

EDITORIAL

INNOVATION FOR SUSTAINABLE FUTURES

STRATEGIC DIRECTIONS AT BONN UNIVERSITY

Nations face growing ecological, social and economic challenges in the Anthropocene. Reconciling human economic activity with nature's cycles requires decoupling economic growth from the excessive use of finite resources. We also have to shape the future of work in a networked and digitalized world. Moreover, high levels of income inequality between and within countries needs urgent action to minimize exclusion.

In many democratic social market economies, these challenges result in a loss of confidence in political systems, thus putting their institutions at risk. The Sustainable Development Goals (SDGs) aim to tackle these challenges, but may remain an empty catalog unless science-based priority setting and context-specific implementation research guide their strategic enactment. Research thus has an important role to play in addressing both the challenges and risks of our times.

Among the factors behind Bonn University's recent success in the German Excellence Initiative is a strategic focus on **"Innovation and Technology for Sustainable Futures"**. A unique feature of Bonn University is its cooperation with UN agencies and other global partners, for instance through the Center for Development Research (ZEF) and international research networks across all faculties. The University's sustainability research agenda features five closely related sub-themes that address key SDG challenges:

1. **Modeling, Foresight, and Risk Assessment Capacity** in social-ecological systems, which include forecasting behavior and footprints under social, economic, and biophysical constraints.
2. **Technological and Digital World Innovations**, including research on developing bio-friendly materials offering the potential to reduce environmental footprints through sustainable consumption and production. Digital innovations in agriculture, health

care, and other service robotics offer opportunities that need to be shaped and guided toward sustainability.

3. **Institutional Innovation, Behavior and System Transformations**, including societal transformation toward a circular bio-based economy (the bioeconomy), low-waste circular economic systems, and eco-efficient crop production.
4. **Nutrition and Health**, including causalities of health and diseases through their root causes embedded in the social, economic and ecological systems.
5. **Development and Change**, including determinants and consequences of migration, the role of markets and services for development, and alternative approaches to transformation governance.

This issue of ZEF News highlights some of this research agenda's initiatives and activities. It shows that ZEF has already a strong base on which to expand its work.

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They serve as Speakers of Bonn University's Transdisciplinary Research Area "Innovation and Technology for Sustainable Futures". (TRA6)