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Sustainable Development Goals: The Contribution of Science

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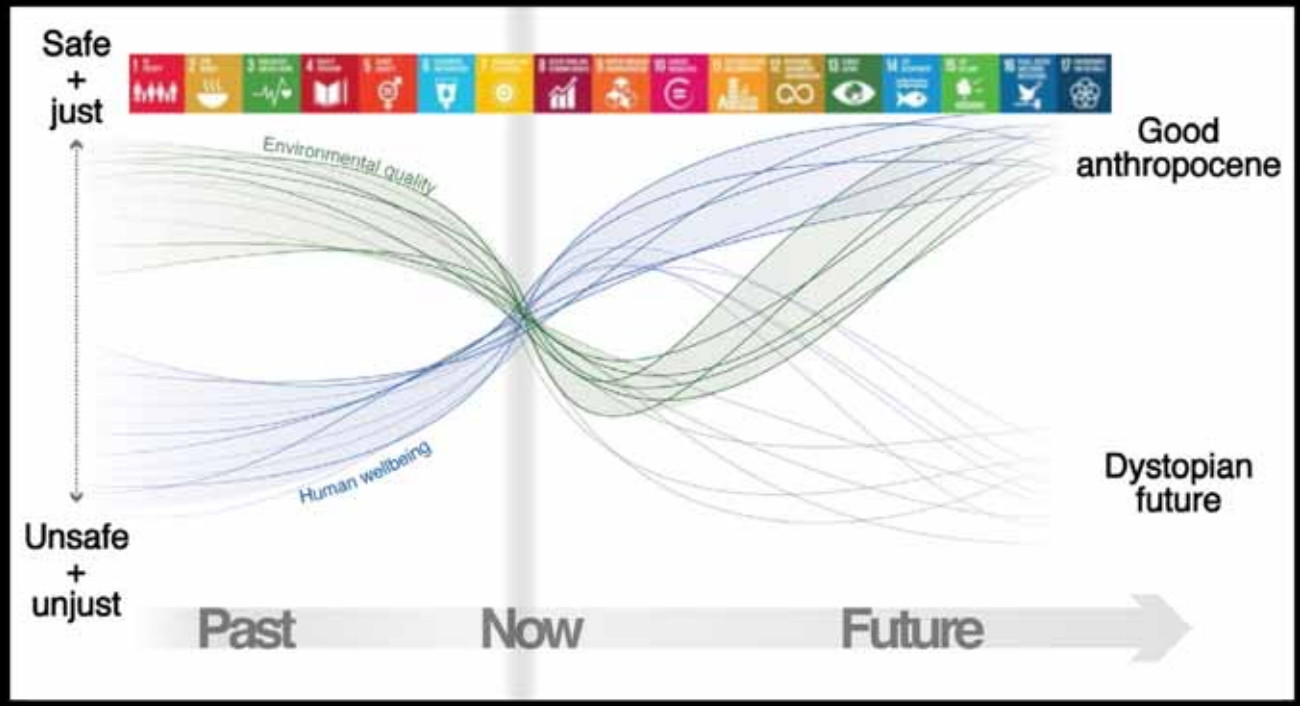
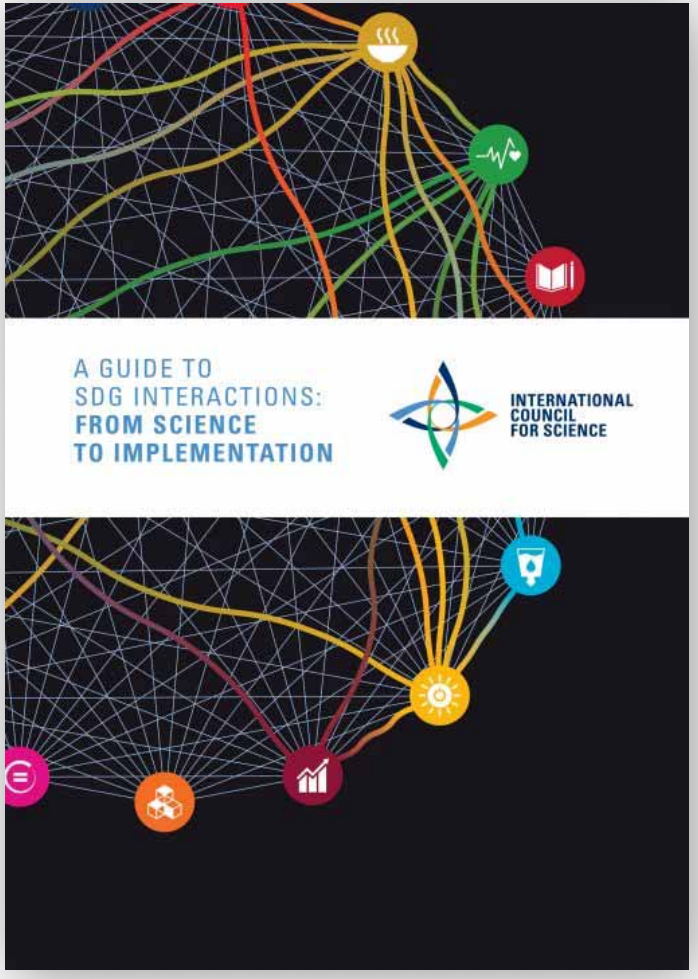
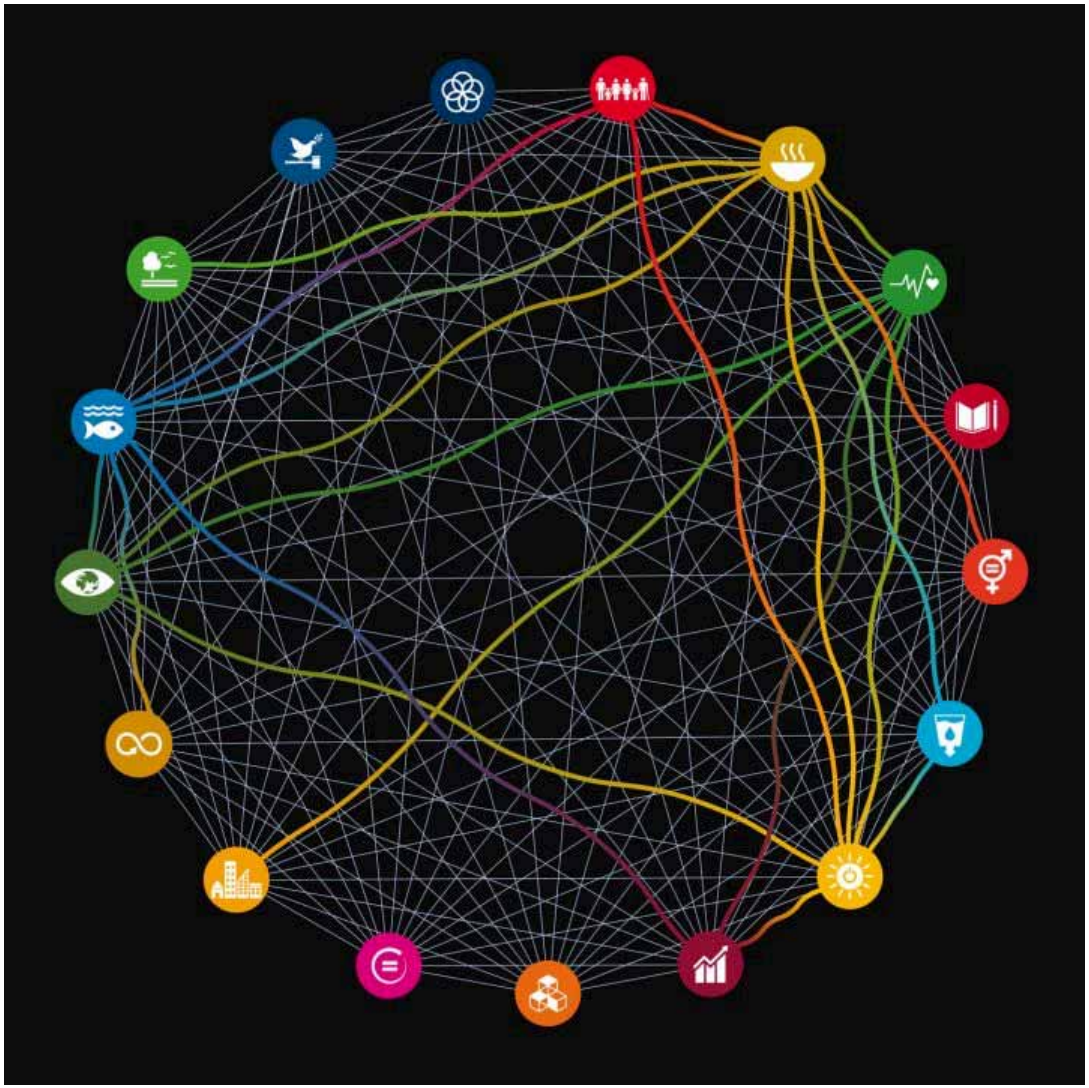


