

## **“Transformations toward Sustainability: Voices of Early-Career Asian Scholars”**

by Steven R. McGreevy (Assistant Professor, RIHN) and  
Maximilian Spiegelberg (PhD Candidate, Kyoto University)

On January 22<sup>nd</sup> 2015 nine outstanding early-career scholars from China, Malaysia, Philippines, Taiwan and Vietnam participated in the Workshop *“Transformations toward Sustainability: Voices of Early-Career Asian Scholars”*, part of the Sakura Science Program and side event to the Future Earth Workshop hosted at the Research Institute for Humanity and Nature. The participants represented a variety of research fields with high relevance to sustainability, such as eco-health, computational sociology, education for sustainability, earth system sciences and science management.

In a first round the scholars were asked to put their current work, or careers in general, in context of chapter C *“Transformations toward Sustainability”* of the Future Earth Strategic Research Agenda, released in December in 2014. The high degree of interdisciplinarity and internationality of the presented work underlined clearly that co-designed and co-produced research employs a large variety of tools and methods yielding science-based sustainable change.

Despite the differences of educational backgrounds, all participants showed high interest in the others disciplines and a willingness to think outside of the box. This laid an excellent basis for a discussion session as a second round. The topic of **“Barriers to Inter- and Transdisciplinary Research and Possible Solutions”** surfaced during the discussion and four main points were perceived as obstacles common across disciplines and countries:

- Silo thinking. Various forms of institutions are too limited in their view and scope (policy-practice-research, nature-technology-social sciences, water-air-soil-biota, etc.) and thereby often do not suit inter- and transdisciplinary research and sustainable transformation. However, they determine on the one hand the views of science itself (problem identification & description, data sets, “disciplinary cultures” & languages, ...) and, on the other hand, funding access, measures of “success” and dissemination and implementation of results.
- Institutional rigidity. Transparency and public accounting are highly valued, but a high degree of (perceived) inefficiency and overload with administrative documentation (“paper work”) make transdisciplinary research that does not always necessarily follow the traditional categories possible.
- Lack of capacity. Transdisciplinarity and local engagement require a certain set of skills and

the scientists function more as a bridge between solutions- and curiosity-driven science, but also between different stakeholders (“knowledge broker”, “humble scientist”, “?”)

- Data access, quality, differences. The “privatization” of publicly financed research results, the politization of data, as well as the secrecy around tools and methodologies hinder transboundary and transdisciplinary cooperation and make the replication of results (one of the scientific fundamentals) impossible.

In the eyes of the early-career researchers the following points are very likely valuable for the implementation of the Strategic Research Agenda and in providing lasting impact for Future Earth:

- Communication of research findings should be target group oriented employing the full range of (new media) communication tools. Just scientific publications and conferences will not do.
- Setting standards of transdisciplinary research that reflect the value and successes of transformation-oriented approaches involving various stakeholders and methods.
- Built capacity and legacy of sustainability and transdisciplinarity. There is a need to get out of/overcome the silos within education and science and mainstream sustainability and interdisciplinarity. Along with this comes the demand for (new) skills, such as qualities to mediate, connect/bond, listen, being patient and to pause for reflection.
- Improving data access, harmonization and quality are always, and have always been, necessary. They are a fundamental driver of science since its inception, but data alone will be meaningless if the context and methodologies down to the last details that yielded them are not disclosed as well. One of the advantages of transdisciplinarity is to respect and integrate other sets of knowledge, which reduces reliance on data.