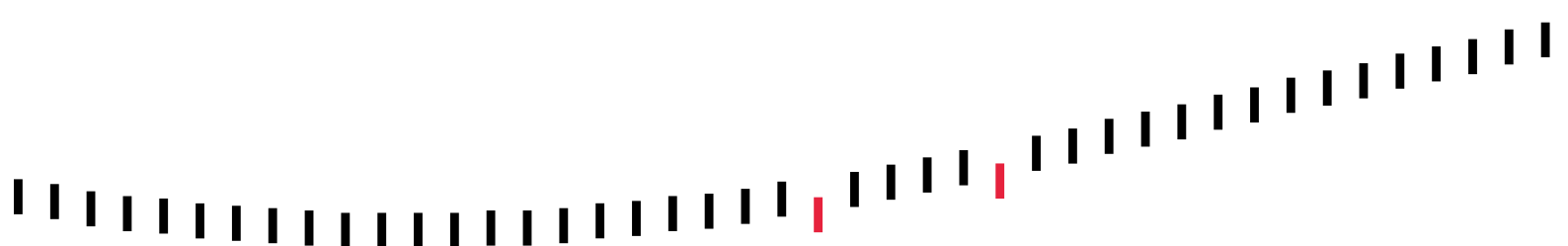B₁S₁S

Volkswirtschaftliche
Beratung

Final report

Final Evaluation of the r4d Programme

Basel ₁ 06.05.2024

Imprint

Final Evaluation of the r4d Programme

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Executive Summary

The r4d programme and its objectives

The Swiss Agency for Development and Cooperation (SDC) and the Swiss National Science Foundation (SNSF) have co-funded the r4d programme with roughly CHF 100 million between 2012 and 2023. The programme has supported 57 solutions-oriented research projects. Each project has brought together researchers from the Global South and Switzerland. The programme's main objective was "to contribute to solving urgent global problems and securing global public goods in Africa, Asia and South America within the normative and conceptual framework of global sustainable development." The r4d Programme aims 1) to generate evidence and solutions for development problems, 2) to make solutions available to stakeholders, and 3) to build scientific capacities in the Global South and in Switzerland for transformative research.

Scope, objectives and methods of the evaluation

The evaluation's first objective is to assess the extent to which the r4d programme has been able to achieve its objectives. The second objective is to identify lessons learned that can be used for other research programmes, such as r4d programme's successor, SOR4D. The evaluation is based on the OECD DAC Principles for Evaluation of Development Assistance and focuses on relevance, coherence, effectiveness, efficiency, and sustainability.

The evaluation has created a broad evidence base – building upon 25 in-depth case studies of funded projects (44% of all projects), interviews with 18 stakeholders involved in the design and management of the programme, and interviews with 10 informants from the broader research landscape. Moreover, a quantitative survey of the funded researchers was conducted, in which 113 participated.

Goals achieved, effectiveness confirmed

Our findings indicate that the programme achieved its objectives:

1. The funded projects clearly generated evidence and research-based solutions (objective 1). The research results were not only presented successfully in 474 peer-reviewed articles. The projects also explored diverse and new channels to communicate their results, including 644 workshops with local communities, 77 policy briefs, and multiple knowledge databases. Moreover, the projects enhanced international and interdisciplinary scientific networks, which enabled the development of numerous new projects.
2. The funded projects have made solutions available to stakeholders (objective 2). Our findings show numerous examples of cases where the projects generated knowledge transfer to national and international stakeholders. We saw multiple examples of policy impact and one

important case of market impact. These findings demonstrate that, at its core, the intervention logic of the funding programme works.

3. Finally, the programme helped increase scientific competencies and expertise (objective 3). More than 200 junior researchers were trained in transformative research settings. More than 90% of the project participants from the Global South stated that r4d had a positive impact on their career development. And the research perspectives of many junior and senior researchers were changed. The competencies necessary to succeed in a transformative and international research environment were developed, networks with research partners and stakeholders in the North and the South were built and strengthened.

Sustainability dependent on future funding opportunities

Many of the positive impacts – such as the capacity building, the career development effects, the orientation of researchers toward transformative and solutions-oriented (SDG) research, the scientific networks – will likely outlive the r4d programme.

It is critical, however, that the trained researchers find new opportunities to fund transformative research projects. After their r4d projects, many researchers will be confronted with institutions and incentive structures that still do not reward transdisciplinary, interdisciplinary, and solutions-oriented research. Therefore, these researchers will need new funding to continue with this type of research.

Innovative programme design, efficient management

In many ways, the r4d programme was ahead of its time. It was inter- and transdisciplinary, development-oriented, it directly involved the Global South in the effort to attain the SDGs, and it was transformational/challenge-oriented. These concepts, of course, are older than the r4d programme. However, r4d was introduced before many other programmes that were eventually built on these concepts. For example, the EU only started to implement these concepts in its Horizon 2020 programme in 2014. And combining these concepts in one programme was novel to the SNSF.

Due to the programme's innovativeness, novel principles such as transdisciplinarity and development orientation had to be defined and operationalised. From that perspective, the r4d programme can be seen as a living lab that allowed both the SDC and the SNSF to try out these new concepts.

Relevance to the SNSF, the SDC, the funded researchers and the projects' beneficiaries

In the face of the existential challenges that humanity faces today, the r4d programme is potentially more relevant than ever. Transdisciplinary research that directly involves the Global South will be critical for reaching the SDGs (SNSF, 2022, p. 24; International Research Council, 2022).

Transformative research targeted at the SDGs is coherent with the mandates and strategies of both the SDC and the SNSF. The r4d programme was at the time the only transformative research programme in Switzerland that focused on sustainability in the sense of the SDGs. Today, its successor, SOR4D, still is the only one of this kind. The r4d programme can be seen as the proof of

concept that demonstrates that transformative research works: r4d delivered both scientific excellence and impact.

Our findings also suggest that the funded projects were highly relevant to the projects' respective beneficiaries and stakeholders. The researchers benefited greatly from the funding – especially the senior researchers from the Global South and the junior researchers both in the Global South and Switzerland. Many projects also showed great relevance to local beneficiaries.