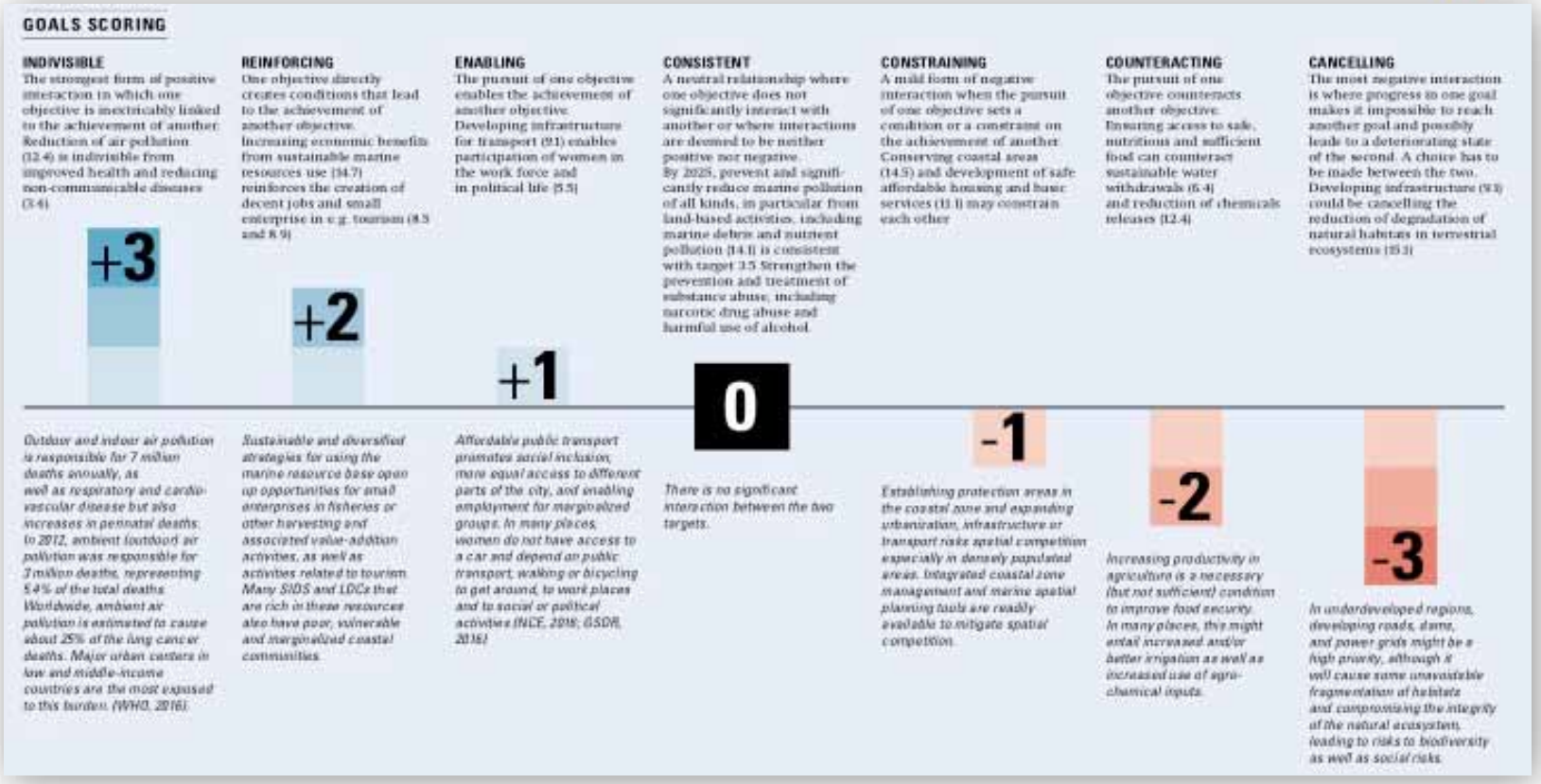
Bennett et al. 2016, Front Ecol Environ


A GUIDE TO
SDG INTERACTIONS:
FROM SCIENCE
TO IMPLEMENTATION
INTERNATIONAL
COUNCIL
FOR SCIENCE



1. Reducing SDGs-complexity by qualitative scoring:

