie, E., 24 Jul. 2020, Mercury Exposure and Health Problems of the Students Using Skin-Lightening Cosmetic Products in Makassar, South Sulawesi, Indonesia, Cosmetics, 7 (3), 58-58, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/cosmetics7030058
- Pateda, M, S; Sakakibara, M, 21 Jul. 2020, Preliminary Study on Human Lung Function of Artisanal and Small-scale Gold Miner in Gorontalo Province, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the International Conference on Transdisciplinary Approach Reserch 2017(ICTAR2017), 536, 012009-012009, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/536/1/012009

・Prasetia, H; Sakakibara, M; Sera, K, 21 Jul. 2020, Preliminary Study of Atmospheric Mercury Contamination Assessment Using Tree Bark in an ASGM Area in North Gorontalo Regency, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the International Conference on Transdisciplinary Approach Reserch 2017(ICTAR2017), 536, 012007-012007, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/536/1/012007

・Basri; Sakakibara, M., 21 Jul. 2020, The Stakeholders Position Map Related to the Mercury Pollution Reduction Program in Bombana Area, Southeast Sulawesi, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the International Conference on Transdisciplinary Approach Reserch 2017(ICTAR2017), 536, 012008-012008, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/536/1/012008

・Kasamatsu, H., Mohamad, J., Arifin, Y. I., Baga, M., Shimagami, M. and Sakakibara, M., 21 Jul. 2020, Prior Study for the Biology and Economic Condition as Rapidly Environmental Change of Limboto Lake in Gorontalo, Indonesia, IOP Conference Series: Earth and Environmental Science:Proceeding of the International Conference on Transdisciplinary Approach Reserch 2017(ICTAR2017), 536, 012005-012005, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/536/1/012005

・Gafur, N. A; Sakakibara, M; Sera, K; Arifin, Y. I, 21 Jul. 2020, Toxic Metal Concentrations of Human Hair in Downstream of ASGM Sites in Bone Bolango Regency, Gorontalo Province, Indonesia, IOP Conference Series: Earth and Environmental Science, International Conference on Transdisciplinary Approach Research 2017(ICTAR2017), 536, 012006-012006, IOP Publishing, English, Refereed, Scientific journal DOI:10.1088/1755-1315/536/1/012006

・Kuruniawan, I. A; Sugawara, H; Sakakibara, M; Arifin, Y.I; Eraku, S.S, 21 Jul. 2020, The Potential of Gorontalo Province as Global Geopark, IOP Conference Series: Earth and Environmental Science:Proceeding of International Conference on Transdisciplinary Approach Research 2017 19 August 2017(ICTAR2017), Universitas Negeri Gorontalo, Indonesia, 536 (1), 012004-012004, IOP Publishing, English, Refereed, International conference proceedings DOI:10.1088/1755-1315/536/1/012004

・Kenji Okazaki; Shusaku Yamazaki; Toshiyuki Kurahashi; Masayuki; Sakakibara, 21 Jul. 2020, An Artificial Channel Purification Experiment for Arsenic-rich Drainage Water from the Abandoned Mine by using Eleocharis acicularis, IOP Conference Series: Earth and Environmental Science :International Conference on Transdisciplinary Approach Research 2017(ICTAR2017), 536, 012003-012003, IOP Publishing, Refereed, International conference proceedings DOI:10.1088/1755-1315/536/1/012003

・Sri Manovita Pateda; Sakakibara, M; Sera, K, Nov. 2018, 2480, Lung Function Assessment as an Early Biomonitor of Mercury-Induced Health Disorders in Artisanal and Small-Scale Gold Mining Areas in Indonesia, Environmental Research and Public Health, 15 (11), English, Refereed, Scientific journal DOI:10.3390/ijerph15112480

[Presentations]

・中村千怜; 辻智大; 池田倫治; 西坂直樹; 大西耕造; 榊原正幸, 四国西部宇和盆地における阿蘇４降下テフラ層厚の妥当性, JpGU-AGU Joint Meeting2020, 幕張メッセ国際展示場, 27 May 2020, Japanese, Poster presentation

・亀井友斗; 村上慶太; 村上雄一; 榊山匠; 土居文人; 高橋司; 榊原正幸, 四国西予ジオパークで初めて実施された体験活動を主とした留学生向けジオツアー, JpGU－AGU Joint Meeting2020, 24 May 2020, Japanese, Poster presentation

[Academic Contribution]

・4th Japan – ASEAN Medical Seminar on Human Health Impact of Heavy Metals, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 25 Jan. 2021

・8th seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 14 Dec. 2020

・3rd Japan - ASEAN Medical Seminar on Human Health Impact of Heavy Metals, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 31 Oct. 2020

・SRIREP Project International webinar, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 14 Sep. 2020

・SRIREP Project 2nd International mini seminar, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 11 Sep. 2020

・6th seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 25 Aug. 2020

・4th seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 17 Jul. 2020

・5th seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 13 Jul. 2020
・SRIREP Project 1st International mini seminar, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 01 Jul. 2020
・3rd seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 29 Jun. 2020
・2nd seminar for SRIREP Project, SRIREP Project, Research Institute for Humanity and Nature, 11 Jun. 2020
・1st seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 02 Jun. 2020
・9th seminar for SRIREP Project, Academic society etc, SRIREP Project, Research Institute for Humanity and Nature, 18 Jan. 2021

[Committee Memberships]
・Dec. 2020, 理事, 日本 UNEP 協会, Society
・May 2019, 愛媛大学学生国際交流協力事業会理事, 愛媛大学学生国際交流協力事業会（ＡＩＮＥＣＳ）, Others
・Jun. 2018, 西予市ジオパーク拠点施設建設検討委員会委員, 西予市, 平成 30 年 6 月 13 日から拠点施設の建設が完了するまでの間, Autonomy
・May 2018, 四国西予ジオミュージアム（仮称）展示内容検討委員会委員, 西予市, 展示内容の検討が終了するまでの間, Autonomy
・Nov. 2017, 松山市土壌汚染対策専門委員, 松山市, 平成 31 年 10 月 31 日まで, Autonomy
・Sep. 2019, Mar. 2022, 四国西予ジオの至宝認定審査会審査員, 四国西予ジオパーク推進協議会, Autonomy

[Research Projects]
・Co-creation of Sustainable Regional Innovation for Reducing Risk of High-impact Environmental Pollution, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, May 2015, Mar. 2024

SHAHRIER Shibly

Researcher

[Academic Career]
Kochi University of Technology, School of Economics & Management, Ph.D. in Economics, Ph.D. (2015-2018)
International University of Japan Public Management and Policy Analysis Master’s in Public Management (2012-2014)
Jahangirnagar University, Government and Politics, Bachelor of Social Science in Government and Politics, (2004-2009)

[Professional Career]
Research Institute for Humanity and Nature, Research Department, Researcher, Researcher (2020-)
Brac University, School of Humanities and Social Sciences, Assistant professor (2018-2019)
International University of Japan, Research assistant (2014-2015)

[Higher Degrees]
Bachelor's, Jahangirnagar University (2010)

[Fields of Specialization]
Humanities & social sciences > Economic policy > Development Economics > Experimental Economics > Behavioral Economics > Environmental Economics > Sustainability

—Achievements—

[Published Papers]

- Shahidur Rahman; Gulfam Tasnim; Shibly Shahrier, Jan. 2021, The role of the Accord and Alliance to improve labor standards in the readymade garment industry of Bangladesh, Under review in Development and Change
- Shahrier, S; Kotani, K; Saijo, T, Aug. 2020, Intergenerational sustainability dilemma and a potential solution: Future ahead and back mechanism, Under review in Experimental Economics
- Khatun, M. A; Shahrier, S; Kotani, K, Jun. 2020, Cooperation and cognition gaps for salinity: A field experiment of information provision, Under review in Journal of Cleaner Production
- Raja Rajendra Timilsina; Shibly Shahrier; Koji Kotani, 2020, Capitalism and Sustainability Dilemmas, Economics, Law, and Institutions in Asia Pacific, 151-167, Springer Singapore, In book DOI:10.1007/978-981-15-5407-0_11

[Research Projects]

- Research Program 3: Designing Lifeworlds of Sustainability and Wellbeing, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, Mar. 2016, Mar. 2021

SHIMADA Nahoko

Researcher

[Academic Career]

University of Shiga Prefecture Graduate School of Human Culture 博士後期課程 (2008-2012)

The University of Shiga Prefecture Human Cultures Graduate School 博士前期課程 (2006-2008)

[Professional Career]

Research Institute for Humanity and Nature, RIHN center, Researcher (2016-)

Center for Southeast Asian Studies, Kyoto University, Practice-oriented Area Study Division, Cooperative Researcher (2012-2016)

Center for Southeast Asian Studies, Kyoto University, Practice-oriented Area Study Division, Project Researcher (2008-2012)

[Fields of Specialization]

Humanities & social sciences > Local studies > imaginative-ecology

[Academic Society Memberships]

the Japan Society of Lifology (2019-)

[Awards]

Excellence Award at the 2nd TAKAYA YOSHIKAZU Area Study Prize, SHIMADA Nahoko, Vanish of the Fudo : The meaning of closing the village and shrine, Executive Committee of TAKAYA YOSHIKAZU Area Study Prize (2019)

Excellence Award at the 2nd TAKAYA YOSHIKAZU Area Study Prize, SHIMADA Nahoko, Vanish of the Fudo : The meaning of closing the village and shrine, Executive Committee of TAKAYA YOSHIKAZU Area Study Pr

—Achievements—

[MISC]

- SHIMADA Nahoko, Jun. 2020, -GIAHS Forum-, Humanity & Nature Newsletter, 81, 10-11, RIHN, Japanese, Refereed, Report research institution

[Presentations]

- 嶋田奈穂子, 世界農業遺産認定地の試行錯誤ー実務者の課題と希望ー., 農村計画学会 2020 年度秋季大会シンポジウム（オンライン）, 19 Dec. 2020, Invited, Japanese, Invited oral presentation

・嶋田奈穂子, 世界の人々に目を向けよう ーイランとイスラム教ー, 千里山コミュニティ研修, 12 Dec. 2020, Invited, Japanese, Public discourse

[Committee Memberships]

・2017, member of Committee of Eco School, Kusatsu city Shibukawa Elementary school, Society

・Aug. 2020, Mar. 2022, Member of Committee for the Area plan of Cultural property preservation and utilization, Moriyama City, Shiga Prefecture, Autonomy

[Research Projects]

・地域情報学ツールの活用－東ティモールの小規模ダム評価のために, YANAGISAWA Masayuki; EUGENIO Lemos, CENTER FOR INFORMATION RESOURCES OF AREA STUDIES, Kyoto University, Methodology, Area Studies, Research Institute for Humanity and Nature, Apr. 2020, Mar. 2021

・Sharing the Process of Post-war Recovery -Regarding Awareness of and Preserving and Using Local Knowledge about Water Source Conservation in Okinawa and Timor-Leste-, YANAGISAWA Masayuki; UDA Takuya; ABE Kenichi; EUGENIO Lemos, CENTER FOR INFORMATION RESOURCES OF AREA STUDIES, Kyoto University, Cross-regional Area Studies, Area Studies, Research Institute for Humanity and Nature, Apr. 2019, Apr. 2020

[Media Coverage]

・「神社消滅を調べる総合地球環境学研究所研究員」., Other than myself, 朝日新聞, 15 Oct. 2020, テーブルトーク 夕刊(関西版), 2, Paper

SHIN Ki-Cheol

Assitant Professor

[Fields of Specialization]

Natural sciences > Human geoscience > Geochemistry > isotope geology

[Academic Society Memberships]

The Geochemical Society of Japan

The Society of Resource Geology

—Achievements—

[Published Papers]

・Tsubasa Otake; Ryoichi Yamada; Ryohei Suzuki; Shunsuke Nakamura; Akane Ito; Ki-Cheol Shin; Tsutomu Sato, Feb. 2021, Large Fe isotope fractionations in sulfide ores and ferruginous sedimentary rocks from the Kuroko volcanogenic massive sulfide deposits in the Hokuroku district, northeast Japan, GEOCHIMICA ET COSMOCHIMICA ACTA, 295, 49-64, PERGAMON-ELSEVIER SCIENCE LTD, English, Scientific journal DOI:10.1016/j.gca.2020.12.009

・Yoshitaka Oishi; Ki-Cheol Shin; Ichiro Tayasu, Jan. 2021, Lead isotope ratios in moss for the assessment of transboundary pollutants in the Yatsugatake Mountains, central Japan, ECOLOGICAL RESEARCH, WILEY, English, Scientific journal DOI:10.1111/1440-1703.12205

[Research Projects]

・Stable isotope analysis on the estimates of diet and sex of human skeletal remains of the Jomon period, 日下 宗一郎; 申 基チョル, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), Tokai University, 01 Apr. 2020, 31 Mar. 2024, 18460000, 14200000, 4260000, 20H01371

・The provenance and manufacturing processes of Mesopotamian clay tablets, 渡辺 千香子; 辻 彰洋; 申 基チョル; 小口 千明; 岡田 保良; 安間 了, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), Osaka Gakuin University, 01 Apr. 2019, 31 Mar. 2024, 17290000, 13300000, 3990000, 19H01361

・Estimation of atmospheric deposition load and its effects on nutrient dynamics in forest ecosystems using heavy metal isotopes, 浦川 梨恵子; 太田 民久; 申 基チョル; 佐瀬 裕之, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (C), Asia Center for Air Pollution Research, 01 Apr. 2019, 31 Mar. 2023, 4420000, 3400000, 1020000, 19K06138

・Water and soil environmental changes and dawn of urban mine around the early cities in Ancient West Asia, 安間 了; 荒川 洋二; 横尾 頼子; 淺原 良浩; 下岡 順直; 中野 孝教; 佐野 貴司; 若狭 幸; 堀川 恵司; 黒澤 正紀; 八木 勇治; 申 基チョル; 池端 慶; 丸岡 照幸; 昆 慶明; 鎌田 祥仁, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research on Innovative Areas (Research in a proposed research area), The University of Tokushima, 29 Jun. 2018, 31 Mar. 2023, 277160000, 213200000, 63960000, 18H05447

・Manufacturing and distribution area of ancient earthenware revealed through Sr-Nd-Pb stable isotope analysis, 石丸 恵利子; 冨井 眞; 申 基チョル, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Challenging Research (Exploratory), Challenging Research (Exploratory), Hiroshima University, 29 Jun. 2018, 31 Mar. 2021, 6240000, 4800000, 1440000, 本研究は、土器の製作地を具体的に明らかにするため、ストロンチウムなどの安定同位体分析を用いた新しい土器の胎土分析に挑戦し、製作圏や流通圏の実証や社会構成史の復元を行うことを目的としたものである。 当初の研究計画では 3 つの地域を対象に、それらの地域での状況を 1 年ごとに検討する計画であったが、研究開始時に研究メンバー全員で再度議論を行い、まずは分析方法の有効性を確認するための定性分析を実施してから、各地域での研究の方向性を検討することとした。 本年度は、坂出市、東大阪市、東広島市で各 1 回の研究会（資料調査および検討会）を実施し、分析対象に設定した 2 地域にまたがる東大阪市と京都市で資料のサンプリングを実施した。資料は、亀井遺跡（大阪府）の弥生土器と聖護院川原町遺跡（京都市）の縄文土器であり、考古学的な資料観察によって「生駒西麓産」とされる土器と「非生駒西麓産」の土器をそれぞれ選択し、それらの資料計 19 点のストロンチウム（Sr）-ネオジム（Nd）-鉛（Pb）の安定同位体比を測定した。 分析の結果、「生駒西麓産」の特徴を備えた 10 点と「非生駒西麓産」土器 9 点では、Sr-Nd 同位体比が異なる傾向が示された。前者は生駒斑レイ岩の同位体比とおよそ符合し、それに由来する可能性が認められた。後者は他の花崗岩や堆積岩由来の材料が混ざったものからなることが示唆された。今後、原材料と考えられる堆積物や岩石、あるいは遺跡周辺の原土（粘土）の同位体比を測定するなどの更なる考察が必要ではあるが、「生駒西麓産」と「非生駒西麓産」土器胎土の同位体比が異なることが明らかとなった。 これらの分析結果の一部については、次年度開催の学会で発表する予定（発表受理済み）である。, 18K18527

・Construction of ecosystem stoichiometry concept based on bio-geological coupling, 陀安 一郎; 申 基チョル, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Challenging Research (Exploratory), Challenging Research (Exploratory), Research Institute for Humanity and Nature, 29 Jun. 2018, 31 Mar. 2021, 6240000, 4800000, 1440000, 本研究においては、マグネシウム、亜鉛、カルシウム、ストロンチウムなどの安定同位体比分析を検討している。 まず、Mg 安定同位体比の測定については元素分離法の確立、MC-ICP-MS を用いた測定法の開発が終わり、環境標準試料を用いた評価を行った。元素分離では回収率が 95%以下になるとカラム内部で同位体分別が起きて、測定値が変わることが分かった。そのため全試料について回収率を確認する作業が必要である。同位体比の測定法としては標準試料-未知試料-標準試料の挟み込み法を採択しているが、試料/標準の濃度比が 1.0～1.2 の範囲では安定することが分かった。 Zn の同位体比の測定については陰イオン交換樹脂を用いた分離精製法の検討を行った。MC-ICP-MS を用いた測定法については銅添加法を試した。この方法はダブルスパイク法より操作が簡単で、十分な精度が得られる利点がある。亜鉛と銅の濃度比は測定値に大きな影響を与えないことが確認された。また、試料/標準の濃度比によって測定値が変わらないことも確認され、標準物質を用いた評価でも非常に安定した結果を得た。 Ca 安定同位体比の分析法については陽イオン交換樹脂を用いた元素分離法の確立まで行うことができた。表面電離型質量分析装置を用いた測定法については 42Ca と 43Ca を用いたダブルスパイク添加法の検討を行った。タングステンフィラメントは安定した測定ができるが、39K のブランクが高くて高精度分析には使えないことが分かった。その代わり高純度レニウムフィラメントでは信号の安定性はタングステンよりやや悪いが 39K のブランク信号は出なかったので今後の測定にはレニウムフィラメントを採用することになった。, 18K19367

・水及び生物体内のトレーサービリティを活用した生物生産環境解析手法の開発, 山田 佳裕; 大森 浩二; 井上 幹生; 申 基チョル, 日本学術振興会, 科学研究費助成事業 挑戦的研究(萌芽), 挑戦的研究(萌芽), 香川大学, 29 Jun. 2018, 31 Mar. 2021, 6370000, 4900000, 1470000, 西条平野の加茂川下流の水源は、加茂川本流、黒瀬ダム、地下水、市の川と多岐にわたり、水質は各々の流域の特徴を反映して、大きく異なっている。このようなことから、西条平野は、平野部を流れる用水の起源や動態の解析のための手法を検討するのに適したフィードといえる。今年度は、物質レベルでの手法を用いた流況解析、生物動態の解析に資する基礎的な情報の収集を目的とし、加茂川下流域における水と水生生物を対象にした化学組成の分析を行った。 河川水で、特徴的な分布を示した物質の 1 つが Sb である。加茂川上流の濃度は低いが、市の川合流後、平野への灌漑用水取水地点では高くなった。市の川の流域には日本最大級のアンチモンを産出する鉱山があり、それを反映して市の川の Sb 濃度は 113μg/L と高い。西条平野の水源は加茂川から直接導水された河川水、加茂川から涵養された浅層地下水、西条市の背後地である石鎚山系が供給源と考えられる深層地下水がある。これらの Sb 濃度をみると、河川水は 4.2μg/L、浅層地下水は 11.6 ± 0.8μg/L、深層地下水が 0.4 ± 0.2μg/L であった。 水中の物質濃度は大きな時間変動を伴うが、水生生物は物質情報を積算している。今回は固着性が高いと思われる底生魚類のヨシノボリについて Sr 安定同位体比を測定した。各地点の平均値を見ると市の川が最も高く、加茂川上流が最も低くなった。加茂川下流はそれらの間の値となった。河川水の安定同位体比は測定出来ていないが、市の川と加茂川の水及び下流での混合による水中の Sr 安定同位体比の値の違いを反映していると解釈できる。耳石と尾びれを測定したところ、耳石が若干高い値を示すことがわかった。これは、それぞれの組織への Sr の同化プロセスの違い、河川水中の経時変化、河川間の移動を反映していると思われる。, 18K19878

