

# EADI

## **Roles, processes and risks within the research – practice nexus: Perspectives from academia**

---

Sonja Keller  
Katja Bender

---



# Roles, processes and risks within the research – practice nexus: Perspectives from academia

**Study commissioned by the European Association of Development  
Research and Training Institutes**

Prepared by

Sonja Keller und Katja Bender (both Hochschule Bonn-Rhein-Sieg, University of Applied  
Sciences)

**Reviewers:**

Mikkel Funder, Danish Institute for International Studies

Ondřej Horký-Hlucháň, Institute of International Relations Prague

Katarzyna Jarecka, Poland

Maru Mormina, University of Oxford, Nuffield Department of Population Health

Jakub Stepién, Poland

*November 2020*

**Contact:**

Prof. Dr. Katja Bender

Email: [katja.bender@h-brs.de](mailto:katja.bender@h-brs.de)

International Centre for Sustainable Development

Hochschule Bonn-Rhein-Sieg, University of Applied Sciences

<https://www.h-brs.de/de/izne>

Susanne von Itter

Email: [itter@eadi.org](mailto:itter@eadi.org)

European Association of Development Research and Training Institutes

[www.eadi.org](http://www.eadi.org)

# Content

- Table of figures ..... II
- Executive Summary ..... 1
- 1. Introduction ..... 3
- 2. Literature review ..... 3
- 3. Methodology ..... 5
- 4. Results..... 9
  - 4.1. Motivating and demotivating factors ..... 9
  - 4.2. Roles, partners and processes..... 12
  - 4.3. Perceived impact of collaboration on research ..... 23
    - 4.3.1. Understanding research quality..... 23
    - 4.3.2. Perspectives on goals of collaboration..... 24
    - 4.3.3. Perceived impact on research quality..... 25
- 5. Conclusion ..... 30
- Bibliography ..... 32

## Table of figures

Figure 1: Disciplinary background of survey respondents.....	7
Figure 2: Yrs of experience in research, prof.l experience and experience with RPC .....	8
Figure 3: Motivating and demotivating factors (respondents without experience) .....	9
Figure 4: Motivating and demotivating factors (respondents with experience) .....	10
Figure 5: Types of practitioners involved in RPCs .....	12
Figure 6: Roles of practitioners in RPCs.....	14
Figure 7: Practitioners as partners (%) .....	14
Figure 8: Practitioners involvement in phases of research process .....	15
Figure 9: Types of practitioners recognizing value and utilizing results.....	16
Figure 10: Lack of scientific understanding undermining successful collaboration .....	17
Figure 11: Resource consumption of RPC compared to traditional research projects I.....	18
Figure 12: Resource consumption of RCP compared to traditional research projects II.....	18
Figure 13: Conflicts threatening project success.....	19
Figure 14: Ranking of funding sources according to relevance.....	20
Figure 15: Appropriateness of terms and conditions and sufficiency of calls.....	21
Figure 16: Social impact as researcher's responsibility.....	24
Figure 17: Impact on research quality dimensions.....	26

## Executive Summary

This explorative study was commissioned by EADI and conducted between October 2019 and July 2020. It aimed to assess from the perspective of academia facets of cooperation between development research and practice. This included identifying main groups of non-academic actors involved, analyzing motivations as well as enabling or disabling factors, and exploring ethical challenges of research-practice collaboration in development research. The study was conducted in the context of the rising attention paid to cooperation between research and practice in the context of sustainable development.

A broad definition of research-practice collaboration was applied to capture all collaborative activities between researchers and practitioners. 'Practitioner' refers to any non-academic actor from any sector (public administration, policy-making, CSO / NPO, private sector, public service provision). The study comprises descriptive quantitative data analysis of data generated through an online survey, which was distributed among heads of EADI member institutions, as well as qualitative content analysis of expert interviews. The sample consists of 52 survey respondents predominantly with PhD level education and experience in collaborations, as well as 11 senior-level researchers with experience in collaboration with practitioners as interview partners.

Results show that researchers in a majority of cases have additional roles in joint projects, such as project leadership and coordination, and generally feel a strong responsibility for ensuring project success and impact. Practitioners get involved in the research process most often at the beginning (problem definition) and end (dissemination), and slightly less often during data collection. Involvement is lowest during theoretical reasoning and hypothesis formulation as well as development of research design and data analysis. Patterns in collaboration of different types of practitioners could be identified, with CSO/non-profit organizations being more often involved as partners and utilizing results more often than other types of practitioners. Factors potentially undermining project success appear to be a lack of understanding of scientific methods and processes on the side of practitioners, and lack of partner motivation as well as organizational differences. Furthermore, collaborative projects are perceived to be more resource intense regarding time, management effort and communication. Funding appears to be a critical issue shaping collaboration, with up to over half of survey respondents viewing different aspects of funding conditions as inappropriate. Furthermore, funding conditions and its associated challenges vary greatly nationally. Qualitative data shows how funding and governance of collaboration impact on all dimensions of collaborative research: its credibility, legitimacy and salience.

While the public discourse tends to champion research-practice collaborations as a way to address complex challenges of our time, views on how collaboration impacts on research quality in its given dimensions credibility, legitimacy and salience vary greatly between researchers.

# **Roles, processes and risks within the research – practice nexus: Perspectives from academia**

## **Study implementation**

### **1. Introduction**

This report is the result of an explorative, empirical study into perspectives of academia regarding prerequisites and key drivers of successful partnerships. The study was commissioned by EADI and was implemented between October 2019 and July 2020. The objectives entail describing predominant ways of cooperation between development research and practice and identifying main groups of non-academic actors involved in research-practice collaboration as well as analyzing motivations for engaging or disengaging in research-practice partnerships, identifying enabling or disabling factors for research-practice collaboration and exploring ethical challenges with respect to research – practice collaborations in development research.

Cooperation between research and practice has gained attention over the past two decades, especially in the context of sustainable development. It is generally understood to benefit both society and research, leading to more effective and equitable social innovation and interventions, while improving research itself in its different dimensions.

While research-practice collaborations have increasingly become an object of investigation, perspectives and experience of academia with research-practice collaborations have not yet been studied extensively.

This study consists of a preliminary literature review of research into research-practice collaborations generally, and an assessment of literature concerned with the researchers' roles, attitudes and perspectives in collaborative processes. In a next step, results from an online survey distributed among EADI member institutions are presented. The qualitative results are then put in perspectives and combined with the results of semi-structured interviews.

### **2. Literature review**

In preparation of the empirical study, a literature review of research into research-practice collaborations was conducted, which informed the development of the survey and interview guide. The literature review includes an overview of research into research-practice collaborations and the evolving research into roles and perspectives of academia in research-practice collaborations.

The cooperation between researchers and practitioners during the different stages of the research process is gaining attention, and has increasingly been promoted as a way to benefit

both research and society in the social sciences, health and public services and development research, climate and environmental science and sustainability studies among others (Jasanoff 2004; Djenontin / Meadow 2017; Filipe et al. 2017; Needham 2008; Hirsch-Hadorn et al. 2006; Rycroft-Malone et al. 2016). Expected benefits concern both the results of the collaborative research process as well as the societal impact of results.

Research-practice collaboration has become a common political demand and social expectation of academia (Dilling / Lemos 2011; Future Earth), with grant requirements in some European countries increasingly including forms of cross-sectoral collaboration (Pohl 2008: 47). Beyond fulfilling grant requirements and political and institutional strategies, researchers have for some time been engaged in collaborative activities with non-academic actors depending on their professional development and career paths, as well as their personal preferences and opportunities.

The discussion of research-practice collaboration features different terminologies which have developed to describe the collaborative process, displaying a variety of definitions, concepts and goals. Prominent terms are transdisciplinary research, co-production of knowledge, civic science, post-normal science, Mode-2-knowledge production, and participatory action research (for an overview of these see Wyborn et al. 2019). However, despite the popularity of collaborative approaches to research and knowledge production, definitorial and conceptual unclarity remains a prevalent issue, while the process itself is understood differently in different theoretical traditions regarding the relationship between the sciences and society, perspectives on knowledge, and outcomes of the process (Miller / Wyborn 2018; van der Hel 2016; Popa et al. 2014).

The prevailing unclarity is understood to undermine the approach's potential to create the desired (forms of) knowledge or results more generally, and to be impactful (Jahn et al. 2012). Ultimately, it is not clear what counts as co-produced knowledge and why, what processes to arrive at co-produced knowledge look like regarding actor constellations and interactions and what happens during the process, when the process starts and what impact it aims to achieve (Schneider et al. 2019; Thompson et al. 2017; Lux et al. 2019).

Science and technology studies have developed the perspective on knowledge as being inevitably socially co-produced and inherently political, and science as socially constituted, with a focus on the process of knowledge creation as (re-)production of social order (Jasanoff 2004; Guston 2001: 401). Issues of power and its interdependencies with knowledge as well as the subjectivity of actors have been at the heart of this perspective.

On the other hand, within sustainability studies, knowledge has been understood as more instrumental, and the co-production process has been considered normatively as an aspiration.

This perspective has frequently been criticized for running the risk of disregarding inherent political issues of knowledge production (Miller / Wyborn 2018) and instead perpetuating power structures (Turnhout et al. 2020).

Empirical research rooted in the different theoretical perspectives into research-practice collaborations has flourished over the past two decades to gain a better understanding of collaboration processes, associated costs, roles, related results as well as conditions for and mechanisms of impact creation (e.g. Pohl 2008; Pohl et al. 2010; Armitage et al. 2011; Harvey et al 2019; Rosendahl et al. 2015; Zingerli et al. 2009; Filipe et al .2017; Edelenbos 2011; Lux et al. 2019; Aeberhard / Rist 2008). Research focusing on researchers and their relations with practitioners (Parker / Kingori 2016; Guimarães et al. 2019; Oliver et al. 2019; Williams et al. 2020; Nyström et al. 2018; Mitlin et al. 2020) and on stakeholders (Bracken et al. 2015) is still scarce.

### 3. Methodology

In order to capture attitudes and experience regarding the spectrum of research-practice collaboration, this study has applied a broad understanding of research-practice collaboration as any research activity that includes practitioners at any given stage of research, with the exception of research activities which involve practitioners as informants only (e.g. respondents in data collection processes). ‘Practitioners’ are understood as actors from any field outside academia – including governments and public authorities, civil-society organizations or private sector actors. This broad definition allows for an exploration of the empirical realities of and attitudes towards the research-practice nexus without normative implications, while at the same time enabling the exploration of the links between research-practice collaboration and impact creation more generally.

The study employed quantitative and qualitative methods.

As a first step a descriptive statistical data analysis was conducted with data derived from an online survey distributed to heads of EADI member institutions. In a second step generated qualitative data was analyzed using structured content analysis, with categories derived inductively from the interview material.

The survey targeted researchers and research managers at EADI member university as well as non-university research institutions. The goal of the survey was to find out about participants and processes of collaboration, perceived risks and benefits, and motivations of academics engaging in them, as well as perspectives of those not engaging in these collaborations.