The ICSU-Guide approach



ICSU, 2016, A Guide to SDG Interactions; Nilsson et al. 2016, Nature

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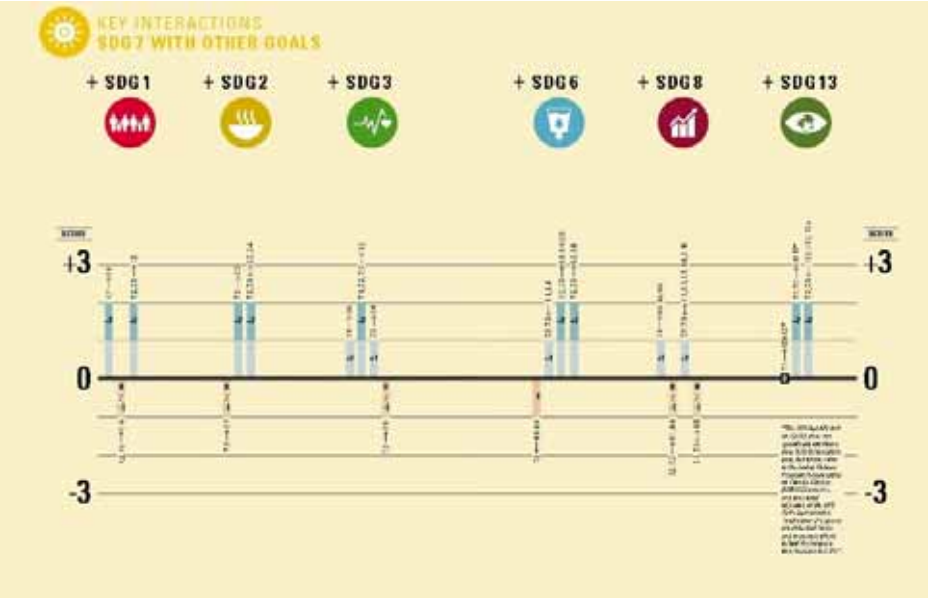