・Challenge to secondary standard materials for multi-element stable isotopes using environmental standard samples, 申 基チョル, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (C), Research Institute for Humanity and Nature, 01 Apr. 2018, 31 Mar. 2021, 4420000, 3400000, 1020000, 研究初年度として研究計画通り進めることができ、（１）全２１種類の３７本の標準物質準備ができた。（２）試料分解法の検討ではマイクロ波分解装置を用いた混酸による分解法の見直しをおこない、1 回の分解より 2 回分解でより完全な分解結果が得られた。しかし、試料によって違いも出てきて一応完全分解されたように見えても次の段階の元素分離段階でトラブルを起こすことも確認できた。一方低温灰化装置による比較は装置の不具合で予定より遅れている。 マグネシウム安定同位体比の測定では確立された方法で新たに購入した環境標準試料の測定を行った。元素分離では亜鉛を分離した後にマグネシウムを分離することで亜鉛による干渉を避けることができた。同位体比の測定法としては標準-未知試料-標準の挟み込み法で行い、未知試料と標準試料の濃度比 1.0〜1.2 で正確で安定した結果を得ることができた。 亜鉛の同位体比の測定については陰イオン交換樹脂を用いた亜鉛の分離精製法の検討を行った。並行して安定同位体標準物質を用いた測定法の検討が行われ、MC-ICP-MS を用いた測定法については銅添加法を試した。この方法はダブルスパイクを使う方法より操作が簡単で、十分な精度を得られるので利点がある。亜鉛同位体比の測定ではマグネシウムの場合とは違って、試料/標準試料の濃度比や亜鉛/銅の濃度比によって測定値に影響を与えないことが確認された。標準物質を用いた評価でも非常に安定した結果を得ることができた。 カルシウム安定同位体比の分析法については表面電離型質量分析装置を用いた測定法の検討を行い、タングステン（W）フィラメントは安定した測定ができるが 39K のブランクが高い問題が確認された。一方高純度レニウム（Re）フィラメントでは信号の安定性は W よりやや悪いが 39K のブランクが出なかったので今後の測定には Re を使用することになった。, 18K11630

・Reconstruction of Assyrian reliefs through the analysis of material stone, 渡辺 千香子; 申 基チョル; 小口 和美; 安間 了, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), Osaka Gakuin University, 01 Apr. 2017, 31 Mar. 2021, 17680000, 13600000, 4080000, 本年度の主な研究活動は、①第 2 回英国調査、②第 3 回英国調査、③美術史・文献研究、④研究会、から成る。 ①前年度の調査に引き続き、第 2 回目の大英博物館調査を行った（4〜5 月：安間・申・辻・渡辺・テイラー・ブレアトン・クイン）。博物館地下に置かれた浮彫のほか、ギャラリーの展示品（人面有翼牡牛像・「ラキシュの戦い」浮彫図など）に使われた石材の化学組成を明らかにするため、携帯型蛍光 X 線分析装置をつかった非破壊分析ならびに帯磁率を測定した。また「ティル・トゥーバの戦い」浮彫図の表面にみえる微化石について撮影を行い、微化石の専門家に意見を求め、大型底生有孔虫 Alveolinidae 科であることが判明した。種を特定するため、浮彫の試料採取を申請した。調査後、大英博物館へすべてのデータを提供した。 ②第 3 回目の英国調査では、大英博物館・アシュモリアン美術館・バーミンガム博物館において浮彫調査を行った（8 月：安間・申・渡辺・ブレアトン・コリンズ・鷲津）。大英博物館では、前回までアクセス不可能だった「ティル・トゥーバの戦い」浮彫上段部分ならびに左半分を成す浮彫石板について分析を行った。アシュモリアン美術館では、前回訪問時に特別展に貸し出されていてアクセスできなかった浮彫について非破壊分析を行なった他、浮彫 9 点からサンプル採取を行った。バーミンガム博物館では、倉庫に置かれた浮彫とギャラリーに置かれた浮彫について非破壊分析を行った。調査後、各関係機関へすべてのデータを提供した。 ③大英博物館収蔵浮彫のライオン狩り浮彫について、美術史・文献学的研究をミュンヘン大学ならびにウィーン大学研究者と共同で行い、国際学会等で発表した（7 月：渡辺・ノヴォトニー・ゼルツ）。古代メソポタミアに少なくとも異なる 2 種類のライオンが生息していたことが明らかになった。 ④研究会を開催して今後の研究について意見交換した（12 月）。, 17H04493

SHINKAI Rika

Researcher

[Academic Career]

Keio University, Graduate School of Letters, Doctor's Degree Program, (coursework completed without degree) (1994-1997)
Keio University, Graduate School of Letters, Master's Degree Program (1992-1994)
Keio University, Department of literature, Archaiology and Ethnology (1985-1989)

[Professional Career]

総合地球環境学研究所 FEAST Project Project Researcher (2019-2021)
Reseach Institute for Humanity and Nature, Visiting researcher (2017-2019)
Reseach Institute for Humanity and Nature, Small-Scale Economy Project, Project Researcher (2015-2017)
Nara National Research Institute for Cultural Properties, Environmental Archaeology Section, Visiting researcher (2015)
Nara National Research Institute for Cultural Properties, Environmental Archaeology Section, Technical Assistant (2014-2015)

[Fields of Specialization]

Humanities & social sciences > Archaeology > Zooarchaeology > Anthropology
Environmental science/Agricultural science > Environmental policy and society

[Academic Society Memberships]

The Society of Ecological Anthropology (2019-)
Millet Society of Japan
THE SOCIETY OF BIOSOPHIA STUDIES
三田史学会
THE ANTHROPOLOGICAL SOCIETY OF NIPPON
Japanese Society for Zooarchaeology
Association of Wildlife and Human Society (2021-)

—Achievements—

[Books etc]

・田村, 典江; Rupprecht, Christoph D. D.; McGreevy, Steven R., Mar. 2021, 食と農の未来会議への挑戦 ー京都府京都市, みんなでつくる「いただきます」 : 食から創る持続可能な社会, vii, 192p, 昭和堂, Japanese, ISBN: 9784812220290

[Published Papers]

・真貝理香, 11 Mar. 2021, 「食と農の未来会議・京都」の取り組みー京都市の事例, 農業と経済 4 月号, 84 (4), 56-61, Japanese
・真貝理香; スピーゲルバーグ・マキシミリアン, Oct. 2020, 暮らしの中のネオニコチノイドーネオニコチノイド系殺虫成分含有の家庭用製品についての調査より, 土と健康, 501 (10・11 月合併号), 16-21, Japanese
・Rika Shinkai; Maximilian Spiegelberg; Christoph D. D. Rupprecht; Norie Tamura, Oct. 2020, The importance of collecting basic data on beekeeping in Japan: issues and ideas for reform based on an analysis of differences between prefectural application forms for beekeeping registrations., Sustainable livestock production and human welfare (Animal-husbandry), 74 (11), 921-929, Japanese, Scientific journal
・Christoph D. D. Rupprecht; Joost Vervoort; Chris Berthelsen; Astrid Mangnus; Natalie Osborne; Kyle Thompson; Andrea Y. F. Urushima; Maya Kóvskaya; Maximilian Spiegelberg; Silvio Cristiano; Jay Springett; Benedikt Marschütz; Emily J. Flies; Steven R. McGreevy; Laÿna Droz; Martin F. Breed; Jingchao Gan; Rika Shinkai; Ayako Kawai, 2020, Multispecies sustainability, Global Sustainability, 3, e34, Cambridge University Press (CUP), English, Refereed, Scientific journal DOI:10.1017/sus.2020.28

[Presentations]

・真貝理香, ニホンミツバチ養蜂今昔物語ーニホンミツバチ養蜂の歴史を辿る, 日本在来種みつばちの会 定期総会 記念講演会, 13 Mar. 2021, Invited, Japanese, Invited oral presentation

・秋津元輝; 真貝理香, 市民運動と行政の狭間で：食からのトランジション・京都市での試み, 第 62 回環境社会学会大会, 06 Dec. 2020, Japanese, Oral presentation

[Works]

・Archives of Japanese Honeybee Beekeeping, Apis cerana japonica. https://japanese-honeybee.info/, Rika SHINKAI, 13 Dec. 2019

・Traditional Japanese Honeybee Beekeeping in Kozagawa, Wakayama (Film 30 min.) https://www.youtube.com/watch?v=4LZumgD_qO4, Production; SHINKAI Rika; Maximilian SPIELGELBERG; Christoph RUPPRECHT; Editing; SAWAZAKI Kenichi, Dec. 2019

[Research Projects]

・Comprehensive research and filming of traditional beekeeping of Japanese honeybee in mountainous areas of Japan, 真貝 理香; 竹川 大介; 甘 靖超; スピーゲルバーグ マキシミリアン, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (C), Research Institute for Humanity and Nature, Apr. 2019, Mar. 2023, 4290000, 3300000, 990000, 19K01215

[Media Coverage]

・養蜂 情報共有の場 歴史・文化 日本人との関わり 研究者が HP, Other than myself, 毎日新聞（大阪版）, 25 Jul. 2020, 社会, Paper

・笑福亭晃瓶のほっかほかラジオ, KBS 京都, 14 Jul. 2020, Media report

・ニホンミツバチ養蜂文化網羅 向日の研究者データベース公開 関連文献や歴史・映像, Other than myself, 京都新聞（洛西版）, 04 Jul. 2020, 地域, Paper

・さろん de 乙訓 食から生の根源探求, Other than myself, 京都新聞（朝刊）, 28 Apr. 2020, Paper

・環境市民のエコまちライフ, Myself, 京都三条ラジオカフェ, 14 Dec. 2020, Media report

SHIODERA Satomi

Researcher

[Professional Career]

Center for Southeast Asian Studies (CSEAS), Kyoto University, Affiliated assistant professor (2018-2021)
Research Institute for Humanity and Nature 研究部 Researcher (2018-2021)
Center for Southeast Asian Studies (CSEAS) Kyoto University 人間生態相関研究部門 Researcher (2013-2018)
Nanyang Technological University, Asian School of the Environment, Visiting researcher (2016-2017)
Nanyang Technological University, Asian School of the Environment, Visiting researcher (2016)
University of Science-Malaysia, School of Biological Sciences, Visiting researcher (2015)
Hokkaido University Forest Research Station Field Science Center for Northern Biosphere 学術研究員 (2013)
Center for Sustainability Science, Hokkaido Unicersity, Postdoctoral fellow (2009-2013)
Faculty of Agriculture, Kyoto University, Postdoctoral fellow (2009)
Center for Ecology, Kyoto University, postdoctoral fellow (2008-2009)
Graduate School of Environmental Earth Science, The 21st Century Center Of Excellence Program, Research Assistant (2004-2005)

[Higher Degrees]

(2008)

[Fields of Specialization]

Humanities & social sciences > Local studies
Environmental science/Agricultural science > Social-ecological systems
Life sciences > Ecology and environmental science > Plant Ecology
Life sciences > Forest science > Forest Ecology

[Academic Society Memberships]
The Japan Society of Tropical Ecology
The Ecological Society of Japan
Japan Peatland Society
International Peat Society

—Achievements—

[Research Projects]
・熱帯泥炭湿地林の「水」を介した森林維持機構・物質循環の解明と人為的攪乱による影響, 塩寺 さとみ, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (C), Research Institute for Humanity and Nature, 01 Apr. 2020, 31 Mar. 2023, 4290000, 3300000, 990000, 20K12266

SHIRAI Yuko

Researcher

—Achievements—

[Published Papers]
・Yuko Shirai, Chai Podhisita and Parnnachat Tipsuk, Nov. 2020, Latrine Development in Thailand, Sanitation Value Chain, 4 (3), 21-36, English, Refereed DOI:10.34416/svc.00024

[Presentations]
・Yuko Shirai, Sustainable Cross-Border Community Development and Management in the East-West Economic Corridor in the time of COVID-19, Workshop 2020 International Grant Program, The Toyota Foundation, Online, 28 Oct. 2020, English, Oral presentation

SOUDA Katsuya

Researcher

[Higher Degrees]
(2012)

[Fields of Specialization]
Humanities & social sciences > Sociology > forced migration studeies

[Academic Society Memberships]
日本ソーシャル・イノベーション学会
THE JAPANESE SOCIETY FOR ENVIRONMENTAL EDUCATION
INTERNATIONAL SOCIETY OF VOLUNTEER STUDIES
JAPAN ASSOCIATION FOR MIGRATION POLICY STUDIES

[Awards]
The 16th Mikio Sumiya Award for researchers 2019, Katsuya SODA;Hironori YAMAGUCHI, Process of Activating Citizens by Raising Voices of Compassion for the Oppressed: A Collaborative Practice in Producing a Community FM Radio Program

"Nanmin Now". (SODA Katsuya & YAMAGUCHI Hironori, in Journal of Volunteer Studies Vol.19, pp.75-86., The International Society of Volunteer Studies in Japan (2019-2020)

The 16th Mikio Sumiya Award for researchers 2019, Katsuya SODA;Hironori YAMAGUCHI, Process of Activating Citizens by Raising Voices of Compassion for the Oppressed: A Collaborative Practice in Produci

京の公共人材大賞奨励賞 宗田勝也 京都府 (2016)

—Achievements—

[Books etc]

・宗田勝也; 井上藍; 上水陽一; 河嶋隆司; 中野源大, Mar. 2021, Editor, Covid-19, Highschool Students and Global Environment, Research Institute for Humanity and Nature

・村田和代; 中川雅道; 森本郁代; 香取一昭; 野村恭彦; 杉岡秀紀; 佐藤徹; 田中富雄; 宗田勝也; 中村香苗; 岡本能里子; 服部圭子; 佐野亘, 18 Dec. 2020, 多文化社会における話し合い—言葉とまなざしをめぐって, Joint work, これからの話し合いを考えよう, ひつじ書房

[Published Papers]

・Katsuya SODA, 31 Jan. 2021, A Suggestion for Realization of "No One will be Left Behind": A Report of a Volunteer Activities of Migrants and Refugees under the Pandemic of COVID-19 in Japan, Journal of Volunteer Studies, (21), 33-38, Japanese, Refereed, Scientific journal

[MISC]

・Katsuya SODA, Jun. 2020, A Report of the 11th Earth Hall of Fame KYOTO - Review on Joining of High School Students to the Discussion, Humanity & Nature Newsletter, (81), 12-12, Japanese, Meeting report

[Presentations]

・Katsuya SODA, Support Activities for Migrants in Japan under Pandemic of Covid-19- A Perspective from Innovation, Japan Society for Social Innovation 2nd Annual Convention, 01 Nov. 2020, Japanese, Oral presentation

・Katsuya SODA; Kenichi ABE, Learning Climate Justice with High school Students- Lesson from project of Research Institute of Human and Nature, 31st Annual Meeting of The Japanese Society for Environmental Education, 23 Aug. 2020, 21 Aug. 2020 - 23 Aug. 2020, Japanese, Oral presentation

・Katsuya SODA, Community Media in the Post-Pandemic World - Present Situation in Japan -, UNESCO Chair on Community Media, Global Dialogues 6. Reaching the Unreached: Community Radio in Southeast Asia and the Pacific, 06 Aug. 2020, Invited, English, Nominated symposium

[Teaching Experience]

・Theory for Volunteer Activities, Kyoto University of Foreign Studies, 99 Apr. 2020

SPIEGELBERG Maximilian

Researcher

[Academic Career]

Kyoto University, Sustainable Rural Development, Global Environmental Studies (2013-2017)

Philipps University Marburg, Peace- & Conflict - Studies (2006-2009)

Brandenburg Technical University Cottbus, Environmental & Resource Management (2002-2006)

[Professional Career]

Research Institute for Humanity and Nature, Lifeworlds of Sustainable Food Consumption and Production: Agrifood Systems in Transition, Project Researcher (2017-)

Research Institute for Humanity and Nature, Future Earth in Asia, Research Assistant (2016)

FernUniversität in Hagen Interdisciplinary Distance Studies of Environmental Sciences Coordinator (2010-2013)

Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH Turkmenistan Project on Sustainable Land- & Forest – Management + Project on Combating Desertification Field Assistent (2009)
Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH Turkmenistan Project on Sustainable Land- & Forest – Management + Project on Combating Desertification Field As (2009)
Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH Project on the Convention to Combat Desertification (UNCCD) at the Ministry of Development Cooperation Bonn/Germany Consultant & Intern (2009)
Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH Project on the Convention to Combat Desertification (UNCCD) at the Ministry of Development Cooperation Bonn/Ger (2009)

[Higher Degrees]
PhD, Kyoto University

[Fields of Specialization]
Environmental science/Agricultural science > Environmental policy and society

—Achievements—

[Published Papers]
- MCGREEVY Steven R.; TAMURA Norie; RUPPRECHT Christoph D. D.; OTA Kazuhiko; KOBAYASHI Mai; SPIEGELBERG Maximilian, 2021, Learning About, Playing With, and Experimenting in Critical Futures Through Soft Scenarios—Directions for Food Policy—, ENVIRONMENTAL SCIENCE, 34 (2), 46-65, SOCIETY OF ENVIRONMENTAL SCIENCE, JAPAN, Japanese DOI:10.11353/sesj.34.46
- Maximilian Spiegelberg; Norie Tamura, Sep. 2020, If this is the future - School lunches in 2050, Agriculture and Economy, 86 (8), 66-67, Japanese, Invited, Research society
- Christoph D. D. Rupprecht; Joost Vervoort; Chris Berthelsen; Astrid Mangnus; Natalie Osborne; Kyle Thompson; Andrea Y. F. Urushima; Maya Kóvskaya; Maximilian Spiegelberg; Silvio Cristiano; Jay Springett; Benedikt Marschütz; Emily J. Flies; Steven R. McGreevy; Laÿna Droz; Martin F. Breed; Jingchao Gan; Rika Shinkai; Ayako Kawai, 2020, Multispecies sustainability, Global Sustainability, 3, Cambridge University Press (CUP), Scientific journal DOI:10.1017/sus.2020.28

[Research Projects]
- School Lunch 2050 – The interactive homepage, Research Institute for Humanity & Nature, Aug. 2020, Mar. 2021

SUGIHARA Kaoru

Specially Appointed Professor

[Professional Career]
Research Institute for Humanity and Nature, Specially Appointed Professor (2016)
Specially Appointed Professor, Research Institute for Humanity and Nature, and Senior Professor, National Graduate Institute for Policy Studies (cross-appointment) (2016)
National Graduate Institute for Policy Studies, Senior Professor (2014-2016)
National Graduate Institute for Policy Studies, Professor (2013-2014)
University of Tokyo, Graduate School of Economics, Professor (2012-2013)
Kyoto University, Center for Southeast Asian Studies, Professor (2006-2012)
Osaka University, Faculty of Economics (from 1997 Graduate School of Economics), Professor (1996-2006)
University of London, Department of History, School of Oriental and African Studies, Lecturer (and Senior Lecturer) (1985-1996)
Osaka City University, Faculty of Economics, Lecturer (and Associate Professor) (1978-1985)

[Fields of Specialization]
Humanities & social sciences > Economic history

[Awards]

