Future Earth: for Sustainable Development in Asia

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Future Earth, its history and core Characteristics

Future Earth is a global research platform aiming to provide integrated knowledge to support and facilitate transformations of society to a sustainable world, to overcome current ,threatening conditions of the earth for the sustainability of human life. To this end, collaboration across scientific disciplines and active interaction with stakeholders in society is strongly encouraged. Integrated knowledge can only be provided by such collaboration and interaction.

The scientific achievements by Global Environmental Change (GEC) programmes, such as World Climate Research Programme (WCRP), The International Geosphere-Biosphere Programme (IGBP), DIVERSITAS, an International Programme of Biodiversity Science, and International Human Dimensions Programme on Global Environmental Change (IHDP), have revealed current and predicted situation of the Earth. However, researchers who had been involved in these programmes have recognized more and urgent needs for collaboration with other scientific fields, especially in the humanities and social sciences, and stakeholder engagement, for further scientific achievements and also for more efficient use of scientific products in society. Three of above GEC programmes have closed by the end of 2015 and now Future Earth is integrating individual research projects under the former GEC programmes and is carrying out supporting roles for those activities. The main themes of Future Earth are Dynamic Planet, Global Sustainable Development and Transformations towards Sustainability, and the co-design, co-production and co-delivery of research with stakeholders convey the essential nature of Future Earth.

Future Earth organizational structures

Major decisions for Future Earth are made by the Governing Council, and both Science and Engagement Committees provide advice to the Governing Council. In May 2015, the Future Earth Secretariat started/commenced its full operation to support those committees as well as the whole research community related to Future Earth. The Secretariat is led by Prof. Paul Shrivastava, Executive Director, and the Executive Secretariat is composed of Global Hubs, which are distributed in five locations - Colorado, Montreal, Paris, Stockholm and Tokyo, and Regional Centres in Asia, Latin America, the Middle East and North Africa, and Europe. Secretariat functions such as research synthesis and foresights, communication and outreach, capacity building, etc. are evenly supported by the five Global Hubs, and Regional Centres are in charge of regional structures and activities, closely working with the regional communities, reflecting natural and cultural characteristics of the region.

Knowledge-Action Networks

At the end of 2014, Future Earth identified eight major challenges for global sustainability to be tacked by year 2025 in Future Earth Visions, and developed its Strategic Research Agenda 2014 with more detailed research targets. The eight challenges include, in brief, Food-Water-Energy Nexus, Decarbonization, Natural Assets, Healthy Cities, Rural Sustainability, Health under Climate Change, Sustainable Consumption and Production, and Governance Systems for Social Resilience.

When the major meetings of Science and Engagement Committees of Future Earth and its Governing Council were held in Tokyo, Japan, together with several public events in Tokyo and in Kyoto, Future Earth research and implementation plan was outlined and the initial set of Knowledge-Action-Networks (KANs) was identified to serve as practical platforms for promoting research collaboration and stakeholder engagement. The objectives of the KANs are to:

- identify and respond to society's needs for scientific knowledge to successfully undertake the transformation to sustainability,
- generate integrated knowledge that is relevant to decision-makers,
- develop and cultivate inter- and trans-disciplinary research that is solution-driven, and

•add value to research that has already or is being carried out

Four of the KANs are directly linked to the above challenges, such as Water-Energy-Food Nexus, Natural Assets, Cities and Health, and others are cross-cutting topics, involving Oceans, Transformations, Sustainable Development Goals and Sustainable Finance & Economics. Preparatory discussions are under way for establishing more KANs.

Individual research projects or organizations are welcomed and encouraged to contribute to KANs on a voluntary basis and the gateway and tool to contact Future Earth will be provided soon through Open Network.

Future Earth researches in Asia

At the past Science Council of Asia Conferences, Future Earth has been taken up as a major topic. In 2013, at the 13 Conference in Bangkok, Thailand, there was a panel discussion on Future Earth. In 2014, the theme of the 14 Conference in Kuala Lumpur, Malaysia, was Future Earth: Research for Global Sustainability and a Holistic Understanding of Sustainable Development in Asia. On those occasions, participants discussed actively on how to promote Future Earth in Asia and on the roles of science and scientists for sustainable development in Asia through contributing to Future Earth.

In November 2015, a Regional Advisory Committee (RAC) was established, and several countries have their National Committees for Future Earth. Asia is rich in diversity in nature, human culture and history. There were many natural disasters, diverse interface between ecosystems and human habitat, forefront problems caused by human activities and within human societies, experiences to overcome past damages of the nature and human problems, etc. With such diversity and experiences as well as unique visions and approaches to nature and science, Asia is strongly expected to contribute to science for Future Earth. In-depth dialog and suggestions are expected to be exchanged between participants for a better understanding on Future Earth, on its benefits to Asia and how scientists from the region can contribute to Future Earth.

References

For general aspects of Future Earth, please see: http://www.futureearth.org/

Future Earth 2025 Vision: http://www.futureearth.org/media/future-earth-2025-vision

Strategic Research Agenda 2014: http://www.futureearth.org/media/strategic-research-agenda-2014