The survey was conducted online between 6th December 2019 and 31<sup>st</sup> January 2020. The open survey link was distributed through EADI mailing lists, provided by EADI. The heads of

EADI member institutions were contacted and invited to complete the survey, as well as to distribute the link within their organization.

The online survey consisted of a maximum of 39 questions depending on the experience of the respective researcher, and an additional optional amount of 13 project specific questions. The additional questions related to specific successful or unsuccessful projects and could be filled in for a maximum of 3 projects. Survey questions were developed building on the literature about research-practice collaboration. The survey captured data on the following dimensions:

- Background information about the respondent (e.g. respondents' academic qualification and discipline, institutional background and field of research, professional experience)
- Perceived impact of research-practice collaborations on research quality
- Characteristics of research-practice collaborations and attitudes towards processes of research-practice collaborations
- Project specific information

A total of 52 respondents completed the survey, which amounts to a response rate of below 2% relating to the total number of EADI member institution staff. This small sample size presents a limitation of the study, including a possible selection bias.

The survey filtered respondents according to whether they indicated to have experience with research-practice collaboration. The objective was to infer about differences in attitudes towards research practice collaborations between both groups. Out of the 52 respondents only 7 respondents indicated to have no experience. This indicates a self-selection bias with researchers having been exposed to research-practice collaborations being more likely to answer the survey. The results will be presented in chapter 4, but it needs to be stressed that any comparative interpretation between respondents with and without experience is severely constrained.

Follow up semi-structured interviews were carried out with a selection of European senior level researchers with extensive first-hand experience in the collaboration with practitioners and the interface between research and practice. Interview partners were selected based on their work-related country of origin, experience, and disciplinary background. To ensure equal representation, gender was included as a selection criterion.

Each interview was scheduled for 50-60 minutes and was conducted via online video conference tools. The interview guide contains eight guiding questions, which built on the results of the quantitative data analysis. The interview guide in a first step aimed to capture the different experience with research-practice collaboration regarding funding conditions, duration of collaborations and projects and types of partners involved, as well as perceptions of motivations.

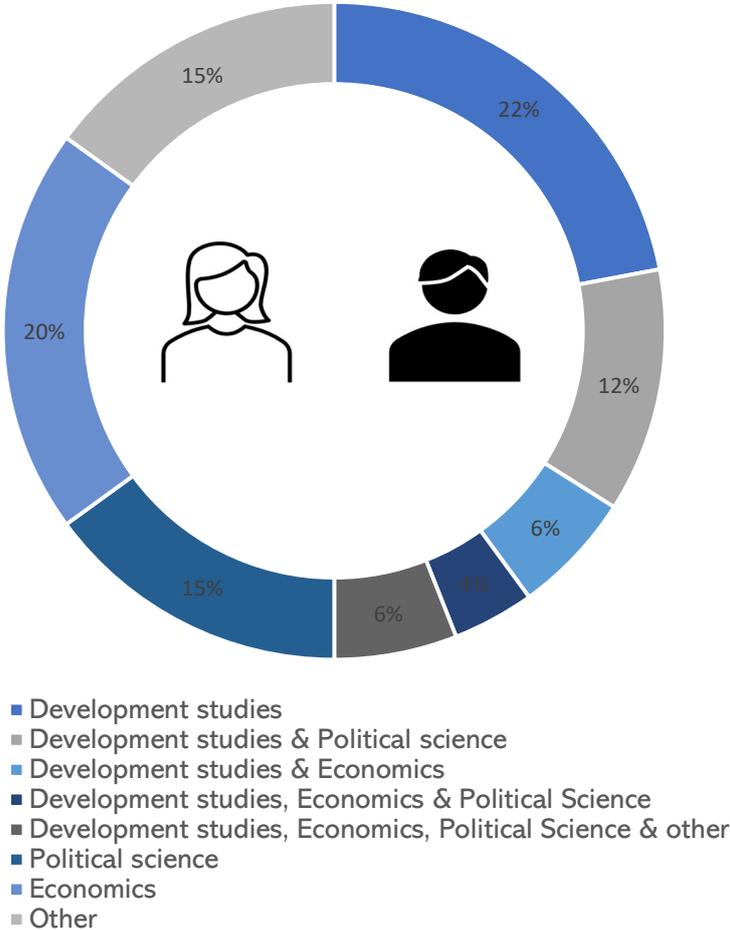
In a second step, the interview guide inquired into understandings of goals of collaborative research, perspectives on the impact on the different dimensions of research quality (credibility, salience, legitimacy), as well as additional facilitating and obstructing factors to research-practice collaborations.



Survey respondents are majority PhD holders with 75%, 21% hold a Master’s degree, and 4% indicated they hold a Bachelor’s degree. The institutional background of respondents is equally distributed between university / university of applied sciences and non-university research institutes / think tanks, with 50% each.

Regarding disciplinary background, respondents could indicate multiple disciplines. There is a strong overlap between the disciplines of economics and political sciences/administration and development studies, as well as other related disciplines. 50% of respondents indicated a background in development studies, 36% in political sciences/administration, 35% in economics, and 23% in related other disciplines. 77% of respondents work in development research, 4% in sustainability, 6% in humanitarian aid and action, 6% in conflict studies and 2% in transition research, and 5% in other fields.

Figure 1: Disciplinary background of survey respondents



The range of respondent’s professional experience (in years) is between 3-40 years (median 18 years). Research experience spans from 0-40 years (median 15 years). 87% of all respondents have experience with research-practice collaborations, spanning from 1-31 years of experience, with the median being 7 years.

Figure 2: Yrs of experience in research, prof.l experience and experience with RPC



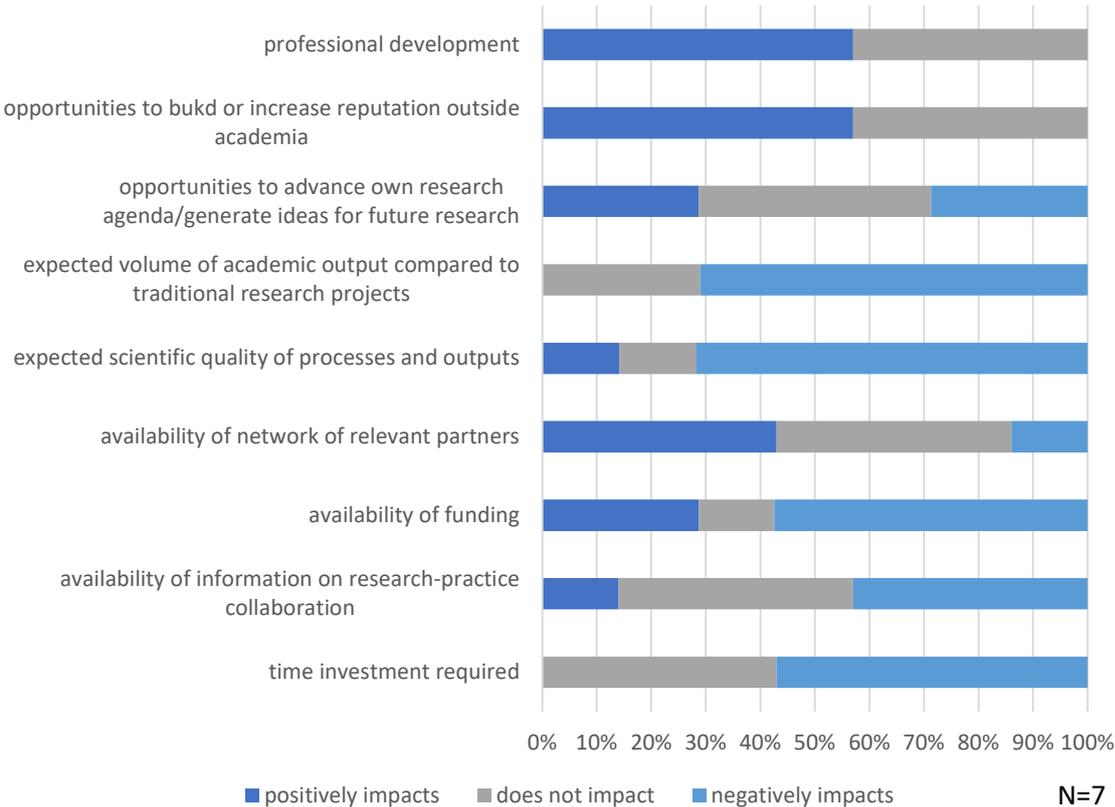
The interview sample consists of a total of eleven experts mainly from EADI member institutions across Europe, working at university and non-university research institutions, and with extensive experience with practitioner collaboration. Among the European countries are the United Kingdom, the Netherlands, Germany, Italy, Denmark, Sweden, Poland and the Czech Republic. The field of research spans sustainability studies, development research, social policy research and humanitarian as well as conflict and peace research. Disciplinary backgrounds span political sciences, sociology, economics, social anthropology, human geography, peace and conflict studies, development studies and humanitarian studies.

# 4. Results

## 4.1. Motivating and demotivating factors

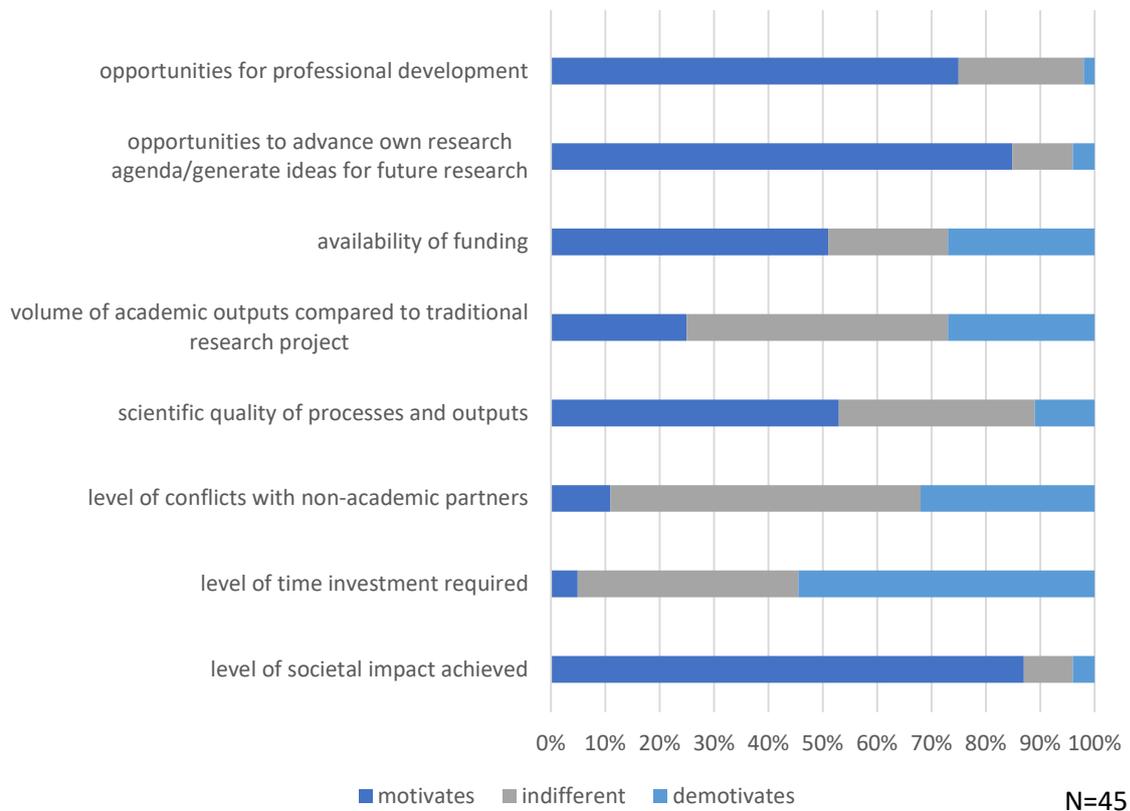
We suggested nine potentially relevant aspects for the decision to engage in collaborations to respondents with and without experience. For respondents without experience, expectations regarding the **scientific quality** and the **expected academic output** of collaborations appear to demotivate engaging in collaborations, followed by expectations of available funds and required time investment. Perceived unavailability of information on collaboration also appears to be slightly more demotivating. Potentially motivating appears to be expectations of professional development, opportunities to increase reputation outside academia and the availability of a network of relevant partners.