1. Introduction

1.1 The r4d programme

The Swiss Agency for Development and Cooperation (SDC) and the Swiss National Science Foundation (SNSF) have dedicated around CHF 100 million to the r4d programme for the period 2012-2023. The programme's objectives are:

1. To generate scientific knowledge that can be used for reducing poverty and that contribute to the pursuit of the Sustainable Development Goals (SDGs),
2. to offer stakeholders holistic approaches for problem solving, and
3. to build capacity in lower- und middle-income countries by enhancing scientific skills and research capabilities.

1.2 Objectives of the evaluation

The evaluation's objective is, firstly, to assess the extent to which the r4d programme has been able to achieve its objectives (summative) and secondly, to define lessons learned that can be used for the successor programme (SOR4d) and other research programmes by the SDC and the SNSF (formative).

1.3 Methodology

To create a solid empirical basis, the evaluation combines quantitative (survey, bibliometrics) and qualitative (interviews and case studies) methods, responsive (interviews and survey) and non-responsive (bibliometrics) methods. At the core, the evaluation conducted 25 in-depth case studies (44% of all projects) and interviews with 18 stakeholders involved in the design and management of the programme as well as 10 informants from the broader research landscape. Finally, we conducted an online survey of all project participants in which 113 researchers participated. Annexes D-F provide detailed overviews of the methodology. The design of the evaluation is described in the following figure.

Figure 1: Evaluation design
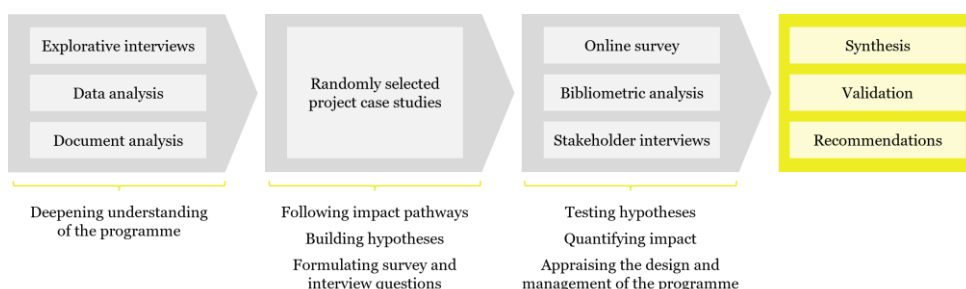
Source: Own compilation, for additional information on the methodology please refer to the Annex.

1.4 Structure of the report

The OECD DAC Principles for Evaluation of Development Assistance recommend focusing on five criteria: Relevance, coherence, effectiveness, efficiency, sustainability (OECD DAC, 2019). We have structured the report along these criteria. Reference to the evaluation questions, where relevant, is made in brackets (e.g., "see EQ13"). The complete list of evaluation questions is presented in Annex A.

2. Relevance and coherence

According to the OECD DAC, "relevance" is concerned with the extent to which an intervention corresponds with the beneficiaries' needs, policies, and priorities. The criteria "coherence" is concerned with the question of how well an intervention fits with other interventions by the responsible institution as well as other institutions and international standards (OECD DAC, 2019, p. 7).

2.1 Relevance of transformative research

Humanity is facing existential challenges – climate change, resource depletion, economic inequality, to name but a few. In view of these challenges, in 2015, the United Nations General Assembly defined 17 Sustainable Development Goals (SDGs). Switzerland has also formally committed itself to these goals (Bundesrat, 2020).

Scientific progress and technological advances are crucial to achieving these goals. However, the United Nations' (2023, p. 39-40) last report documenting the progress toward the SDGs criticises that the "potential of science, technology and innovation is vastly untapped" and that "institutional and other barriers stand in the way" of realising the full potential of science, technology, and innovation.

The UN report calls on governments to increase research funding and to identify and reduce said barriers, which are well documented. For instance, the International Science Council (2021, p. 9) criticises: "As it is currently organised, the international science system produces significant but narrowly focused, fragmented, and compartmentalised knowledge that is often disconnected from society's most immediate needs. In short, much of science funding supports research that is limited in its ability to contribute to the transformative, systemic changes need for human well-being to thrive in the 21st century and beyond." The International Science Council (2021) and experts in the field of science, technology, and innovation therefore demand a transformation of science systems (Sachs et al, 2019; Frazey et al. 2020; Mazzucato 2018). And they call for "transformative science," which involves:

– Interdisciplinarity and transdisciplinarity: Achieving the SDGs requires solving complex and interconnected problems.[1] Therefore, they require insights from different scientific disciplines (natural sciences, social sciences, and humanities) and sectors (academia, government, civil society, industry) (Mazzucato, 2018, p. 803).

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[1] Problems like climate change and economic inequality, for instance, are interconnected.

– Solution-oriented and applied research that is accessible and used by the relevant stakeholders (International Science Foundation, 2021, p. 16).

The r4d programme aims to fund such transformative research and can be presented as a response to these calls – even though the programme may have started before the SDGs were defined in 2015. We therefore conclude that the r4d programme is relevant and highly coherent with the relevant international strategies (SDGs), to which the Swiss Federation has formally committed itself (see "BFI-Botschaft 2021-2024" in Bundesrat, 2020).

2.2 Relevance to the SNSF and coherence with its strategies and activities

The Swiss National Science Foundation (SNSF), too, has committed itself to the SDGs in its multi-year programme for 2021-2024 (SNSF, 2019, p. 16).[2] The r4d programme is the only research programme in the SNSF's portfolio that is truly transformative and focused on sustainability. There are programmes that touch upon individual aspects of sustainability. But the r4d programme is the only transformative research programme that is explicitly aligned with the SDGs.[3] Many of the interviewed researchers underscored that, in the Swiss funding landscape, they would not have been able to fund their projects from different funding sources. The r4d programme can be seen as the proof of concept that demonstrates that transformative research works: It generates both excellence and impact. Therefore, it sits firmly within the mandate of the SNSF.

