

Policy Brief

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Utilization of research knowledge in transformation pathways towards sustainability

Co-creation of research knowledge between academics and non-academic stakeholders, contributes to sustainable development and societal transformation. Based on a survey conducted among 43 international research partnership projects, we recommend an active engagement with non-academic actors, especially from vulnerable groups and local enterprises, from the start of a research endeavour.

Picture: Critical revision of land rights among academic and non-academic actors in Brazil's *Semiarido* region. © Johanna Jacobi

KEY MESSAGES

- Research knowledge from 43 r4d projects is mostly used in science and to a lesser extent in policy-making and development practice.
- Most frequent non-academic users of research knowledge are governmental institutions and local communities.
- Different stages of utilization of research knowledge have been identified.
- Projects achieve multiple stages of utilization at different geographic scales from local to global.
- The early involvement of non-academic actors from key groups is linked to their utilization of research knowledge.

Participation of non-academic actors

There is often a contradiction between purely scientific interests and research needs of non-academic actors. Transdisciplinary approaches between academic and non-academic actors can bridge this tension. Our recent study shows that such empowering approaches can facilitate utilization of co-created knowledge at multiple geographical scales.

When research is based on transdisciplinarity and co-creation of knowledge, utilization goes beyond the scientific community to the spheres of practice and policy making. In this way, co-created knowledge becomes transformative because it puts real and contextualized problems at the centre, allowing for the co-production of context-specific answers. Thus, participation of non-academic actors from the beginning of the project, when the project contents and responsibilities are defined, is an opportunity for empowerment and for developing strategic links. This participatory approach goes beyond access to information sources or dissemination, and includes participation of non-academic partners in the project design and as co-organizers of the research activities.

The way in which non-academic actors are involved in research projects affects not only the research activities but also has an impact on the ultimate beneficiaries. A transformative science considers the processes of participation and benefit as key to moving towards sustainability.

Role of academic and non-academic actors in achieving utilization of knowledge

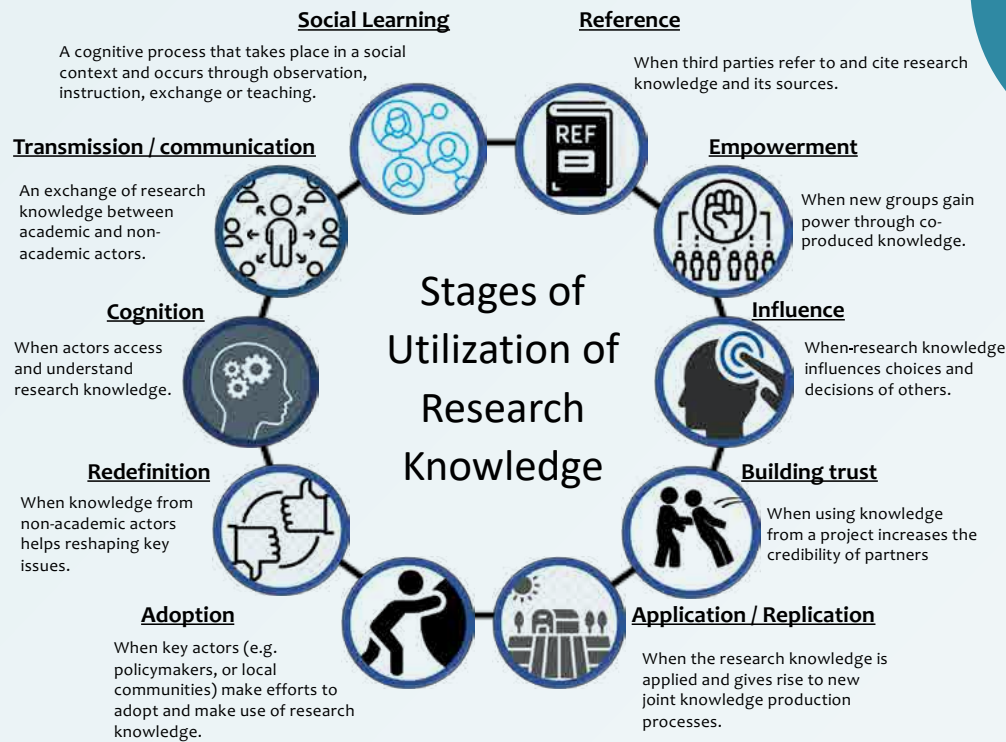
In the responses of 94 academic and non-academic partners involved in research for development projects we found several significant relationships between specific actors and the stages of utilization of knowledge achieved in the projects (see Figure 2). National research institutions are key to *transmission* as well as to *advocacy*; local communities are relevant for achieving *social learning*, *empowerment* and *application* in the field; local NGOs and extension organizations are relevant for *understanding*, *influence*, *building trust* and *empowerment*, and international NGOs are important for *redefining issues*. In order to achieve multiple stages of utilization of research knowledge, it is necessary to include academic and non-

RECOMMENDATIONS FOR RESEARCHERS AND FUNDERS

- Our research shows that collaboration between academic and non-academic partners contributes to sustainability pathways. Interdisciplinary and transdisciplinary research should be supported in development cooperation because it facilitates multiple collaboration avenues by combining different forms of knowledge.
- Long-term partnerships between academic and non-academic, South-North and South-South partnerships contribute to sustainability transformations, but time is needed to build mutual trust. Thus, researchers and funders need to secure the resources and personal commitment for developing long-term partnerships.
- Enabling institutional environments should be created for transdisciplinary research because it challenges scientific traditions, does not easily fit within academic structures, and exposes prejudices about non-academic knowledge holders.
- Utilization of research knowledge should be valued and promoted during all project phases because the use of knowledge is a continuum, producing permanent effects in science, policy and practice.

academic actors in all partner countries. Our results indicate that the utilization of research was high in research itself, and in influencing policy discourses. However, it had low effects on changing policies and practices. We therefore identified a gap between research and discourses, and the actual change in policy and practice. Respondents highlighted the need to conduct research for development using partnerships with civil society groups who then also engage with policy makers an appropriate strategy to deal with this potential risk. Furthermore, transdisciplinary research is impossible to implement if predominant ways of doing research – such as applying only positivistic approaches – are not questioned and transformed as well.

