



The concept of transdisciplinarity and links to open knowledge

Susanne Schuck-Zöller

Climate Service Center Germany/Helmholtz-Zentrum Geesthacht

■ Climate Service Center Germany



- **Founded in 2009** by the German Federal Ministry of Education and Research
- Since June 2014 **scientific organizational entity** of Helmholtz-Zentrum Geesthacht
- Financed by **programme-oriented funding** of Helmholtz Association
- Director is **Dr. Daniela Jacob**
- Based in Hamburg's **Chilehaus**
- **Interdisciplinary team** of natural scientists, socio-economists, and humanists (approx. 40 staff members)

■ Definition of climate services

Being relatively new, various definitions and interpretations exist for the concept of climate services.

For the scope of this document, we attribute to the term a broad meaning, which covers *the transformation of climate-related data — together with other relevant information — into customised products such as projections, forecasts, information, trends, economic analysis, assessments (including technology assessment), counselling on best practices, development and evaluation of solutions and any other service in relation to climate that may be of use for the society at large.*

As such, these services include data, information and knowledge that *support adaptation, mitigation and disaster risk management (DRM).*

from: EC Directorate-General for Research and Innovation (2015):

A European research and innovation Roadmap for Climate Services - Box 1

■ Co-production, Co-design of knowledge



„The development of climate services (...) requires a transdisciplinary approach of co-design, co-development and co-evaluation“

European Commission (2015):
Roadmap for Climate Services

- Products are being developed in **cooperation with the customers**
- **Integrated research** of science and practice
- Climate services are by nature inter-, **and** transdisciplinary
- Co-production and its methods have to become a subject of research, as well



Development of TDR as a concept

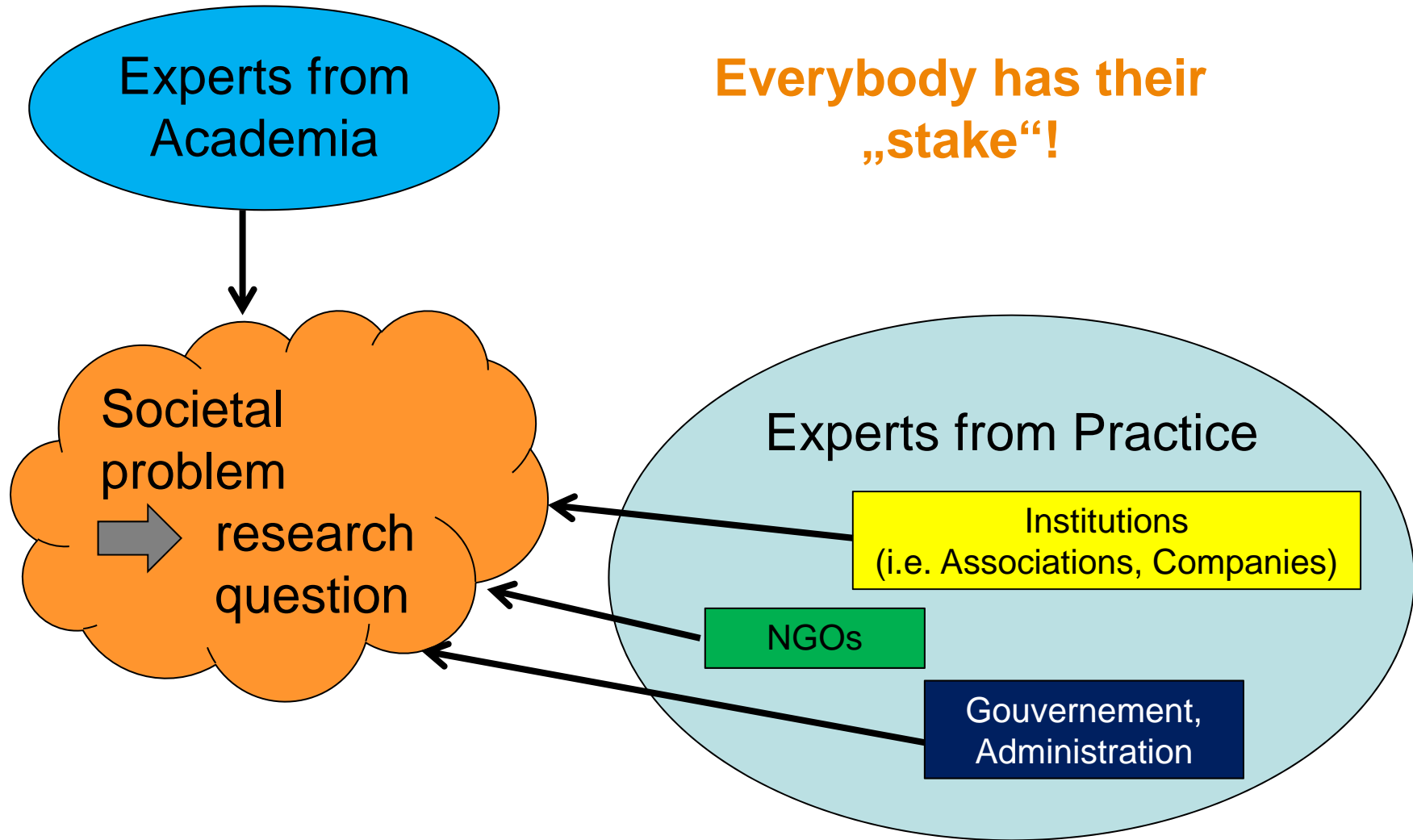
Discussion about concept since about 20 years