2.3 Relevance to the SDC and coherence with its activities

The SDC's mandate is to reduce poverty and to curb global risks. In this light, Article 29 of the Ordinance to the Federal Law on International Development Cooperation and Humanitarian Aid explicitly states the objective of promoting research for development (Bundesrat, 2022). In the Swiss Federation's "Cooperation Strategy 2021-2024", academic research is referred to as a source of invaluable knowledge about population needs, evolving global challenges, and the impact and effectiveness of international cooperation (SDC, 2020). The r4d programme is thus fully in line with the SDC's mandate and highly coherent with its objectives.

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[2] Despite the official commitment, we noticed some resistance against the concept of transformative research. This resistance was confirmed by the stakeholders from within and outside the SNSF. It is also reflected in the financial commitment to the r4d programme, which is rather small compared to the overall budget of the SNSF. It also appears to be reflected in the much smaller budget of the programme's successor, the SOR4D programme.

[3] In its multi-year program for 2025-2028, the SNSF also mentions the Bridge programs and the National Research Programmes (NRPs). Moreover, there is the SPIRIT programme. However, the Bridge programme, the NRPs and the SPIRIT programme are not systematically oriented toward the Sustainable Development Goals (SDGs). Furthermore, most Bridge projects are market-oriented rather than challenge-oriented. The r4d programme thus stands as a notable exception, filling a gap in the SNSF's portfolio. While its budget may be comparatively small, it provides a crucial opportunity to gain preliminary experiences with transdisciplinary and transformative research. Finally, the SPIRIT programme lacks transdisciplinarity and solution orientation.

The programme's relevance to the SDC is underscored by the fact that numerous r4d projects have received subsequent funding from the SDC. Examples of some other projects which received funding include:

– Agro-pastoralism in Kenya: SDC Regional Cooperation (SCO) funded a follow-up project called "Resilience for Pastoralist Communities in Northern Kenya".
– The Swiss Tropical and Public Health Institute (Swiss TPH) developed a tool for Malaria. SDC analysis and policy division funded a follow-up project on non-communicable diseases (NCDs) called "ComBaCaL".
– The Woody Weeds project received follow-up funding through the SDC's Horn of Africa Programme. The new project is called "Woody Weeds +".
– The project "Linking Education and Labour Markets: Under what conditions can Technical Vocational Education and Training (TVET) improve the income of the youth?" became part of the SDC's country programme in Nepal (ENSSURE).
– The e-POCT project received follow-up funding by the SDC and the Fondation Botnar. The new project focusing on Ruanda and Tanzania is called "Dynamic electronic decision trees for managing childhood illness (DYNAMIC)".
– With the r4d project on health impacts of natural resource extraction the SDC field offices helped engage in policy dialogues that ended up influencing policy in five partner countries.

2.4 Relevance to the beneficiaries

According to the OECD DAC criteria, relevance is also to be interpreted as relevance to the beneficiaries (i.e., "the individuals, groups, or organisations, whether targeted or not, that benefit directly or indirectly from the development intervention" OECD DAC, 2019, p. 7). How relevant was the programme to the beneficiaries? We distinguish between the beneficiaries of the programme and the beneficiaries of the project.

Relevance of the programme to the funded researchers

The main beneficiaries of the programme, of course, were the researchers it funded. All the funded researchers that we interviewed confirmed the importance (i.e., relevance) of the projects and the funding they received for their career development (Section 3.3). Given the fact that funding opportunities in the Global South are more limited, the funding was especially relevant to the project participants from the Global South. The r4d programme also provided much-needed funding for researchers wishing to engage in transformative research. The positive impact on capacity and career development discussed in Section 3.3 is testament to the relevance of the programme to the funded researchers.

Relevance of the projects to the respective beneficiaries

How relevant were the funded projects to the respective beneficiaries of the projects? We could only speak to a few beneficiaries of the projects, and we could not speak to any potential beneficiaries that were not identified or reached by the projects. This limits our ability to conclusively assess the relevance of the projects to their respective beneficiaries. We can, however, assess the steps that the funded projects took to ensure the relevance of their projects.

During all phases, the projects engaged with a diverse range of different stakeholders and beneficiaries. During the inception and research phase, the main stakeholders were national research institutions and local communities. During the dissemination phase, the key stakeholders were policy makers in the Global South (see Figure 2 below). Examples of local stakeholders include the Cuban soil laboratories and yam production research centres. Local communities ranged from apple farmers in Kyrgyzstan, to Indonesian women in areas of social conflict, to disabled and elderly people in Uganda. Policy makers included public health officials in Lesotho, customs officials in Ghana, and a national working group on gender in Indonesia.

Figure 2: Main beneficiaries/stakeholders and phase of engagement
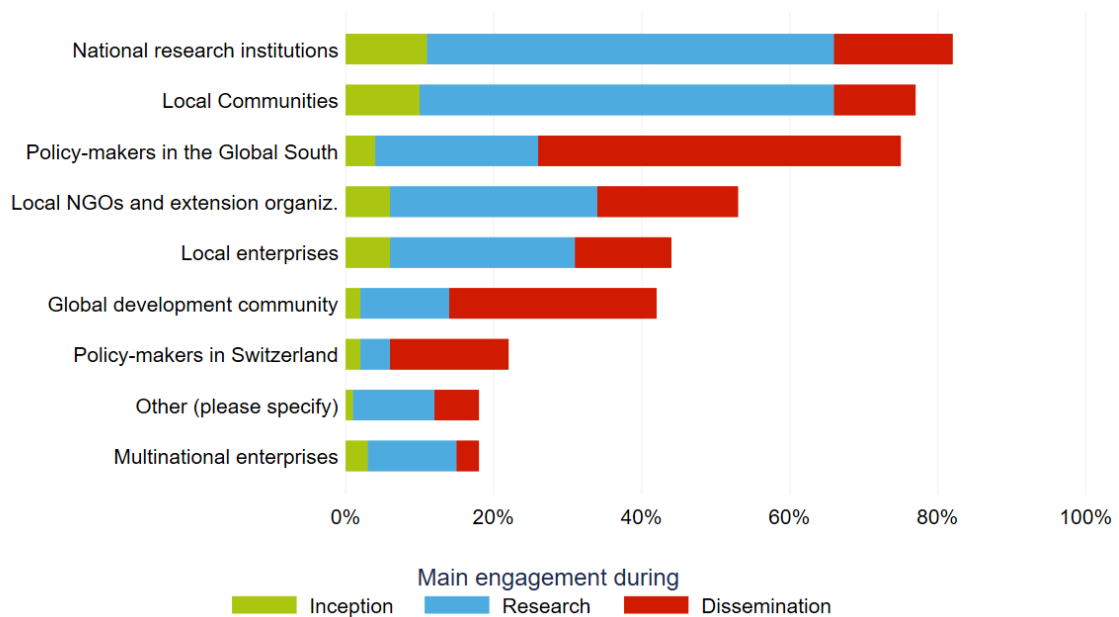
Source: Online survey by BSS. Question: Please identify the primary stakeholders and beneficiaries relevant to your project. During which phase or period of your research project did you most frequently engage with these stakeholders?