Figure 3: Motivating and demotivating factors (respondents without experience)



For those with experience, the prime motivating factor appears to be achieving **societal impact**, followed by advancing own research agenda and generate new ideas for future research, building reputation outside academia, and to a lesser extent, opportunities for professional development. The prime demotivating factor is the **level of time investment** required, while other aspects did impact motivation to a lesser extent.

Figure 4: Motivating and demotivating factors (respondents with experience)



98% of those with experience indicated they intend to engage in collaborations in the future. Interest in engaging in research-practice collaboration among those respondents without experience appears to be lower, standing at 57%. Impeding factors in this group appear to be a perceived **lack of opportunities**, followed by the **unavailability of funds**.

Comparing the two groups, our results show that among those without experience, the **interest to engage in future collaboration is not very pronounced**, and **expectations of academic achievements within research-practice collaborations are rather low**. In contrast, respondents with experience in collaboration have a **much more positive view** of collaborative academic achievements, of scientific quality and outputs as well as opportunities to advance research agendas. The outstanding motivating factor appears to be the achievement of **social impact**.

**Qualitative results** support these findings, showing that especially **impact creation** and **opportunities for learning** motivate researchers, and career related aspects are of much lesser importance. In addition, the qualitative interviews discussed motivations in more depth.

Most interview partners named two factors that motivate them. Answers regarding motivations can be grouped in five dimensions:

- ▶ impact creation (7),
- ▶ learning (8),
- ▶ research practical (5),
- ▶ ethical (1)
- ▶ and career related (1).

Impact creation was named together with learning by six respondents, being the most common combination. Other combinations are a mix of the above.

Regarding impact creation, respondents stated a strong personal preference for research that is of practical relevance, produces useful and useable results and contributes to solving problems generally.

Learning as a motivation includes learning about the field (understanding political processes and decision-making, knowing issues of acute relevance to practitioners) as well as learning as a perspectival change (changing, broadening or updating perspectives, learning as a reality check, building bridges between academia and practice and breaking down stereotypes).

*“I personally think it is extremely exciting to understand political decision-making and to see that what was developed in an ivory tower does not always work in practice”*

Research practical motivations include the enabling of research and the development of research questions. Research is perceived to be enabled through collaboration especially in fields that are inaccessible to researchers (e.g. in conflict or crisis areas) or due to lack of research funding opportunities or infrastructure. Practitioners are understood in these circumstances to enable or facilitate data collection. The development of research questions refers to ‘interesting’ and practically relevant research as well as to the development of different research questions through the inclusion of practitioner perspectives.

One respondent cited ethical motivations as giving back to local partners with a view of research often extracting data for the researcher’s gain, accompanied by extracting the local partners’ resources (time, effort) or using the partners’ infrastructure. The integration of their input and the sharing of results with partners and the wider public is seen as some form of compensation for the “selfish extraction of data”.

Career related motivations were cited as a less important motivation. It includes the increase of visibility in academia and with partners and the building of reputation.

## 4.2. Roles, partners and processes

### Researchers

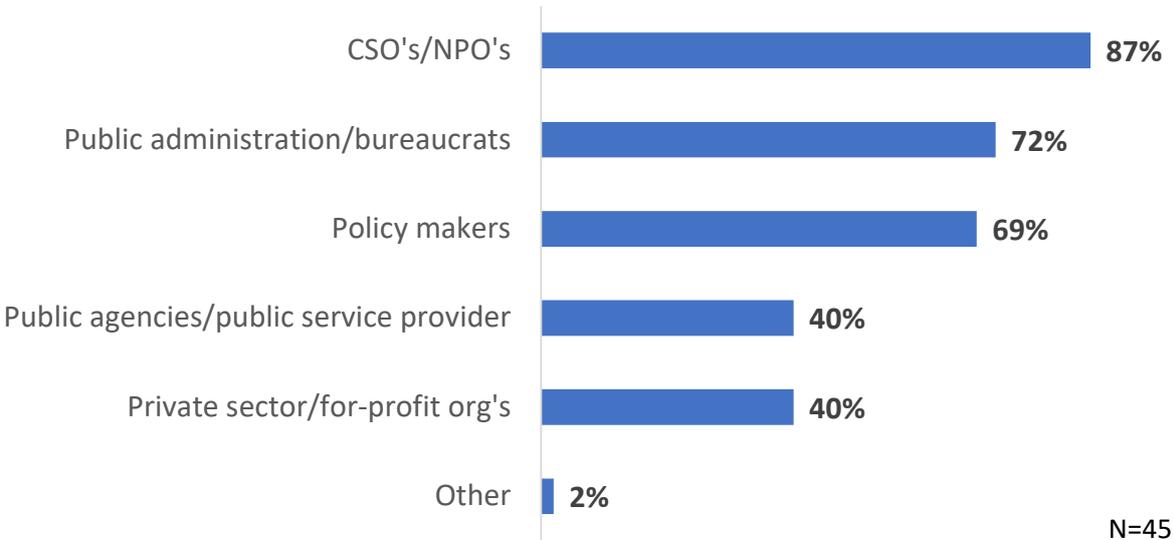
Respondents engage in collaboration in various roles. Of experienced survey respondents, 85% have participated in collaborations as researcher, 47% as project leader, 40% as coordinator, 33% as co-leader and 11% as administrator. **Of those participating as researchers 81% have additional roles.**

**This is supported by qualitative results**, with researchers emphasizing they drive collaboration, and feel responsible not only for their research, but for communication and collaboration.

### Partners

Partners involved in research practice collaboration are especially civil society organizations and non-profit organizations (87%), followed by public administration and bureaucrats (72%), and policy makers (69%). To a lesser extent, private sector and for-profit organizations (40%) as well as public agencies and public service providers (e.g. public medical services, security) (40%) are involved.

Figure 5: Types of practitioners involved in RPCs





Only 5% of respondents indicated that international partners are not ever involved in their collaborations. Whereas 36% indicated to always involve international partners, 32% do so often, and 27% sometimes.

**These results are reflected in the qualitative data:** Experience with partners span government actors, civil society organizations (NGOs), international organizations and international financial institutions, development agencies, consultancies, and consultancies as private sector actors, whereas private sector actors other than consultants are somewhat underrepresented. Most respondents had experience with international southern partners, whereas a minority mainly had experience with national or northern partners.

**Exchange platforms and networks** were mentioned by one respondent as a way to create trust between and legitimacy of partners, at international, national and local level. Trust and legitimacy building processes take time and require intense exchange and equal rights in the networks but are critical for cooperation.



Regarding partners' roles in collaborative research projects, survey results show that especially CSO/NPOs take active roles in consortia, while policy makers and public administration/bureaucrats tend to be more involved as stakeholders. Private sector actors tend to be slightly more often involved in consortia than as stakeholders, although overall at much lower levels than other types of practitioners.

Figure 6: Roles of practitioners in RPCs

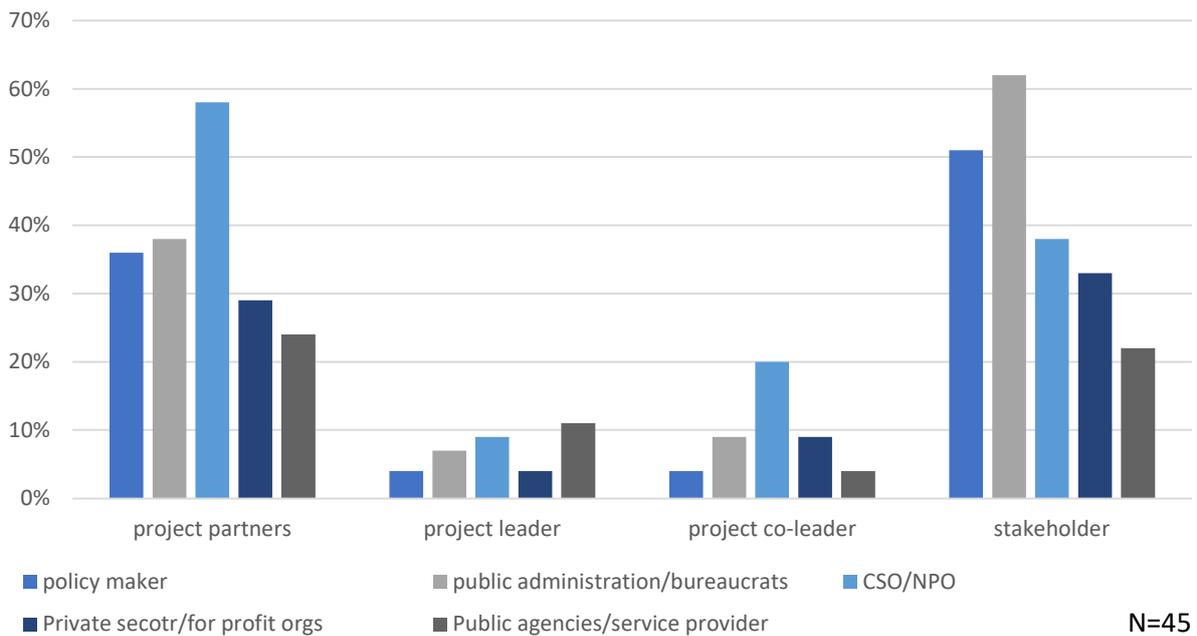
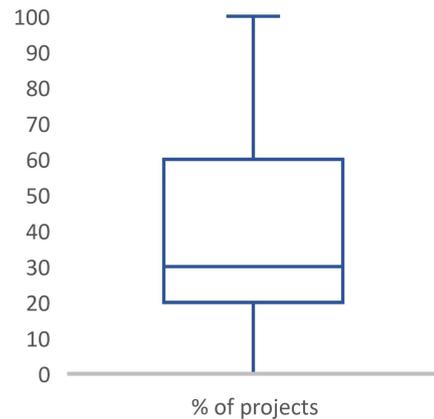


