

## Enhancing urban resilience through sustainability science research

On the 12<sup>th</sup> of October 2017 the Faculty of Economics and Sociology at University of Łódź hosted a Polish-Japanese Symposium on Urban Resilience and Sustainability Science. The Symposium was co-organised by the Faculty of Economics and Sociology and the Integrated Research System for Sustainability Science, a Research Centre at the University of Tokyo.

The Symposium aimed to facilitate exchange of knowledge on the latest models of urban resilience in Eastern Asia and Central Europe and to lead to the creation of a Polish-Japanese, interdisciplinary research group, working in the area of urban resilience and sustainability science. It was also meant to contribute to the popularity of the concept of urban resilience in the practice of managing cities (actually poor implementation of the principles of urban resilience and sustainability science in the practice of urban governance remains a common problem in Poland and Japan). Finally, the Symposium was organized to highlight the area of sustainability science as something more than „sustainable development” – an area of research associated with extensive scientific justification for the concept of sustainable development and the search for mechanisms of its implementation.

The Integrated Research System for Sustainability Science (IR3S) at the University of Tokyo is the world's leading center of research in sustainability science. Another particularly prominent research institution represented at the Symposium was Stockholm Resilience Centre from Stockholm University which is the leading institution in the area of resilience research and which has close research collaboration established with both the IR3S and the Faculty of Economics and Sociology at University of Łódź.

Keynote presentation on the role of sustainability science for achieving Sustainable Development Goals was delivered by Professor Kazuhiko Takeuchi, Director of the IR3S, former Assistant Director General of United Nations, and former Senior Vice-Rector of the United Nations University.

In the first plenary session which featured the theoretical and general issues related to sustainability science and urban resilience, Professor Akimasa Sumi from the University of Tokyo gave the introductory presentation connecting these two research areas. This was followed by Professor Kensuke Fukushi, also from the University of Tokyo, who focused on sustainable urban water environment and in particular on the enhancement of resilience against water-related crisis. The last speaker in this session was Professor Erik Andersson from Stockholm Resilience Center, Stockholm University, who

talked specifically about urban resilience, focusing mostly on the context of ecosystem services and biodiversity.

The second plenary session focused on three examples of specific research questions addressed in the context of sustainability science. The first presentation was given by Dr. Alexandros Gasparatos from the University of Tokyo who talked about several research projects carried out in Africa, connecting different topics related to energy, food security and environmental protection. Then, Dr. Kinga Krauze from the European Regional Centre for Ecohydrology, the International Institute of Polish Academy of Sciences, talked about the broader context of sustainable development research with the focus on experiences from her work in the Long-Term Ecological Research Network. Finally, Dr. Piotr Matczak, Associate Professor at Adam Mickiewicz University in Poznań, focused on the awareness component of sustainability, and in particular on the role of traditional knowledge and common sense as complementary sources of information to be used in planning sustainable development.

Another part of the Symposium was a panel discussion moderated by Dr. Marcin Jarzębski from the University of Tokyo. The topic of the discussion was "How to promote sustainability science research in Poland?" and it was motivated by the relatively low international visibility of this area of Polish research. Five discussants exchanged opinions on their own experience in setting up research projects, establishing collaboration with other stakeholders and promoting research results: Professor Kazuhiko Takeuchi; Dr. Małgorzata Stępniewska from Adam Mickiewicz University in Poznań; Dr. Iwona Wagner from the Polish National Commission for UNESCO; and Dr. Anna Kalinowska and Dr. Kamil Kwiatkowski, both from the University of Warsaw, University Centre for Environmental Studies and Sustainable Development. The panel was preceded by an introductory speech by Dr. Jakub Kronenberg, Associate Professor at University of Łódź.

The Symposium was attended by over 100 participants, many of whom took active part in discussions and who had the opportunity to exchange contacts and discuss potential research collaborations. Additionally, one day before the Symposium, a smaller group of researchers took part in a seminar meant to promote academic collaboration between Polish and Japanese researchers. Participants indicated their research expertise and collaboration needs, and within smaller groups they considered what collaboration opportunities emerged for the future.

One of the specific issues which were raised many times during the Symposium and which definitely need more attention in Poland was the UN 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). The different presentations delivered during the Symposium demonstrated the broader relevance of this Agenda and the different contexts in which the SDGs need to be addressed.

More practically, the Symposium offered Polish participants opportunities to obtain information on international publishing opportunities in the area of sustainability science. In particular the Japanese guests highlighted opportunities to publish in the journal entitled *Sustainability Science* and published by Springer, of which Professor Kazuhiko Takeuchi is the Editor-in-Chief. An additional workshop on academic writing led by Dr. Alexandros Gasparatos and Dr. Marcin Jarzębski helped 15 young research-

ers, mostly Ph.D. students, to improve their writing skills and obtain knowledge about publication and review processes.

Altogether the events related to the Symposium took place during the whole week and – apart from the abovementioned meetings – included field visits and additional academic discussions. In particular, the guests visited study sites of the ENABLE project (Enabling Green and Blue Infrastructure Potential in Complex Social-Ecological Regions), within which Łódź is one of case study cities. The ENABLE project field visit focused on the topic of creating green corridors on the basis of the relatively little known rivers in Łódź – as a means of supporting urban resilience in this city.

The Symposium was part of a broader project focused on enhancing research collaboration between Polish and Japanese researchers in the area of sustainability science and urban resilience. The project was funded through the Scientific Cooperation Funding Opportunity jointly offered by The Polish Academy of Science and The Japan Society for the Promotion of Science.

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