

TWI2050

The World in 2050

www.twi2050.org



**A global research initiative in support of a
successful implementation of the United
Nations 2030 Agenda**

twi2050@iiasa.ac.at



SUSTAINABLE DEVELOPMENT GOALS



→ How can the world meet **the full set of SDGs in 2030** and reach a fuller sustainable development path after that?

→ What are the **synergies and trade-offs** that could emerge between the various SDGs along such pathways?

A global partnership

- Partnership between science and policy that aims to develop equitable pathways to sustainable development within safe planetary boundaries and acceptable social boundaries
- Aims to address the transformational challenges related to achieving the SDGs with an integrated and systemic approach
- Pathways will run to 2050 to allow a glimpse at long-term trends and compliance with the planetary boundaries while capturing the role of improved technologies and transformations in key areas

Implementing the UN 2030 Agenda

- Strong commitment around shared goals
- Growing consensus around challenges of economic development, social inclusion, environmental sustainability
- But no clear & shared understanding of how the goals can be achieved (Sustainable Development Pathway)
- Continuing suspicion that “environmental sustainability” requires cap on human development
- Confusion around short-term vs. long-term objectives
- Lack of visibility of science-based pathways

We lack a truly integrated, comprehensive quantitative understanding of sustainable development pathways.

Research will lead to better understanding of the key **interactions between various sustainable development challenges**, in different systems, in different regions and across time.

Scientific literature: Urgent need for integrated vision on sustainable development and SDGs.

Steffen et al. (2015). *Science*. Planetary boundaries;
Nilson et al. (2016). Map the interactions between SDGs ;
Lu et al. (2015). 5 priorities for SDGs. 520;
Van Vuuren et al., 2015. *Social forecasting & technological change*.

Objective of TWI2050

Analytically explore Sustainable Development Pathways to prove the feasibility of attaining the SDGs and long-term human development within a stable Earth-system

The TWI2050 Mission

To provide a global analytical platform, where leading knowledge science and policy partners on integrated world development and Earth dynamics, join forces to undertake state-of-the-art analyses, assessments and scenarios of pathways to attain the SDGs within Earth's safe operating space.

Goal: Harness deep knowledge of specialized institutions from around world (in energy, food, macro-economics, climate, biodiversity, demography, etc in an integrated framework – not necessarily into single integrated mathematical model

Rather than examining various future scenarios, TWI2050 will focus on describing a potential SD pathway

The World in 2050 Partners

- Centre for Integrated Studies on Climate Change and the Environment (CIRED)
- Climate Center Service Germany (GERICS)
- Earth Institute, Columbia University
- European Commission, Joint Research Centre (JRC)
- Energy Planning Program, COPPE, Federal University of Rio de Janeiro
- Environmental Change Institute (ECI) at the University of Oxford
- Fondazione Eni Enrico Mattei (FEEM)
- Future Ocean
- German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE)
- International Institute for Applied System Analysis (IIASA)
- Millennium Institute
- MIT Joint Program on the Science and Policy of Global Change
- National Institute for Environmental Studies (NIES)
- National Renewable Energy Laboratory (NREL)
- Organisation for Economic Co-operation and Development (OECD)
- Potsdam Institute for Climate Impact Change (PIK)
- Stockholm Resilience Centre
- Sustainable Development Solutions Network (SDSN)

THE EARTH INSTITUTE
COLUMBIA UNIVERSITY

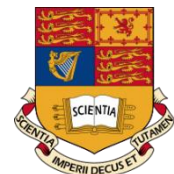


Stockholm Resilience Centre
Sustainability Science for Biosphere Stewardship



The World in 2050 Network

- Alpen-Adria University (AAU)
- Analysis, Integration and Modelling of the Earth System (AIMES)
- Austrian Research Promotion Agency
- Australian National University (ANU)
- Arizona State University (ASU)
- University of Natural Resources and Life Sciences (BOKU)
- Brazilian Federal Agency for the Support and Evaluation of Graduate Education (CAPES)
- Centro Nacional de Monitoramento e Alertas de Desastres Naturais (CEMADEN)
- Centre for Global Sustainability Studies (CGSS)
- Commonwealth Scientific and Industrial Research Organization (CSIRO)
- Conservation International
- Earth League, whole Earth system modelling initiative
- Empresa Brasileira de Pesquisa Agropecuária (Embrapa)
- Forestry and Forest Products Research Institute (FFPRI)
- Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP)
- Fundação Oswaldo Cruz
- Future Earth
- Global Environment Facility (GEF)
- Imperial College
- Indian Institute of Technology (IIT)
- Institute for Advanced Sustainability Studies (IASS)
- Institute for Global Environmental Strategies (IGES)
- International Energy Agency (IEA)



The World in 2050 Network

- International Food Policy Research Institute (IFPRI)
- International Monetary Fund (IMF)
- Intergovernmental Panel on Climate Change (IPCC)
- Korea University (KU)
- London School of Hygiene & Tropical Medicine
- Mercator Research Institute on Global Commons and Climate Change (MCC)
- National Center for Atmospheric Research (NCAR)
- National Science Foundation (NSF)
- Pacific Northwest National Laboratory (PNNL)
- Netherlands Environmental Assessment Agency (PBL)
- Research Institute of Innovative Technology for the Earth (RITE)
- Rheinisch-Westfälische Technische Hochschule Aachen (RWTH)
- Stakeholder Forum
- Swedish Research Council for Sustainable Development (FORMAS)
- Tsinghua University
- UNDESA
- UNEP
- Université Catholique de Louvain
- University of Sussex
- US National Academy of Sciences (NAS)
- World Bank
- World Wildlife Fund (WWF)



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