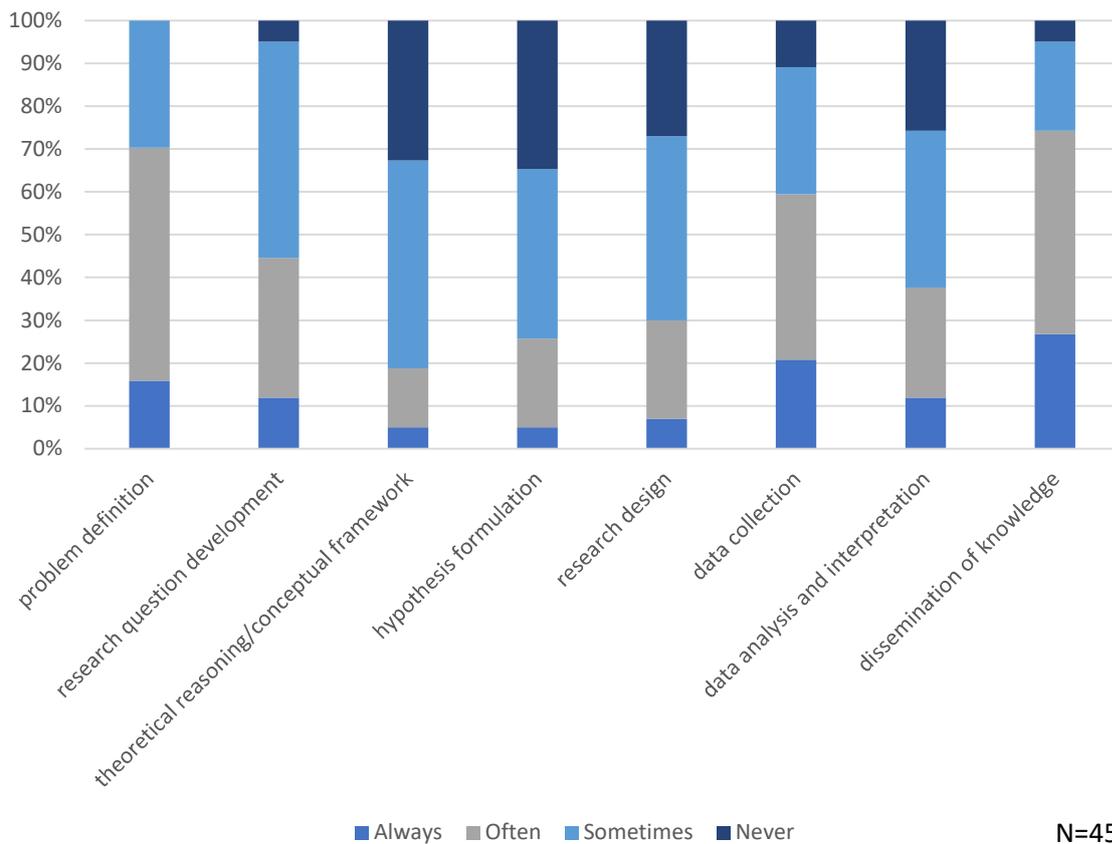
Figure 7: Practitioners as partners (%)

To follow up on roles, respondents were asked to indicate, how often in their experience practitioners are involved as project partners. 54% of respondents indicated that practitioners are involved in up to 30% of projects as partners, with the remaining 46% indicating that practitioners are involved as partners in 50% of projects and more.



To gain insights into how practitioners get involved in research, respondents were asked to indicate for each defined stage of the research process how often practitioners generally get involved. Results show that mostly, practitioners are involved in problem definition at the beginning and dissemination at the end of the process, as well as to a slightly lesser extent in the collection of data. Practitioners are least involved in the mostly theoretical stages of the research process and the analysis and interpretation of data.

Figure 8: Practitioners involvement in phases of research process

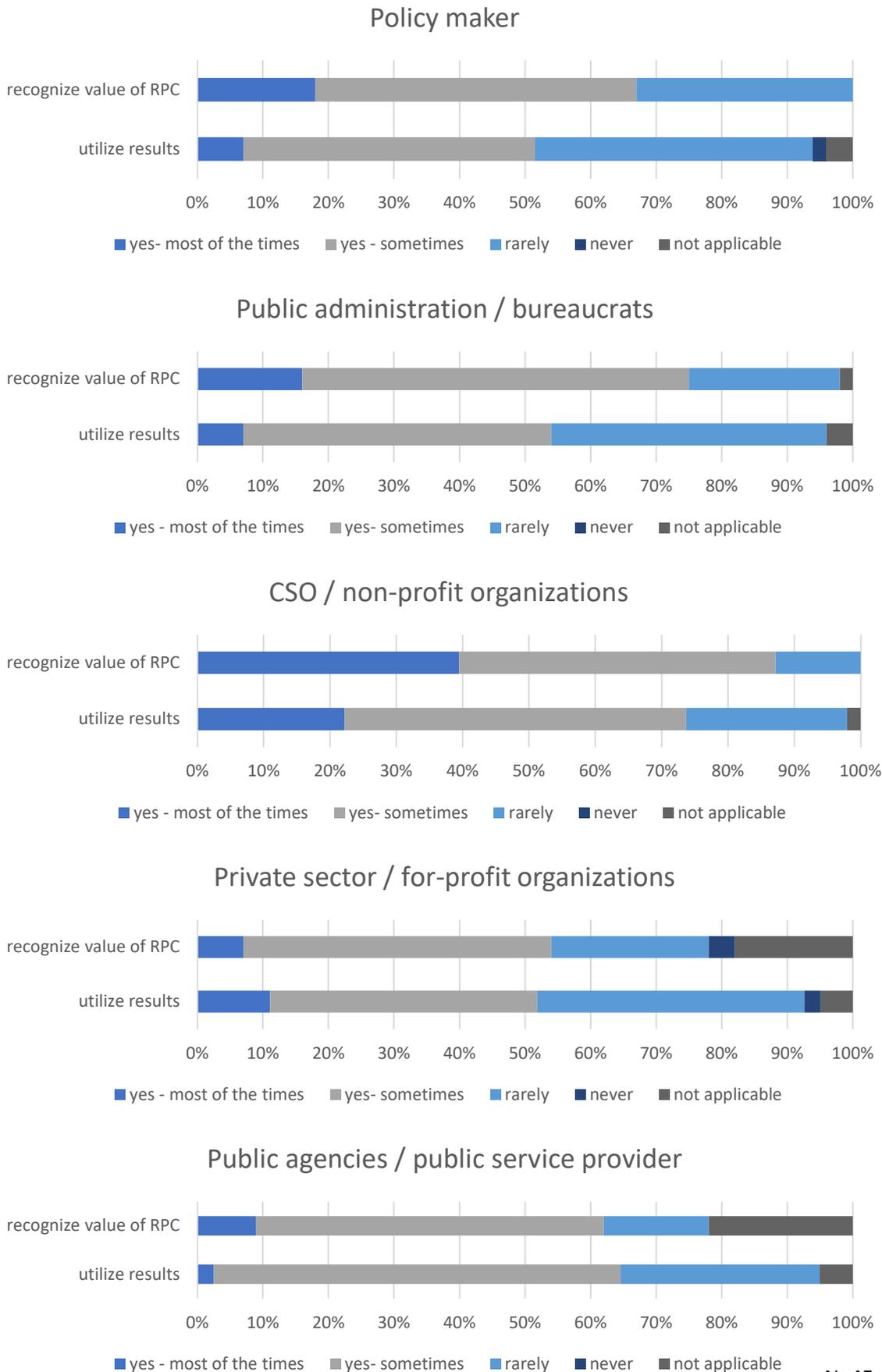


In most cases, projects **do not involve facilitators or knowledge brokers** (64%), in those remaining cases where facilitators or knowledge brokers are involved, they are involved as project partners (56%) or external contractors (50%), mainly funded by project funds. Of those indicating they did not involve facilitators mainly also indicated that they **did not have demand for facilitators** (76%). 21% gave the unavailability of funds as a reason.

### ***Evaluation of partnerships***

Survey respondents were asked to give their view on whether the different types of practitioners recognize the value of participating in collaborations, and if practitioners are perceived to utilize created research results. Results show that survey respondents perceive CSO/NPOs to value collaboration most and make most use of results. Policy makers and public administration/bureaucrats tend to recognize the value of collaboration. However, results are mixed regarding the issue of utilizing results. Over 40% of respondents indicate that this happens rarely.

Figure 9: Types of practitioners recognizing value and utilizing results



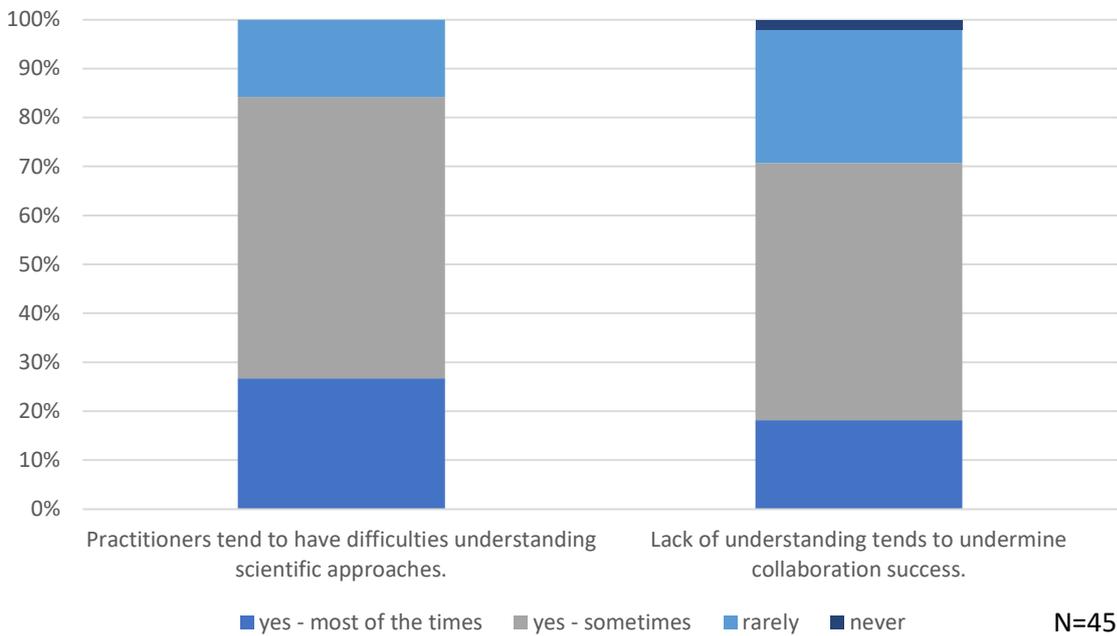
N=45

**Qualitative data suggests** that CSO/NPOs tend to collaborate with academia because researchers can **legitimate research conducted by CSO/NPO** and **enhance limited resources and capabilities in development projects**. Regarding collaboration with policy makers and public administration/bureaucrats, it is reported that results can oftentimes not be implemented because of **organizational inflexibility and politics**.