Nikkei Prize for Economics Books, Sugihara, Kaoru,

Suntory Prize for Social Sciences and Humanities, Sugihara, Kaoru,

Grand Prize for Asia-Pacific Award, Sugihara, Kaoru,

Grand Prize for Asia-Pacific Award, Sugihara, Kaoru, The East Asian Miracle in Global History, Nagoya Daigaku Shuppankai, Nagoya, the Mainichi Newspapers Co. and the Asia Affairs Research Counci (2020)

—Achievements—

[Books etc]

・Sugihara, Kaoru, 2020, Single work,

[Published Papers]

・Sugihara, Kaoru, Mar. 2021, “Jinshinsei ni Okeru Fukusu Hatten Keiro: Monsun Ajia no Shigen to Seizon Kiban o Megutte (Multiple Development Paths in the Anthropocene: Resources and Livelihood in Monsoon Asia)” (with the assistance of Masahiro Terada), in Masahiro Terada and Daniel Niles (eds),

・Sugihara, Kaoru, 2020, “’Yoroppa no Kiseki’ Saiko: Dai Bunki Ronso to Sono-go (Reassessing ’The European Miracle’: The Great Divergence Debate and Its Impact)”, Tokushu: Keizaishi Kenkyu no Shin Choryu (Special Feature: New Trends in the Study of Economic History),

[MISC]

・Sugihara, Kaoru, Mar. 2021, “Sekaishi no Nakano Higashi Ajia no Kiseki: Keizaishi・Kankyoshi kara ‘Rekishi Sogo’ o Kangaeru (The East Asian Miracle in Global History: ‘Modern and Contemporary History’ from the Perspective of Economic and Environmental History)”,

・Sugihara, Kaoru, 03 Nov. 2020, “Iwai Shigeki ‘Choko・Kaikin・Goshi: Kinsei Higashi Ajia no Boeki to Chitsujo (‘Tribute, Trade Restriction and Official Border Commodity Exchange: Trade and Order in Early Modern East Asia’ by Shigeki Iwai)”, Dai 63 Kai Nikkei・Keizai Tosho Bunkasho Senpyo, (Review on behalf of the Committee for the Nikkei Prize for Excellent Books in Economic Science),

・Yamanaka, Manabu D.; Kozan, Osamu; Sugihara, Kaoru, Jul. 2020, "Population density, personal distance and social distancing in the anthroposphere:Implications from the COVID-19 disaster", JpGU-AGU joint Virtual Meeting 2020 July 13 2020

・Sugihara, Kaoru, 2020, “Ajia no Toshika to Shingata Korona Uirusu Kansensho (Asia’s Urbanization and the COVID-19 Infections)”,

[Presentations]

・Sugihara, Kaoru, “Sekaishi no Nakano Higashi Ajia no Kiseki: Keizaishi・Kankyoshi kara ‘Rekishi Sougou’ o Kangaeru (The East Asian Miracle in Global History: ‘Modern and Contemporary History’ from the Perspective of Economic and Environmental History)”, Dai 71 Kai Aichi-ken Sekaishi Kyoiku Kenkyukai (The 71st Aichi-ken Sekaishi Kyoiku Kenkyukai), Online., 27 Mar. 2021, Invited

・Sugihara, Kaoru, ”Aden in the Indian Ocean Trade, c.1880-1938: Cotton Textiles, Local Food and Exports to the West”, Grant-in-Aid for Scientific Research (B) Workshop on A Statistical Study of Indian Ocean Trade: Towards a Reappraisal of Regional Trade in Modern World History, Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 15 Mar. 2021

・Sugihara, Kaoru, "Population Density in the Socio-historical and Administrative Context: A Review of Recent Literature on COVID-19 Infections", Jissen Puroguramu 1: ‘Kankyo Hendo ni Junan ni Taioushiuru Shakai eno Tenkan’ (Research Program 1 Workshop on ‘Societal Transformation under Environmental Change’), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 08 Mar. 2021

・Sugihara, Kaoru, [Komento] 'Nishimura Takeshi "Nijyu-seiki no Batavia niokeru Honkon Shanhai Binko no Katsudou" [Comment on] Takeshi Nishimura's "Activities of Hong Kong Shanghai Bank at Batavia in 20 Century", Kyoto Daigaku Tounan-Ajia Chiiki Kenkyusho Kyoudou Kennkyu 'Kindai Tounan-Ajia no Shakai Keizaiteki Henyou to Komyunikeshion Gijyutsu no Hatten (Center for Southeast Asian Studies, Kyoto University, Collaborative Research, “Socio-Economic Change and the Development of Communication Technology in Modern Southeast Asia”), Kyoto University, 13 Feb. 2021

・Sugihara, Kaoru, "Another Asian Drama Growth, Resource Use and the Responsibility for Global Sustainability", Sogo Chikyu Kankyogaku Kenkyusho Tokubetsu Seminar (Research Institute for Humanity and Nature Special Seminar), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 11 Dec. 2020, Invited

・Sugihara, Kaoru, "Ryoutaisenkanki no Ajiakanboueki to Tounan-Ajia: Ikinaikoueki no Suikei wo Megutte (Intra-Asian Trade and Southeast Asia during the Inter-war Period: Concerning Estimate of Regional Trade)", Kyoto Daigaku Tounan-Ajia Chiiki Kenkyusho Kyoudou Kennkyu 'Kindai Tounan-Ajia no Shakai Keizaiteki Henyou to Komyunikeshion Gijyutsu no Hatten (Center for Southeast Asian Studies, Kyoto University, Collaborative Research, “Socio-Economic Change and the Development of Communication Technology in Modern Southeast Asia”), Kyoto University, 05 Dec. 2020

・Sugihara, Kaoru, “Sekai Jinko no Rekishiteki Susei to Sengo Ajia no Toshika: COVID-19 no Kansen Kakudai kara Kangaeru (Historical Trends of World Population and Urbanization of Post-war Asia: A Perspective from the Spread of COVID-19 Infection)”, Kansai Daigaku Keizai Gakubu Koenkai (Faculty of Economics Seminar, Kansai University), Kansai University, Suita, 30 Nov. 2020, Invited

・Sugihara, Kaoru, “Kaihatsu-shugi kara Jizokuteki Hatten e: Sengo Nihon no Kogyo-ka no Keiken kara (From Developmentalism to Sustainable Development: A Perspective from the Industrialization Experience of Post-war Japan)", Chikyuken Open House ‘Kankyo to Kaihatsu no Rekishi o SDGs kara Yomitokou!’ (Research Institute for Humanity and Nature Open House ‘Let’s Understand the History of Environment and Economic Development from the Perspective of SDGs’), Online, 15 Nov. 2020

・Sugihara, Kaoru, “Shigen Kankyoshi no Ni-ruikei (Two Types of Resource and Environmental History)”, Jissen Puroguramu 1: ‘Kankyo Hendo ni Junan ni Taioushiuru Shakai eno Tenkan’ -Ajia no Tayousei ni Taioushita Shosou: Mizu Shigen Kaihatsu to Suiryoku Hatsuden ni Kansuru Jirei Kenkyu (Indo to Nihon)- (Research Program 1 Workshop on ‘Societal Transformation under Environmental Change’: Patterns of Development Seen in the Context of Asia’s Diversity - Case Studies on Water Resources Development and Hydroelectric Power in India and Japan -), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto. and Online, 09 Nov. 2020

・Sugihara, Kaoru, "East Asia in Indian Ocean Trade", Grant-in-Aid for Scientific Research (B) Workshop on A Statistical Study of Indian Ocean Trade: Towards a Reappraisal of Regional Trade in Modern World History, Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 30 Oct. 2020

・Sugihara, Kaoru, “COVID-19 and Asia’s Sustainability: An Introduction”, Jissen Puroguramu 1: ‘Kankyou Hendo ni Jyunan ni Taioushiuru Shakai heno Tenkan’: Tokubetsu Session ‘COVID-19 to Ajia no Jizoku-teki Hatten’ o Tema to shite (Research Program 1 Workshop on ‘Societal Transformation under Environmental Change’, Special Session on COVID-19 and Sustainable Development in Asia), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 17 Jul. 2020

・Sugihara, Kaoru, "Aden kara mita Enkakuchi-Boueki, Indoyo-Koeki, Hokutou Afurika・Arabia Hanto-Koeki (Long Distance Trade from the Perspective of Aden, Indian Ocean Trade and Northeast African and Arabian Peninsula Trade)", Grant-in-Aid for Scientific Research (B) Workshop on A Statistical Study of Indian Ocean Trade: Towards a Reappraisal of Regional Trade in Modern World History, Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 29 Jun. 2020

・Sugihara, Kaoru, “Sengo Nihon no Rinkai Kogyo Chitai ni Okeru Tochi to Mizu no Kakuho ni tsuite (Provision of Land and Water in the Seafront Industrial Complex in Post-war Japan)”, Jissen Puroguramu 1: ‘Kankyo Hendo ni Junan ni Taioushiuru Shakai eno Tenkan’: Sengo Nihon no Kogyou Ricchi ni okeru Kogyou Yosui no Yakuwari (Research Program 1 Workshop on ‘Societal Transformation under Environmental Change’: The Role of Industrial Water in Industrial Areas of Post-war Japan), Sogo Chikyu Kankyogaku Kenkyusho (Research Institute for Humanity and Nature), Kyoto and Online, 01 Jun. 2020

[Research Projects]

・Multiplex paymeny systems and the evolution of central banking, Nishimura, Takeshi; Ishikawa, Ryota; Masaki, Toyomu; Sugihara, Kaoru; Kato, Keiichiro; Shizume, Masato, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), Kansai University, Apr. 2019, Mar. 2023, 16770000, 12900000, 3870000, 19H01513

・Kingendai ni okeru Kan-Indoyo Nettaichiki no Fukusu Hatten Keiro: Hatten to Teikaihatsu no Fukuganteki Shiya no Naka de, Wakimura, Kohei; Kanda, Sayako; Kigoshi, Yoshinori; Kobayashi, Kazuo; Konasugawa, Ayumu; Tanabe, Akio; Soda, Ryoji; Mizuno, Shoko; Ota, Atsushi; Sugihara, Kaoru; Oishi, Takashi; Taniguchi, Kenji; Fujita, Koichi; Ohashi, Atsuko; Sato, Takahiro, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (A), Osaka University of Economics and Law, Apr. 2019, Mar. 2022, 30160000, 23200000, 6960000, 19H00543

・A Statistical Study of Indian Ocean Trade: Towards a Reappraisal of Regional Trade in Modern World History, Sugihara, Kaoru; Nishimura, Takeshi; Suzuki, Hideaki; Tsubota, Kenmei; Kobayashi, Atsushi; Kobayashi, Kazuo, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), Research Institute for Humanity and Nature, Apr. 2019, Mar. 2022, 17290000, 13300000, 3990000, 19H01515

・Program 1: Societal transformation under environmental change, Research Institute for Humanity and Nature, Research Program, Apr. 2016, Mar. 2022

TAMURA Norie

Senior Researcher

[Academic Career]

京都大学大学院 農学研究科 応用生物科学専攻 博士課程 (2001-2007)

京都大学大学院 農学研究科 応用生物科学専攻 修士課程 (1998-2001)

[Professional Career]

Research Institute for Humanity and Nature 研究部 Senior Project Researcher (2016-2021)

Research Institute for Natural Capital. Co. Ltd, Director, Senior Researcher (2010-2016)

AMITA Institute for Sustainable Economies Co. Ltd 主任研究員 (2005-2011)

[Fields of Specialization]

Life sciences > Aquaculture

Environmental science/Agricultural science > Agricultural sociology

Life sciences > Forest science

[Academic Society Memberships]

THE JAPAN REGIONAL FISHERIES SOCIETY

Public Policy Studies Association, Japan

THE JAPANESE FOREST SOCIETY

THE JAPANESE FOREST ECONOMIC SOCIETY

—Achievements—

[Books etc]

・田村, 典江; Rupprecht, Christoph D. D.; McGreevy, Steven R., Mar. 2021, みんなでつくる「いただきます」: 食から創る持続可能な社会, vii, 192p, 昭和堂, Japanese, ISBN: 9784812220290

[Published Papers]

・田村 典江, 2021, 新型コロナウイルスが問いかける私たちの食と農, 森林環境, 4-8, 森林文化協会, Japanese

・MCGREEVY Steven R.; TAMURA Norie; RUPPRECHT Christoph D. D.; OTA Kazuhiko; KOBAYASHI Mai; SPIEGELBERG Maximilian, 2021, Learning About, Playing With, and Experimenting in Critical Futures Through Soft Scenarios—Directions for Food Policy—, ENVIRONMENTAL SCIENCE, 34 (2), 46-65, SOCIETY OF ENVIRONMENTAL SCIENCE, JAPAN, Japanese, Refereed DOI:10.11353/sesj.34.46

・Norie Tamura; Hein Mallee, Dec. 2020, Japan's Fishery Forest Movement as a Sustainability Transition, 4th APSAFE Symposium Proceedings, 114-118, English, Refereed, International conference proceedings

・真貝理香; スピーゲルバーグ・マキシミリアン; ルプレヒト・クリストフ; 田村典江, Oct. 2020, 日本における養蜂の基礎データ収集の必要性—「蜜蜂飼育届」の都道府県別書式の差から見た課題と改善提案—, 畜産の研究, 74 (11), 921-930, Japanese, Scientific journal

・TAMURA Norie; OKUYAMA Yoichiro, 2020, Closing Remarks (Voluntary Symposium at the Japanese Forest Society: What Matters in Professional Forestry Education System in Japan? Rethinking Forest Science, Technology and Society), FOREST ECONOMY, 72 (10), 26-27, FOREST ECONOMIC RESEARCH INSTITUTE, Japanese DOI:10.19013/rinrin.72.10_26

・TAMURA Norie, 2020, Forestry Vocational Education in Japan Today (Voluntary Symposium at the Japanese Forest Society: What Matters in Professional Forestry Education System in Japan? Rethinking Forest Science, Technology and Society), FOREST ECONOMY, 72 (10), 16-17, FOREST ECONOMIC RESEARCH INSTITUTE, Japanese DOI:10.19013/rinrin.72.10_16_2

・TAMURA Norie, 2020, The Changing Role of Public Sector Technical Staff in Forest Management, The Japanese Forest Society Congress, 131 (0), 285-285, THE JAPANESE FORESTRY SOCIETY, Japanese DOI:10.11519/jfsc.131.0_285

・SUZUKI Haruhiko; KAKIZAWA Hiroaki; HIRATA Kunihiro; TAMURA Norie, 2020, The Current State of and Future Trends in the Forest Administration of Municipalities:Analysis of the Postal Questionnaire Survey, Journal of Forest Economics, 66 (1), 51-60, The Japanese Forest Economic Society, Japanese, Refereed DOI:10.20818/jfe.66.1_51

・C.I. Nicholls; M.A. Altieri; M. Kobayashi; N. Tamura; S. McGreevy; K. Hitaka, 2020, Assessing the agroecological status of a farm:a principle-based assessment tool for farmers, Agro Sur, 48 (2), 29-41, Sistema de Bibliotecas UACH, English, Refereed, Scientific journal DOI:10.4206/agrosur.2020.v48n2-04

[MISC]

・田村 典江, Oct. 2020, アンケートから読み取る水産関係者の新型コロナの受け止め方 (業界 養殖業界のポストコロナ対策), 養殖ビジネス = Aqua culture business, 57 (11), 36-41, 緑書房, Japanese, Invited

[Research Projects]

・Research on the measurement of the real flexibility associated with the government funds for rural development, 荘林 幹太郎; 田村 典江; 竹田 麻里, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (C), Gakushuin Women's College, 01 Apr. 2020, 31 Mar. 2023, 3900000, 3000000, 900000, 20K06303

TANIGUCHI Makoto

Professor

[Academic Career]

University of Tsukuba 大学院博士課程地球科学研究科 地理学・水文学専攻 (1982-1987)

University of Tsukuba 第一学群 自然学類 (1978-1982)

[Professional Career]

Research Institute for Humanity and Nature, Deputy Director-General (2015-)

Research Institute for Humanity and Nature, Professor (2008-)

Research Institute for Humanity and Nature, Associate Professor (2003-2008)

Department of Earth Sciences, Nara University of Education, Professor (2000-2003)

Department of Earth Sciences, Nara University of Education, Associate Professor (1993-2000)

Department of Earth Sciences, Nara University of Education, Assistant Professor (1990-1993)

Department of Earth Sciences, Nara University of Education, Research Associate (1988-1990)

Division of Water Resources, CSIRO, Australia, Visiting Scientist (1987-1988)

[Higher Degrees]

Doctor of Science, University of Tsukuba

[Fields of Specialization]

Environmental science/Agricultural science > Recycling systems and society

Environmental science/Agricultural science > Environmental impact assessment

Natural sciences > Atmospheric and hydrospheric science

Environmental science/Agricultural science > Environmental dynamics

Humanities & social sciences > Geography

Natural sciences > Human geoscience

[Academic Society Memberships]

International Association of Hydrogeologists

水文・水資源学会
日本陸水学会
日本地理学会
日本地下水学会
日本水文科学会
International Association of Hydrological Science
American Geophysical Union
Japan Geoscience Union

[Awards]

公益社団法人・日本地下水学会 学会賞(2021)
日本水文科学会・学術賞(2021)
日本陸水学会賞(吉村賞） (2005)
日本地理学会研究奨励賞 (1987)

—Achievements—

[Books etc]

・谷口真人, 2021, III-3 水・エネルギー・食料連環の重要性, 366-369, Contributor, 水環境の事典, 朝倉書店, Japanese, Dictionary or encycropedia

・総合地球環境学研究所, 05 Oct. 2020, 持続可能な社会と富士山, 4-14, ビオシティ 84 号 特集号 富士山から持続可能な未来へ－自然・社会・文化・まちのネクサス, 冊, ビオシティ, Japanese, ISBN: 9784907083625

・Foster, S; Dillon, P; Stigter, T; Taylor, R; Scanlon, B; Andreo, B; Kebede, S; Escolero, O; Taniguchi, M; Wende, F, 2020, Climate-change adaptation and groundwater, 6, Association of Hydrogeologists, Strategic Overview Series, English

・宮越昭暢; 谷口真人, 2020, 地球温暖化が進むと地下水や湧水に影響はあるのですか？, 182-185, Contributor, 「地下水・湧水の疑問」, 日本地下水学会編、成山堂書店, Japanese

[Published Papers]

・Henrietta Dulai; Isaac R. Santos; Makoto Taniguchi; Ryo Sugimoto; Jun Shoji; Abhijit Mukherjee, 20 Jan. 2021, Editorial: Submarine Groundwater Discharge: Impacts on Coastal Ecosystem by Hidden Water and Dissolved Materials, Frontiers in Environmental Science, 8, Frontiers Media SA, Refereed, Scientific journal DOI:10.3389/fenvs.2020.629509

・Lee, S.H; Taniguchi, M; Masuhara, N; Mohtar, R.H; Yoo, S.H; Haraguchi H, 2021, Analysis of industrial water–energy–labor nexus zones for economic and resource-based impact assessment, Resources, Conservation and Recycling, 169, 105483, Refereed, Scientific journal DOI:10.1016/j.resconrec.2021.105483

・Sang-Hyun Lee; Jin-Yong Choi; Seung-Oh Hur; Makoto Taniguchi; Naoki Masuhara; Kwang Soo Kim; Shinwoo Hyun; Eunhee Choi; Jae-hoon Sung; Seung-Hwan Yoo, Dec. 2020, Food-centric interlinkages in agricultural food-energy-water nexus under climate change and irrigation management, Resources, Conservation and Recycling, 163, 105099-105099, Elsevier BV, English, Refereed, Scientific journal DOI:10.1016/j.resconrec.2020.105099