Societal and very complex problems need TDR
to

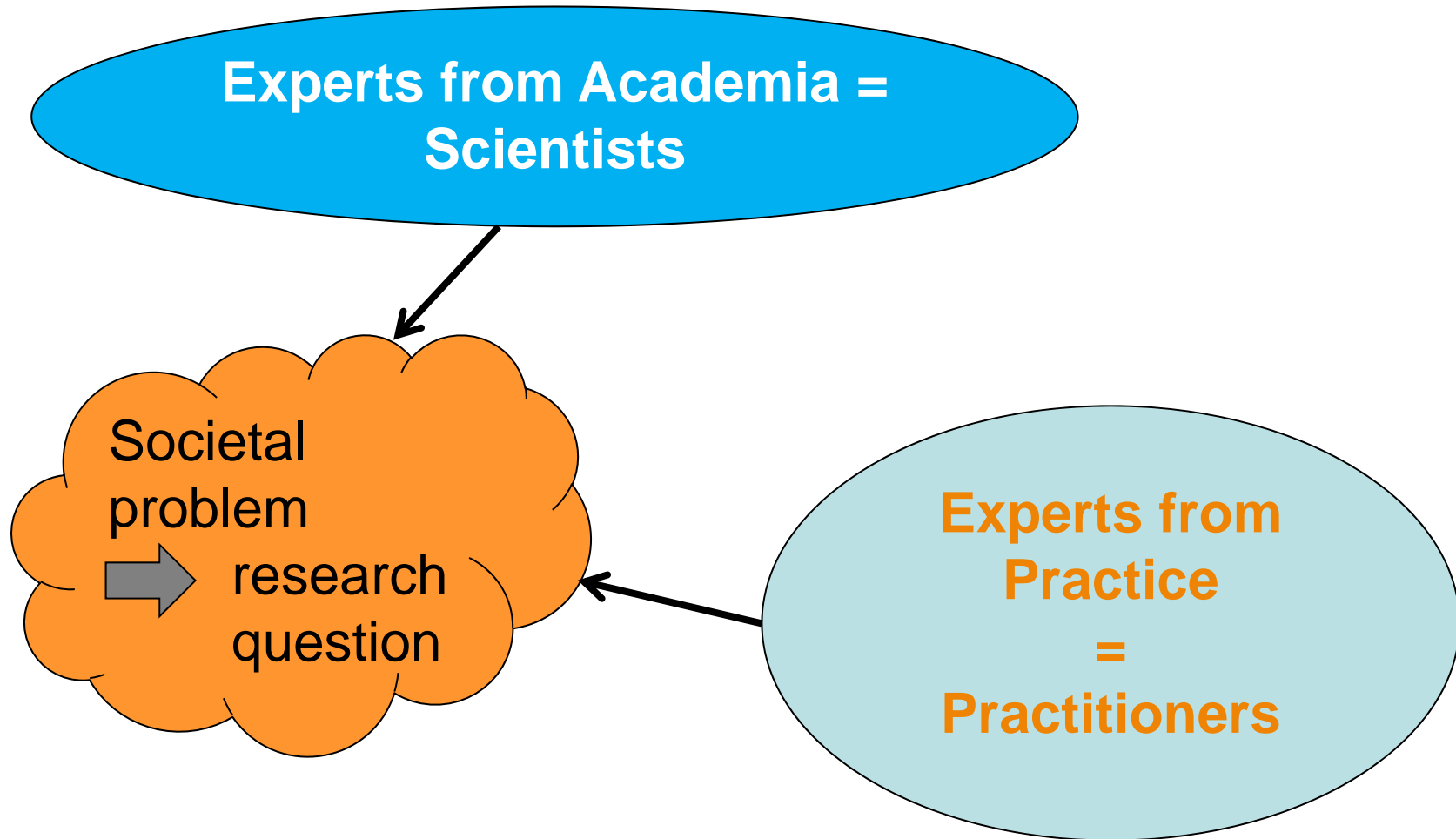
- Involve different points of view
- Involve experiences from practice
- Make research results applicable
- Develop individual products for special questions
- Gain legitimacy
- Raise awareness

Open Knowledge enhances TDR, as it enables practitioners to gain background information on their own. Nevertheless, this may not lead to a less open and transparent way of management in the project itself.