Projects that engaged their stakeholders and beneficiaries actively and early appear to have achieved greater relevance, the results from our case studies suggest. In some projects, the interviewed project participants regretted that their beneficiaries were not engaged earlier.

3. Effectiveness

Has the r4d programme achieved its objectives? (EQ7) To answer this question, we turn to the results framework that was developed by the SNSF and SDC during the inception of the r4d programme (see Figure 3 and the full results framework in Annex B). The programme's overarching objective – at the impact level – is "to contribute to solving urgent global problems and securing global public goods in Africa, Asia and South America within the normative and conceptual framework of global sustainable development."

At the outcome-level the results framework defines three objectives: 1) evidence and research-based solutions are generated, 2) problems and solutions are communicated and applied, 3) scientific competencies are increased (see Figure 3 below).

Figure 3: Results framework

Outcome 1	Outcome 2	Outcome 3
Making research-based solutions available	**Informing national and international stakeholders**	**Increasing scientific competencies and expertise**
Communication of research results (Section 3.1.1)	Results exchanged with stakeholders, and applied (3.2.1)	Capacity building (3.3.1)
Enhancement of scientific networks (3.1.2)	Results brought into international channels (3.2.2)	International research partnerships (3.3.2)
	Raising awareness on tackling global issues (3.2.3)	Capacity to tackle gender issues (3.3.3)

Note: Summary and simplification by the evaluators. The full results framework is included in Appendix B.

Were these outcome-level objectives achieved? In the following three subsections, we summarise our findings, focusing on the outcome-level and impact-level objectives.

3.1 Making research-based solutions available

Our findings indicate that the generation of scientific evidence was one of the core strengths of the programme. This is also supported by the survey results: 64% of the respondents stated that their project was successful in generating scientific knowledge to a "significant" or "considerable" extent. Only 3% of respondents stated that their project did not generate any new knowledge.

Figure 4: Scientific knowledge generated by the projects
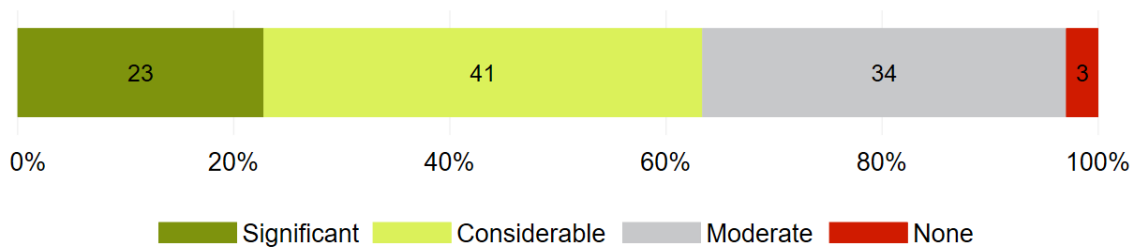
Source: Online survey BSS; Question: The third objective of the r4d programme was to "to generate scientific knowledge and research-based solutions for reducing poverty and global risks in least developed, low- and middle-income countries." To what extent was your project able to do so?

The survey results are supported by the results of our project case studies and our analysis of the publication output. The projects did not only perform well when compared to conventional metrics of publication success. As we will show in the following section, they were also communicated in an impactful way that is in line with the purpose of transformative research.

3.1.1 Communication of research results

What is remarkable about the scientific output is what channels the funded projects have used to communicate their findings. As to be expected, the work has been presented in peer-reviewed journals – but not only that. In addition, the 57 projects have used a wealth of other channels to communicate their findings: 589 conference presentations, 77 policy briefs, 259 stakeholder meetings, and 385 stakeholder consultations (see Table 1).

Table 1: Outputs

Output	North	South	Total
Peer-reviewed articles			474
Other articles			302
Contributions to international conferences			589
Policy briefs			77
Research fairs	46	121	167
Stakeholder meetings	93	166	259
Stakeholder consultations	41	344	385
Online communication			236
Other media communication			338

Source: SNSF programme data, own presentation

According to the project participants' self-assessment (see Figure below), publications in scientific outlets (journals and books) were only the second most important outputs of their projects.

Figure 5: Most valuable outputs of r4d projects
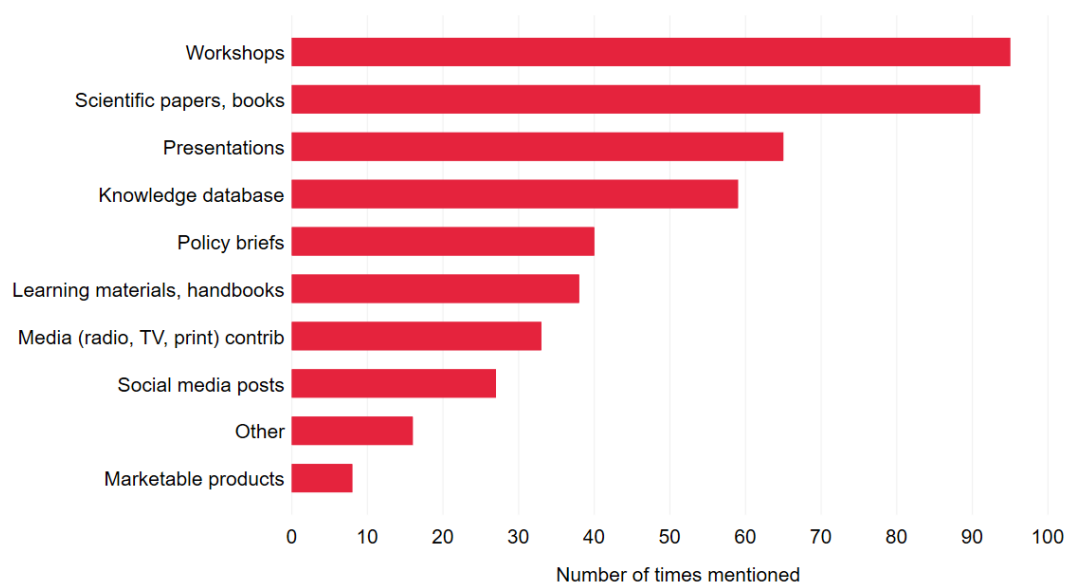
Source: Online survey; Question: Which of the following were the most valuable outputs of your r4d project?