・Makoto Taniguchi; Sanghyun Lee, 2020, Identifying social responses to inundation disasters: a humanity–nature interaction perspective, Global Sustainability, 3 (e9), 1-9, Cambridge University Press (CUP), English, Refereed, Scientific journal DOI:10.1017/sus.2020.3

[MISC]

・陀安一郎; 藤吉麗; 藪崎志穂; SHIN Ki-Cheol; 中野孝教; 谷口真人, 2020, Environmental studies using environmental traceability methodology, 日本地球惑星科学連合大会予稿集(Web)

[Presentations]

・谷口真人, コロナ禍と水・エネルギー・食料研究の新たな課題, 日本学術会議公開シンポジウム「コロナ禍が加速する持続可能な社会の実現に向けた地球環境変化の人間的側面研究の推進」, オンライン開催, 24 Mar. 2021, Invited

・Masuhara, N, Lee; S. Taniguchi, M, Hydro-power Generation as Energy-Water-Land Interactions from Historical Perspective., American Geophysical Union Fall meeting, 12 Dec. 2020, Poster presentation

・Lee S; Taniguchi, M; Masuhara, N, Analysis of transboundary water flows linking physical water supply and virtual water trade through water-food-trade nexus approach, American Geophysical Union Fall meeting(iPoster), 12 Dec. 2020, Poster presentation

・Taniguchi, M; Lee, S; Masuhara, N, Nexus approach of water-energy-food-land interactions for multi-scale sustainability, American Geophysical Union Fall meeting (iPoster), 12 Dec. 2020, Poster presentation

・谷口真人, SDGs と地理学, 立命館地理学, 28 Nov. 2020, Invited, Japanese, Invited oral presentation

・Taniguchi, M; Lee, S; Masuhara, N, Multi-Scale FEW Nexus based on resource-sheds and stakeholders., 2020 Brazilian Belmont Forum Meeting（Zoom 会議）, 23 Sep. 2020, Oral presentation

・谷口真人; 若松永憲; 山下瞳; 熊澤輝一, 文理融合型学際研究を進める総合地球環境学研究所における多様性指標の活用, 第 6 回 RA 協議会（Zoom 会議）, 17 Sep. 2020, Japanese

・谷口真人, 持続可能な社会のための行動変容（その２）, 第 26 回地球研コアプログラム研究会：地球環境 SDGs 第 4 回(Zoom 会議）, 02 Sep. 2020, Oral presentation

・谷口真人, 環境フットプリントと SDGs, 第 25 回地球研コアプログラム研究会：地球環境 SDGs 第 3 回（Zoom 会議）, 27 Aug. 2020

・持続可能な社会のための行動変容（その１）, 第 24 回地球研コアプログラム研究会：地球環境 SDGs 第 2 回（Zoom 会議）, 07 Aug. 2020

・地球環境 SDG 第 2 回「持続可能な社会のための行動変容（その１）」, 第 24 回地球研コアプログラム研究会, 07 Aug. 2020, - 1900

・谷口真人, 資源ネクサスと地球環境 SDGs, 第 23 回地球研コアプログラム研究会：地球環境 SDGs 第 1 回, 06 Aug. 2020

・Taniguchi, M, "The Great Debate: Geoscience and societal leadership in support of planetary stewardship", JpGU-AGU-EGU" joint session at the JpGU-AGU Joint Meeting, 17 Jul. 2020, Invited, English, Invited oral presentation

[Academic Contribution]

・M-G134: Groundwater Resources Conservation, JpGU-AGU Joint Meeting (Session convener), Academic society etc, JpGU-AGU Joint Meeting, 25 Jul. 2020

・GC064: Multisector Dynamics: Energy–Water–Land Interactions at Multiple Scales, American Geophysical Union (Session convener), American Geophysical Union, 10 Dec. 2020

[Committee Memberships]

・2016, 2020, Vice President, IAH: International Association of Hydrogeologists, Society

・Oct. 2017, Sep. 2023, cooperation member, Science Council of Japan, Others

・May 2019, May 2022, President for Atmospheric and Hydrospheric Sciences Section, Japan Geoscience Union, Society

[Research Projects]

・Evaluation of subsurface warming for improving sustainability assessment of subsurface thermal environment in urban areas, 宮越 昭暢; 濱元 栄起; 谷口 真人, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (C), National Institute of Advanced Industrial Science and Technology, 01 Apr. 2019, 31 Mar. 2022, 4290000, 3300000, 990000, 19K12364

・Comprehensive evaluation of land-ocean interactions through river and ground water: a comparison between Asian monsoon and drought area, 小路 淳; 谷口 真人, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), 01 Apr. 2017, 31 Mar. 2021, 15990000, 12300000, 3690000, 海底湧水は河川水など他の陸水に比べてリンや窒素などの栄養を豊富に含むことから，沿岸海域の生物生産に高く寄与することが近年の研究で明らかにされつつある．しかし，これまでの研究は海底湧水と低次生産の関連を対象にしたものがほとんどであり，高次生物への影響を扱った研究例は世界的に見ても乏しい．今年度は、世界の沿岸海域における水産資源として重要な二枚貝の成長に海底湧水が与える影響を評価するための野外実験プロトコルを確立し，各地の調査サイトへ応用することを目的とした．

・「健全な未来都市への知的デザイン：持続可能なグリーン都市に向けた食料・水・エネルギーネクサスアプローチ（METABOLIC)」, 谷口 真人, 戦略的創造研究推進事業ベルモントフォーラム CRA 持続可能な都市化に向けた国際イニシアチブ：食料-水-エネルギーのネクサス, 2018, Mar. 2021, 24998000, 0, 0, Competitive research funding

・「河川水・地下水を介した陸海相互作用の包括評価：モンスーンアジアと乾燥地域の比較」, 小路 淳, 日本学術振興会科学研究費補助金・基盤研究(B)海外学術調査, 2017, 2020, 3900000, 0, 0, Competitive research funding

[Media Coverage]

・未来への大気水圏科学, Myself, 地球惑星科学連合 ニュースレター, Dec. 2020, 16(3), 5, PR

TAYASU Ichiro

Professor

[Academic Career]

Kyoto University, Graduate School, Division of Natural Science, Zoology (1992-1997)

Kyoto University, Faculty of Science, Biology (1988-1992)

[Professional Career]

Research Institute for Humanity and Nature, Professor (2014-)

Kyoto University, Center for Ecological Research, Associate Professor (2003-2014)

Research Institute for Humanity and Nature, Assistant Professor (2002-2003)

JSPS Research Fellow (Research Abroad) in France (2000-2002)

JSPS Research Fellow (PD) (1997-2000)

[Higher Degrees]

Master(Scinece), Kyoto University (1994)

[Fields of Specialization]

Environmental science/Agricultural science > Social-ecological systems

Life sciences > Ecology and environmental science

Environmental science/Agricultural science > Environmental dynamics

[Academic Society Memberships]

JAPAN GEOSCIENCE UNION

The International Union for the Study of Social Insects

The Japanese Society of Limnology

The Japanese Society of Soil Zoology

Ecological Society of Japan

[Awards]

20th Biwako Prize for Ecology, TAYASU Ichiro, Ecological Society of Japan (2019)

INOUE Researc Award for Young Scientist, Inoue Foundation for Science (1999)

—Achievements—

[Books etc]

・陀安一郎, 01 Mar. 2021, 178-184, Contributor, 環境問題を解く ひらかれた協働研究のすすめ, 227, かもがわ出版, Japanese, ISBN: 9784780311440

・Mar. 2021, Tayasu, I. and Shin, K.-C., Editor, A world drawn by Environmental Isotope Study: 2021 edition, Research Institute for Humanity and Nature

・陀安一郎, Mar. 2021, 近藤康久，大西秀之編，環境問題を解く ひらかれた協働研究のすすめ, 178-184, Contributor, 環境トレーサビリティとは何か, 227, かもがわ出版

・陀安一郎; 藤吉麗, Dec. 2020, 脇田健一, 谷内茂雄, 奥田昇 編，流域ガバナンス：地域の「しあわせ」と流域の「健全性」, 98-103, Contributor, 環境トレーサビリティと流域の環境, 454, 京都大学出版会

・陀安一郎, Oct. 2020, 総合地球環境学研究所編，BIOCITY No.84, 100-106, Contributor, 自治体や住民と行う同位体環境学 環境トレーサビリティの実践

・Okuda, N; T. Takeyama; T. Komiya; Y. Kato; Y. Okuzaki; Z. Karube; Y. Sakai; M. Hori; I. Tayasu; T. Nagata, Aug. 2020, Lake Biwa: Interactions between Nature and People (2nd Edition). (Eds. Kawanabe, H. et al.), Contributor, A food web and its long-term dynamics in Lake Biwa: a stable isotope approach, Springer Academic

[Published Papers]

・Kenji Suetsugu; Takashi F. Haraguchi; Akifumi S. Tanabe; Ichiro Tayasu, Mar. 2021, Specialized mycorrhizal association between a partially mycoheterotrophic orchid Oreorchis indica and a Tomentella taxon, MYCORRHIZA, 31 (2), 243-250, SPRINGER, English, Refereed, Scientific journal DOI:10.1007/s00572-020-00999-z

・Naoto F. Ishikawa; Jacques C. Finlay; Hiromi Uno; Nanako O. Ogawa; Naohiko Ohkouchi; Ichiro Tayasu; Mary E. Power, Nov. 2020, Combined use of radiocarbon and stable carbon isotopes for the source mixing model in a stream food web, Limnology and Oceanography, 65 (11), 2688-2696, Wiley, English, Refereed, Scientific journal DOI:10.1002/lno.11541

・Kenji Suetsugu; Shintaro Taketomi; Akifumi S. Tanabe; Takashi F. Haraguchi; Ichiro Tayasu; Hirokazu Toju, Oct. 2020, Isotopic and molecular data support mixotrophy in Ophioglossum at the sporophytic stage, New Phytologist, 228 (2), 415-419, Wiley, English, Refereed, Scientific journal DOI:10.1111/nph.16534

・Kenji Suetsugu; Jun Matsubayashi; Ichiro Tayasu, 01 Sep. 2020, Use of radiocarbon for assessing the mycorrhizal status of mycoheterotrophic plants, Plant Signaling & Behavior, 15 (9), 1785667-1785667, Informa UK Limited, English, Refereed, Scientific journal DOI:10.1080/15592324.2020.1785667

・Kai Nils Nitzsche; Ki-Cheol Shin; Yoshikazu Kato; Hiromitsu Kamauchi; Shotaro Takano; Ichiro Tayasu, Aug. 2020, Magnesium and zinc stable isotopes as a new tool to understand Mg and Zn sources in stream food webs, Ecosphere, 11 (8), Wiley, English, Refereed, Scientific journal DOI:10.1002/ecs2.3197

・Jun'ichiro Ide; Takuya Ishida; Abigail P. Cid-Andres; Ken'ichi Osaka; Tomoya Iwata; Takuya Hayashi; Masanori Akashi; Ichiro Tayasu; Adina Paytan; Noboru Okuda, Aug. 2020, Factors characterizing phosphate oxygen isotope ratios in river water: an inter-watershed comparison approach, LIMNOLOGY, 21 (3), 365-377, SPRINGER JAPAN KK, English, Refereed, Scientific journal DOI:10.1007/s10201-020-00610-6

・Yoshikazu Kato; Hiroyuki Togashi; Yutaka Kurita; Hiromitsu Kamauchi; Ichiro Tayasu, Jul. 2020, Discrimination of nursery locations of juvenile Japanese flounderParalichthys olivaceuson the Pacific coast of northern Japan based on carbon and nitrogen stable isotope ratios, FISHERIES SCIENCE, 86 (4), 615-623, SPRINGER JAPAN KK, English, Refereed, Scientific journal DOI:10.1007/s12562-020-01436-y

・Jun Matsubayashi; Yutaka Osada; Kazuaki Tadokoro; Yoshiyuki Abe; Atsushi Yamaguchi; Kotaro Shirai; Kentaro Honda; Chisato Yoshikawa; Nanako O. Ogawa; Naohiko Ohkouchi; Naoto F. Ishikawa; Toshi Nagata; Hiroomi Miyamoto; Shigeto Nishino; Ichiro Tayasu, May 2020, Tracking long-distance migration of marine fishes using compound-specific stable isotope analysis of amino acids, Ecology Letters, 23 (5), 881-890, Wiley, English, Refereed, Scientific journal DOI:10.1111/ele.13496

・Kohtaroh Shutoh; Yuko Tajima; Jun Matsubayashi; Ichiro Tayasu; Syou Kato; Takashi Shiga; Kenji Suetsugu, Apr. 2020, Evidence for newly discovered albino mutants in a pyroloid: implication for the nutritional mode in the genus Pyrola, American Journal of Botany, 107 (4), 650-657, Wiley, English, Refereed, Scientific journal DOI:10.1002/ajb2.1462

・Takuya Ishida; Ichiro Tayasu; Chisato Takenaka, Jul. 2015, 4678, Characterization of sulfur deposition over the period of industrialization in Japan using sulfur isotope ratio in Japanese cedar tree rings taken from stumps, ENVIRONMENTAL MONITORING AND ASSESSMENT, 187 (7), SPRINGER, English, Refereed, Scientific journal DOI:10.1007/s10661-015-4678-0

[MISC]

・後藤祐之介; 川井清明; SHIN Ki-Cheol; 陀安一郎, 2021, 元素及び重元素安定同位体比分析によるニンジンの産地判別法の開発, 農林水産消費安全技術センター食品関係等調査研究報告, (44)

・陀安一郎, 2020, 同位体環境学と同位体地図を用いた研究の展開, 海洋化学研究, 33 (1)

・八木龍太; 陀安一郎; 末次健司, 2020, Nutritional mode of orchids associated with Rhizoctonia: Are they mixotroph?, 日本生態学会大会講演要旨(Web), 67th

・藤吉麗; 陀安一郎; 藪崎志穂; 原口岳; 由水千景; 大串健一; 古川文美子; 伊藤真之; 山本雄大; 横山正; 三橋弘宗, 2020, Contrasting seasonal dynamics of nitrate and sulfate in Chikusa River watershed, Hyogo, Japan, 日本生態学会大会講演要旨(Web), 67th

・塩澤直人; 由水千景; 冨樫博幸; 陀安一郎; 占部城太郎, 2020, Untangling diet sources of small animals on sandy beach, 日本生態学会大会講演要旨(Web), 67th

・綱本良啓; 陀安一郎; 原口岳; 直江将司, 2020, Vertical seed dispersal of Pinus pumila by nutcracker: a case study of Mt Iwate, 日本生態学会大会講演要旨(Web), 67th

・原口岳; 幸田良介; 石塚譲; 陀安一郎, 2020, Inter-annual variation of fecal nitrogen stable isotope values, as an indicator of herbivory by deer at cultivated lands, 日本生態学会大会講演要旨(Web), 67th

・横山裕矢; 勝田長貴; 香川雅子; 内藤さゆり; 森本真紀; 由水千景; 陀安一郎; 川上紳一, 2020, Sulfur isotope analysis for Nigori River in Asama volcano, 日本地球惑星科学連合大会予稿集(Web)

・陀安一郎; 藤吉麗; 藪崎志穂; SHIN Ki-Cheol; 中野孝教; 谷口真人, 2020, Environmental studies using environmental traceability methodology, 日本地球惑星科学連合大会予稿集(Web)

・中桐貴生; 松本武志; 堀野治彦; 大串健一; 藪崎志穂; 陀安一郎; 吉岡有美; 櫻井伸治, 2020, Quantitative evaluation of the effect of paddy irrigation on river flow regimes using water stable isotopic ratios, 日本地球惑星科学連合大会予稿集(Web)

・加藤義和; 冨樫博幸; 栗田豊; 長田穣; 天野洋典; 由水千景; 鎌内宏光; 陀安一郎, 2020, Stable isotope ratios of vertebral collagen reveal habitat history of Japanese flounder in Sendai Bay, 日本生態学会大会講演要旨(Web), 67th

・首藤光太郎; 田島裕子; 松林順; 陀安一郎; 末次健司, 2020, ラン科以外の種子植物から初めて発見された部分的菌従属栄養植物のアルビノ個体, 日本植物分類学会大会研究発表要旨集, 19th

・末次健司; 松林順; 陀安一郎, 2020, Some mycoheterotrophic orchids depend on carbon from dead wood: Novel evidence from a radiocarbon approach, 日本生態学会大会講演要旨(Web), 67th (5), 1519-1529, WILEY, English DOI:10.1111/nph.16409

[Committee Memberships]

・Mar. 2019, Mar. 2021, Auditor-secretary, Ecological Society of Japan, Society

・Jan. 2019, Dec. 2021, Limnology Editor-in-Chief, Japanese Society of Limnology, Society

・Jan. 2020, Dec. 2023, Council member, The Japanese Society of Limnology, Society

・Jan. 2016, Dec. 2023, Representatives of Kinki Branch (Kyoto), The Ecological Society of Japan, Society

・Nov. 2013, Review Editor, Frontiers in Environmental Science, Others

[Research Projects]

・Developing an analytical method of multi-elemental Isoscapes by international networks, Ichiro Tayasu, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)), Research Institute for Humanity and Nature, Oct. 2020, Mar. 2025, 17290000, 13300000, 3990000, 20KK0165

・Construction of ecosystem stoichiometry concept based on bio-geological coupling, Ichiro Tayasu, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Challenging Research (Exploratory), Research Institute for Humanity and Nature, Jun. 2018, Mar. 2021, 6240000, 4800000, 1440000, 本年度においては、昨年度に分析方法が確立した、各元素に関する実際の生態系試料の分析を行った。まず、石灰岩河川と非石灰岩河川においてMg と Ca の濃度および δ26Mg 値を比較したところ、明瞭な違いがあった。この結果は、母岩がこれらの値を決めていることを示している。δ26Mg 値においては、石灰岩河川では-1.96 ‰ 〜 -1.22 ‰であったのに対し、非石灰岩河川では-0.95 ‰ 〜 -0.60 ‰の値を持っていた。また、琵琶湖集水域における 3 つの石灰岩河川に生息する水生生物の δ26Mg 値は、3 つの非石灰岩河川に生息する水生生物の δ26Mg 値よりも低く、石灰岩からの影響が水生生物に見られることがわかった。しかしながら、摂食機能群別の δ26Mg 値はそれぞれ異なっており、餌源の違いが影響を与える可能性が示唆された。一方、ハゼ科魚類の δ26Mg 値は、河川水中の δ26Mg 値に近似しており、Mg が直接河川水から得られた可能性が見られた。現在、魚類の移動研究には、耳石のストロンチウム同位体比（87Sr/86Sr）がよく使われている。しかし、この指標だけでは河川を分けれない場合もあり、その場合に δ26Mg 値を用いた研究を行う意義があることがわかった。これらの結果について原著論文として発表した。 続いて、一方、δ66Zn 値に関してみると、野洲川では河川水の値と付着藻類の値は同様であったが、安曇川では付着藻類の方が少し高い値を示した。比較して、陸上植物の落葉の δ66Zn 値は河川水の値よりも低かった。ヒゲナガカワトビケラでは、δ66Zn 値が高くなっており、同位体分別が起こっている可能性がある。 さらに、河川生態系における δ44Ca および δ88Sr に関しては、水生生物における分析自体が一般的でないため、手法開発も含め検討を行った。, 18K19367

・Applied research platform based on environmental traceability, TAYASU Ichiro, Research Institute for Humanity and Nature, Post-Core Project, Research Institute for Humanity and Nature, Apr. 2020, Mar. 2023

Win Thiri Kyaw

Researcher

[Academic Career]

Ehime University School of Medicine, Department of Clinical Pharmacology and Therapeutics, Ph.D. medical science (2009-2013)

Ehime University School of Medicine, Department of Clinical Pharmacology and Therapeutics, Research Student (2008-2009)

