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How can research funding programmes enhance transdisciplinary co-production of knowledge?

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Abstract

A growing number of actors emphasize the need for transdisciplinary (TD) co-production of knowledge as one way of making research part of needed societal transformations. But as the field of TD research has developed, many scholars have pointed out how the prevailing research context shaped by current science policy is persistently unfavourable to TD modes of knowledge production; TD requires conditions that differ from those needed for basic disciplinary research (Dedeurwaerdere 2013; Kläy et al. 2015; Kueffer et al. 2012; Schneidewind 2009). However, while there is an increasing body of literature about TD research at the project level, very little research has focused more specifically on issues related to science policy, in particular, on how different structures of overall research funding programmes relate to successful enhancement and implementation of such research (Schneider et al. 2019).

Research funding bodies increasingly acknowledge the importance of TD research, yet their management, evaluation, and funding practices often do not reflect this (Woelert and Millar 2013). For example, there is much evidence that interdisciplinary and TD research proposals have difficulty obtaining funding, since reviewers typically apply disciplinary perspectives and quality criteria instead of considering the integrated whole (Bromham et al. 2016; Mansilla 2006; Woelert and Millar 2013). Moreover, (classic) academic careers are still typically built on measuring scientific impact according to publication in peer-reviewed journals – journals that are more interested in the scientific part of TD research, not in the efforts of such

actual societal transformations (Kueffer et al. 2012; Rhoten and Parker 2004). Consequently, for TD research to reach its full potential, experts argue that far-

reaching structural and institutional changes are needed in the way academic organizations are managed, organized, and funded and in how TD research is treated by research funding bodies (Dedeurwaerdere 2013; Defila and Di Giulio 1999; Kläy et al. 2015; Kueffer et al. 2012; Schneidewind 2009).

With third-party funding increasingly required for research, research funding programmes and bodies now play a crucial role in science policy (Braun 1998; Bromham et al. 2016; Lyall et al. 2013) and, consequently, in possible changes to the science policy context. Funding bodies strongly influence what kind of research programmes get launched, what research proposals get funded, what kinds of impacts are valued, what networking and capacity-building opportunities are possible, and what sort of career experience is considered valuable in applicants for funding.

In order to address this gap, this session focuses on how research funding programmes can enhance transdisciplinary co-production of knowledge in different contexts. By doing so, we try to unravel the potential and limitations of different approaches and activities, and to enhance learning between the programmes.

To learn from different meta-level studies that accompany TD funding programmes, the session includes 6 short talks (10 min), followed by a joint discussion addressing the following guiding questions.

1) What activities were implemented by the funding programmes to foster TD? In particular,
   a. how did they support the three core elements of TD research (joint problem and goal definition, co-production of new knowledge and contributions to societal transformations)?
   b. how did they support TD on the level of the projects (project support) and on the level of the entire programme (e.g. synthesis)?
2) How and to what extent did the programmes foster the project's capabilities in engaging in TD?
3) What methodological designs were applied and developed by the accompanying, meta-level research to support the programmes? In particular,
   a. how was the collaboration between the meta-level research and the programmes organised?
   b. what concepts, tools and frameworks have been developed?
4) What are key learnings for future programme development?

This session is linked to a session where representatives of research funding institutions discuss how research funding for enhancing societal transformations can be enhanced.

Talks:

Research Funding Programmes Aiming for Societal Transformations: 10 Key Stages.
Flurina Schneider et al. will present a generic model and design recommendations for TD research funding programmes, developed jointly with key actors involved in four Swiss research funding programmes: the National Research Funding Programme NRP61 on sustainable water management, the NRP68 on sustainable use of soil as a resource, the Swiss Programme for Research on Global Issues for Development (r4d programme), the NCCR North-South focusing on Research for Mitigating Syndromes of Global Change.

Supporting the Swiss NRP 72 on One Health and antimicrobial resistance

Isabelle Providoli et al. will present insights from an accompanying research on interdisciplinarity in the Swiss NRP 72. The aim of the study was to support the programme's steering committee in navigating challenges and opportunities of interdisciplinarity related to the emerging One Health approach. To generate a holistic understanding of the approaches and activities of both, the programme level and the individual projects, the study team tested the above mentioned generic framework.

Accompanying research as a catalyst for integration? Experiences with German research funding bodies

Antonietta Di Giulio and Rico Defila will present their experiences in conducting accompanying research to German research programmes. These experiences cover two different types of accompanying research (meta type and integration-oriented type, see Defila and Di Giulio 2018) and one type of supporting activity (coaching) for three different funders in Germany. In the presentation, these approaches of how different funders have supported the projects and/or the programmes and the concepts and tools that were developed by the accompanying research will be explained, and the potentials and limitations of these approaches will be compared.

Fostering transdisciplinary in the German Programme "innovation groups for sustainable land management"

Christian Eismann will present first results on how the projects have benefited from (and struggled with) the new programme elements. The funding programme "Innovation Groups for Sustainable Land Management" may be a milestone for German transdisciplinary research. It covers very heterogenous projects on the energy system transformation, urban-rural relationships and new methods of farming. The programme administration developed a bundle of new means and requirements to support the projects by their common goal to create solutions ready for application. Among other things, the proposal writing phase was financed, the project duration was extended from the usual three years up to five, the project's practice partners received a significant funding, and the projects had to create an innovation concept. However, for the project members it was a demanding balancing act of doing serious scientific research while being confronted with the high expectation to achieve effect and create practical outcomes for the project regions and the society. The new elements of the programme's structure produced uncertainties too, on both sides.

A UK Perspective on ITD Research Funding Programmes

Catherine Lyall will talk on ITD research funding in UK. "Transdisciplinary" research is not a mainstream activity in the UK and is rarely supported per se by funders of research. Yet, although UK research policy does not fund overtly "transdisciplinary" research programmes, it does firmly embrace the concepts of research that is interdisciplinary and that involves potential research users in some form of "knowledge exchange". Indeed, British academics are now explicitly assessed on the extent to which their research has an impact on external

will illustrate this apparent contradiction with reference to examples of UK research that is, to all intents, transdisciplinary if not in name.

ICS's LIRA 2030 in Africa

Katsia Paulavets et al. will talk on the LIRA 2030 Africa programme and how it supports African early career scientists to undertake TD research on sustainable development in the urban context. Based on the experiences of the LIRA projects, the intervention will focus on what it takes to undertake TD research in the African context, what enabling environment it requires and what institutional structural changes are needed.

Key Readings:

Schneider, Flurina, Tobias Buser, Rea Keller, Theresa Tribaldos, und Stephan Rist. 2019. „Research Funding Programmes Aiming for Societal Transformations: Ten Key Stages". *Science and Public Policy*. https://doi.org/10.1093/scipol/scy074.

Defila R., Di Giulio A. (2018): What is it good for? Reflecting and systematizing accompanying research to research programs. In: GAIA, 27(S1), 97-104. doi: 10.14512/gaia.27.S1.17