Workshops – with other researchers or stakeholders – were mentioned most often. Also, presentations, contributions to knowledge databases, and policy briefs were rated highly by the survey participants.

These findings suggest that the funded researchers have internalised the programme's objective of contributing to problem-solving. The findings from the project case studies support this interpretation. Depending on the projects' specific stakeholders and beneficiaries, the funded projects chose the most adequate communication channel for presenting their results. The following examples illustrate this:

– The project on health impact assessments[4] conducted a series of three-day workshops with policy makers to discuss current solutions in the field of health care assessments in Africa. These workshops identified shortcomings in the current legislation. Based on the workshop findings, the project proposed alternatives.
– The project on development outcomes of resource extraction[5] developed a Resource Impact Dashboard (RID) to support evidence-based policy deliberations in resource extraction areas. The dashboard was co-designed with the policy organisations that later ended up using the tool.
– The project on the gender dimensions of social conflict[6] published a book on agricultural commercialisation, gender equality and the "right to food". Additionally, the team produced two short films, organised numerous policy dialogues at different levels of governance, and developed four policy briefs.

3.1.2 Enhancement of scientific networks

Did the programme help enhance "scientific networks on global issues for development"? This is another output-level question of the results framework. The following findings suggest that this objective was achieved:

– The projects have helped establish new collaborations: 17% of the project participants had not previously collaborated with any of the other project participants. 53% had only collaborated with few of the other project participants. That means that, in the funded projects, new collaborations were established. This also helped integrate researchers from the Global South into international research networks (see Figure 16 in Annex F).
– It is also positive to see that, according to the results of the online survey, 67% of the project participants continue to collaborate and 19% plan to do so after the completion of their r4d projects (see Figure 17 in Annex F).

The findings from the survey are confirmed by our case studies. The positive networking effect is not only limited to the circle of direct project collaborators: For researchers from the Global South, the programme provided a rare opportunity to travel to international conferences. This allowed them to expand their networks beyond their project teams. Moreover, the results from our case studies also suggest that more than four fifth of all projects analysed in a case study established new relationships with practitioners.

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[4] The full name of the project is: "Health impact assessment for engaging natural resource extraction projects in sustainable development in producer regions"
[5] Full name: "Measuring the development outcomes of resource extraction in producer countries"
[6] Full name: "The Gender Dimensions of Social Conflicts, Armed Violence and Peacebuilding"

Networking, however, is only a means to an end. Networks are meant to promote the transfer of knowledge and to lay the ground for new projects and innovations to emerge. And our results suggest that this was achieved. According to SNSF programme data, more than half of the funded projects have already led to follow-up projects – and, as the aforementioned survey results suggest, more are to come. Examples include:

- The project COCOBOARDS received follow-up funding by Innosuisse and SECO to develop their business case.
- Five r4d projects (ORM4Soil, IFWA, Ghana insect Compost, ORGAS) and one synthesis project (Food Systems Caravan) received follow-up funding by the SNSF through the Implementation Networks programme to disseminate the research evidence generated in the r4d projects and TAGs.

There are also the examples of projects that received follow-up funding by the SDC already mentioned above (see Section 2.3).

Some of these follow-up projects may have happened without the r4d projects. In many cases, however, follow-up projects directly resulted from the r4d project, the interviewed project participants assured us.

3.2 Informing national and international stakeholders

Another objective of the r4d programme mentioned in the results framework is to inform "[n]ational and international stakeholders [...] on the nature of the problems, trade-offs, and options for tackling and solving problems [...]".

Figure 6: Degrees of knowledge utilisation achieved by the r4d projects
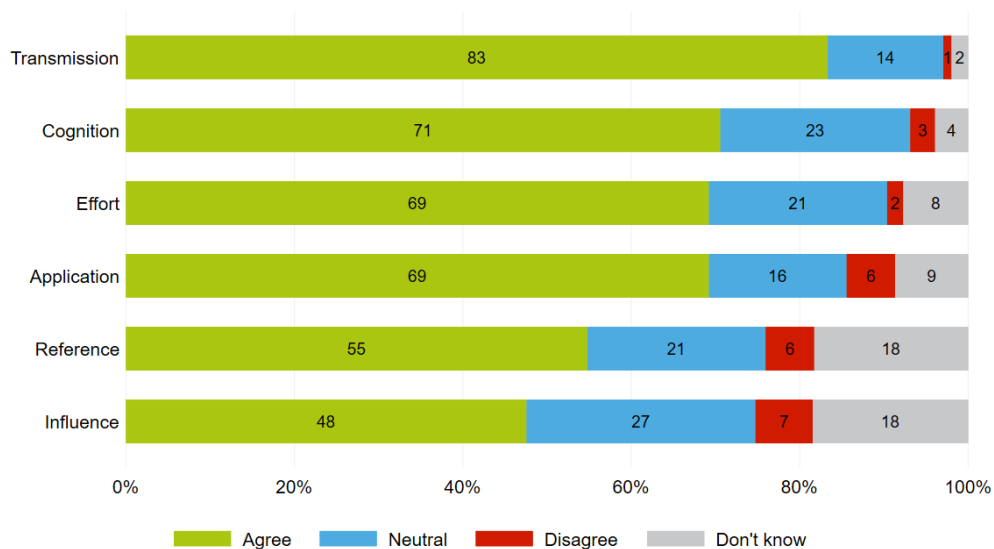
Source: Online survey; conceptual basis for the questions based on Landry at al. (2001); Question: We are interested in understanding the influence and impact of your r4d project on the relevant stakeholders and beneficiaries. Please indicate your level of agreement with the following statements.