University of Medicine 2, Yangon, Bachelor of Medicine, Bachelor of Surgery (2000-2007)

[Professional Career]

Research Institute for Humanity and Nature, Research Department, Researcher (2019-)

Ehime University School of Medicine, Department of Clinical Pharmacology and Therapeutics, Researcher (2013-2017)

[Fields of Specialization]

Life sciences > Neurology

—Achievements—

[Published Papers]

・Win Thiri Kyaw; Xiaoxu Kuang; Masayuki Sakakibara, 16 Sep. 2020, Health Impact Assessment of Artisanal and Small-Scale Gold Mining Area in Myanmar, Mandalay Region: Preliminary Research, International Journal of Environmental Research and Public Health, 17 (18), 6757-6757, MDPI AG, English, Refereed, Scientific journal DOI:10.3390/ijerph17186757

[Presentations]

・Win Thiri Kyaw, Mercury Free Society Network, 3rd Japan-ASEAN Medical Seminar on Human Health Impact of Heavy Metals, 31 Oct. 2020, English, Public discourse

[Research Projects]

・Co-creation of Sustainable Regional Innovation for Reducing Risk of High-impact Environmental Pollution, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, Apr. 2015, Mar. 2024

Wong Grace

Associate Professor

[Fields of Specialization]

Environmental science/Agricultural science > Social-ecological systems > Social-environmental justice > resource governance > wellbeing

Humanities & social sciences > Economic policy > Development studies > policy and critical discourse analysis

—Achievements—

[Published Papers]

・Brockhaus, M.; Di Gregorio, M.; Djoudi, H.; Moeliono, M.; Pham, T.T.; Wong, G.Y., 2021, The forest frontier in the Global South: Climate change policies and the promise of development and equity, Ambio, Scientific journal DOI:10.1007/s13280-021-01602-1

・Thu, T.P.; Moeliono, M.; Brockhaus, M.; Wong, G.Y.; Le, N.D., Dec. 2020, The politics of swidden: A case study from Nghe An and Son La in Vietnam, Land Use Policy, 99, 103050, English, Scientific journal DOI:10.1016/j.landusepol.2017.10.057

・Wong, G.Y.; Moeliono, M.; Pham T.T.; Bong, I.W.; Sahide M.A.K.; Naito, D.; Brockhaus, M., Nov. 2020, Social forestry in Southeast Asia: Evolving interests, discourses and the many notions of equity, Geoforum, 117, 246-258, PERGAMON-ELSEVIER SCIENCE LTD, English, Scientific journal DOI:10.1016/j.geoforum.2020.10.010

・Sahide, M.A.K.; Fisher, M.R.; Supratman, S.; Yusran, Y.; Pratama, A.A.; Maryudi, A.; Runtuboi, Y.; Sabar, A.; Verheijen, B.; Wong, G.Y.; Kim, Y.S., Jun. 2020, Prophets and profits in Indonesia's social forestry partnership schemes: Introducing a sequential power analysis, Forest Policy and Economics, 115, 102160, English, Scientific journal DOI:10.1016/j.forpol.2020.102160

・Nasser, F.; Maguire-Rajpaul, V.; Dumenu, W.K.; Wong, G.Y., 28 May 2020, Climate-Smart Cocoa in Ghana: How Ecological Modernisation Discourse Risks Side-Lining Cocoa Smallholders, Frontiers in Sustainable Food Systems, 4, 73, Scientific journal DOI:10.3389/fsufs.2020.00073

・Sahide, M.A.K.; Fisher, M.R.; Verheijen, B.; Maryudi, A.; Kim, Y. S.; Wong, G.Y., 2020, Sequential power analysis framework in assessing social forestry outcomes, MethodsX, 7, 100917, English, Scientific journal DOI:10.1016/j.mex.2020.100917

・Delabre, I.; Boyd, E.; Brockhaus, M.; Carton, W.; Krause, T.; Newell, P.; Wong, G.Y.; Zelli F., 2020, Unearthing the myths of global sustainable forest governance, Global Sustainability, 3, English, Scientific journal DOI:10.1017/sus.2020.11

[Research Projects]

・Fair for Whom? Politics, power and precarity in transformations of tropical forest-agriculture frontiers, Research Institute for Humanity and Nature, Apr. 2020, Mar. 2026

YABUSAKI Shiho

Researcher

[Academic Career]

University of Tsukuba Graduate School of Life and Environmental Sciences 地球環境科学専攻 (2000-2005)

University of Tsukuba Master's Program in Environmental Sciences 環境科学専攻 (1998-2000)

University of Tsukuba Graduate School Division of Environmental Science 地球科学 (1994-1998)

[Professional Career]

Fukushima University Symbiotic Systems Science and Technology 客員准教授 (2016-)

Research Institute for Humanity and Nature, RIHN Center (2016-)

Fukushima University 共生システム理工学類 (2012-2016)

Rissho University, Faculty of Geo-Environmental Science Department of Environment Systems, Post-doctoral Fellow Researcher (2007-2012)

University of Tsukuba 生命環境科学研究科 陸域環境研究センター (2005-2007)

Utsunomiya University, Faculty of Education (2005)

[Higher Degrees]

Doctor (Science), University of Tsukuba

[Fields of Specialization]

Natural sciences > Atmospheric and hydrospheric science > Hydrology

[Academic Society Memberships]

地学団体研究会 (2014-)

日本地球惑星科学連合 (2009-)

水文・水資源学会 (2002-)

日本地球化学会 (2001-)

土壌物理学会 (2000-)

日本地下水学会 (1998-)

日本水文科学会 (1998-)

日本土壌肥料学会 (2000-2015)

American Geophysical Union（AGU） (2005-2012)

—Achievements—

[Books etc]

・総合地球環境学研究所, Oct. 2020, 忍野八海と忍野村の地下水, 36-43p, Contributor, BIOCITY, No.84, 株式会社ブックエンド

・日本地下水学会編, Jun. 2020, Q20 地下水や湧水はミネラルが豊富でおいしいというのは本当ですか？ ; Q29 名水百選とはどのようなものですか？ ; Q30 湧水や井戸の名称はどのように付けられたのですか？, Contributor, 地下水・湧水の疑問, 成山堂書店

[Published Papers]

・藪崎志穂, Mar. 2021, 水の安定同位体をいた地下水や湧水の涵養域の推定— 福島県沿岸域の研究例 —, 陀安一郎, 申 基澈 編「同位体環境学がえがく世界：2021 年版」, 67-71, Japanese, In book

・Shiho Yabusaki, Jan. 2021, Estimation method of recharge area and residence time in groundwater by using stable isotopes, CFCs and SF6, 地球科学, 75, 91-96, Japanese, Refereed, Scientific journal

・Shiho Yabusaki, Aug. 2020, Characteristics of water quality and estimation of the recharge area in the northern part of the coastal area, Fukushima prefecture, 地下水学会誌, 62 (3), 449-471, 日本地下水学会, Japanese, Refereed, Scientific journal

・SHIMANO Yasuo; YABUSAKI Shiho, 2020, Visit to valuable water springs (128) Valuable water springs in upper and middle drainage basins of Tama River, Journal of Groundwater Hydrology, 62 (1), 113-129, Japanese Association of Groundwater Hydrology, Japanese DOI:10.5917/jagh.62.113

[Presentations]

・藪崎志穂; 川越清樹; 佐藤 公, 裏磐梯地域と福島市内における降水の安定同位体比の特徴と気象条件との関係について, 磐梯朝日自然環境保全研究所 令和 2 年度研究成果報告会, 13 Mar. 2021, Japanese, Public discourse

・古川綾華; 藪崎志穂; 川越清樹, 物質流出成分に寄与する地域条件の因果関係の検討, 平成 2 年度 土木学会東北支部技術研究発表会, 06 Mar. 2021, Oral presentation

・幡谷有翼; 藪崎志穂; 川越清樹, 土地利用に応じた阿武隈川の物質流出機構の地域特性解析, 平成 2 年度 土木学会東北支部技術研究発表会, 06 Mar. 2021, Oral presentation

・藪崎志穂; 松崎由佳; 柴崎直明, 仙台市宮城野区新浜地区の地下水の安定同位体比の月変化と滞留時間の推定について, 海岸環境関連グループ合同報告会, 24 Feb. 2021, Japanese, Public discourse

・藪崎志穂, 福島県沿岸域における地下水および湧水の震災後約 10 年間の水質，安定同位体比の変化について, 第 10 回同位体環境学シンポジウム, 18 Dec. 2020, Japanese, Poster presentation

・幡谷有翼; 藪崎志穂; 川越清樹, 阿武隈川における各小流域の外部負荷量と地域特性の検討, 第 10 回同位体環境学シンポジウム, 18 Dec. 2020, Japanese, Poster presentation

・四柳宏基; 諸橋将雪; 高橋雅昭; 大泉 毅; 藪崎志穂; 陀安一郎; 大河内 博; 佐瀬裕之, 日本海側の森林地域における降水イベント時の渓流イオン成分の流出特性, 第 10 回同位体環境学シンポジウム, 12 Jul. 2020, Japanese, Poster presentation

・佐瀬裕之; 諸橋将雪; 高橋雅昭; 大泉 毅; 猪股弥生; 藪崎志穂; 齋藤辰善; 山下尚之; 陀安一郎; 中田 誠, Multi-isotopic approach to evaluate effects of transboundary air pollution on forest ecosystems of central Japan. JpGU meeting 2020, 地球惑星科学連合 2020 年合同大会, 12 Jul. 2020, Poster presentation

・中桐貴生; 松本武志; 堀野治彦; 大串健一; 藪崎志穂; 陀安一郎; 吉岡有美; 櫻井伸治, 水安定同位体比を用いた水田農業が河川流況に及ぼす影響の定量評価，地球惑星科学連合 2020 年合同大会，12 Jul. 2020, Japanese, Poster presentation

・陀安一郎; 藤吉 麗; 藪崎 志穂; SHIN Ki-Cheol; 中野孝教; 谷口真人, 環境トレーサビリティー手法を用いた環境研究, 地球惑星科学連合 2020 年合同大会, 12 Jul. 2020, Japanese, Poster presentation

・藪崎志穂; 柴崎直明; 山本怜南, 仙台市宮城野区新浜地区の地下水の滞留時間の推定－SF6，CFCs 等による結果を用いた検討－, 地球惑星科学連合 2020 年合同大会, 12 Jul. 2020, Japanese, Poster presentation

・Shiho Yabusaki; Makoto Taniguchi; Ichiro Tayasu; Tomoya Akimichi; Noboru Ohomori; Souichirou Watanabe; Hisamaru Osada; Ken Goto, Characteristics of stable isotopes in monthly precipitation at Oshino village and northern slope of Mt. Fuji from Dec. 2016 to Mar. 2020, JpGU meeting 2020. (地球惑星科学連合 2020 年合同大会）, 12 Jul. 2020, English, Poster presentation

[Committee Memberships]

・Oct. 2020, 住環境保全審議会 委員, 忍野村

・Dec. 2019, 「新版地学事典」増補・改訂 編集委員, 地学団体研究会

・Apr. 2015, 研究調査委員会, 水文・水資源学会

・Feb. 2008, 市民コミュニケーション委員会, 日本地下水学会

[Research Projects]

・福島県全域の地下水中放射性セシウムの汚染マップの作成, 竹内 真司; 鈴木 弘明; 林 武司; 藪崎 志穂, 住友財団, 2020 年度 住友財団 環境研究助成, Nov. 2020, Nov. 2121

・Understanding the water quality and groundwater flow system and predicting the influence of reconstruction project in the near coastal area of Fukushima Prefecture, 藪崎 志穂; 川越 清樹, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (C), Research Institute for Humanity and Nature, Apr. 2020, Mar. 2023, 4290000, 3300000, 990000, 20K01150

・Studies on short-term or medium-term impacts caused by infrastructure reconstruction on ecosystem in the tsunami disaster area, 黒沢 高秀; 吉田 龍平; 柴崎 直明; 藪崎 志穂; 平吹 喜彦; 永松 大; 兼子 伸吾; 川崎 興太, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (A), Fukushima University, Apr. 2018, Mar. 2023, 43680000, 33600000, 10080000, 宮城県仙台湾沿岸から福島県相双地域の平野部の復旧事業が行われている区域で気象，地下水動態・水質，植生，植物相，遺伝的多様性，都市計画に関して，観測，調査，解析を開始した。気象に関して日本全域をカバーする過去 10 年間の 3 次元大気データを収集・解析し，少なくとも 5km スケールでは震災による土地被覆変化に由来する気温や風速の変化は検出できないことを明らかにした。地下水動態・水質に関して，仙台市宮城野区新浜地区において，貞山運河付近の表流水を 2 箇所で採水し分析するとともに，既存井戸 6 箇所の地下水について定期的に現場水質測定と室内水質分析を行った。また，既存井戸 2 箇所に絶対圧型自記水位計を設置し，30 分間隔で地下水位と地下水温の連続観測を開始した。併せて，滞留時間分析用の試料も 4 地点で採取した。植生に関して，南蒲生の砂浜海岸エコトーンで植生調査とドローンによる画像取得を実行し，過去のデータと比較して，植生変遷と微細地形の不均一性の実態および自律的再生にかかわるそれらの意義を検討した。また宮城県仙台湾沿岸から福島県相双地域の復旧事業が行われている砂浜海岸地域の状況を改めて確認した。防潮堤，海岸林の復旧完了直後で今後の変化を追跡しやすい相馬市松川浦に 3 本の調査測線を設定し，植生調査を実施して今後の追跡を開始した。福島県相馬市のヒヌマイトトンボ生息地の震災前から復旧事業後までの植生や土地利用の変化を大学紀要で報告した。植物相に関して海岸防災林内に設けた保護区 3 箇所の調査を進めるとともに，福島県内の津波被災地の絶滅危惧種の概況を大学紀要で報告した。都市計画に関して，防災緑地や海岸防災林の整備計画・状況などについて整理するとともに，福島県いわき市豊間地区の住民を対象として防災緑地に関するアンケート調査やヒアリング調査を行った。, 18H04146

・地質に対応した日本酒仕込み水の水質分析体系化によるテロワール・ブランディング, 国税庁, 令和２年度「日本産酒類のブランド化推進事業」, Aug. 2020, Mar. 2021

YAMADA Taiki

Researcher

[Academic Career]

Tohoku University 理学研究科 数学専攻博士課程 (2016-2019)

Tohoku University, Program for Leading Graduate Schools, Interdepartmental Doctoral Degree Program for Multi-dimensional Materials Science Leaders (2014-2019)

Tohoku University 理学研究科 数学専攻修士課程 (2014-2016)

[Professional Career]

Research Institute for Humanity and Nature 研究員 (2019-2021)

Tohoku University Graduate School of Science Department of Mathematics 日本学術振興会特別研究員 DC2 (2018-2019)

[Fields of Specialization]

Informatics > Mathematical informatics

Natural sciences > Geometry > Discrete Geometry

[Academic Society Memberships]

THE MATHEMATICAL SOCIETY OF JAPAN

[Awards]

修士論文川井奨励賞 山田 大貴 川井財団 (2016)

—Achievements—

[Published Papers]

- Ryunosuke Ozawa; Yohei Sakurai; Taiki Yamada, 2021, Maximal diameter theorem for directed graphs of positive Ricci curvature, to appear in Comm. Anal. Geometry (arXiv:2011.00755v2), English, Refereed, Scientific journal
- Taiki Yamada, Dec. 2020, A Construction of Graphs with Positive Ricci Curvature, Kyushu Journal of Mathematics, 74 (2), 291-311, English, Refereed, Scientific journal
- Ryunosuke Ozawa; Yohei Sakurai; Taiki Yamada, Sep. 2020, Geometric and spectral properties of directed graphs under a lower Ricci curvature bound, Calc. Var. Partial Differential Equations, 59 (4), 142-177, English, Refereed, Scientific journal
- Kazuyoshi Watanabe; Taiki Yamada, Jun. 2020, Relation between Combinatorial Ricci Curvature and Lin-Lu-Yau's Ricci Curvature on Cell Complexes, Tokyo Journal of Mathematics, 43 (1), 25-45, English, Refereed, Scientific journal

[Research Projects]

- ビッグデータ解析に応用可能な高連結度グラフの構成に関する微分幾何学的研究, 山田 大貴, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Research Activity Start-up, Research Institute for Humanity and Nature, Aug. 2019, Mar. 2021, 2470000, 1900000, 570000, 19K23411

YAMANAKA Manabu D.

Senior Researcher

[Academic Career]

Nagoya University, Graduate School of Science, Department of Atmospheric and Hydrospheric Sciences (1980-1985)

Kyoto University, Faculty of Science, Auditor (1979-1980)

Osaka Kyoiku University, Faculty of Education, Special Cource for High School Teachers of Science (1975-1979)

[Professional Career]

Research Institute for Humanity and Nature, Tropical Peatland Society Project, Senior Researcher (2020-2021)

Kobe University, Professor Emeritus (2016-)

Research Institute for Humanity and Nature, Tropical Peatland Society Project, Project Researcher (2018-2019)

Japan Agency for Marine-Earth Science and Technology, Department of Coupled Ocean-Atmosphere-Land Processes Research, Senior Staff (2016-2018)

Japan Agency for Marine-Earth Science and Technology, Department of Coupled Ocean-Atmosphere-Land Processes Research, Principal Scientist (2015-2016)

Japan Agency for Marine-Earth Science and Technology, Department of Coupled Ocean-Atmosphere-Land Processes Research, Principal Scientist (2014-2015)

Japan Agency for Marine-Earth Science and Technology, Risearch Institute for Global Change, Principal Scientist (2009-2014)

Japan Agency for Marine-Earth Science and Technology, Institute of Observational Research for Global Change, Senior Scientist (2007-2009)

Japan Agency for Marine-Earth Science and Technology, Institute of Observational Research for Global Change, Special Scientist (2005-2007)
Kobe University, Graduate School of Science and Technology, Professor (1998-2007)
Kyoto University, Radio Atmospheric Science Center, Associate Professor (1995-1998)
Kyoto University, Radio Atmospheric Science Center, Lecturer (1989-1995)
Yamaguchi University, Faculty of Education, Lecturer (1987-1989)
Institute of Space and Astronautical Science, Devision of Space System Technology, Postdoctoral Fellow, Japan Society for Promotion of Science (1986)
Nagoya University, Water Research Institute, Junior Research Fellow, Japan Society for Promotion of Science (1985-1986)

[Higher Degrees]

DSc, Nagoya University (1985)

[Fields of Specialization]

Natural sciences > Mathematical physics and basic theory > planetary fluid dynamics
Aerospace > marine > and maritime Engineering > Aerospace engineering > scientific ballooning > atmospheric remote sensing
Humanities & social sciences > Local studies > Indonesian maritime continent
Environmental science/Agricultural science > Environmental dynamics > tropical peatland humanosphere science
Natural sciences > Atmospheric and hydrospheric science > atmosphere-hydrosphere science

—Achievements—

[Published Papers]

・Muhammad Arif Rahman; Devis Styo Nugroho; Manabu D. Yamanaka; Masahiro Kawasaki; Osamu Kozan; Masafumi Ohashi; Hiroyuki Hashiguchi; Shuichi Mori, Jan. 2021, Weather radar detection of planetary boundary layer and smoke layer top of peatland fire in Central Kalimantan, Indonesia, Scientific Reports, 11 (367), English, Refereed, Scientific journal

[MISC]

・山中大学, Dec. 2020, 木村磐根先生の御謦咳に接した一人として, 木村磐根先生追悼集, 124-125, Japanese, Introduction other
・山中大学, 12 Nov. 2020, JpGU-AGU2020（バーチャル）緊急特別第三セッションの報告:「新型コロナウイルス感染症と地球の環境・災害」, Humanity and Nature, (82), 21-23, Japanese, Invited, Introduction research institution