In a next step, survey respondents were asked whether in their experience, practitioners generally tend to have difficulties understanding scientific approaches, and if this lack of understanding undermines collaboration success. Our results indicate that a **lack of understanding** of scientific approaches is an issue in collaboration, with 84% of respondents indicating that this happens either most of the times or sometimes. To a slightly lesser extent do these problems seem to **undermine the success of collaborations**.

**!** *However, with 71% of respondents indicating that this lack of understanding undermines collaborations most of the times or sometimes, this can be regarded as a critical challenge to the effectiveness of research-practice collaborations.*

Figure 10: Lack of scientific understanding undermining successful collaboration



### Challenges and conflicts

Research-practice collaborations overall tend to be more resource intense than pure research projects, with 67% of respondents viewing them as more time consuming, 58% as more difficult to manage, and 73% as requiring much higher or higher communication efforts.

Figure 11: Resource consumption of RPC compared to traditional research projects I

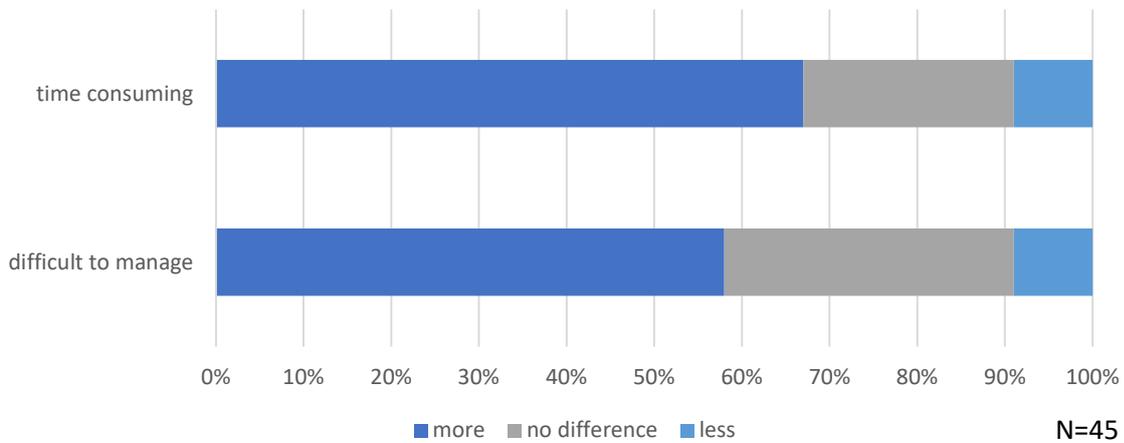
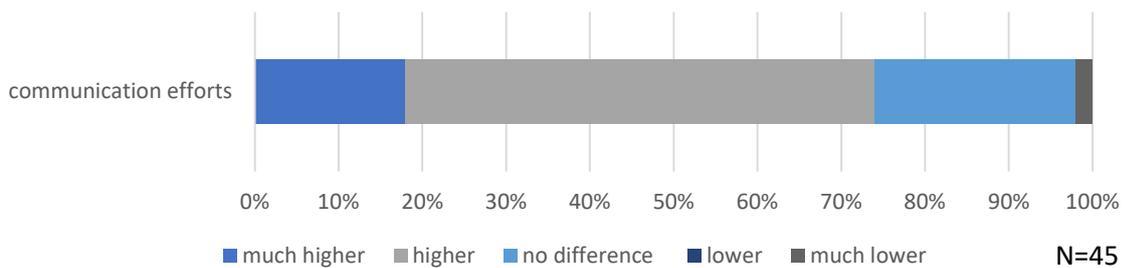
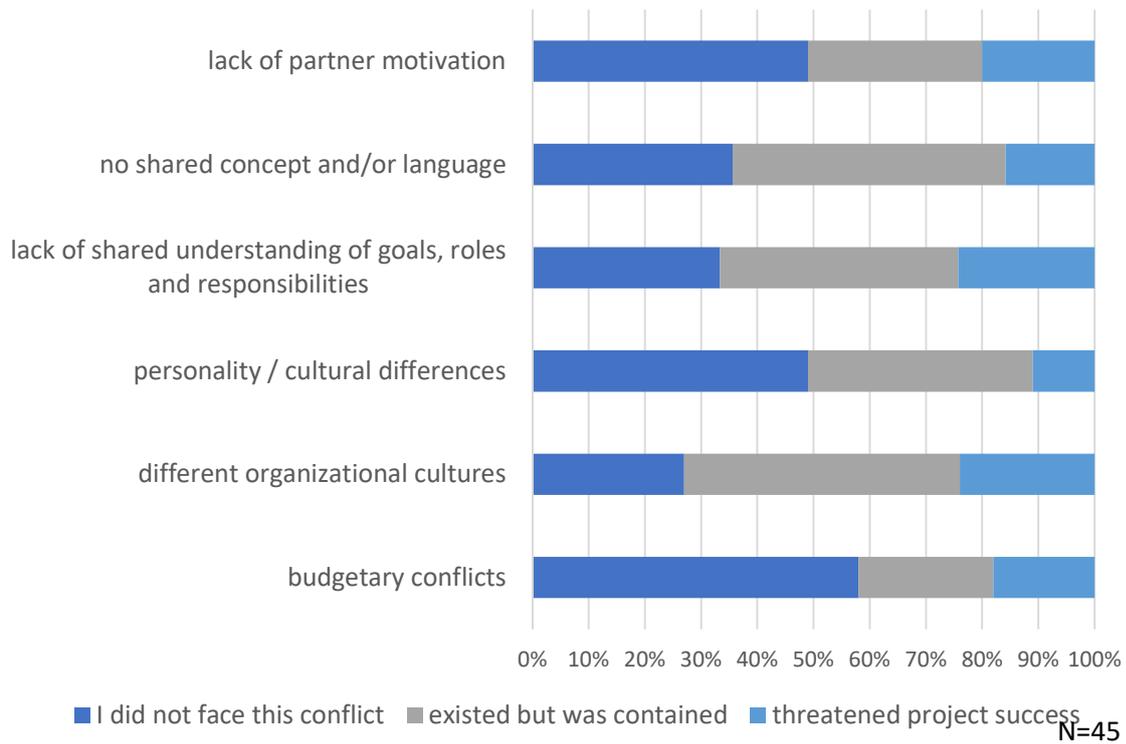


Figure 12: Resource consumption of RCP compared to traditional research projects II



Different organizational cultures and lack of shared understanding of project goals, individual roles and responsibilities, and to a lesser extent the lack of motivation of partners are perceived as the most consequential conflicts with 20-24% of respondents perceiving them to have threatened project success.

Figure 13: Conflicts threatening project success



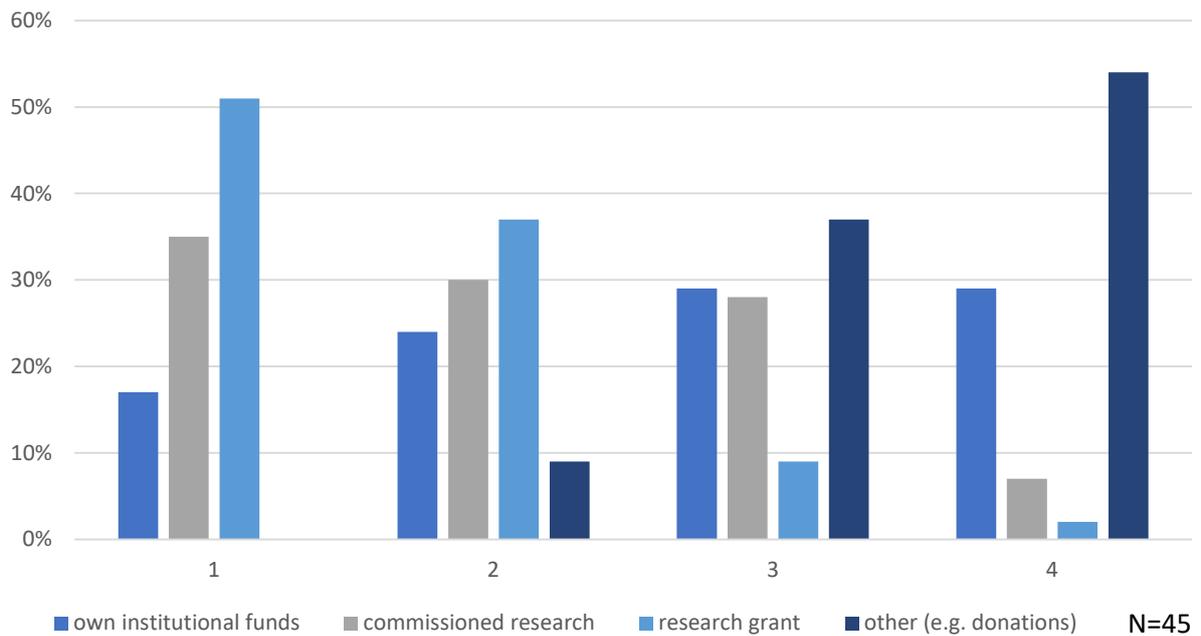
**Qualitative results illustrate how conflicts impact research-practice collaboration.**

Organizational culture was understood by one researcher as a factor influencing the salience of research-practice collaboration. In cases where the organizational culture is highly inflexible, (e.g. Ministries) research results might not be received. Conversely, institutions with an open organizational culture can react to research input and adjust their programmes. In order to change closed organizational cultures, a staff exchange programme was suggested between academia and Ministries, which could be an affordable solution. Another researcher explained how collaboration with practitioners can be more comfortable compared to collaboration with only fellow academics.

**Funding research-practice collaborations**

Survey respondents with experience in collaborations were asked to rank funding sources in order of their respective importance (1 is the most important). Results show that research grants followed by commissioned research (financed by practitioners) play a substantial role in the financing of collaborative research, whereas institutional funds are of minor importance, and other sources such as donations do not play a significant role.