There are different degrees of knowledge utilisation. According to a commonly used framework developed by Landry et al. (2001), knowledge utilisation starts with the transmission of information to the target groups, continues with the cognition of that information by the target groups, and ends with influencing the target groups' actions (see Figure above).

While 83% of the survey respondents stated that their project succeeded in transmitting their results to the relevant beneficiaries, 48% stated that they were also able to influence their beneficiaries.

These findings are supported by the survey results presented in the following Figure 7. More than half of the survey respondents stated their projects achieved the objective of raising awareness on tackling global issues through systematic and interdisciplinary approaches. Slightly more than 40% stated that they were able to bring results of research into relevant channels of international debate and regional and international policy dialogue.

Figure 7: Achievement of r4d objectives
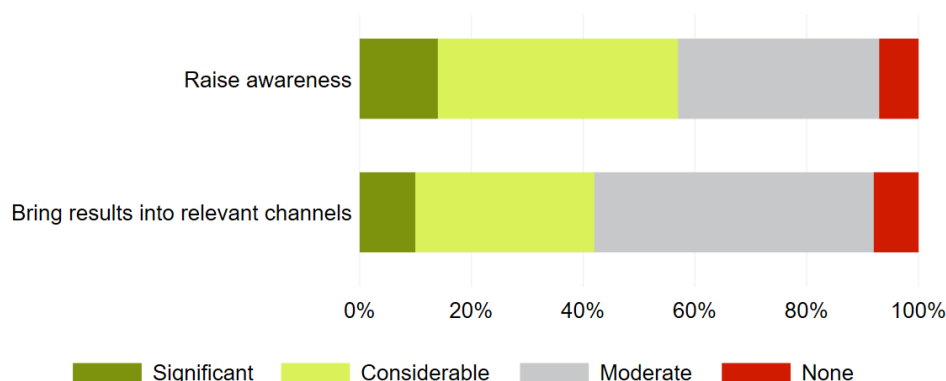
Source: Online survey; Questions: The first objective of the r4d programme was to "bring results of research into relevant channels of international debate and regional and international policy dialogue." To what extent was your project able to do so? The second objective of the r4d programme was to "raise awareness on tackling global issues through systemic and interdisciplinary approaches." To what extent was your project able to do so?

These results are based on self-assessments and are, of course, subjective in nature. In the following sub-sections we show, how they are supported by the results from our case studies.

3.2.1 Results exchanged with stakeholders – and applied

Are research results exchanged with stakeholders and applied? This is EQ11 and one of the three output-level goals mentioned by the results framework. Our findings indicate that many projects had impact on policy.

Policy impacts

The results of our case studies suggest that around three quarters of all projects engaged with policy makers *and* succeeded in having at least some policy impact. Examples include:

- The project "Improving the HIV care cascade in Lesotho" studied improved access to HIV testing and treatment, especially for the rural population. They found that offering same-day initiation of antiretroviral therapy improved treatment outcomes. Their work has been widely cited and used in WHO guidelines and by policy makers in Lesotho.
- The project on career counselling in West Africa[7] adapted existing vocational guidance materials to the West African context. The project appears to have helped lift career guidance back on the political agenda in Togo and Burkina Faso. The project participants in Togo presented the project to the relevant ministry and provided a justification for investing in career counselling. The project produced training materials that were used to train career counsellors in Togo. To date, 40 counsellors have been trained using these materials. The project also produced psychometric tests that are now used in career counselling for high school and university graduates in Togo.

We cannot entirely discount potential attribution problems. Many different factors typically contribute to policy changes. And research results alone rarely do. In many cases, however, we found indications – not proof – that at least suggest that the projects contributed to the attributed policy changes.

Market impacts

The projects did not only influence policy making. We also found other types of impacts. The following example, for instance, pursued a knowledge transfer pathway via the commercialisation route: The relatively small project COCOBOARDS developed a panel made from coconut husk fibres as alternative to classic wood panels. It achieved remarkable impacts. Young researchers established a start-up firm in Switzerland (NaturLoop.ch), which already pays salaries for staff in Switzerland and the Philippines. The collaboration with South partners will be expanded to other countries which have similar potential (Brazil, Sri Lanka). Firms like IKEA are starting to become interested in the product. Applications for low-cost housing, relevant for the poor, are developed.

3.2.2 Results brought into international channels

Bringing "[r]esults of research […] into relevant channels of international debate and regional and international policy dialogue" is mentioned as a second objective in the results framework (EQ14). According to the survey results (see Figure 7 above), more than 40% of respondents indicated that their project had significant or considerable success in getting their results into international channels. This finding is supported by our case studies: Of the analysed projects, about half were able to do so. Examples of cases where results were brought into international channels include:

- The projects of the conflicts and social cohesion call produced a documentary film together. The film called "Inequality and conflict – Beyond Us and Them" was screened at a side event of a high-level UN forum meeting in New York where the relevant SDG 16 - peace, justice, and strong institutions - was discussed. The film screening was attended by governmental representatives and NGOs, and it was discussed with the researchers from the funded projects.

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[7] The full name of the project is: "Adapting and strengthening educational guidance and career counseling to promote decent work in two West African countries"

- The project on the gender dimensions of social conflict[8] developed a better understanding of how gender informs conflict management and peacebuilding practices. A PhD student in Indonesia became an important voice for women, influencing national policy. She recently joined the ASEAN Women For Peace Registry (AWPR).
- The project on Illicit Financial Flows[9] (IFFs) collected data on the taxation of mineral exports and developed solutions to improve current tax policies. The results were discussed at prominent conferences such as the World Resource Forum, UNCTAD, and the OECD. They also consulted with think tanks such as T20 in advance of G20 meetings.