[Presentations]

・山中大学, How Space Matters in COVID-19 Infections: Population Density, Personal Distance, and Social Distancing in Asian Archipelagos, 総合地球環境学研究所プログラム 1 特別セッション研究会, 08 Mar. 2021, Japanese
・山中大学; 荻野慎也, 海陸風起源双方向重力波による成層圏 QBO 頑健化, 日本気象学会 第 12 回熱帯気象研究会, 04 Mar. 2021, 04 Mar. 2021 - 05 Mar. 2021, Japanese, Oral presentation
・山中大学, COVID-19 感染の人口密度依存性に基く尼日両島嶼国家のサステナビリティ, 第 2 回インドネシア研究懇話会(KAPAL), 29 Nov. 2020, 28 Nov. 2020 - 29 Nov. 2020, Japanese, Oral presentation
・インドネシア泥炭地と地球の気候, 第 2 回日立京大ラボワークショップ, 21 Nov. 2020, Invited, Japanese, Invited oral presentation
・山中大学; 甲山治; 杉原薫, 人間活動の偏在による災害・環境諸問題の深刻化, 日本気象学会 2020 年度秋季大会, 29 Oct. 2020, 25 Oct. 2020 - 31 Oct. 2020, Japanese, Oral presentation
・山中大学; 荻野慎也, 熱帯沿岸起源重力波の成層圏準二年周期振動への寄与, 日本気象学 2020 年度秋季大会, 28 Oct. 2020, 25 Oct. 2020 - 31 Oct. 2020, Japanese
・小川まり子; 山中大学; Awaluddin; A. Darmawan; A. Sulaiman; 甲山治, スマトラ東部沿岸部における降雨日変化: 泥炭地域レーダー観測結果, 第 14 回 MU レーダー・赤道レーダーシンポジウム, 14 Sep. 2020, 14 Sep. 2020 - 15 Sep. 2020, Japanese, Oral presentation
・山中大学, COVID-19-visualized disaster-environment risks by human activity concentration, 第 33 回 AF-Forum: ポストコロナの暮らしと仕事、住まいと都市, Archi-Neering Design Forum (A-Forum), online, 21 Aug. 2020, Invited, Japanese, Invited oral presentation

・Manabu D. Yamanaka, Population density, personal distance and social distancing: The Spatial Spread of COVID-19 Infections in Japan and Indonesia, 総合地球環境学研究所プログラム 1 特別セッション研究会「COVID-19 とアジアの発展」, 17 Jul. 2020, Japanese

・Manabu D. Yamanaka, Parametrization of tropical coastal nonstationary gravity waves robustizing QBO, JPGU-AGU 2020, 14 Jul. 2020, English

・Manabu D. Yamanaka; Osamu Kozan; Kaoru Sugihara, Population density, personal distance and social distancing in the anthroposphere: Implications from the COVID-19 disaster., JPGU-AGU 2020, 13 Jul. 2020, Invited, Japanese, Invited oral presentation

・山中大学, インドネシア海大陸と地球の気候, 奈良女子大学大気グループ特別セミナー, 29 Jun. 2020, Japanese

・Manabu D. Yamanaka, Tropical coastal climate modifications in Mekong delta and Indonesian peatlands., Abstracts, AOGS 2020, 28 Jun. 2020, English

・Manabu D. Yamanaka, Maritime continent coasts emitting omni-azimuthal gravity waves, Abstracts, AOGS 2020, 28 Jun. 2020

[Academic Contribution]

・Late Breaking Session "COVID-19, the Earth's Environment and Disaster", Co-Convenors: Jun Matsumoto, Yukihiro Takahashi, Akira Wada, Manabu D. Yamanaka, Competition etc, JpGU-AGU Joint Meeting 2020, 13 Jul. 2020

[Research Projects]

・New Picture and Future Prediction of the Global Water Cycle Using a Global Cloud-Resolving Model NICAM, Shin-Ya Ogino; Tomoe Nasuno; Shuichi Mori; Manabu D. Yamanaka, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), Japan Agency for Marine-Earth Science and Technology, Apr. 2019, Mar. 2022, 14950000, 11500000, 3450000, 19H04248

・Toward the Regeneration of Tropical Peatland Societies: Building International Research Network on Paludiculture and Sustainable Peatland Management, Osamu Kozan; Kosuke Mizuno; Masayuki Ito; Tetsuya Shimamura; Masahiro Kawasaki; Satomi Shiodera; Manabu D. Yamanaka; Daisuke Naito; Masaaki Okamoto; Takamasa Osawa; Ryosuke Kajita; many others, Research Institute for Humanity and Nature, Research Institute for Humanity and Nature, Research I stitute for Humanity and Nature, Apr. 2014, Mar. 2022

・Japan-Indonesia Comparative Study on Urban and Development Areas Based on Population Density Dependency of COVID-19 Infection, Manabu D. Yamanaka, Research Institute for Humanity and Nature, FY 2020 Director General's Discretionary Budget Support for Research on COVID-19, Research I stitute for Humanity and Nature, Sep. 2020, Mar. 2021

・Satellite Remote Sensing Technology, Yamaguchi University, Priority Universities fro Cooperation, Yamaguchi University, Apr. 2017, Mar. 2021

・Project for Building Capacity for Can Tho University to be an Excellent Institution of Education, Scientific Research and technology Transfer, Japan International Cooperation Agency (JICA), Japan International Cooperation Agency (JICA), Sep. 2016, Mar. 2021

YAMAUCHI Taro

Professor

[Academic Career]

The University of Tokyo 医学系研究科 国際保健学専攻 (1998)

The University of Tokyo, Graduate School, Division of Medical Sciences, School of International Health (1998)

The University of Tokyo 医学系研究科 国際保健学専攻 (1995)

The University of Tokyo, Graduate School, Division of Medical Sciences, School of International Health (1995)

The University of Tokyo Faculty of Medicine 保健学科 (1993)

The University of Tokyo, Faculty of Medicine, School of Health Sciences (1993)

[Professional Career]

Research Institute for Humanity and Nature, Professor (2018-)

Hokkaido University, Faculty of Health Sciences, Professor (2013-)
Hokkaido University, Graduate School of Health Sciences, Associate Professor (2007-2013)
Research Institute for Humanity and Nature, Visiting Associate Professor (2007-2008)
The University of Tokyo, Graduate School of Medicine, Research Associate (2002-2007)
Japan Society for the Promotion of Science, Research Associate (2000-2002)
The Australia National University, Researcher (1999-2000)

[Higher Degrees]
Master of Health Sciences, The University of Tokyo (1995)

[Fields of Specialization]
Life sciences > Applied anthropology
Life sciences > Nutrition and health science
Humanities & social sciences > Early childhood education and childcare
Humanities & social sciences > Local studies
Life sciences > Physical anthropology
Life sciences > Hygiene and public health (non-laboratory)

[Academic Society Memberships]
日本オセアニア学会
生態人類学会
日本生理人類学会
日本人類学会
日本成長学会
日本健康学会（旧称: 日本民族衛生学会）
International Association of Physiological Anthropology (IAPA)
Society for the Study of Human Biology (SSHB)
International Society for the Study of Human Growth and Clinical Auxology (ISGA)
日本アフリカ学会

[Awards]
日本成長学会優秀論文賞 (2008)
日本人類学会 Anthropological Science 論文奨励賞 (2006)
石本記念デサントスポーツ科学振興財団、最優秀入選 (2004)
三島海雲記念財団学術奨励賞 (2003)
稲盛財団研究奨励賞 (2003)

—Achievements—

[Books etc]
・山内太郎, 30 Nov. 2020, 148-158, 3.5 労働, 安河内朗, 岩永光一 編『生理人類学—人の理解と日常の課題発見のために』理工図書
・山内太郎, 30 Sep. 2020, 16-19, 北海道大学におけるアフリカ研究の紹介, 84, アフリカ／2020 AUTUMN No. 3/Vol. 60 アフリカ協会
・山内太郎, 03 Sep. 2020, 305-307, コラム 23 子どもクラブ アクション・リサーチ, 島田周平, 大山修一編『ザンビアを知るための 55 章 〜エリア・スタディーズ』・明石出版
・山内太郎, 03 Sep. 2020, 301-304, 47 章 都市スラムの水とトイレ事情—未計画居住区におけるサニテーション課題, 島田周平, 大山修一編『ザンビアを知るための 55 章 〜エリア・スタディーズ』・明石出版

[Published Papers]
・Sikopo Nyambe; Taro Yamauchi, 06 Mar. 2021, Peri-urban water, sanitation and hygiene in Lusaka, Zambia: photovoice empowering local assessment via ecological theory, Global Health Promotion, 175797592199571-175797592199571, SAGE Publications, Refereed, Scientific journal DOI:10.1177/1757975921995713

・Ming HAO; Jiabei HE; Yi ZENG; Wei HAN; Akira SAI; Taro YAMAUCHI, 07 Jan. 2021, A Comprehensive Assessment of Hand Washing: Knowledge, Attitudes and Practices (KAP) and Hand-Washing Behaviors among Primary School Students in Northeast China, Sanitation Value Chain, Refereed

・Arimi Mitsunaga; Taro Yamauchi, Dec. 2020, Evaluation of the nutritional status of rural children living in Zambia, Journal of Physiological Anthropology, 39 (1), Springer Science and Business Media LLC, Refereed, Scientific journal

・Dinala H; Sambo J; Nyambe S; Yamauchi T, 26 Nov. 2020, A Comparative Report on Health and Water, Sanitation and Hygiene in Malawi, Tanzania and Zambia, Sanitation Value Chain, 4 (3), 37-60, Refereed

・Sambo, J; Muchindu, M; Nyambe, S; Yamauchi, T, 25 Aug. 2020, Sustainable Solid Waste Management: An Assessment of Solid Waste Treatment in Lusaka, Zambia, Sanitation Value Chain, 4 (2), 039-050, Refereed

・Sai A; Al Furqan R; Ushijima K; Hamidah U; Ikemi M; Widyarani; Sintawardani N; Yamauchi, T, 25 Aug. 2020, Personal Hygiene, Dignity, and Economic Diversity among Garbage Workers in an Urban Slum of Indonesia., Sanitation Value Chain, 4 (2), 051-066, Refereed

・Sikopo Nyambe; Lina Agestika; Taro Yamauchi, 13 May 2020, The improved and the unimproved: Factors influencing sanitation and diarrhoea in a peri-urban settlement of Lusaka, Zambia, PLOS ONE, 15 (5), e0232763, Public Library of Science (PLoS), Refereed, Scientific journal

・Mariko Isshiki; Izumi Naka; Yusuke Watanabe; Nao Nishida; Ryosuke Kimura; Takuro Furusawa; Kazumi Natsuhara; Taro Yamauchi; Minato Nakazawa; Takafumi Ishida; Ricky Eddie; Ryutaro Ohtsuka; Jun Ohashi, 23 Apr. 2020, Admixture and natural selection shaped genomes of an Austronesian-speaking population in the Solomon Islands, Scientific Reports, 10 (1), Springer Science and Business Media LLC, Refereed, Scientific journal

・Reginald Adjetey Annan; Solomon Adjetey Sowah; Charles Apprey; Nana Ama Frimpomaa Agyapong; Satoru Okonogi; Taro Yamauchi; Takeshi Sakurai, 01 Apr. 2020, Relationship between breakfast consumption, BMI status and physical fitness of Ghanaian school-aged children, BMC Nutrition, 6 (19), Springer Science and Business Media LLC, Refereed, Scientific journal

・Takahiro Miki; Tomohiko Nishigami; Tsuneo Takebayashi; Taro Yamauchi, Apr. 2020, Association between central sensitivity syndrome and psychological factors in people with presurgical low back pain: A cross-sectional study, Journal of Orthopaedic Science, 26 (3), 337-342, Elsevier BV, Scientific journal DOI:10.1016/j.jos.2020.03.017

[Presentations]

・Nyambe S, Yamauchi T, Factors Impacting the Peri-urban Water, Sanitation and Hygiene Ecosystem in Lusaka, Zambia., Global Station for Indigenous Studies and Cultural Diversity Online Workshop., Online, 23 Mar. 2021

・Sikopo Nyambe; Lina Agestika; Taro Yamauchi, Socio-demographic and sanitation factors associated with diarrhea prevalence in peri-urban Lusaka, Zambia, Online International Symposium Sanitation Value Chain 2020, Online, 10 Dec. 2020, 09 Dec. 2020 - 10 Dec. 2020, Oral presentation

・Akira Sai; Radhitiya Al Furqan; Ken Ushijima; Umi Hamidah; Mayu Ikemi; Widyarani; Neni Sintawardani; Taro Yamauchi, Physical and mental health of sanitation workers in an urban slum of Indonesia: Personal hygiene and the construction of self-esteem in waste-handling, Online International Symposium Sanitation Value Chain 2020, Online, 10 Dec. 2020, 09 Dec. 2020 - 10 Dec. 2020, Oral presentation

・Joy Sambo; Mazuba Muchindu; Sikopo Nyambe; Taro Yamauchi, An Assessment of Sustainable Solid Waste Management and Occupational Health in Lusaka, Zambia, Online International Symposium Sanitation Value Chain 2020, Online, 09 Dec. 2020 - 10 Dec. 2020, Poster presentation

・Hermes Dinala; Sikopo Nyambe; Taro Yamauchi, Assessment of Sanitation, Hygiene and Health Status of Primary School Children in a Zambian Slum, Online International Symposium Sanitation Value Chain 2020, Online, 09 Dec. 2020 - 10 Dec. 2020, Poster presentation

・Chua Min Li; Hidenori Harada; Mayu Tsurumi; Shigeo Fujii; Imasik Nyambe; Meki Chirwa; Taro Yamauchi, Association of fecal contamination and WASH conditions in a Zambian peri urban community, Online International Symposium Sanitation Value Chain 2020, Online, 09 Dec. 2020 - 10 Dec. 2020, Poster presentation

・Tatsuki Konishi; Koji Hayashi; Taro Yamauchi, Infant oral contact and cooperative breeding in a hunter-gatherer society in Cameroon, Online International Symposium Sanitation Value Chain 2020, Online, 09 Dec. 2020 - 10 Dec. 2020, Poster presentation

・Kotomi Sato; Widayarani; Umi Hamidah; Mayu Ikemi; Ken Ushijima; Neni Sintawardani; Taro Yamauchi, Menstruation and Menstrual Hygiene Management Practices among Females in an Urban Slum of Indonesia, Online International Symposium Sanitation Value Chain 2020, Online, 09 Dec. 2020 - 10 Dec. 2020, Poster presentation

・Yi Zeng; Jiabei He; Ming Hao; Wei Han; Taro Yamauchi, Knowledge, attitude, and practice of hygiene associated gross motor development delay among children in a suburban area of China, Online International Symposium Sanitation Value Chain 2020, Online, 09 Dec. 2020 - 10 Dec. 2020, Poster presentation

・笹瀬達也; 佐井旭; 山内太郎, インドの 5 歳未満の子どもの健康と衛生ー水、サニテーション設備が整備されてもなぜ子どもは下痢を発症し続けるのかー, 第 85 回日本健康学会総会, オンライン, 05 Dec. 2020 - 06 Dec. 2020, Poster presentation

・佐井旭; 池見真由; 山内太郎, インドネシアの都市スラムにおけるごみ収集人の身体的・精神的健康ー労働環境における衛生観念・行動と自尊心の形成ー, 第 85 回日本健康学会総会, オンライン, 05 Dec. 2020 - 06 Dec. 2020, Poster presentation

・岡部千帆; 佐井旭; 山内太郎, SNS を用いた大学生の朝食習慣を改善するための取り組みの評価, 第 85 回日本健康学会総会, オンライン, 05 Dec. 2020 - 06 Dec. 2020, Poster presentation

・山内太郎, 子どもと地域と研究者が共創するサニテーションプロジェクト, 地球研・高知大学合同勉強会, オンライン, 02 Dec. 2020, Invited

・Kotomi Sato; Taro Yamauchi, Remote interview research to examine factors affecting MHM practices among females in an urban slum of Indonesia, The 6th RIHN-LIPI International Webinar, Online, 25 Nov. 2020

・小玉祐矢; Sikopo Nyambe; Hermes Dinala; 佐井旭; 山内太郎, ルサカ市における WASH 改善に向けた地域型組織の組織コミットメント、動機付けの実態調査, Joint Congress on Global Health 2020 Osaka, オンライン, 01 Nov. 2020 - 03 Nov. 2020, Poster presentation

・Yi Zeng; Jiabei He; Ming Hao; Wei Han; Taro Yamauchi, Risk factors affecting gross motor development delay among children in a suburban area of China: Focus on water, sanitation and hygiene, Joint Congress on Global Health 2020 Osaka, Online, 01 Nov. 2020 - 03 Nov. 2020, Poster presentation

・Joy Sambo; Mazuba Muchindu; Sikopo, An Assessment of Sustainable Solid Waste Treatment and Occupational Health in Lusaka, Zambia, Joint Congress on Global Health 2020 Osaka, Online, 01 Nov. 2020 - 03 Nov. 2020, Poster presentation

・満永有美; 山内太郎, サハラ以南アフリカの子どもの成長チャート構築と成長の時代変化の検証, 第 31 回回日本成長学会学術集会, オンライン開催, 31 Oct. 2020

・小西達貴; 林耕次; 山内太郎, カメルーンの狩猟採集社会における乳幼児の口唇接触と育児協働, 第 74 回日本人類学会大会, オンライン開催, 31 Oct. 2020

・Sato K; Yamauchi T, Factors affecting MHM practices among females in an urban slum of Indonesia, The 5th RIHN-LIPI International Webinar, オンライン開催, 27 Oct. 2020

・郝明; 賀加貝; 曾怡, 韓威; 山内太郎, 中国東北部農村小学生向けの手洗い評価基準の検討, 日本生理人類学会第 81 回大会, オンライン開催, 25 Oct. 2020

・佐藤寿実; 山内太郎, 日本人女子大学生の体型認識とライフスタイルおよび主観的健康観, 日本生理人類学会第 81 回大会, オンライン開催, 25 Oct. 2020

・佐藤寿実; 山内太郎, インドネシアの都市スラムにおける月経衛生対処に影響を与える要因の影響の検討, 第 1 回サニテーション研究会：インドネシア都市スラムのサニテーション課題, 北海道大学大学院保健科学研究院, 21 Oct. 2020

・山内太郎, サニテーションプロジェクトにみる課題解決型プロジェクトのこれまでとこれから, 第 6 回人文・社会科学系研究推進フォーラム, オンライン開催, 09 Oct. 2020, Invited

・Dinala H; Nyambe S; Sambo J; Yamauchi T, A collaborative research on household WASH and COVID19 in peri-urban Zambia, 1st Webinar on Sanitation and Health in Lusaka, zoom, 16 Sep. 2020

・Nyambe S; Yamauchi T, Dziko Langa's future research plans & activities: Current outcomes & way forward, 1st Webinar on Sanitation and Health in Lusaka, zoom, 16 Sep. 2020

・Yamauchi T, Project research during pandemic period: publication and online field research, 1st Webinar on Sanitation and Health in Lusaka, zoom, 16 Sep. 2020

・Yamauchi T, Collaborative field research in rural area in Cameroon in the age of COVID-19 pandemic, The 3rd Online Workshop on Exploring New Style for International Joint Field Research with/after COVID-19 between Cameroon and Japan, zoom, 11 Sep. 2020

・Yamauchi T, Project research during pandemic period: publication and online field research, The 3rd RIHN-LIPI International Webinar, zoom, 26 Aug. 2020

