



Federal Ministry
of Education
and Research



SDG's, Sustainability Strategy and Research in Germany

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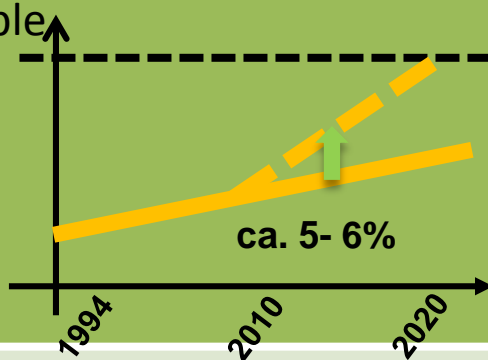
German Sustainability Strategy

- Idea: Coordination of all policy measures in sustainability.
- Making progress in Germany measurable: 34 indicators with concrete objectives, covering climate, energy, biodiversity, raw materials, investment in research etc.
- Coordinated by German Federal Chancellery.
- Participation of all ministries, board on State Secretary Level
- First published in 2004, renewed every 4 years
- New German sustainability strategy coming soon! (end of 2016)
- What will be new: Focus on implementation of SDG. Structured along 17 SDG

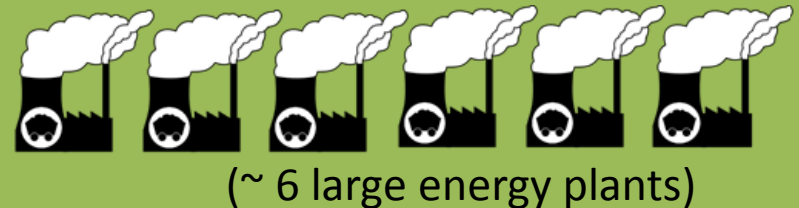
Role of Science in Sustainability Strategy

- Example raw materials productivity
Objective: Increase by a factor of 2 from 1994 to 2020
- Research initiative „r2: innovative technologies for resource efficiency“

Increase in **raw materials productivity** possible



Reduction in **energy consumption**
ca. 75 TWh/a

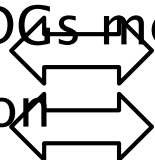
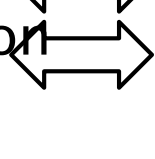


- Reduction of raw materials ca. 80 Mio. t/a (25 %) possible
 - Reduction of green house gases emissions ca. 60 Mio. t CO₂-Äq./a (7,5 %)
- Reduction of costs: ca. 3.4 b €/a

Role of Science in Sustainability Strategy

- Science is needed for the implementation of nearly all of the 17 SDG´s
- Science initiatives will be mentioned in 13 (out of 17) chapters of the new German strategy
- Example: Investment in R&D: Increase to 3 % of NGP in 2020
Actual (2015): 2.85 % for Germany
But: How to measure Output of R&D–investments instead of input?

Scientific platform for the implementation of the SDGs is needed!

- Great societal challenges (SDG) and sustainability politics need science!
- Implementation of SDGs means **conflicts and contradictions**:
 - Improving nutrition  protect ecosystems
 - Economic growth  sustainable consumption
- **Transformation processes** have to be investigated
- **Many initiatives**, many scientific players from science in Germany: Future Earth, SDSN, WGBU, SRU etc should be bundled
- **Science – policy interface** should be designed.
- BMBF started dialogue with science to implement a scientific platform

Research Programm FONA as a basis for implementing the SDGs

Framework Programme since 2005

Political achievements of FONA in research and innovation:

- focus on societal challenges,
- inter- and transdisciplinary research,
- international networks