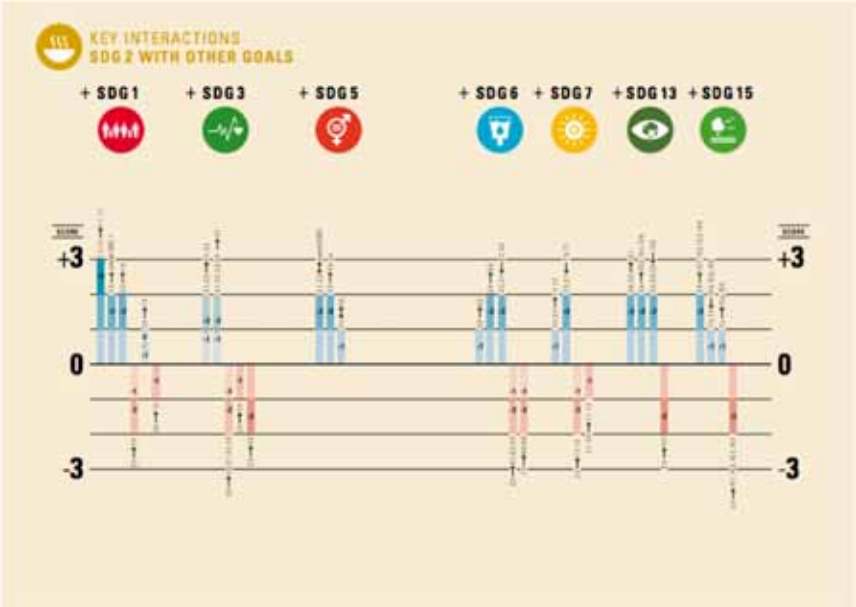

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Knowledge-Action Networks of Future Earth

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1. Reducing SDGs-complexity by clustering: The “Nexus” approach

Examples of the multliple SDGs integrated in Future Earth’s Knowledge-Action Networks

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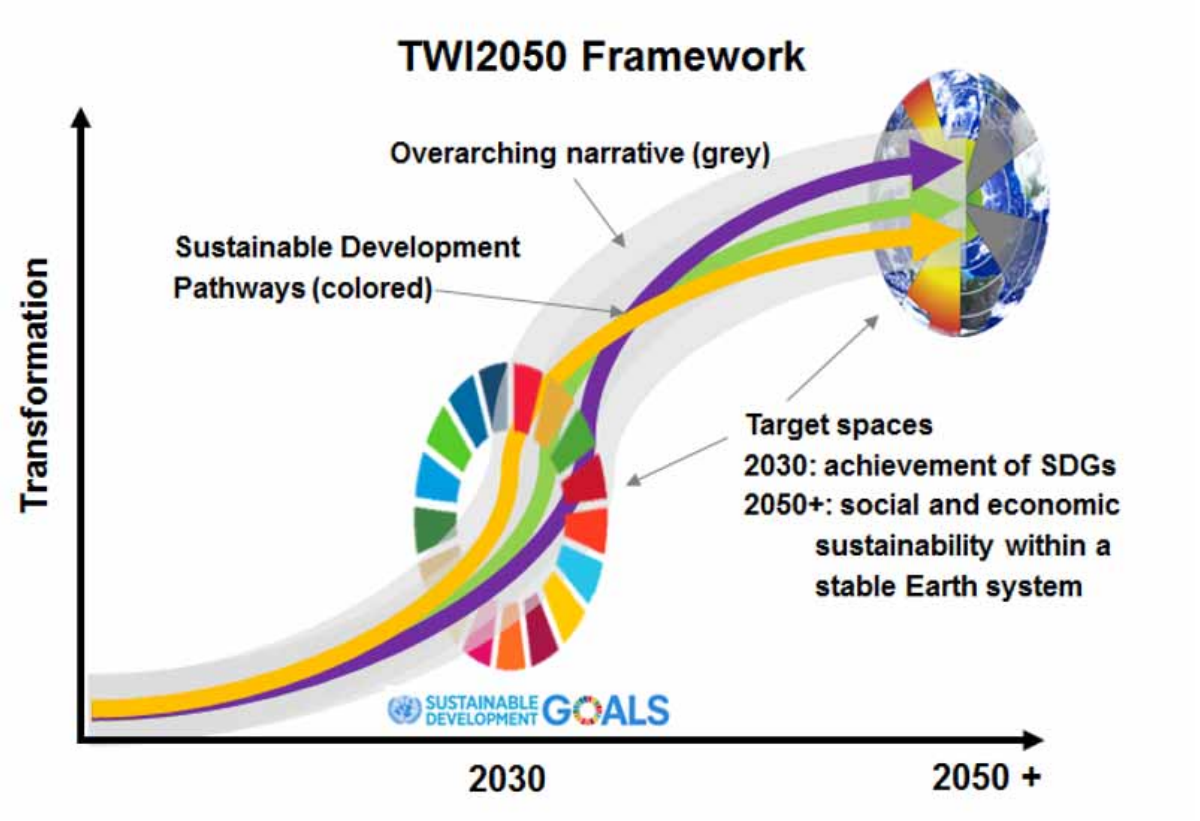
1. Reducing SDGs-complexity through modelling:
The World in 2050 approach