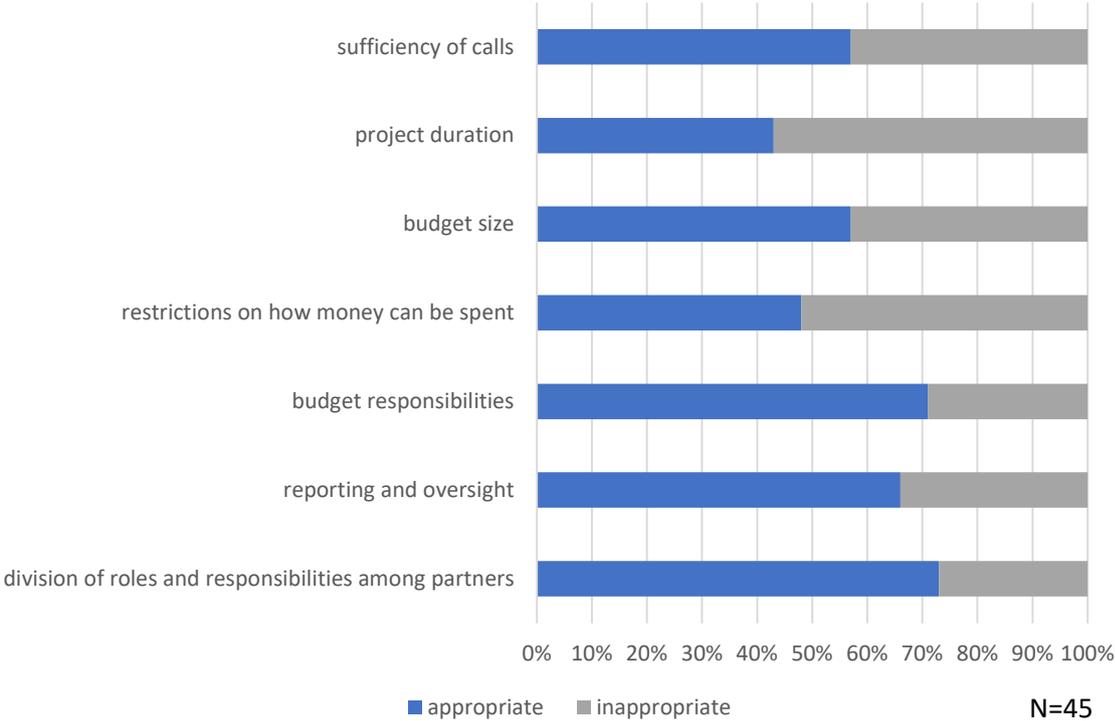
Figure 14: Ranking of funding sources according to relevance



Regarding the availability of calls, 57% indicated there are enough calls in their specific field of research for collaborative projects. Regarding the appropriateness of terms and conditions, **problems** exist especially with regard to **project duration** and **restrictions on how funds can be spent**.

**!** Overall, terms and conditions are viewed as inappropriate by at least 25% of respondents, depending on the specific aspect.

Figure 15: Appropriateness of terms and conditions and sufficiency of calls



**These findings are reflected in the qualitative sample with important qualifications.**

The most pervasive experience with funding sources reported in the interviews is third-party funding through public funds, research councils, Ministries, or agencies, made available to project-based cooperation, starting with a call and the development of a project proposal. Commissioned research by international organizations and international financial institutions as well as non-governmental organizations was also mentioned as a mode of funding, with researchers being contracted for a specific task.

Institutional funds seem to play a more important role in settings where development research is entirely underfunded. Research in these constellations is subsidized by institutional funds in classic development projects, in which researchers are contracted to do baseline studies and evaluations.

Experiences with project-based funding duration vary from very short periods of 3 months to 5 years (maximum) with the bulk of projects having a duration between 1-3 years.

→ Different intensities of relationships between research institutions and funding bodies exist.

Relationship intensities influence competitiveness of project selection from open calls to negotiated funding, giving funding bodies the ability to influence project design.

→ **Requirements for funding vary nationally and very substantially:**

Whereas some funding policies make mandatory the inclusion of practitioners as well as theoretical impact creation pathways, some do not emphasize as much the inclusion of practitioners or impact creation, and others limit the role of funded research in development projects to implementing baseline studies, or underfund development research entirely.

→ **Employment situation is perceived to impact researchers' leeway in designing collaborations**

Some researchers explained that their employment situation as unlimited employees allows them to more freely engage with practitioners outside of project-based collaboration, while acknowledging that researchers with limited contracts depend more strongly on project based funding, which can influence their engagement (purpose, scope, depth) with practitioners.

→ **Funding regarding terms and conditions as well as processes, is a consequential and cross cutting issue.**

Seven researchers named funding as a critical issue, which impacts all three dimensions of research quality.

One researcher explained how funding can impact on the researcher's independence depending on the source of funding and its involvement in the project (third-party vs. commissioned research or consulting). Dependence on funding from a project partner might negatively impact the researcher's neutrality and thereby the credibility of results.

The modes of project selection were named as well whereby the decision for funding of a specific project should be made based on the demands of practitioners and the relevance of the proposed project. If funding decisions are taken by neutral commissions, projects might get funded that have low salience.

Also named was the issue that pressure to raise funds and a resulting profit orientation can lead to a change in research foci, which can result in loss of valuable experience. Another researcher criticized the common funding regime of short-term projects which leads to loss of knowledge at the end of projects. These losses can negatively impact salience. This together with the fact that change is long-term calls for longer funding periods.

Three respondents explained that practitioners might not feel they are getting anything out of the cooperation, because project outputs, e.g. as journal articles do not directly benefit practitioners. Additionally, a lack of institutional incentives to engage practitioners impacts negatively on cooperation. These aspects impact negatively on the salience of cooperation.

Two researchers explained how in their experience funding guidelines are often inadequate and make it impossible to give back to practitioners, which raises ethical questions. Another respondent explained how short project funding periods can lead to the exclusion of southern researchers in the article writing phase, as this often happens when project funds have already ended. Northern partners often have the financial capacity to provide funding for article writing whereas southern partners are often already involved in other projects, which reinforces imbalances and challenges legitimacy.

→ Funding related **administrative issues** are seen as undermining collaboration.

One respondent mentioned bureaucracy and notions of accountability as impeding factors for genuine collaboration. This is the case with project partners struggling with the presentation of annual accounting reports and safeguarding policies, which often are inadequate in the specific context, and which leads to the creation of mutual suspicion at the start of a joint project. As a result, only bigger partners mirroring the UK are able to collaborate which makes it more difficult to bring smaller, local partner on board. This is understood to undermine genuine collaboration, and negatively impact legitimacy, as well as salience.

### 4.3. Perceived impact of collaboration on research

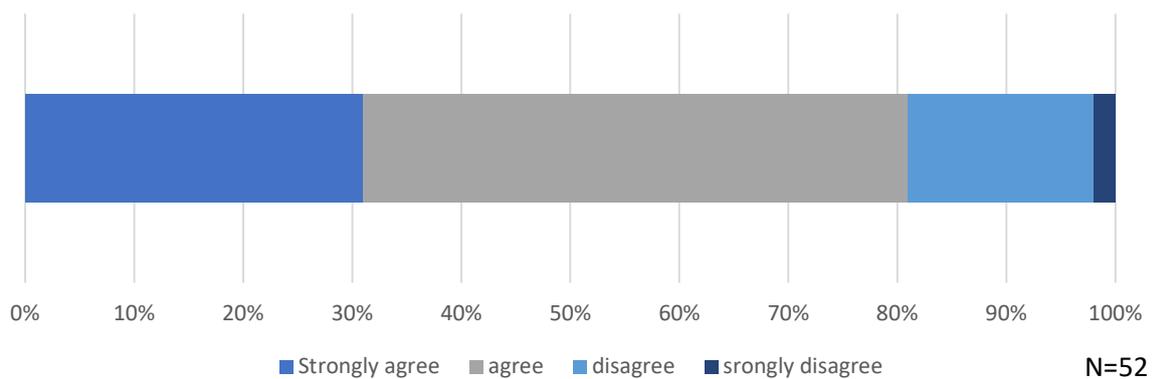
#### 4.3.1. Understanding research quality

Research quality is generally understood to entail several dimensions with a tendency to prioritize its credibility, yet there is no consensus in the literature on what constitutes research quality in the context of collaborative or transdisciplinary research (see Belcher et al. 2016: 2). With reference to Belcher et al. (2016) and Cash et al. (2003), we define research quality in collaborative research to consist of the three dimensions credibility, salience and legitimacy. **Credibility** is understood here to refer to the *adequacy regarding disciplinary standards*, of theories and methods. **Salience** we refer to the *relevance and influence outside academia*, thereby comprising the two dimensions of relevance and effectiveness which are defined in Belcher et al. (2016). **Legitimacy** refers to the *ethical standards and fairness of representation* in the research process, based on the idea that results will be perceived as legitimate depending on “who participated and who did not, the process for making those choices, and how information is produced, vetted, and disseminated” (Cash et al. 2003: 5).

### 4.3.2. Perspectives on goals of collaboration

The achievement of social impact is often cited as a goal of collaboration between researchers and practitioners. We aimed to shed light on attitudes of academia regarding their responsibility in creating real world impact. All survey respondents were asked if they view the creation of social impact as the researcher's responsibility. Over 80% generally agreed with this understanding of responsibility.

Figure 16: Social impact as researcher's responsibility



**Perspectives on goals of RCP were discussed in more depth in the qualitative interviews.** The qualitative results show a **variety of understandings** of the goals of collaboration and also **great disparity** among respondents.

Increasing salience was seen by four respondents as a goal of research practice collaboration, understood as developing relevant research questions and results as input for improved policy making and providing NGOs with research capacities to improve the design and monitoring of interventions, increasing acceptance of services, and as relevance at the discursive level.

Enhancing the credibility of research was agreed with by two respondents regarding the acquisition of additional information about the field.

Interestingly, five respondents stressed see the goal in research practice collaboration as transformation, thus changing perspective from outcome-oriented to a procedural view. "Transformation" is related to the transformation of relationships (develop mutual respect) and transformation of perspectives through mutual learning and related to this the development of different knowledge (different analytical frameworks and categories), the facilitation of a cross-compartmental dialogue, and the challenging of conceptions of credible, legitimate and salient which themselves are socially constituted, and not objective criteria.

*“It is very important for knowledge development. And that means that the kind of practitioner knowledge is not normally included in our analytical frameworks, the recognition of practitioner knowledge and the kind of categories and the kind of questions practitioners have are often not included in our analytical frameworks. And I think we do need to have that because otherwise our understanding is less and is less relevant and less credible and legitimate, not so much from the academic point of view but from the practitioner point of view from the policy point of view.”*

*“My take-away message [...] would be that we move away from impact and talk more about learning and capacity, mutual capacity. That has to be the basis for research-practice collaboration. We have to stop thinking that we are going to make a huge difference. If we do, fair enough. But it can be about creating new common sense, new learning, new understanding that then enhances all of our work and positionality and ability to get messages out into different contexts.”*

Interestingly, one respondent saw RCP not as a means for knowledge creation, but rather stressed the increased efficiency of the research process in difficult fields as a goal of research-practice collaboration, as it was experienced to save time and money.

