**Implementing Technology Assessment through Stakeholder Platforms: Strategic Resource Logistics for Socially Robust Models of Sustainability Innovation**

Masaru Yarime
Science, Technology, and Innovation Governance (STIG), Graduate School of Public Policy, University of Tokyo; and Department of Science, Technology, Engineering and Public Policy (STEaPP), University College London (UCL)
E-mail: yarimemasa@gmail.com

(Prepared for the Workshop on Technology Assessment, Tokyo, July 11, 2014)

Abstract

To address global sustainability problems, often ill-defined and intermingled, we need to integrate knowledge effectively and efficiency from various academic disciplines in natural science, social sciences, and humanities for scientific understanding of complex and dynamic interactions between natural and human systems and societal actions for sustainability innovation. With the necessary expertise and experience involving a significant degree of diversity and uncertainty, a major challenge in is how to design and implement serious engagement and fruitful collaboration between academia and stakeholders, including industry, government, and civil society. That would require careful consideration about what types of joint initiatives and networking contribute to identifying desirable goals and targets and developing complementary skills and capacities, what mechanisms and stakeholder relations have been put in place to drive practices and initiatives, and what factors promote or obstruct their successful implementation. With the diversity of stakeholders in terms of perceptions, motivation, and behavior dependent upon economic, social, and historical contexts, the creation and management of stakeholder platforms would be a key for co-creating knowledge, co-designing targets, and co-implementing processes for innovation. Technology assessment would be conducted concurrently with strategic resource logistics, in which collaboration with stakeholders is promoted for creating, sharing, and utilizing relevant knowledge together in society so that feedback from them is well integrated into the process of technology assessment. This paper examines a case of innovation through creating stakeholder platforms for sustainable management of phosphorus, with the participation of researchers as well as practitioners involved in the entire value chain ranging from exploration and mining to processing, transport, use, and recycling. The lessons in facilitating sharing knowledge and expertise through strategic resource logistics with stakeholders would contribute to establishing socially robust models of sustainability innovation.