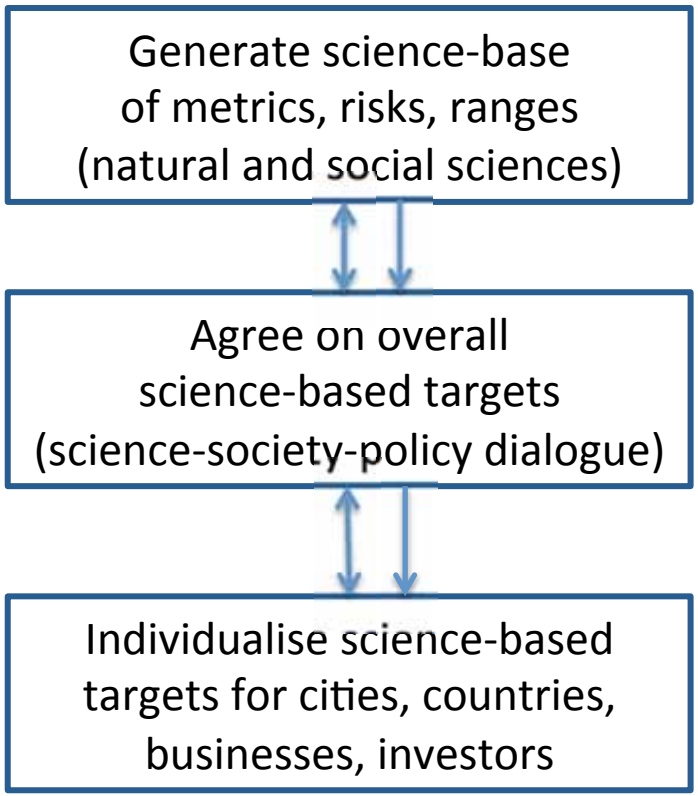


2. Making the SDGs tangible:

Science-Based Targets

Science-based target – Paris Agreement:
Limitation to 1.5°/ <2° warming and related emission targets

Non-science based targets in SDG-14 (Ocean)
"Conserve and sustainably use the oceans, seas and marine resources for sustainable development"
Target 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds ...
Target 14.2: By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts ...
Target 14.3: Minimize and address the impacts of ocean acidification
Target 14.4: By 2020, effectively regulate harvesting and end overfishing
...



3. Break down SDGs to the regional and local level

4. Direct research and innovation to exemplary seeds of successful sustainable transformation

Seeds of Good Anthropocenes
project in Future Earth

led by
Global Research Projects
ecoSERVICES and PECS

Examples of good seeds

5. Change infrastructure to encourage sustainability research

BELMONT FORUM

- Advancement of interdisciplinary and transdisciplinary science.
- Knowledge for understanding, mitigating and adapting to global environmental change.

Funding organizations (25 members from 21 countries)

Collaborative Research Actions (CRAs)

Open Calls

- Scenarios of Biodiversity and Ecosystem Services II

Calls in Progress

- Transformations 2 Sustainability
- Sustainable Urbanisation Global Initiative/Food-Water-Energy Nexus

Calls in preparation

- Ocean Sustainability
- Disaster Risk Reduction and Resilience
- ...

Previous Calls

- Climate Predictability and Inter-Regional Linkages
- Mountains as Sentinels of Change
- Arctic Observing and Research for Sustainability
- Scenarios of Biodiversity and Ecosystem Services
- E-Infrastructures and Data Management
- Food Security and Land Use Change
- Coastal Vulnerability
- Freshwater Security

6. Investigate the science of transformation

to mobilise people, focus attention, and induce transformation

Sustainable Development Goals: The Contribution of Science

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1. Reduce the complexity of the 17 interconnected goals (selective clustering, modelling, qualitative scoring)
2. Turn aspirational SDGs into tangible science-based targets
3. Approach SDGs regionally considering relevance and worldviews
4. Analyse exemplary seeds of successful sustainable transformation
5. Adapt research infrastructure to encourage sustainability research
6. Invest in the science of transformation