

Future Earth; Integrated Program of Global Environmental Change Studies

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During the last decade, each discipline oriented researches for global environmental change have achieved excellent progress, however, the real global environmental problems have not been solved yet. Disagreements between developed and developing countries, and science and society are the most urgent issue for all stakeholders. In order to take a step forward, ICSU/ISSC/UNU/IGFA/Belmont Forum/UNEP/UNESCO have launched a new 10 years program Future Earth which focus on co-design/co-production, transdisciplinarity, vertical (multi scale: global-regional-local) and horizontal (multi issue with different sectors/stakeholders) integrations, and the involvement of young scientists. These are very important and urgent for solving global environmental problems. In addition to these, the regional perspective to the Future Earth is also important. More than 50 percent of the worlds population lives in Asia, and huge cultural/economical/ environmental/political diversities exists in Asia. Drastic changes (both increase and decrease) of population, material consumptions, environmental deteriorations, natural and social disasters, occurs in Asia, i.e. Asia is the most hot spot area in terms of human and nature drives. Discipline oriented research has a tendency with quick impacts but quick phase out. On the other hand, interdisciplinary and transdisciplinary research has a tendency of slow and long impact to the society. Both possibility and problems for young scientists exists in term of interdisciplinary and transdisciplinarity research. As fresh water security has been launched as one of the future earth project, hydrology requires integration of the problems such as water-energy-food nexus. For co-design/co-production of the future earth program, scientists should consider whom and when the stakeholders to be involved in.

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