

JSPS Core-to-Core Program
FY2015 Implementation Plan (Project No. :23001)

Research Theme Establishment and advancement of Global Meta-Network on Sustainability Science

Duration of Project April 1st, 2013 ~ March 31st, 2016 (36months)

Core Institution in Japan (Co-Chair) Integrated Research System for Sustainability Science (IR3S)
The University of Tokyo Institutes for Advanced Study (UTIAS)
(Kazuhiko Takeuchi Director/Professor)

Implementing Organizations

○ **Japan**

Japan	Core Institution	Integrated Research System for Sustainability Science The University of Tokyo Institutes for Advanced Study	
	Co-Chair (name and title)	Kazuhiko Takeuchi, Director/Professor	
	Cooperating Institutions	Institute for the Advanced Study of Sustainability, United Nations University	Number of Cooperating Institutions 1

○ **Partner Countries**

Sweden	Core Institution	University of Stockholm	
	Co-Chair (name and title)	Thomas ELMQVIST, Professor of Stockholm Resilience Centre	
	Cooperating Institutions	Stockholm Resilience Centre, Chalmers University of Technology	Number of Cooperating Institutions 2

U.S	Core Institution	Arizona State University	
	Co-Chair (name and title)	Sander VAN DER LEEUW, Dean/Professor of School of Sustainability	
	Cooperating Institutions	University of Arizona Massachusetts Institute of Technology, University of Hawaii	Number of Cooperating Institutions 3

Italy	Core Institution	Sapienza University of Rome	
	Co-Chair (name and title)	Vincenzo NASO, Professor of Interuniversity Research Centre for Sustainable Development	
	Cooperating Institutions		Number of Cooperating Institutions
			0

France	Core Institution	Aix-Marseille University	
	Co-Chair (name and title)	Jean-Louis ARMAND, Professor of Department of Mechanical Engineering	
	Cooperating Institutions		Number of Cooperating Institutions
			0

Swiss	Core Institution	Swiss Federal Institute of Technology Zurich	
	Co-Chair (name and title)	Gerhard SCHMITT, Senior Vice President(in charge of international affair)/Professor of Department of Architecture	
	Cooperating Institutions		Number of Cooperating Institutions
			0

Objectives of Research Exchange (including the five years after the project finishes)

The objective of this international research is to develop a meta-network on Sustainability Science through conference organization, journal development, and joint research projects among member countries. The activities will be supported through foundation of International Society on Sustainability Science (ISSS), led by the University of Tokyo, and planning to expand the network to promote Sustainability Science beyond member countries.

Results to the present

Joint Research

We planned the International Conference on Sustainability Science (ICSS) together with all partner institutions in other countries. In implementing the plan, we individually investigated the six areas promoted in this project (1. Climate and ecosystem change response; 2. Resilience-building strategies; 3. Resource co-management; 4. Energy sustainability; 5. Sustainability design; and 6. Cultural diversity), and held discussions to obtain a broad perspective of them. Such discussions are essential to linking the future direction of sustainability science and delivering individual research results to society. They can also be perceived as collaborative research between each university participating or cooperating in the project. This year, the United Nations University served in the important position of executive committee. In particular, it established Natural Capital and Green Economy as the central topic for the year, and conducted planning in order to pursue the roles and contributions of the fields of nature, energy, water, industry and the like with respect to the sustainability of Natural Capital and Green Economy. Until now, policies and project strategies with a bias toward economic evaluation indices have tended to be adopted. However, the ground-breaking introduction of the concept of capital, has enabled the consideration of policy by which economic activity can contribute to regional and global sustainability.

Seminar

The 5th International Conference on Sustainability Science (ICSS) was held at the United Nations University, Tokyo, on January 22-24, 2015. Professor Carl Folke (Science Director of the Stockholm Resilience Centre) was invited to be the keynote speaker. Professor Sir Partha Dasgupta (University of Cambridge), Dr. Mark Stafford Smith (Chair of the Future Earth Science Committee), Professor Paul Shrivastava (Executive Director of Future Earth and Director of David O'Brien Centre for Sustainable Enterprise at Concordia University), Anantha Duraiappah (Director of UNESCO MGIEP) and Professor Zakri Abdul Hamid (Chair of IBPS) also gave addresses and participated in discussions. An open symposium was jointly held with the Sustainability Science Consortium on the final day, at which many participants engaged in lively discussions. This activity was summarized in the form of an overview paper in the journal Sustainability Science.

Researcher Exchanges

Students on the University of Tokyo Department of Urban Engineering postgraduate course were dispatched in consultation with Chalmers University of Technology, Sweden, for two months. During the dispatch period, they were instructed by Professors. Sustainability Science was the main subject at the October general meeting chaired by the University of Copenhagen and sponsored by the International Alliance of Research Universities (IARU),

of which the University of Tokyo serves as a key member. It was linked with this project and many University of Tokyo faculty were dispatched to the meeting. Director Kazuhiko Takeuchi who supervises the project was invited to be the keynote speaker.

Summary of FY 2015 Exchange Plan

Joint Research

Similar to the previous year, collaborative research will be carried out with a focus on research through planning for the International Conference on Sustainability Science, (ICSS). This will be the final year for ICSS to be supported by this project. Moving forward, in order that the ICSS continue to operate without depending on this project, the aim is to build an administrative foundation through the two policies of 1) Enhancement of coordination with projects related to sustainability science, and 2) Expansion of the schools collaborating in this project and coordination with diverse institutions according to the topic of the ICSS. In that respect, we will cooperate with the various projects being developed regionally and strengthen collaboration with universities, research institutions, NGOs, and other organizations in the project areas. In particular, we will build structures for “in kind” and other forms of support with agencies linked with the region, independent of external capital. We will also consider providing an incentive to conference participants by reporting the results of conferences in the form of papers in Sustainability Science. We will furthermore consider the links between sustainability science and other networks. Next year, we will enhance collaboration with Future Earth, for which IR3S acts as the international headquarters, and aim for a greater penetration of sustainability science into the scientific community.

Seminar

We hope to hold ICSS2016 in South Africa as a seminar project. This seminar has basically been held by Japan or partner countries, but having toured round all countries and in light of conditions stated in the section on collaborative research, we hope to seriously consider the social application of sustainability science and hold it in Africa, with which we have strong links. The University of Cape Town, Stellenbosch University, and other institutions will serve as regional coordinators and link with other African universities, NGOs, and research institutions. A detailed schedule for the event has yet to be decided, but in order to provide sufficient preparation time, the seminar is planned to be held in Cape Town in late February, 2016. In addition to university research institutions, we have also consulted the Tokyo International Conference on African Development and the African Development Bank, and we are requesting their cooperation in the seminars. The aim of the seminars is the general mobilization of collaborating universities and the permeation of sustainability science into African countries.

Researcher Exchanges

With regards to researcher exchanges this year, we are planning seminars, collaborative research, and the long-term dispatch (20 days) of professor-level faculty to promote closer cooperation. Specifically, in order to promote collaborative research, we plan to dispatch Professor to Stockholm University which are offering to sponsor the ICSS in 2016 (after project conclusion). Furthermore, we will promote researcher exchanges in order to enhance cooperation with partner countries and other networks (e.g. Future Earth, Belmont Forum, AUN-Seed NET, APN, START, MAIRS, etc), with the aim of continuous cooperation with respect to ICSS and the expansion of sustainability science.