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Water-Energy-Food Nexus in Humanity and Nature

Abstract

Industrialization, the green revolution, and urbanization leading to the current Anthropocene have caused the wicked problems including global warming and decrease of biodiversity. Nature has many different functions since the birth of the earth, such as circulation, environment, resources, and diverse value. As the values of efficiency and simplicity for human being have been spread widely and quickly in Anthropocene, the view of nature as a resource is becoming much stronger. On the other hand, the view of nature as environment and the diversity of values is becoming weaker. In order to make just transition with nature and climate positive for sustainable society, we need to gain the system knowledge including tradeoff and synergy among humanity and nature. The "nexus," which is a new concept of connecting humanity and nature, is becoming increasingly important for solving global environmental and social issues. Nexus relationships include physical connections as well as socio-economic virtual connections, such as footprints and qualitative connections including tradeoffs and synergies. This talk focuses on the conceptualization of the nexus approach which is a new connectivity and relationship among humanity and nature.

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Prof. Dr. Makoto Taniguchi is a hydrologist and a deputy director-general at the Research Institute for Humanity and Nature, Japan. He is an Elected Fellow of International Union of Geodesy and Geophysics, Japan Geoscience Union Fellow, Cooperation Member of Science Council of Japan, and a Future Earth Assembly member, Steering Committee member of Water-Energy-Food Nexus KAN. He served PI and Co-PI of many research projects including UNESCO-GRAPHIC, Groundwater in Asian Megacities, Water-Energy-Food Nexus, and Belmont Forum SUGI Food-Energy- Water NEXUS. He has worked on water-related projects around the world, authoring or co-authoring over 200 articles, and editing or co-editing 8 books.