FONA³: 2015 to 2019, 2.1 b € estimated budget

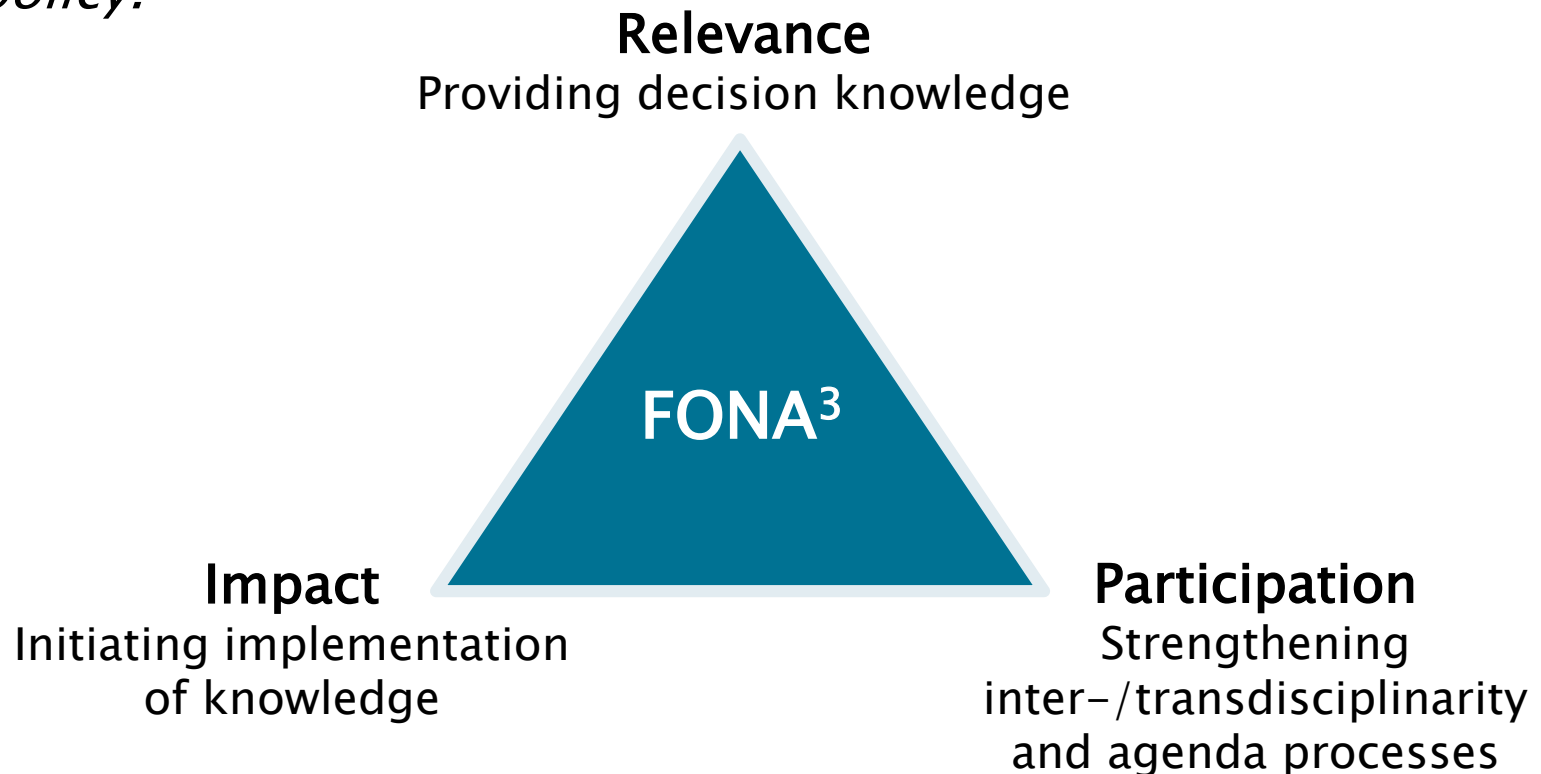
What has been achieved with FONA 2005–2015:

Examples:

- new efficient use of raw materials; CO₂ use as a raw material (ex. Sunfire project)
- basic data collection for international climate policy (e.g. IPCC)
- natural disaster protection (Tsunami rapid alert system)
- the BMBF positioned itself as a leading actor in energy research (several successful projects on energy system transition)
- ...

Principles of FONA³

Essential is translating our knowledge into practice and policy.



Research for Sustainable Development (FONA)

Maintaining and enhancing
quality of life and competitiveness

Using resources intelligently
and efficiently

Protecting common assets:
Climate, biodiversity, the ocean

Education and research: working
together for sustainable
development

Green Economy

Future City

Energiewende

FONA³ – 3 trends of sustainable development: 3 flagship initiatives (Leitinitiativen)

- **Green Economy**

...the transition to an ecologically, economically and socially sustainable subsistence strategy