■ „Stakeholders“ as a term

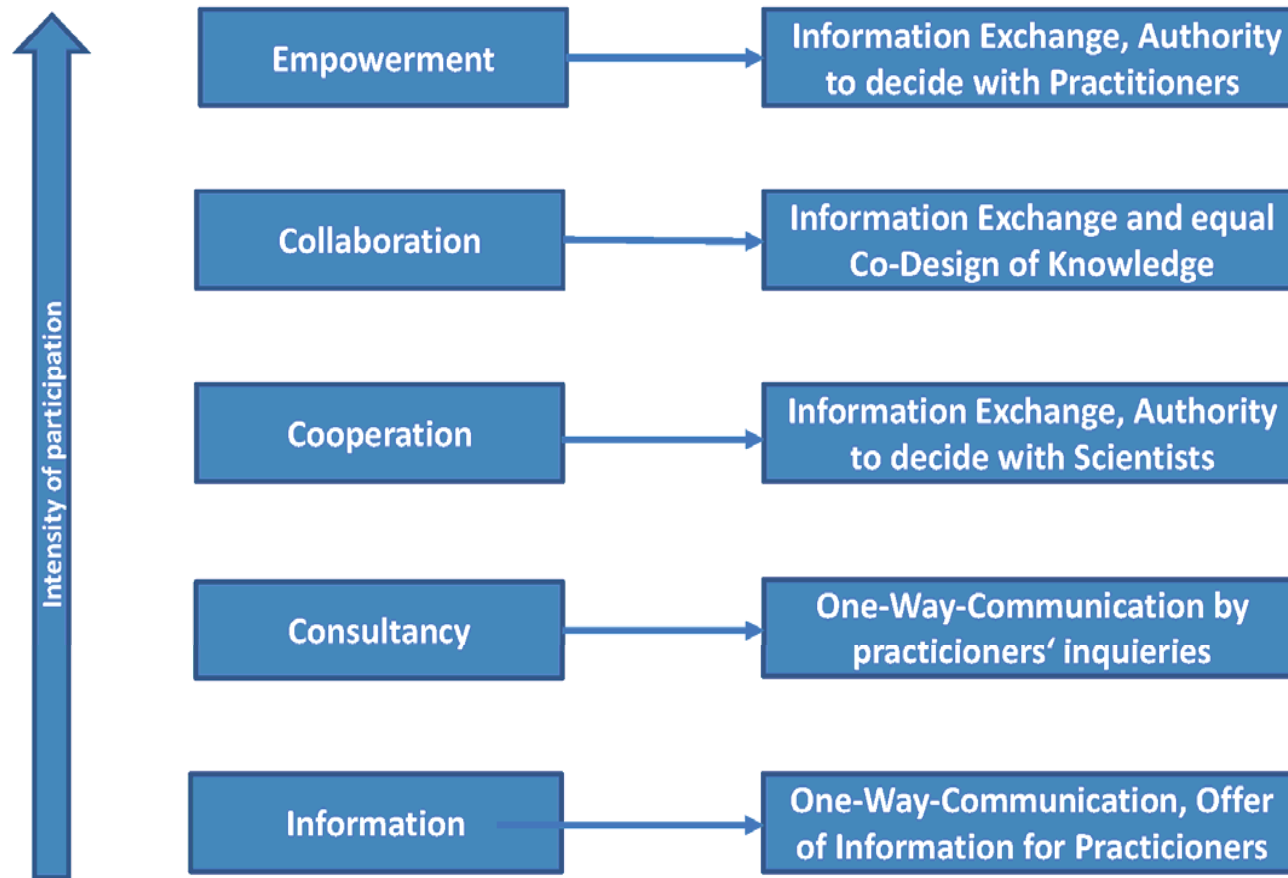


■ „Practicioners“ as a term



Different intensities of involvement

Degrees of Practitioners' Involvement



Stauffacher et al. (2008)

■ Barriers to the Open Science Idea

Experiences by GERICS

Copyright issues may hinder the Open Access idea: For a new document server „Climate Change“ we tried very hard to collect documents from the German KLIMZUG projects

← we had to make the authors sign a letter of agreement ex-post

Many practitioners long for help and judgement to navigate all different information.

Many institutions made the experience, that information in data portals needs individual explanation and customising. So they combine information products and consultancy.



Questions

How to design highly complex scientific knowledge to make it useful for practitioners or scientists from other fields?

How to evaluate the content of the different Open Access information portals and enable users to judge on their reliability?

What can appropriate quality criteria be like?

Can we involve practitioners in designing web-portals that facilitate the huge amount of knowledge?

Are there appropriate structures and resources to involve practitioners in co-designing and facilitating Open Access products?

■ References

Brinkmann, C.; Bergmann, M. et al (2015): Zur Integration von Wissenschaft und Praxis als Forschungsmodus. Hamburg

Reitinger, E.; Ukowitz, M. (2014): Emotionen und Qualitäten in der transdisziplinären Forschung. In: Dressel/Berger/Heimerl/Winiwarter (Hg.): Interdisziplinär und transdisziplinär forschen. Praktiken und Methoden. Bielefeld

Scherhauser, P.; Grüneis, H. (2014): Herausforderungen und Grenzen partizipativer Projektarbeit – Zwei Beispiele aus der transdisziplinären Klimawandelanpassungsforschung und erste Lösungsansätze. In: Umweltpsychologie, 18(2), p. 189-210

Stauffacher, M.; Flüeler, T. et al (2008): Analytic and dynamic approach to collaboration. In: Systemic Practice and Action Research 21/6, p. 409-422