3.2.3 Raising awareness on tackling global issues

Raising "[a]wareness on tackling global issues through systemic and interdisciplinary approaches" is stated as a third output indicator by the results framework. According to the survey results (see Figure 7 above), 57 % of respondents had significant or considerable success in raising awareness of their research topic. Again, our case studies support this finding. Examples of projects that helped raise awareness include:

- The project Woody Weeds[10] showed that some invasive tree species, which have been introduced in many African regions as a source of firewood or to rehabilitate degraded land, have negative impacts on biodiversity, ecosystem services, and human well-being. By generating and sharing this knowledge with relevant actors, the project raised awareness for the risks that invasive species pose to ecosystems in East Africa.
- The project on girls' football teams[11] examined girls' participation in social life through the study of youth soccer clubs. Girls and coaches participated virtually in a conference to raise awareness of the importance of gender rights in Africa.
- The project COCOBOARDS[12] contributed to a new understanding of how to make better use of coconut waste as a resource.

3.2.4 Analysis

Given these findings, how "effective" was the programme overall? Did the programme contribute "to solving urgent global problems and securing global public good," which is the r4d programme's impact objective? The evidence presented above suggests that many projects did achieve this objective. This demonstrates that, at its core, the intervention logic of the r4d programme works. Clearly, not all projects achieved all objectives. However, this is in line with expectations for one must recognize that there are important constraints:

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[8] Full name: "The Gender Dimensions of Social Conflicts, Armed Violence and Peacebuilding"

[9] Full name: "Curbing Illicit Financial Flows from Resource-rich Developing Countries: Improving Natural Resource Governance to Finance the SDGs"

[10] Full name: "Woody invasive alien species in East Africa: assessing and mitigating their negative impact on ecosystem services and rural livelihood"

[11] Full name: "Kick it like a Girl! Young Women Push Themselves Through Football in the African Public Space."

[12] Full name: "COCOBOARDS: environmentally sound technology for the manufacturing of affordable building materials based on coconut husk and natural bonding agents"

– Policy-changes typically take much longer than the typical project duration of 3 or 6 years. And it often takes more than a single research project to change policy. Therefore, it would have been unrealistic to expect large-scale policy changes or paradigm shifts.
– One should not underestimate the role of chance. Many factors typically contribute to impacts. And many of these factors are beyond the control of the projects. Therefore, it always takes a little luck for impacts to occur. We thus recommend that the projects should not simply be judged by the impacts they have achieved (deterministic perspective) but by the steps they have taken to maximise the chance of impacts occurring (probabilistic perspective). And for most of the projects that we studied, we gained the impression that they did take effective measures to maximise the likelihood of success.

Considering these factors, we conclude that the "effectiveness" of the programme was high.

3.2.5 Contributing factors

From the results of our project case studies, we can also deduce factors that contribute or constrain the creation of impacts:

– A systematic mapping of the stakeholder landscape and a systematic scoping of the beneficiaries' needs at the beginning of the project is critical. It ensures relevance to the project beneficiaries and is therefore highly conducive to achieving impact.
– Co-creation: For the project results to be of value to stakeholders and beneficiaries, they must be involved throughout the project – especially in the project design. This requires the willingness to constantly revisit and revise the project design to keep the research objectives aligned with the stakeholders' interests. Projects that followed the typical procedure of data collection, analysis, publication, and then communication tended to struggle to engages with their stakeholders and beneficiaries.[13]
– Strong pre-existing networks and relationships with practitioners and beneficiaries make it easier to address the just mentioned points.
– Prior experience with transformative, international, and transdisciplinary research greatly contributes to the projects' success.
– Realistic objectives: The projects must define realistic objectives and a mature intervention logic that outlines how the project is to generate impact. Projects that focused on specific local problems tend to be more successful than projects whose goals remained abstract.
– Sufficient time: Our case studies suggest that the projects from the thematic calls, that were funded for 6 years, tended to have achieved more outcomes and impacts. However, our sample is too small to conclude that there is a systematic relationship between the duration of the funding and the impacts achieved by the project. Also, the online survey does not show significant differences between the impacts of the open call and the thematic call projects. Nonetheless, our findings do show that there are several reasons why it is important the projects are given sufficient time: The first reason is that it takes time to systematically map the stakeholder landscape in the beginning of the project and to communicate the results at the end. Often this is not feasible in a three-year project. Second, mostly projects from the thematic calls had the opportunity to involve doctoral students, as the minimum duration of a PhD programme

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[13] Positive examples in which this phasing was challenged were the relatively few projects with a transdisciplinary and/or transformative approach (e.g. Telecoupled Landscapes).

usually is 4 years. Many of the doctoral students were employed in relevant positions after completing their doctorates.

– Follow-up funding: It takes time and resources to generate impacts. To exploit their full potential, many projects require follow-up funding. And some of the projects that showed potential were able to get follow-up funding from various sources.

– The collaboration is built on an equal partnership in line with the KFPE principles (see text box below).

The factors that we have identified in the evaluation are in line with the factors identified by Eschen et al. (2021) and Jacobi et al. (2020).

3.2.6 Constraining factors

We can also name the following constraints, in addition to the general constraints presented above:

– Not all partners from the South had an interest in generating an impact. Some saw the r4d projects as just another funding opportunity to continue the research that they were already doing, which in most cases meant that they focused on the production of peer-reviewed publications. Some South partners were even less familiar than their Northern partners with transdisciplinary approaches and working with policy makers and practitioners.

– Several project participants criticised that the projects had to be led and the finances controlled by PIs (principal investigators) in Switzerland. They suggested that this made it more difficult to build an effective working relationship with some of the partners from the Global South (see Section 3.3.2 below).

– Some of our interviewees pointed toward a language barrier between English (the language of science), national (official), and local languages.

3.3 Increasing scientific competencies and expertise

Strengthening the "capacities to identify and tackle new issues with a potential global impact for developing countries" is mentioned as the third outcome-level objective stated by the results framework.[14]. We consider this to be one of the main strengths of the programme. The Figure 8 below provides a first indication of the programme's impact on capacity building. In the following sub-sections, we will elaborate the impact with further evidence.