Multiple mechanisms to enhance the utilization of research knowledge and transformation were identified in the analysis



(see box). There is no ideal combination, nor one mechanism fits all needs. Rather, there is a need to adjust the mechanisms to the specific contexts. The process of adapting these mechanisms can be time consuming. Furthermore, our results showed that the achieved stages of utilization of knowledge are connected to the process of co-creating knowledge. However, the utilization of co-created knowledge beyond the sphere of the project partnerships remains challenging, as we saw in the weak results for actual changes in policies.

The projects of the sample are embedded in transformation cycles with integration of non-academic actors being the most frequently mentioned step. As this research was done while the research projects were still active, higher levels of social learning and collective action can be expected in the future. Indeed, the projects can be regarded as important parts of a larger societal transformation process.

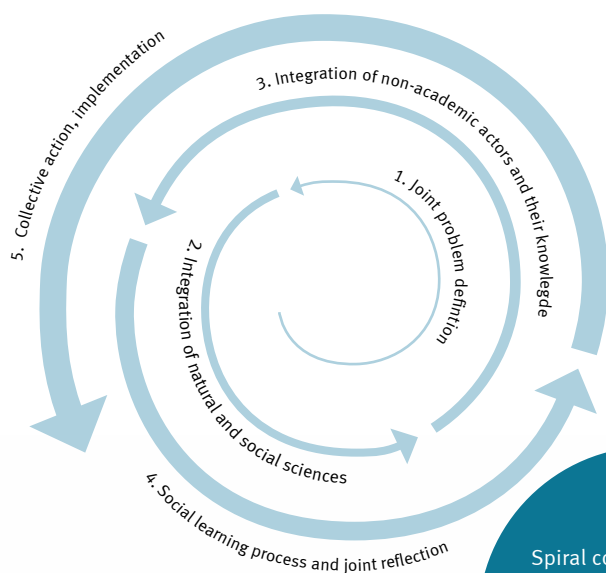
MECHANISMS TO ENHANCE THE UTILIZATION OF KNOWLEDGE AND TRANSFORMATION

Utilization of knowledge becomes possible through a diversity of mechanisms. Combining traditional scientific approaches, co-creation of scientific knowledge, and mechanisms of interaction with non-academic actors appear to have potential. In our sample, the most important mechanisms are (multiple selections possible):

1. Participation of local partners and/or policy makers in research, learning and/or identification of pathways (92%)
2. Partnership actions/collective action (78%)
3. Scientific articles and/or conference contributions (64%)
4. Provision of new methods/tools/technologies (knowledge, models, software) (56%)

In addition, the following approaches were considered as highly relevant:

- Educational change scenarios with capacity building or training in the partner countries, contributing to already existing initiatives
- Local community transformation actions for bottom-up institution building which aim to change the rules and increase participation, procedural and distributional justice.



Spiral concept showing an ideal-typical process of the transdisciplinary co-creation of knowledge and societal transformation

METHODS

The insights presented in this policy brief result from the two year synthesis stream on 'Utilization of research knowledge for sustainability transformations'. The focus was on the interdisciplinary and transdisciplinary processes of collaborations for sustainability within the r4d programme. A total of 94 academic and non-academic partners active in 47 research projects in 37 countries worldwide participated in our survey and replied to ten possible stages of knowledge utilization at different scales. The analysis in the global research network of the r4d programme made it possible to identify common advantages and challenges of research knowledge utilization. The results demonstrate that societal utilization of research knowledge cannot be achieved without employing transdisciplinary approaches that bring together academic and non-academic actors around sustainability debates. The **11 principles for transboundary research partnerships**¹ of the Swiss Commission for Research Partnerships with Developing Countries provide guidance for these approaches. Transformative science depends to a large extent on the spaces where participation takes place, and the possible benefits generated by scientific research, not only for academic communities but in a proportional balance with communities of policy and practice.

¹ https://kfpe.scnat.ch/en/11_principles_7_questions/uuid/i/13beb0f7-4780-5967-a257-bd6c-c3d5e424-A_Guide_for_Transboundary_Research_Partnerships_%283rd_edition_-_2018%29

FURTHER INFORMATION

r4d Synthesis Project:

Utilisation of research knowledge for sustainability transformations

www.r4d.ch/r4d-programme/synthesis

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THE AUTHORS

Aymara Llanque-Zonta

Researcher, Institution University of Bern,
Center for Development and Environment (CDE)
aymara.llanque_zonta@leuphana.de



Johanna Jacobi

Researcher, University of Bern,
Center for Development and Environment (CDE)
johanna.jacobi@unibe.ch



Stellah M. Mukhovi

Lecturer/researcher,
University of Nairobi, Department of Geography &
Environmental Studies
stellah.mukhovi@gmail.com



Eliud Birachi

Project leader, Bioversity-CIAT
e.birachi@cgiar.org



Per von Groote

Program manager, University of Bern,
Institute of Social and Preventive Medicine
per.vongroote@ispm.unibe.ch



Carmenza Robledo

Researcher, ETH Zürich, TdLab
carmenza.robledo@usys.ethz.ch



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