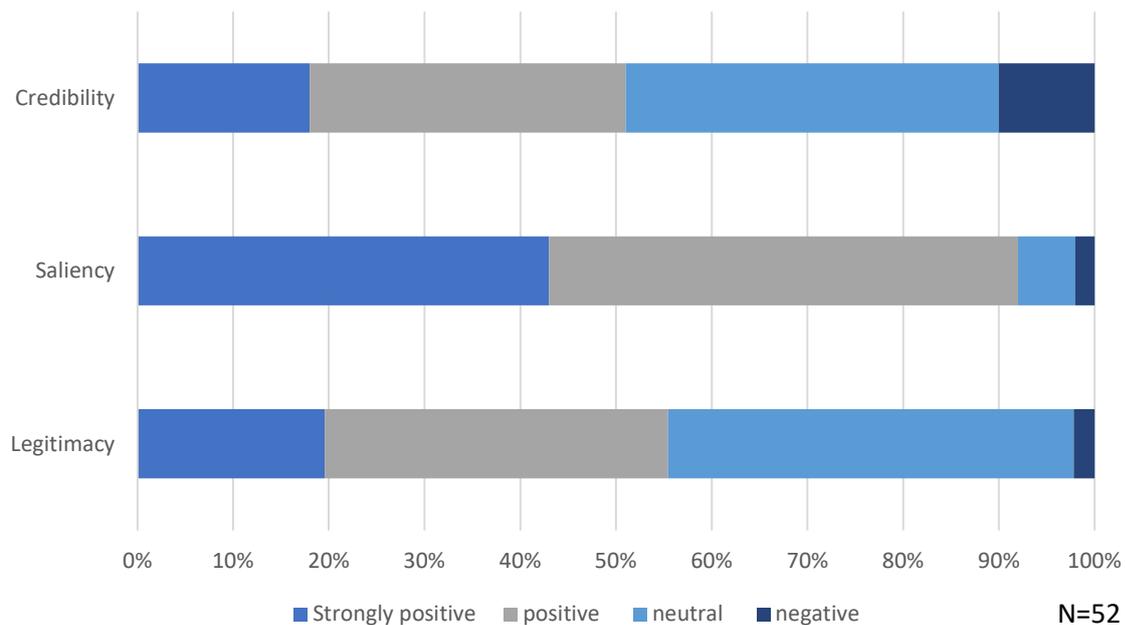
Although most of the respondents saw RCP aimed at improving knowledge generation in one way or the other, one respondent disagreed with the notion that research-practice collaborations aim at enhancing research quality at all, instead understanding the goal as developing more usable albeit limited, more specific knowledge to a more specific problem, with limited relevance due to less generalizable or generalized results.

#### 4.3.3. Perceived impact on research quality

All survey respondents were asked to give their view on the impact of research-practice collaborations on the three different dimensions of research quality: credibility, salience and legitimacy.

The strongest impact was found for saliency. 92% of all respondents perceive collaborations to have a positive impact on saliency. Perceptions of the impact on credibility, and to a lesser extent legitimacy are more diverse, yet still more than 50% of respondents perceived RPC to positively impact on both dimensions. 39% asserted no impact (neutral) for these same dimensions. The option “strongly negative” was not selected.

Figure 17: Impact on research quality dimensions



Qualitative data reveal that **perspectives of researchers** on how collaboration impacts these different dimensions, and perspectives on risks **vary to a great extent**.

### **Saliency**

Eight respondents felt the collaboration with practitioners adding or enhancing the saliency of their research, albeit in different ways.

Two respondents saw the enhanced saliency as a result of forming a collective, that makes the uptake of an idea more powerful. This related to a) bringing more stakeholders on board, and b) of having a critical mass of research projects that collectively increase relevance of research. However, one respondent explained that as projects are confrontational and internally political, what can be achieved through a project is mitigated by what it internally establishes.

*“Thinking about impact can be problematic.[...] The notion that research-practice collaboration, that it’s even collaborative [...]. It’s actually quite confrontational, its internally quite political, and what people think of as what their collaboration should look like will vary. So the internal politics of partnership is actually really hard, so what kinds of effects you want to have externally will be mitigated by what you can actually achieve even internally.”*

One respondent explained that the collaboration with practitioners helps identify and anticipate demands for research results, which then can be better communicated and be made better accessible. The latter point was stressed by another respondent, arguing that the cooperation with practitioners changes how researchers communicate, thus leading to less closed and more accessible research that more easily feeds back into society. This point was shared by another respondent who saw this effect dependent on the integration of practitioners in every phase of the research process. Another respondent stated that on the one hand specific relevance is increased because data collection is motivated by practitioners' interests, but on the other hand decreases if results cannot be generalized. Another respondent regarding sociological research explained that cooperation with practitioners can enhance salience at the discursive level.

Two respondents did not feel that collaboration with practitioners enhance salience per se, with one respondent arguing that lack of feedback mechanisms into the work of practitioners limits the relevance of collaborative research, and another respondent mentioning that if collaborative research aims more at finding direct effects as opposed to diffuse effects of interventions this might limit the relevance of the research.

Strongly related to the salience of research was the topic of impact or uptake of collaborative research. This was experienced to depend on individuals in partner organizations.

### **Credibility**

Two researchers emphasized the subjectivity of credibility as scientific standards and explained that the integration of practitioners does not negatively impact credibility but rather challenges notions of "credibility" held by academia, with one researcher stating that extra effort has to be made to convince colleagues of the credibility of collaborative research by being more clear and transparent than in traditional research projects, where credibility is less doubted.

*"The risk is the perception that credibility is being diluted. [...] The key I think is to turn that risk into a sense of opportunity"*

Three researchers mentioned the risk of either being too closely attached to practitioners and consequently developing a one-sided perspective on topics or of being too closely identified with the subject they are supposed to be investigating. None of the respondents report having personally experienced this risk, but rather have observed this with others.

Two researchers mentioned the risk of practitioners striving to unduly influence the research process, e.g. regarding data collection, which needs to be corrected by the researcher.

One researcher understands the involvement of practitioners into research as a test for credibility, in the sense that if they see research questions or results as “strange” it might indicate that research might not be of good quality.

No researcher indicated that the involvement of practitioners in the research process did in their experience impact scientific rigor negatively, with a strong sense of personal responsibility and accountability for the scientific work.

Six researchers had personal experience with credibility being positively impacted by research-practice collaborations. This includes the enhanced understanding of context, detail and improved data (3), improved theory building through improved results (1), a better understanding of scientific rigor (what is necessary or unnecessary rigor) as well as a better understanding of the way in which research is fallible (1), and an improvement in methodology (1). This refers to the usage of snowballing as a method for data collection, which after involvement of practitioners has appeared as biased, whereas practitioners have helped to alleviate this bias.

One researcher explained how development agencies and international organizations have helped shape questionnaires and with sampling, as well as during discussions of results have helped relativize and contextualize findings.

Two researchers have not experienced impact on credibility in their collaborations with practitioners.

### ***Legitimacy***

Respondents gave a variety of experience regarding legitimacy. Three researchers mentioned experience where the inclusion of practitioners into the research process enhanced the ethical conduct of research, and one respondent held the view that not including those who are being researched rather would be unethical.

Given enhancing effects on legitimacy and ethical conduct include practitioners helping to avoid conflicts with local communities which could be triggered by data collection, alleviating researchers’ “arrogance” while also letting those people being researched speak for themselves, and that gaining more perspectives on issues enhances legitimacy.

Two respondents saw risks to legitimacy and ethical conduct stemming from the inclusion of practitioners. This was related to the view of practitioners as representing their own interests, which presents an influence that has to be relativized by the researcher, as well as practitioners functioning as gate keepers in collaborative research projects, who might hand pick respondents and pressure respondents to give certain answers. This calls for a need to have some form of separation or independence between researchers and practitioners.

Certain framework conditions were understood by four respondents as negatively affecting the legitimacy and ethical conduct in collaborative research activities. A critical framework condition was seen in the openness of the political system and the political freedoms granted to citizens. In repressive systems, practitioners might not be able to speak freely, might be exposed and put at risk, and might be vulnerable to political influence. In these cases, respondents unanimously stated that collaborative research would not be advisable.

Two researchers did not have experience with collaboration impacting legitimacy of research, with one respondent lacking experience with local partners from the global South.

One respondent emphasized how notions of legitimacy are socially negotiated and criteria for legitimacy and ethics often set by Northern donors. In this way, notions of legitimacy and ethical might become problematic, if generally NGOs are understood to represent the plurality of local interests, and their inclusion per se seen as legitimate, and made a requirement. This can reduce legitimacy to box ticking. Consequentially, it can lead to a representation of transnational elites, when mainly those NGOs are selected for participation who are run by Western-educated persons, while these NGOs already command the capacities that should be developed during the collaboration.

*“We need to ask questions about what we mean by what constitutes legitimate. [...] notions of legitimacy can be quite constraining. There is a tendency to say: ‘Here is [...] my funding regime, and these are the measures of accountability that allow people or organizations or individuals to participate. You have to meet my criteria in the North’ and what that does is it tends to privilege certain types of organizations and participants who already have the capacity [...] we end up working with people who have huge amounts of capacity that don’t need us to build their capacity. [...] As opposed to thinking ‘how do we build legitimacy’. [...] We still operate in a paradigm where NGOs are seen as at the grassroots and representative of a plurality of so-called local interests. [...] So we end up this absurd situation where we are creating a representation of a transnational elite which isn’t motivated by learning, but is motivated by box ticking.”*

## 5. Conclusion

This explorative study included quantitative descriptive data analysis as well as structured content analysis of qualitative data obtained through semi-structured interviews. Empirical results show that collaboration is generally perceived as effective and strongly motivated by the aim to create impact (salience of research) among those respondents with experience in collaboration. The qualitative data supports this picture, with learning and transformation of attitudes and perspectives besides impact creation appearing to be the prime motivator of researchers' engagement in collaboration. Expectations of collaborations of those without experience regarding scientific quality and outputs tend to be rather demotivating, and interest in getting involved appears to be not very pronounced. Considering the small sample size especially in the group without experience, these differences could hint to a rather low reputation of research-practice collaborations within academia, which could potentially discourage participation. A majority of respondents in both groups view the time investment required as potentially demotivation.

Respondents with experience in collaboration participate in various roles in collaboration; as leaders and co-leaders, researchers, and administrators. A strong majority of researchers hold one or more additional roles in these collaborations. This finding is supported by qualitative data, with researchers feeling particularly responsible for most aspects of collaboration. This includes the scientific quality as well as communication of results to partners and the facilitation of impact.

There appears to be a pattern regarding how different types of partners get involved in collaboration; CSO/non-profit organizations tend to be most frequently involved, and more often as partners in collaborations. Their involvement is perceived to be productive, as they are perceived to utilize results most. Political actors appear more often as stakeholders in collaborations. Generally practitioners are involved most of the times at the beginning (problem definition, question development) and end of research projects (dissemination), and to a lesser extent during data collection, with only a minority of cases involved practitioners during phases of theory and hypothesis development and data analysis.