・Yamauchi T, Generating ideas for field surveys in an urban slum in Cameroon in the age of COVID-19 pandemic, The 2nd Online Workshop on Exploring New Style for International Joint Field Research with/after COVID-19 between Cameroon and Japan, zoom, 06 Aug. 2020

・Yamauchi T, Sanitation value chain: Designing sanitation systems as eco-community-value system, The 1st Online Workshop on Exploring New Style for International Joint Field Research with/after COVID-19 between Cameroon and Japan, zoom, 05 Aug. 2020

・Yamauchi T, To continue field research in the age of COVID-19, RIHN-LIPI The 2nd International Mini Webinar: “Exploring new style for international joint field research after/with COVID-19”, Sanitation Project, Research Institute for Humanity & Nature & Indonesian Institute of Sciences, zoom, 29 Jul. 2020

・Yamauchi T, Generating breakthrough ideas for field surveys in an urban slum in Indonesia during COVID-19 period, RIHN-LIPI Joint Mini Webinar: “Exploring new style for international joint field research after/with COVID-19”, Sanitation Project, Research Institute for Humanity & Nature & Indonesian Institute of Sciences, zoom, 24 Jun. 2020

・Sato K; Sai A; Yamauchi T, Menstruation and Sanitation of Mothers and Girls in Urban Slum in Indonesia, RIHN-LIPI Joint Mini Webinar: “Exploring new style for international joint field research after/with COVID-19”, Sanitation Project, Research Institute for Humanity & Nature & Indonesian Institute of Sciences, zoom, 24 Jun. 2020

・佐藤寿実; 山内太郎, インドネシアの都市スラムにおける女性の月経および生理用品の使用・処理の実態, 女性のサニテーション研究会, 総合地球環境学研究所サニテーションプロジェクト（主催） 月経研究会（共催）, zoom, 23 Jun. 2020

[Committee Memberships]

・2020, Vice-president, International Association of Physiological Anthropology (IAPA)

・2020, Executive member, International Society for the Study of Human Growth and Clinical Auxology (ISGA)

・2020, 北海道支部長, 日本アフリカ学会

・2020, 理事, 生態人類学会, 生態人類学会, Society

・2020, 理事, 日本生理人類学会, 日本生理人類学会, Society

・2020, 評議員, 日本人類学会, 日本人類学会, Society

・2020, 副理事長, 日本成長学会, 日本成長学会, Society

・2020, 理事, 日本健康学会(旧称：日本民族衛生学会), 日本民族衛生学会, Society

[Research Projects]

・The Sanitation Value Chain: Designing Sanitation Systems as Eco-Community-Value System, Research Institute for Humanity and Nature, Research Project, Research Institute for Humanity and Nature, Apr. 2015, Mar. 2022

・トイレを必要とする条件とは：狩猟採集民、農耕民、都市生活者の排泄と衛生条件の比較, 山内 太郎; 林 耕次; 中尾 世治; 彭 宇潔; 山口 亮太, 日本学術振興会, 科学研究費助成事業 国際共同研究加速基金(国際共同研究強化(B)), 国際共同研究加速基金(国際共同研究強化(B)), 総合地球環境学研究所, 07 Oct. 2019, 31 Mar. 2024, 18330000, 14100000, 4230000, 初年度である本年度はおもに以下について実施した。 1．都市部：首都ヤウンデ市内の民家密集地区（2 区、6 区）を訪れ、サニテーションに関わる現地の状況視察やそれらに関連した住民組織の活動についての聞き取り調査をおこなった。また、以前より協力関係にある現地 NGO と MOU を締結し、共同研究の体制を確立した。 2．地方都市：東部州において地域住民の衛生改善やトイレ普及をおこなっている NGO の協力で、農村地域でのサニテーション状況の現状把握とその改善方法について情報交換をおこなった。この NGO との間にも MOU を締結し、今後の具体的なパイロットファームの運営を踏まえた共同研究の可能性について議論した。 3．狩猟採集民定住集落：東部州において、定住した狩猟採集民（BAKA）を対象としたサニテーションに関する現地調査をおこなった。トイレの設置や使用状況に焦点をしぼり、現地の NGO と連携しながら住民主導によるトイレ造りを始動した。 4．国際ワークショップの開催：首都ヤウンデにおいて、カウンターパートのヤウンデ第 1 大学在籍の研究者、NGO 関係者らとカメルーンのサニテーションに関する国際ワークショップを開催した。キックオフワークショップとして、参加者のバックグラウンドについての自己紹介を兼ねつつ、今後の共同研究の可能性について議論した。, 19KK0026

・A Sanitation Project Co-created by Children, Community and Researchers, 山内 太郎; 鍋島 孝子; 伊藤 竜生, Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research Grant-in-Aid for Scientific Research (B), Hokkaido University, 01 Apr. 2018, 31 Mar. 2022, 13390000, 10300000, 3090000, 本年度（2 年目）は、以下の３点を実施した。１．衛生とサニテーションに関するプログラムの実施（ザンビア）: 既存のトレーニングプログラム「Child Hygiene and Sanitation Training (CHAST)」をベースに、カウンターパートの研究者、小学校の教師、地元団体のメンバーと協議して現地の文化習慣、規範に合わせてアレンジしたプログラムを実施した。現地の映像作家の協力を得て、子どもたちの活動を映像（写真および動画）で記録した。２．現地小学生の成長・栄養、衛生・健康状態の評価（インドネシア）: 都市スラムの小学校において、身体計測（身長、体重）を行い、WHO およびインドネシアの成長リファレンスを用いて、栄養状態を評価した。下痢の罹患について質問紙調査を実施した。子どもと保護者（母親）に衛生とトイレに関する知識・態度・実践（Knowledge, Attitude, Practice, KAP）質問紙調査を行った。小学生にいつも行っている手洗いをデモンストレーションしてもらい、チェックリストと時間計測によって手洗い技術を評価した。３．参加型アクション・リサーチの発表会とイベント開催（ザンビア）: 首都ルサカのスラム地区において、小学生と若者団体（Youth Group）が実施したアクション・リサーチの成果を発表する展示会を開催した。またルサカ市、市長と協働してイベント（サニテーション・フェスティバル）を開催した。ブラスバンドを従え、市長と子どもクラブメンバーそして日本人研究者が道路を行進した。マーケットでゴミ拾いのデモンストレーションを行った。, 18H00992

YASUNARI Tetsuzo

Director-General

[Professional Career]

Research Institute for Humanity and Nature 顧問・名誉教授 (2021-)

Research Institute for Humanity and Nature, Director-General (2013-2021)

[Fields of Specialization]

Energy > Earth resource engineering > energy science

[Academic Society Memberships]

American Meteorological Society

American Geophysical Union

日本地理学会

日本雪氷学会

地球惑星科学連合

水文・水資源学会

日本気象学会

American Meteorological Society

American Geophysical Union

The association of Japanese Geographers

Tha Japanese Society of Snow and Ice

Japan Geophysical Union

Japanese Society of Hydrology and Water resources

Meteorological Society of Japan

[Awards]

水文・水資源学会名誉会員 安成哲三 水文・水資源学会 (2018)

環境科学会論文賞 安成 哲三 (2015)

日本地球惑星科学連合フェロー 安成 哲三 (2015)

水文・水資源学会功績賞 安成 哲三 (2014)

モンゴル国自然環境功労研究者賞 安成 哲三 モンゴル国自然環境省 (2008)

モンゴル国自然環境省自然環境功労研究者 (2008)

Distinguished Scientist in natural environmental research, Ministry of Natural Environment, Mongolia (2008)

水文・水資源学会国際賞 (2006)
International Award, Japanese Society of Hydrology and Water resources (2006)
日本気象学会藤原賞 (2002)
Fujiwara Prize, Meteorological Society of Japan (2002)
日経地球環境技術賞 (1991)
Nikkei Prize for Global Emvironmental Study and Technology (1991)
日本気象学会賞 (1986)
Research Award (Gakkai-sho), Meteorological society of Japan (1986)
日本気象学会山本賞 (1981)
Yamamoto Prize, Meteorological Society of Japan (1981)
秩父宮記念学術賞(共同受賞) (1980)
Chichibuno-Miya Memorial award (as a group member) (1980)

—Achievements—

[MISC]
- 安成 哲三, Dec. 2020, コロナ禍から気候変動への取組みを学ぶ—「緑の回復」をめざそう—, 京まなびぃニュースレター, (27), 17-18, Japanese, Invited, Lecture materials
- 安成哲三, 29 Jun. 2020, 書評「地球に住めなくなる日;デイビッド・ウォレス・ウェルズ著;藤井留美 訳」, 公明新聞日刊, 4 面-4, Japanese, Book review
- 安成哲三, Jun. 2020, 新たな地球社会に向けた変革のとき, 地球研ニュース, No.81, 2-2, Japanese, Introduction research institution

[Presentations]
- 安成 哲三, 「生命が創った惑星：地球」—人類とは何か、何をすべきなのかを再考する—, 梅棹忠夫生誕 100 年記念連続講座（第 3 回）, 27 Feb. 2021, Invited, Japanese
- Tetsuzo Yasunari, Our Earth: A planet created by life –Rethinking of"How human-nature relation ought to be"–, 大阪府立大学緑地環境科学特別講義 (ETT 講演会）, 18 Dec. 2020, Invited, Japanese
- 安成 哲三, Our Earth: A planet created by life－Rethinking of "How human-nature relation ought to be"－, 地球研セミナー特別シリーズ, 06 Nov. 2020, Invited, Japanese, Public discourse
- 安成 哲三, 「地球温暖化」と「コロナ禍」に私たちはどう立ち向かうべきか －人新世（人類世）における総合地球環境学－, 大学共同利用機関シンポジウム, 17 Oct. 2020, Japanese, Nominated symposium
- 安成 哲三,「地球温暖化」と「コロナ禍」に私たちはどう立ち向かうべきか, 京都市社会教育委員会議, 18 Sep. 2020, Invited, Japanese, Invited oral presentation

YOSHIDA Takehito

Associate Professor

[Academic Career]
Kyoto University 大学院理学研究科 生物科学専攻 (1997-2001)

[Professional Career]
Research Institute for Humanity and Nature 准教授（兼務） (2017-)
東京大学 大学院・総合文化研究科 准教授 (2008-)
University of Tokyo, Lecturer (2006-2008)
JSPS, Postdoctoral Fellow, SPD (2006)
Cornell University, Dept of Ecol & Evo Biol, Research Associate (2005-2006)
JSPS, Postdoctoral Fellow for Research Abroad (2003-2005)

Cornell University, Dept of Ecol Evo Biol, Postdoctoral Fellow (2001-2003)

[Higher Degrees]

Doctor of Science, Kyoto University (2001)

[Fields of Specialization]

Environmental science/Agricultural science > Social-ecological systems

Life sciences > Ecology and environmental science

Life sciences > Evolutionary biology > Evolutionary Biology

Environmental science/Agricultural science > Environmental dynamics

[Awards]

生態学琵琶湖賞 吉田 丈人 日本生態学会 滋賀県 Japan (2021)

研究奨励賞 吉田丈人 日本進化学会 (2007)

宮地賞 吉田丈人 日本生態学会 (2005)

—Achievements—

[Books etc]

・吉田丈人, 2021, Contributor, 生態系減災 Eco-DRR 自然を賢く活かした防災・減災, 慶應義塾大学出版会, Japanese

・黄琬惠, 橋本禅, 吉田丈人, 齊藤修, 瀧健太郎, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2

・吉田丈人, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2

・吉田丈人, 2020, Contributor, 実践版！グリーンインフラ, 日経 BP, Japanese, ISBN: 978-4-296-10675-2

[Published Papers]

・Yurie Otake; Hajime Ohtsuki; Jotaro Urabe; Shigeko Kimura; Kazuyoshi Yamada; Takehito Yoshida, Feb. 2021, Long-term dynamics of a cladoceran community from an early stage of lake formation in Lake Fukami-ike, Japan, Ecology and Evolution, 11 (3), 1240-1253, Scientific journal DOI:10.1002/ece3.7112

・Takehiro Kazama; Jotaro Urabe; Masato Yamamichi; Kotaro Tokita; Xuwang Yin; Izumi Katano; Hideyuki Doi; Takehito Yoshida; Nelson G Hairston Jr, 08 Jan. 2021, A unified framework for herbivore-to-producer biomass ratio reveals the relative influence of four ecological factors., Communications biology, 4 (1), 49-49, English, Scientific journal DOI:10.1038/s42003-020-01587-9

・Kaori Okui, Yoshihiro Sawada, Takehito Yoshida, 2021, “Wisdom of the Elders” or “Loss of Experience” as a Mechanism to Explain the Decline in Traditional Ecological Knowledge: A Case Study on Awaji Island, Japan, Human Ecology, 49, 353-362, the Springer Nature SharedIt, English, Refereed DOI:10.1007/s10745-021-00237-w

・Junya Kumagai, Mihoko Wakamatsu, Shizuka Hashimoto, Osamu Saito, Takehito Yoshida, Takehisa Yamakita, Keiko Hori, Takanori Matsui, Michio Oguro, Masahiro Aiba, Rei Shibata, Tohru Nakashizuka, Shunsuke Managi, 2021, Natural capital for nature’s contributions to people: the case of Japan, Sustainability Science, the Springer Nature, English, Refereed DOI:10.1007/s11625-020-00891-x

・Mifuyu Ogawa, Masashi Soga, Takehito Yoshida, 2021, Participation of diverse actors and usage of traditional and local knowledge in local biodiversity strategies and action plans of Japanese municipalities, Ecology and Society, 26 (3), 26, The Resilience Alliance, English, Refereed DOI:10.5751/ES-12612-260326

・Wanhui Huang, Shizuka Hashimoto, Takehito Yoshida, Osamu Saito, Kentaro Taki, 2021, A nature-based approach to mitigate flood risk and improve ecosystem services in Shiga, Japan, Ecosystem Services, 50, 101309, Elsevier B.V., English, Refereed DOI:10.1016/j.ecoser.2021.101309

・Naoto Shinohara, Takehito Yoshida, 2021, Temporal changes of local and regional processes in the assembly of herbivorous insect communities, Oikos, 130 (10), 1626-1635, Nordic Society Oikos, English, Refereed DOI:10.1111/oik.08350

・Yasushi Miyamoto, Gen Kanaya, Masanori Taru, Takehito Yoshida, 2021, Spatial changes in a macrozoobenthic community depend on restoration methods in historically squeezed coasts in a brackish lagoon, Ecological Research, The Ecological Society of Japan., English, Refereed DOI:10.1111/1440-1703.12268

・Minoru Kasada; Takehito Yoshida, Oct. 2020, The timescale of environmental fluctuations determines the competitive advantages of phenotypic plasticity and rapid evolution, POPULATION ECOLOGY, 62 (4), 385-394, WILEY, English, Scientific journal DOI:10.1002/1438-390X.12059

・Mariko Nagano; Takehito Yoshida, Jul. 2020, Size-selective predation accounts for intra- and inter-specific variation of inducible morphological defense ofDaphnia, ECOSPHERE, 11 (7), WILEY, English, Scientific journal DOI:10.1002/ecs2.3192

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・藤吉麗; 陀安一郎; 藪崎志穂; 原口岳; 由水千景; 大串健一; 古川文美子; 伊藤真之; 山本雄大; 横山正; 三橋弘宗, 2020, Contrasting seasonal dynamics of nitrate and sulfate in Chikusa River watershed, Hyogo, Japan, 日本生態学会大会講演要旨(Web), 67th

・塩澤直人; 由水千景; 冨樫博幸; 陀安一郎; 占部城太郎, 2020, Untangling diet sources of small animals on sandy beach, 日本生態学会大会講演要旨(Web), 67th

・横山裕矢; 勝田長貴; 香川雅子; 内藤さゆり; 森本真紀; 由水千景; 陀安一郎; 川上紳一, 2020, Sulfur isotope analysis for Nigori River in Asama volcano, 日本地球惑星科学連合大会予稿集(Web)

・加藤義和; 冨樫博幸; 栗田豊; 長田穣; 天野洋典; 由水千景; 鎌内宏光; 陀安一郎, 2020, Stable isotope ratios of vertebral collagen reveal habitat history of Japanese flounder in Sendai Bay, 日本生態学会大会講演要旨(Web), 67th

Appendix 1 Number and Affiliation of Project Members

Project Number	Title of the project	Total	RIHN	University / College			Inter-University Research Institute	Public Institution	Private Institution	Others	Overseas Institution
				National	Public	Private					
Research Program 1 (FR4)	Toward the Regeneration of Tropical Peatland Societies: Building International Research Network on Paludiculture and Sustainable Peatland Management	49	9	20	3	5	1	2	1	1	7
Research Program 1 (FR3)	Research and Social Implementation of Ecosystem-based Disaster Risk Reduction as Climate Change Adaptation in Shrinking Societies	119	4	54	7	21		18	14		1
Research Program 1 (FR1)	An interdisciplinary study toward clean air, public health and sustainable agriculture: The case of crop residue burning in North India	55	3	19		3		5	1	2	22
Research Program 2 (FR2)	Mapping the Environmental Impact Footprint of Cities, Companies, and Households	31	8	10		3		3			7
Research Program 3 (FR5)	Lifeworlds of Sustainable Food Consumption and Production: Agrifood Systems in Transition	93	11	15	2	10		7	12	4	32
Research Program 3 (FR4)	The Sanitation Value Chain: Designing Sanitation Systems as Eco-Community-Value System	53	4	21		5		3	1	1	18
Research Program 3 (FR2)	Co-creation of Sustainable Regional Innovation for Reducing Risk of High-impact Environmental Pollution	49	4	12	1	4		1	4		23
Research Program 1 (PR)	Fair for whom? politics, power and precarity in transformations of tropical forest-agriculture frontiers	15		6							9
Individual Collaboration FS (NISHI)	An ecology of care approach to neurological disorders: Toward a comprehensive model for care embedded in a biosocial milieu	10		5	1	4					
Individual Collaboration FS (NAKAGAWA)	Metacognitive interventions on social actors to enable the transition toward a sustainable society	2			2						
Institutional Collaboration FS (MANAGI)	Developing inclusive wealth with clarifying mechanism of social value formation and application to sustainable policy design	16		14	1	1					

Institutional Collaboration FS (SHINJO)	Adaptive governance of multiple resources based on land-sea linkages of the water cycle: application to coral reef island systems	15		10	1	1		1			2
Incubation Studies Proposers	-	4		2				2			
Core Program (FR3)	Information Asymmetry Reduction in Open Team Science for Socio-environmental Cases	33	7	10	2	6	2	2	2		2
Core Program (FR1)	Methods and tactics to foster knowledge Co-creation: A practical framework for implementing transdisciplinary research	5	3	1							1
Core FS (OTA)	Tackling wicked problems: Co-creating serious games as transdisciplinary methods to solve socio-environmental challenges	2	2								
Core FS (LEE)	Development of data-driven decision support platform based on sustainable life cycle assessment towards SDGs Nexus	4	2							1	1
-	Cooperative research program on Environmental Isotope Study	69		41	6	8	1	11	2		
	Total	624	57	240	26	71	4	55	37	9	125