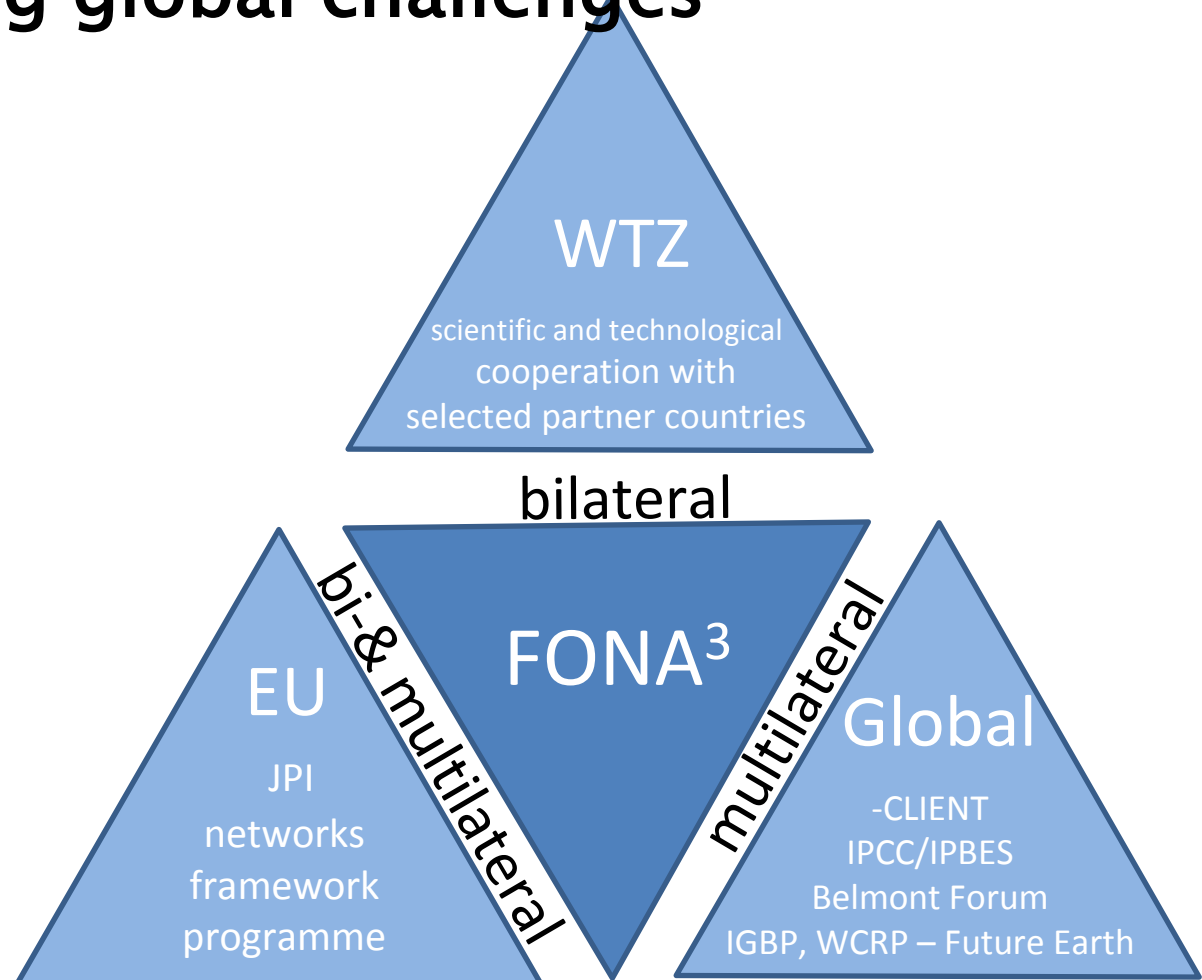
- **City of the Future**

...the development of sustainable urban settlement areas

- **Transformation of the Energy System (Energiewende)**

...the consolidation of technical, ecological, economical and social needs

FONA: Facing global challenges



Social-Ecological Research (SÖF)

- SÖF is a **funding priority** of the FONA framework programme
- SÖF supports the three **flagship initiatives** of FONA:
 - Green Economy
 - City of the Future
 - Energy System Transformation
- Since 2000:
 - more than 12 funding programmes
 - ca. 190 funded projects
 - ca. 180 mill. Euro funding budget



Characteristics of SÖF

- **Societal challenges:** develops strategies and solutions for societal challenges
- **Societal transformation:** supports societal transformation towards sustainable development
- **Transdisciplinarity:** follows a transdisciplinary research approach; involves non-research partners from the start of the project
- **Interdisciplinarity:** follows an interdisciplinary research approach; integrates natural, social and engineering sciences
- **Junior Research Groups:** promotes young scientists in inter- and transdisciplinary academic careers
- **Participatory research agenda process:** invites researchers and civil society to discuss and identify important research topics

Current SÖF research programme

Sustainable Economy (2014 – 2018)

- 31 research projects
- 29 mill. Euro awarded funding by BMBF



Research priorities:

- Enterprises and consumers as change agents of socio-ecological transformation:
 - measuring and evaluating sustainability impacts of business activities
 - new sustainable business models
 - consumer behavior towards sustainable consumption
- Systemic approaches towards transformation of the economic system

Thank you very much!

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Transdisciplinary approach of SÖF

- Supports research not only conducted by university institutes but also by private **non-university research institutes** in cooperation with private companies, municipalities and civil society
- Non-research organisations are encouraged to participate in the project consortium as **funded partners**
- All projects are obliged to work with **practice partners / societal stakeholders**
- Project results are **verified and often adopted by practice partners** (e.g. new concept for private energy consulting)