Collaboration appears to be strained by a lack of understanding of scientific concepts and methods, as well as by their higher level of resource intensity (time, management and communication) compared to traditional research projects. Sensitive conflicts potentially undermining project success appear to be a lack of partner motivation, lack of shared understandings and different organizational cultures. A strong factor, however, is funding. Research grants and commissioned funding play the most important roles in funding collaborations, whereas different aspects of funding (e.g. duration, budget size and responsibilities, amount of calls) are

perceived to be **inappropriate by between over 50%-25%** depending of the aspect. These findings are strongly reflected by qualitative data, with funding being an outstanding issue shaping collaboration and impacting salience, credibility and legitimacy of research. Funding requirements and conditions appeared to be a major and essential issue which was experienced to potentially affect all dimensions of research quality in different ways, with calls for funding periods to be longer and for funding set-ups to maintain a degree of financial independence for researchers from practitioners. Governance aspects were also experienced to influence all dimensions of research quality, with expansive bureaucratic requirements risking the exclusion of smaller partner NGOs. Exchange platforms and networks were experienced to be immensely helpful in fostering collaborations and develop mutual trust.

Quantitative results showed that collaborations are perceived to overall positively impact the salience of research, whereas the impact on legitimacy and credibility appeared to be slightly more controversial. Qualitative data could show that there are **greatly varying perspectives on how collaboration affects research** in its different dimensions.

Salience is experienced to be very low in cases where development research is underfunded entirely, when project funding does not account for the inclusion of more advanced research, and feedback mechanisms are few or non-existent. However, in some cases salience is not experienced to be automatically higher when research-practice collaborations are supported financially. Salience rather depends on the qualities of practitioners involved (e.g. grassroots level vs. larger 'westernized' organizations), their openness to change, and if research results are put into a wider context / allow for generalization.

Similarly, legitimacy cannot be expected to be enhanced by research-practice collaborations per se but critically depends on contextual factors and modes of involvement. Difficult framework conditions like lack of political and civil freedoms and personal security can have adverse effects on the legitimacy of collaborative research, with civil society actors facing major threats to their security. Furthermore, funding requirements regarding the creation of legitimacy can undermine legitimacy itself if requirements for participation prevent smaller, less equipped partners to participate.

The credibility of research was felt to be enhanced when practitioners contribute local, contextual knowledge, shaping questionnaires and supporting sampling. However, risks were seen in their function as gate keepers, with respondents considering it in their responsibility to detect attempts to unduly influence research, and to generally guarantee scientific rigor and meet standards.

## Bibliography

- Aeberhard, Andrea, Stephan Rist (2009) Transdisciplinary co-production of knowledge in the development of organic agriculture in Switzerland, *Ecological Economics*, Volume 68, Issue 4, pp. 1171-1181
- Armitage, Derek, Fikret Berkes, Aaron Dale, Erik Kocho-Schellenberg, Eva Patton, (2011) Co-management and the co-production of knowledge: Learning to adapt in Canada's Arctic, *Global Environmental Change*, Volume 21, Issue 3, pp. 995-1004,
- Belcher, Brian M., Katherine E. Rasmussen, Matthew R. Kemshaw and Deborah A. Zornes (2016) Defining and assessing research quality in a transdisciplinary context, *Research Evolution* 25, pp 1-17.
- Bracken, L.J. and Bulkeley, H.A. and Whitman, G. (2015) 'Transdisciplinary research : understanding the stakeholder perspective.', *Journal of environmental planning and management.*, 58 (7). pp. 1291-1308.
- Cash, David, William Clark, Frank Alcock, Nancy Dickson, Noelle Eckley, and Jill Jäger (2003) Saliency, Credibility, Legitimacy and Boundaries: Linking Research, Assessment and Decision Making.K SG Working Papers Series.
- Dilling Lisa, Maria Carmen Lemos, (2011) Creating usable science: Opportunities and constraints for climate knowledge use and their implications for science policy, *Global Environmental Change*, Volume 21, Issue 2,
- Djenontin, I.N.S., Meadow, A.M. (2018) The art of co-production of knowledge in environmental sciences and management: lessons from international practice. *Environmental Management* 61, pp. 885–903. <https://doi.org/10.1007/s00267-018-1028-3>
- Edelenbos, Jurian, Arwin van Buuren, Nienke van Schie, (2011) Co-producing knowledge: joint knowledge production between experts, bureaucrats and stakeholders in Dutch water management projects, *Environmental Science & Policy*, Volume 14, Issue 6, pp. 675-684,
- Filipe A, Renedo A, Marston C (2017) The co-production of what? Knowledge, values, and social relations in health care. *PLoS Biol* 15(5): e2001403. <https://doi.org/10.1371/journal.pbio.2001403>
- Guimarães, Maria Helena, Christian Pohl, Olivia Bina, Marta Varanda (2019) Who is doing inter- and transdisciplinary research, and why? An empirical study of motivations, attitudes, skills, and behaviours, *Futures*, Volume 112, <https://doi.org/10.1016/j.futures.2019.102441>
- Guston, David H. (2001) Boundary Organizations in Environmental Policy and Science: An Introduction, *Science, Technology, & Human Values*, Vol. 26, No. 4,
- Harvey, B, Cochrane, L, Van Epp, M. (2019) Charting knowledge co-production pathways in climate and development. *Env Pol Gov.*; 29: pp. 107– 117.
- Hirsch Hadorn, Gertrude, Bradley, David, Pohl, Christian, Rist, Stephan and Wiesmann, Urs, (2006), Implications of transdisciplinarity for sustainability research, *Ecological Economics*, 60, issue 1, pp. 119-128.
- Jahn T, Bergmann M, Keil F (2012). Transdisciplinarity: Between mainstreaming and marginalization. *Ecological Economics* 79. 10.1016/j.ecolecon.2012.04.017.
- Jasanoff, Sheila (ed.) (2004). *States of Knowledge: The Co-Production of Science and Social Order*. Routledge.
- Lux, Alexandra, Martina Schäfer, Matthias Bergmann, Thomas Jahn, Oskar Marg, Emilia Nagy, Anna-Christin Ransiek, Lena Theiler (2019) Societal effects of transdisciplinary sustainability research—How can they be strengthened during the research process?, *Environmental Science & Policy*, Volume 101, pp. 183-191
- Miller, Clark A., Carina Wyborn (2018) Co-production in global sustainability: Histories and theories, *Environmental Science & Policy*.
- Needham, C. (2008). Realising the Potential of Co-production: Negotiating Improvements in Public Services. *Social Policy and Society*, 7(2), pp. 221-231. doi:10.1017/S1474746407004174
- Nyström, M.E., Karlton, J., Keller, C. et al. (2018) Collaborative and partnership research for improvement of health and social services: researcher's experiences from 20 projects. *Health Res Policy Sys* 16, 46 <https://doi.org/10.1186/s12961-018-0322-0>

- Oliver, K., Kothari, A. & Mays, N. (2019) The dark side of coproduction: do the costs outweigh the benefits for health research?. *Health Res Policy Sys* 17, 33. <https://doi.org/10.1186/s12961-019-0432-3>
- Parker M, Kingori P (2016) Good and Bad Research Collaborations: Researchers' Views on Science and Ethics in Global Health Research. *PLoS ONE* 11(10): e0163579. doi:10.1371/journal.pone.0163579
- Pohl, C. (2008) From science to policy through transdisciplinary research, *Environmental Science and Policy* 11, pp. 46-53.
- Pohl, Christian, Rist, Stephan, Zimmermann, Anne, Fry, Patricia, Gurung, Ghana S., Schneider, Flurina, Speranza, Chinwe Ifejika, Kiteme, Boniface, Boillat, Sébastien, Serrano, Elvira, Hirsch Hadorn, Gertrude & Urs Wiesmann (2010). Researchers' roles in knowledge co-production: Experience from sustainability research in Kenya, Switzerland, Bolivia and Nepal. *Science and Public Policy*, 37 (4), 267-281.
- Popa, Florin, Mathieu Guillermin, Tom Dedeurwaerdere, (2015) A pragmatist approach to transdisciplinarity in sustainability research: From complex systems theory to reflexive science, *Futures*, Volume 65.
- Rosendahl, J., Zanella, M. A., Rist, S., & Weigelt, J. (2015). Scientists' situated knowledge: Strong objectivity in transdisciplinarity. *Futures*, 65, 17-27.
- Rycroft-Malone, J., Burton, C. R., Bucknall, T., Graham, I. D., Hutchinson, A. M., & Stacey, D. (2016). Collaboration and Co-Production of Knowledge in Healthcare: Opportunities and Challenges. *International journal of health policy and management*, 5(4), pp. 221–223. <https://doi.org/10.15171/ijhpm.2016.08>
- Schneider, Flurina, Markus Giger, Nicole Harari, Stephanie Moser, Christoph Oberlack, Isabelle Providoli, Leonie Schmid, Theresa Tribaldos, Anne Zimmermann (2019) Transdisciplinary co-production of knowledge and sustainability transformations: Three generic mechanisms of impact generation, *Environmental Science & Policy*, Volume 102, pp. 26-35.
- Thompson, Mary Anne, Susan Owen, Jan M. Lindsay, Graham S. Leonard, Shane J. Cronin, (2017) Scientist and stakeholder perspectives of transdisciplinary research: Early attitudes, expectations, and tensions, *Environmental Science & Policy*, Volume 74, pp. 30-39.
- Turnhout, Esther, Tamara Metze, Carina Wyborn, Nicole Klenk, Elena Louder (2020) The politics of co-production: participation, power, and transformation, *Environmental Sustainability*, Volume 42, pp. 15-21,
- van der Hel, Sandra (2016) New science for global sustainability? The institutionalisation of knowledge co-production in Future Earth, *Environmental Science & Policy*, Volume 61.
- Williams, O., Sarre, S., Papoulias, S.C. *et al.* (2020) Lost in the shadows: reflections on the dark side of co-production. *Health Res Policy Sys* 18, 43. <https://doi.org/10.1186/s12961-020-00558-0>
- Wyborn, Carina, Amber Datta, Jasper Montana, Melanie Ryan, Peat Leith, Brian Chaffin, Clark Miller, Lorrae van Kerkhoff (2019) Co-Producing Sustainability: Reordering the Governance of Science, Policy, and Practice, *Annual Review of Environment and Resources* 44:1, pp. 319-346.
- Zingerli, Claudia, Claudia Michel & Annika Salmi (2009) On producing and sharing knowledge across boundaries: experiences from the interfaces of an international development research network, *Knowledge Management for Development Journal*, 5:2, pp. 185-196, DOI: [10.1080/18716340903201538](https://doi.org/10.1080/18716340903201538)



# EADi



EADI e.V.  
Kaiser-Friedrich-Strasse 11  
53113 Bonn, Germany



Tel: (+49) 228 261 81 01  
Fax: (+49) 228 261 81 03



Email: [postmaster@eadi.org](mailto:postmaster@eadi.org)  
<https://www.eadi.org>