

Knowledge for our transformation to a sustainable "Future Earth"

*Thorsten Kiefer¹

1.Future Earth, CNRS-UPMC, Paris, France

Unsustainable ways human development over the last decades have generated large environmental footprints and have led to critical degradation of many aspects of our livelihood and wellbeing, including such basics as clear air, water, food and health. The concepts of planetary boundaries and of socially required standards illustrate that a fundamental transformation to global sustainability is required if we want to live and develop within the margins of a safe and just operating space. Scientific assessments, most prominently by the IPCC and IPBES, have been put in place to deliver regular global scientific updates. In addition, international policy targets have been agreed to such as the Sustainable Development Goals, the Sendai Framework for Disaster Risk Reduction, the Aichi Biodiversity Targets and the Paris Agreement on Climate Change to provide international coordination and guidance on the desired trajectory of transformations. All these complex and interconnected processes require underpinning with research of international excellence, integrated across a wide range of disciplines, and focussed to identify and solve the most crucial questions, issues and problems along the path of our socioeconomic transformation towards sustainability.

The new international research coordination platform Future Earth aims to facilitate this kind of research and to integrate it with the above mentioned policy processes. The research is carried out in disciplinary Core Projects, short-term Fast-Track Initiatives, and longer-term Knowledge-Action Networks. All of these involve stakeholders of sustainability research in co-designing the research plans and co-producing the output to optimise the use in policy and decision processes. My presentation will feature first successful examples how research activities are set up and how results are generated that are of relevance to societal and policy processes. Areas that will be covered with examples include science on climate, ecology, marine, urban, health, governance, among others.

Keywords: Future Earth, Sustainability science, Science-policy dialogue