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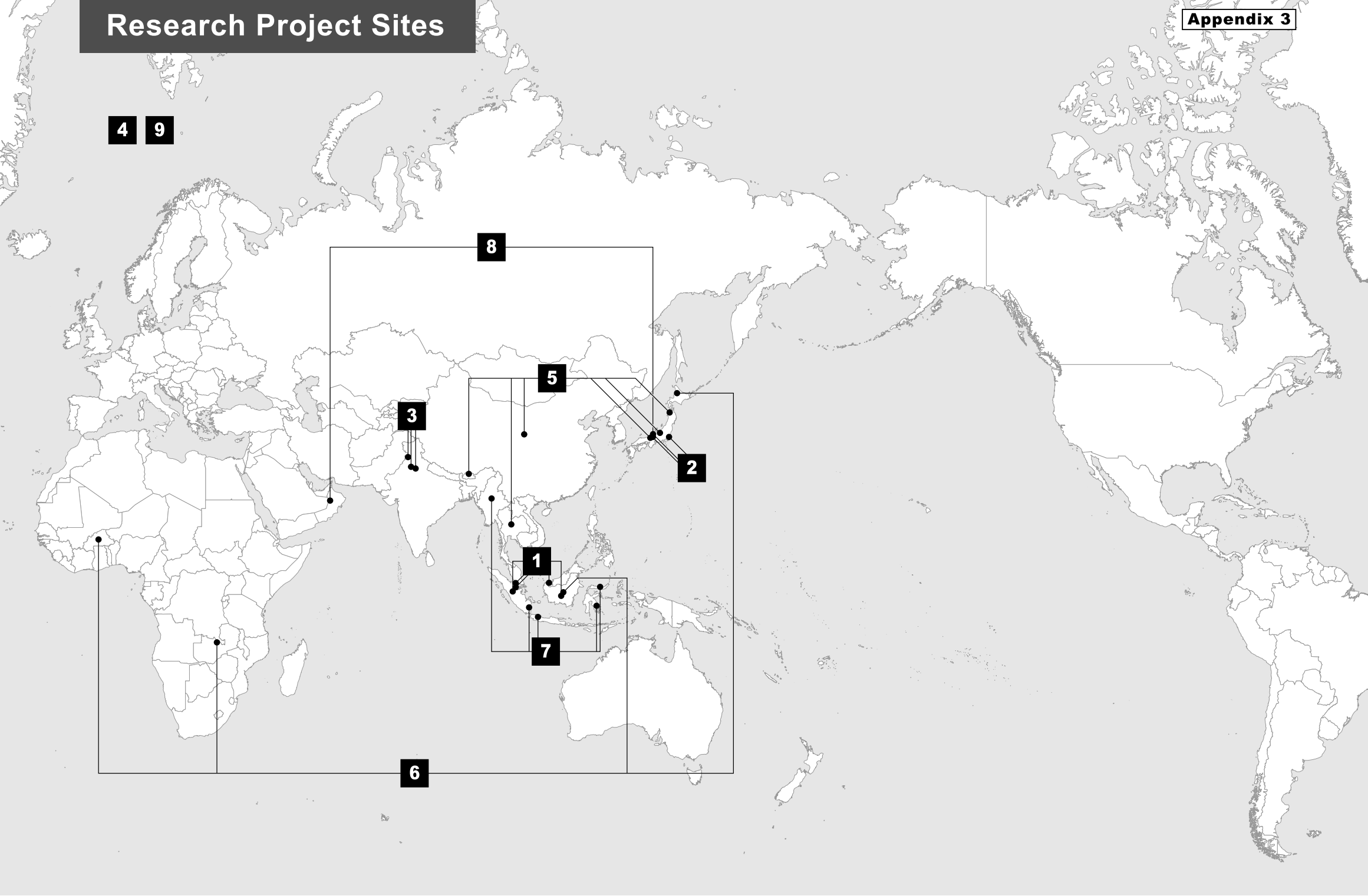
Appendix 2 Research Fields of Project Members

Project Number	Title of the Project	The Number of Projects Members				Research Background of Project Members
		Natural Sciences	Humanities	Social Sciences	Total	
Research Program 1 (FR4)	Toward the Regeneration of Tropical Peatland Societies: Building International Research Network on Paludiculture and Sustainable Peatland Management	30	3	16	49	(Natural Sciences) GIS Spatial Informatics, Political Ecology, Environmental Engineering, Environmental Anthropology, Meteorology, Informatics, Plant Ecology, Forest Ecology, Hydrology, Mathematical Informatics, Ecology, Ecology, Policy Studies, Biogeochemistry, Atmospheric Chemistry, Atmospheric Environment, Air Quality Measurement, Area Informatics, Urban Environmental Engineering, Soil Science, Agriculture, Agrometeorology, Agricultural Hydrology, Agricultural Engineering, Computational Chemistry (Humanities) Anthropology, Forest Policy, History (Social Sciences) Indonesian Political Economy, Indonesia Studies, Political Ecology, Environmental and Agricultural Change, Economics, Economic History, Social Anthropology, Human Geography, Politics, Political Economy, Regional Studies, Land Issue Studies, Agriculture
Research Program 1 (FR3)	Research and Social Implementation of Ecosystem-based Disaster Risk Reduction as Climate Change Adaptation in Shrinking Societies	81	10	28	119	(Natural Sciences) GIS, Landscape Science, Space Utilization Engineering, River Environment, Pollen Analysis, Environmental Systems Engineering, Environment Design, Environmental Impact Assessment, Environmental Policy, Environmental Policy, Environmental Impact Assessment, Social Engineering and Environmental Management, Sustainable Science, Environmental Agriculture, Fish Physiological Ecology, Spatial Information Science, Spatial Informatics, Community Ecology, Landscape Ecology, Architecture, International Fisheries Development, Erosion Control, Forest Policy, Human Environment Design, Water Environment, Water Engineering, Ecology, Ecosystem Management, Ecosystem Management Engineering, Ecosystem Assessment Management, Biodiversity Informatics, Landscape Architecture, Regional Environment Studies, Regional Planning, Global Environmental Studies, Traditional Architecture, Urban Planning, Urban Engineering, Civil Engineering, Civil Engineering Informatics, Statistical Science, Conservation Ecology, Watershed Management, Watershed Hydrology, Theoretical Ecology, Artificial Intelligence, Watershed Policy, Landscape Planning, Silviculture, Ecosystem Conservation, Environmental Protection (Humanities) Archaeology, History by Region, Japanese History, Cultural Anthropology, Ethnology, Japanese History, Historical Geography, Theory of Creative Arts (Social Sciences) Community, Environmental Economy, Environmental Sociology, Environmental Policy, Economic Verification, Architecture, National Land Design, Natural Environment Policy, Natural Capital, Social Economics and Agriculture, Water Environment, Hydrology, Politics, Landscaping, Tourism, Landscape Architecture, General Insurance, Regional Policy, Cultural Policy, City, Agricultural Business Management, Regional Planning, Rural Informatization, Disaster Prevention, Environmental Administration, Environmental Policy, Evaluating Functions of Green Infrastructure , Rural Planning
Research Program 1 (FR1)	An interdisciplinary study toward clean air, public health and sustainable agriculture: The case of crop residue burning in North India	44	8	3	55	(Natural Sciences) Atmospheric Chemistry and Physics, Atmospheric Science, Heat Stress, Heavy Metal Stress, Drought Stress, Seed Priming, Seed Hardening, Seed Physiology, Medical Science, Public Health, Environmental Health, Soil Fertility, Soil Chemistry, Soil Science, Waste Management and Organic Farming Practices, Remote Sensing, Environmental Epidemiology, Environmental Engineering, Environmental Informatics, Environmental Agriculture, Environmental Health, Public Health, International Agricultural Development, Tropical Crop Science, Agronomy, Water Engineering, Atmospheric Simulation, Atmospheric Modeling, Atmospheric Chemistry, Atmospheric Science, Atmospheric Environment, Atmospheric Physics, Groundwater Hydraulics, Soil Science and Plant Nutrition, Soil Microbiology, Agricultural Environmental Engineering, Environmental Science, Numerical Model Simulation (Humanities) Agricultural Economics, Time Geography, Regional Studies, Geography, Geographic Information Science, Social Geography (Social Sciences) Hygieiology, Public Health, Global Health, Toxicology, Biodiversity Policy, Environmental Assessment, Atmospheric Policy, International Cooperation
Research Program 2 (FR2)	Mapping the Environmental Impact Footprint of Cities, Companies, and Households	14		17	31	(Natural Sciences) Sustainability Science; Computational Sustainability, Energy System Analysis, Graph Theory, Optimal Transport, Life Cycle Assessment, Chemical Engineering, Marine Ecology, Environmental Agriculture, Engineering, Interindustry Analysis, Input-Output Analysis, Atmospheric Science, Geoinformatics, Environmental Modeling and Mapping, Soil Science, Civil Engineering, Science, Environmental Economics, Global Food Systems, Political Economy (Social Sciences) System Engineering, Material Flow and Stock Analysis, Life Cycle Assessment, Applied Econometrics, Chemical Engineering, Micro Data Analysis, Science and Technology Studies, Development Economics, Environmental Economy, Economic Statistics, Econometrics, Applied Econometrics, Industrial Ecology, Interindustry Analysis, Input-Output Analysis, Economics of Waste, Industrial Ecology
Research Program 3 (FR5)	Lifeworlds of Sustainable Food Consumption and Production: Agrifood Systems in Transition	41	11	41	93	(Natural Sciences) Public Health, Urban Agriculture, Human Ecology, Agroecology, App Design, Ecological Footprint, Organic Market, Biochar Burying Agriculture, Food System, Life Cycle Assessment, Climatic Variation, Boundary Agriculture, Landscape, Landscape Ecology, Cultivation Management, Bioresource Agronomy, Sustainable Consumption and Production, Social System, Social Impact Assessment, Sociology, Agricultural Sociology, Agricultural Ethics, Frozen Food Engineering, Fishery Life Cycle Assessment, Biodiversity Informatics, Sociology of Local Community, Urban Planning, Urban Ecology, Urban Geography, Soil Science, Tropical Agricultural Ecology, Agriculture, Agricultural Life Cycle Assessment, Verification of Agriculture and Live Stock Industry, Unofficial Green Land, Cultural Landscape, Environmental Design, Organic Agriculture, Beekeeping, Biochar, Biomass Pyrolysis, Environmental Agriculture, Resource Plant Cultivation, Soil Improvement (Humanities) Environmental Anthropology, Food Studies, Sustainability Social Science, Sustainable Consumption, Anthropocene Studies, Environmental Studies, Environmental Sociology, Environmental Ethics, Sociology, Agricultural Ethics, Political Economy, Regional Policy and Planning, Zooarchaeology, Ecological Anthropology, Rural Development, Climatology, Cultural Anthropology, Ethnology, History, Metahistory (Social Sciences) Future Studies, International Political Economy of Agriculture and Food, Rural Sociology, Agroecology, Innovation Studies, Green Consumer, Gender Studies, Distribution of Superfoods, Development Sociology, Environmental Governance, Environmental Management, Environmental Impact Assessment, Environmental Studies, Environmental Planning, Environmental Sociology, Environmental Policy, Company Evaluation, Global Agricultural Economics, Creating Future with Children, Natural Resource Management, Sociology, Socioeconomics, Social Policy, Sociology of Food and Agriculture, Food Consumption, Food loss, Agricultural Geography, Fisheries Science, Policy Science, Organizational Theory, Geography, Urban and Rural Sociology, Soil Science, Agricultural Business Management, Agricultural Economics, Agricultural Policy, Rural Development Sociology, Rural Woman Policy, Gender, Child Care, Forest Policy, Land Use Economy, Urban Agriculture Economic Management
Research Program 3 (FR4)	The Sanitation Value Chain: Designing Sanitation Systems as Eco-Community-Value System	30	8	15	53	(Natural Sciences) Environmental Technology, Sanitation Technology, Water Treatment and Reuse, Genetic Engineering, Hygienic Environmental Engineering, Hygienic Engineering, Animal Production Environmental Studies, Feed studies, Chemical Engineering, Environmental and Sanitary Engineering, Environmental Studies, Environmental Studies, Civil Engineering, Environmental Engineering, Global Food Resources, Water Environment, Water Environment Engineering, Regional Environment Studies, Regional Studies, Geomatics, Agricultural Engineering, Agricultural Civil Engineering, Regional Planning, Health Science (Humanities) Health Science, Human Ecology, Ecological Anthropology, Regional Studies, Cultural Anthropology, Historical Anthropology (Social Sciences) Africa Studies, Sanitation Studies, Medical Anthropology, Development Economics, Health Science, International Politics, Social System, Social Psychology, Informatics, Teaching Material Development, Human Ecology, Regional Studies, Economic Statistics
Research Program 3 (FR2)	Co-creation of Sustainable Regional Innovation for Reducing Risk of High-impact Environmental Pollution	25	6	18	49	(Natural Sciences) Medical Science, Applied Chemistry, Applied Microbiology, Environmental Science, Environmental Ecology, Environmental Soil Science, Boundary Agriculture, Public Health, Forest Ecology, Living Environment, Ecology, Geoscience, Global Environmental Studies, Geology, Geology, Petrology, Physics, Analytical Chemistry, Environmental Chemistry, Pharmacotherapy on Neurology, Analytical Chemistry, Applied Biology, Geophysics, Information Engineering, Sustainability Management (Humanities) Design Studies, British Literature, Environmental Ethics, International Law, Agricultural Economics, Environmental Economics, Humanities (Social Sciences) Gender and Social Sciences, Remote Sensing, Development Economics, Environmental Economics, Development Studies, Environmental Science, Environmental Economy, Educational Psychology, Business Organization, Forest Science, Human Resources Development, Regional Environment Studies, Sociology of Local Community, Geography, Agricultural Economics, Development Economics, Myanmar Studies, Regional Planning, Community Ecology, Forest Ecology, Forest Management, Political Ecology, Agricultural and Mountain Village Area Studies, Agriculture, Economics, Information Engineering
Research Program 1 (PR)	Fair for whom? politics, power and precarity in transformations of tropical forest-agriculture frontiers	11	4		15	(Natural Sciences) Environmental Studies, Environmental Policy, Environmental Agriculture, Environmental and Social Considerations, Forest Science, Politics, Ecology, Community Ecology, Forest Ecology, Forest Management, Political Ecology (Humanities) Regional Studies, Forest Governance, African Politics, Forest Management, International Law
Individual Collaboration FS (NISHI)	An ecology of care approach to neurological disorders: Toward a comprehensive model for care embedded in a biosocial milieu	4	2	4	10	(Natural Sciences) Ecological Anthropology, Mental Health, Nursing, Psychiatric Rehabilitation, Public Health (Humanities) Medical Anthropology (Social Sciences) Care Theory, International Health, Medical Anthropology, Science and Technology Society, Social Anthropology, Welfare Culture
Individual Collaboration FS (NAKAGAWA)	Metacognitive interventions on social actors to enable the transition toward a sustainable society			2	2	(Social Sciences) Experimental Economics, Narrative Analysis, Psychometrics
Institutional Collaboration FS (MANAGI)	Developing inclusive wealth with clarifying mechanism of social value formation and application to sustainable policy design		1	15	16	(Humanities) Humanities and Social Sciences (Social Sciences) Environmental Science, Environmental Management, Environmental Economy, Economics, Urban System Studies, Urban System Engineering, Applied Microeconomics, Environmental Sociology, Household Economics, Macroeconomics
Institutional Collaboration FS (SHINJO)	Adaptive governance of multiple resources based on land-sea linkages of the water cycle: application to coral reef island systems	12	1	2	15	(Natural Sciences) Agricultural and Rural Engineering, Bioorganic Chemistry, Comprehensive Forestry Science, Coral Reef Biophysiology Ecology, Coral Reef Paleontology, Coral Reef Science, Crustal Fluid, Earth Science, Ecology, Environmental Chemistry, Groundwater Literature, Isotope Geochemistry, Marine Environment, Marine Life, Paleoecology (Humanities) Ecological Anthropology, Environmental Folklore (Social Sciences) Environmental Policy, Governance Theory, Political Science, Public Administration
Incubation Studies Proposers	-	4			4	(Natural Sciences) Coral reef global environmental studies, Climate physics, Plant Physiology and Ecology, Tree Physiology, Nitrogen Cycle
Core Program (FR3)	Information Asymmetry Reduction in Open Team Science for Socio-environmental Cases	10	14	9	33	(Natural Sciences) Ecology, Applied Ecology, Science Communication, Scientific Literacy, Science and Technology Society, Architectural Structure, Paleoecology, Human Ecology, Isotope Ecology (Humanities) Design Studies, Early Modern History of Japan, Environmental Ethics, History of Western Thought, Humanities and Social Informatics, Library and Information Science, Philosophy, Science and Technology Society, Science Anthropology (Social Sciences) Social Psychology, Asian architectural history, Clinical psychology, Design, Environmental Policy, Environmental Social System, Environmental sociology, Information engineering, Science and Technology Society
Core Program (FR1)	Methods and tactics to foster knowledge Co-creation: A practical framework for implementing transdisciplinary research	2		3	5	(Natural Sciences) Hydrology, Global Environmental Studies (Social Sciences) Environmental Sociology, Environmental Policy
Core FS (OTA)	Tackling wicked problems: Co-creating serious games as transdisciplinary methods to solve socio-environmental challenges		1	1	2	(Natural Sciences) Environmental Planning Theory, Area Informatics (Humanities) Environmental Ethics, Climate Theory, Food and Agriculture Ethics
Core FS (LEE)	Development of data-driven decision support platform based on sustainable life cycle assessment towards SDGs Nexus	2		2	4	(Natural Sciences) Sustainable Resource Management, Agricultural Water Resource Management
-	Cooperative research program on Environmental Isotope Study	67	2		69	(Natural Sciences) Cosmo and Geochemistry, Applied Entomology, Chemical Oceanography, Anatomy, Marin Science, Environmental Science, Mineralogy and Economic Geology, Ancient Environment, Paleoclimatology, Biomolecular Archaeology, Bioresource Science, Resource Geology, Geochemistry, Biological Anthropology, Tree Physiology and Ecology, Plant Ecology, Plant Physiological Ecology, Forest Hydrology, Forest Ecology, Forest Environment, Water Environment Management, Applied Geology, Resource Engineering, Ecology, Hydrological Geochemistry, Environmental Engineering, Ecology, Biogeochemistry, Sedimentology, Geochemistry, Geochemistry, Geochemistry, Hydrology, Geoscience, Biogeochemistry, Earth Environmental System, Zooecology, Isotope Hydrology, Stable Isotope Ecology, Isotope Geochemistry, Analytical Chemistry, Analytical Chemistry, Hydrosphere Chemistry, Cultural Assets Science, Inorganic Geochemistry, Organic Geochemistry, Limnology, Soil Science, River Basin Conservation, Biogeoscience, Ecological Stoichiometry, Ecoscience, Environmental Chemistry, Environmental Dynamics Analysis, Forest Environment, Global Environmental Chemistry, Legal Medicine, Meteorology, Resource Geology, Water Environmental Science (Humanities) Archaeology, Andean Archeology
	Total	377	71	176	624	

As of 31 March, 2021

Research Project Sites

Appendix 3



Research Program 1 Societal Transformation under Environmental Change

FR4

1 Toward the Regeneration of Tropical Peatland Societies: Building International Research Network on Paludiculture and Sustainable Peatland Management

○Indonesia, Malaysia

FR3

2 Research and Social Implementation of Ecosystem-based Disaster Risk Reduction as Climate Change Adaptation in Shrinking Societies

○Japan

FR1

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

○North India

Research Program 2 Fair Use and Management of Diverse Resources

FR2

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

○World

Research Program 3 Designing Lifeworlds of Sustainability and Wellbeing

FR5

5 Lifeworlds of Sustainable Food Consumption and Production: Agrifood Systems in Transition

○Japan, Thailand, Bhutan, China

FR4

6 The Sanitation Value Chain: Designing Sanitation Systems as Eco-Community-Value System

○Zambia, Burkina Faso, Indonesia, Japan

FR2

7 Co-creation of Sustainable Regional Innovation for Reducing Risk of High-impact Environmental Pollution

○Sulawesi Island in Indonesia, ASEAN countries

Core Program

Core FR3

8 Information Asymmetry Reduction in Open Team Science for Socio-environmental Cases

○Japan

Core FR1

9 Methods and Tactics to Foster Knowledge Co-creation: A Practical Framework for Implementing Transdisciplinary Research

○Global