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[14] The goal is that "[s]cientific competencies and expertise in dealing with the complexity of global issues for the benefit of societies in Africa, Asia and South America are increased". See results framework in Annex B.

Figure 8: Professional development due to r4d
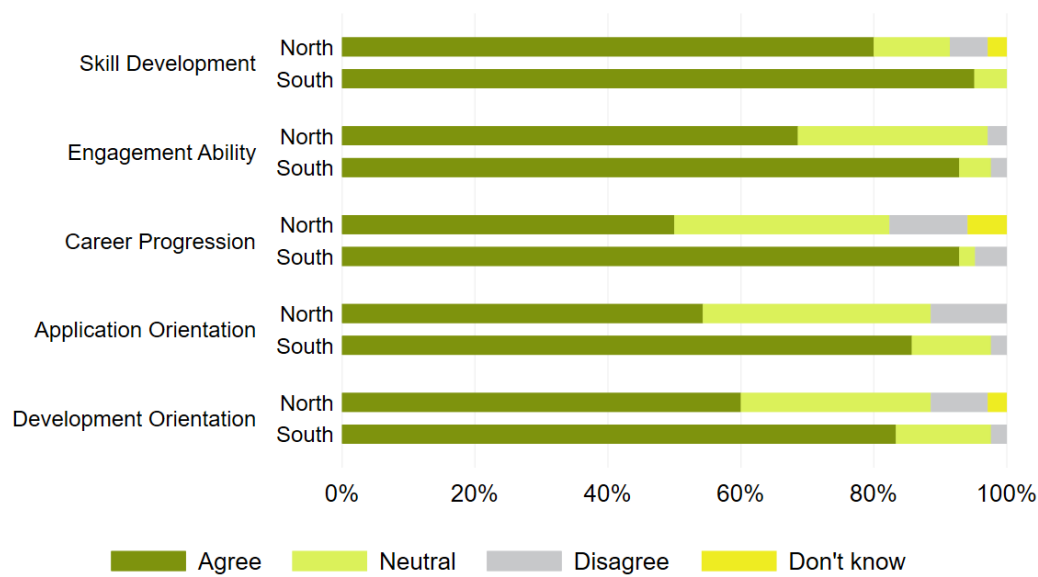
Source: Online survey. Question: Impact on professional development: We would like to understand how the r4d project has influenced your professional development and research approach.

3.3.1 Capacity building

Overall, in the r4d programme, over 200 junior researchers in the Global North and South were trained in trans- and interdisciplinary projects dealing with development issues. This includes around 60 post-docs, 80 PhDs, and a substantial number of both graduate and undergraduate students (SNSF programme data).

In addition to its influence on junior researchers, the programme also had an impact on more senior researchers. Many of the senior researchers we interviewed stated that their research perspectives had been changed by the r4d programme. After their experience with r4d, they intended to put a much greater emphasis on developmental issues. The r4d programme also provided them with the experience of working in a multicultural project environment and conducting fieldwork in developing countries.

The survey results suggest that the impacts were particularly positive in the Global South. More than 90% of the project participants from the Global South stated that their r4d programme had a positive impact on their career development (see Figure 8 at the beginning of this section).

Also, the results from our case studies suggest that many projects were highly successful in building capacity:

– The project on the technical and vocational education and training (TVET)[15] adapted and transferred lessons learned from the Swiss TVET system to partner countries, including Benin, Chile, Costa Rica, and Nepal. During the project, policy makers from these countries were able to attend a Summer School, which enabled them to deepen their knowledge of TVET systems and to develop solutions tailored to the needs of their countries. In Nepal, this led to the

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[15] Full name: "Linking Education and Labor Markets: Under what conditions can Technical Vocational Education and Training (TVET) improve the income of the youth?"

creation of a new master's degree programme focusing on TVET systems. More than 150 students have already graduated from this programme.
- The project Woody Weeds[16] contributed to strengthening the scientific network between the different research centres conducting research on invasive species. In total 22 PhDs and 2 professorships emerged from the project.
- The project on social media use to educate health workers[17] developed a cost-effective way to train health workers in several African countries. Using WhatsApp, they trained more than 30,000 nurses and doctors. However, there are doubts about whether this will continue after the project ends.

Some researchers went abroad. Does that indicate a "brain drain"? Many of the researchers that have left now appear to facilitate collaborations with their colleagues from the Global South. They appear to be assuming the role of "bridgeheads", connecting North and South. It is still too soon, however, to venture a conclusive assessment.

3.3.2 International research partnerships

In Section 3.1.2, we already showed that the programme helped strengthen scientific networks. Did the programme also help establish *international* research partnerships? By design, the r4d funding programme brings together researchers from different countries, the Global South and North. But how equal were these partnerships?

The survey results presented in the Figure below suggest that the project participants from the North and the Global South tended to assume different roles and responsibilities. The project participants from the North played a bigger role in the inception and design of the projects and the authoring of the initial proposals and the final report. The project participants from the Global South played a bigger role in the outreach and communication activities and the stakeholder engagement. The figure is based on the survey results. But the findings shown in the figure are supported by the results from our project case studies.

However, there are notable exceptions, too: In the case of the SoilQ project, for instance, the project idea was conceived by researchers in Cuba. In search of funding opportunities, they discovered the r4d programme and then approached researchers in Switzerland to submit a proposal with them.

As per the requirements of the programme, the funded projects must be led by a PI in Switzerland. Therefore, it does not surprise that the PIs in Switzerland assumed a leading role in the inception and design phase of the projects. It also seems like a natural division of labour for the project participants from the Global South to assume a bigger role in the engagement of stakeholders, since many of the projects' stakeholders and beneficiaries are in the Global South. This division of labour, however, is not compliant with the KFPE's (Commission for Research Partnerships with the Developing Countries) principles for transformative research, as we show in the text box on the next page.

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[16] Full name: "Woody invasive alien species in East Africa: assessing and mitigating their negative impact on ecosystem services and rural livelihood"

[17] Full name: "Social Mobile Media to educate, connect and empower Frontline Health Workers in Nigeria, Zambia and South Africa"

Figure 9: Involvement of the project participants from the North and South
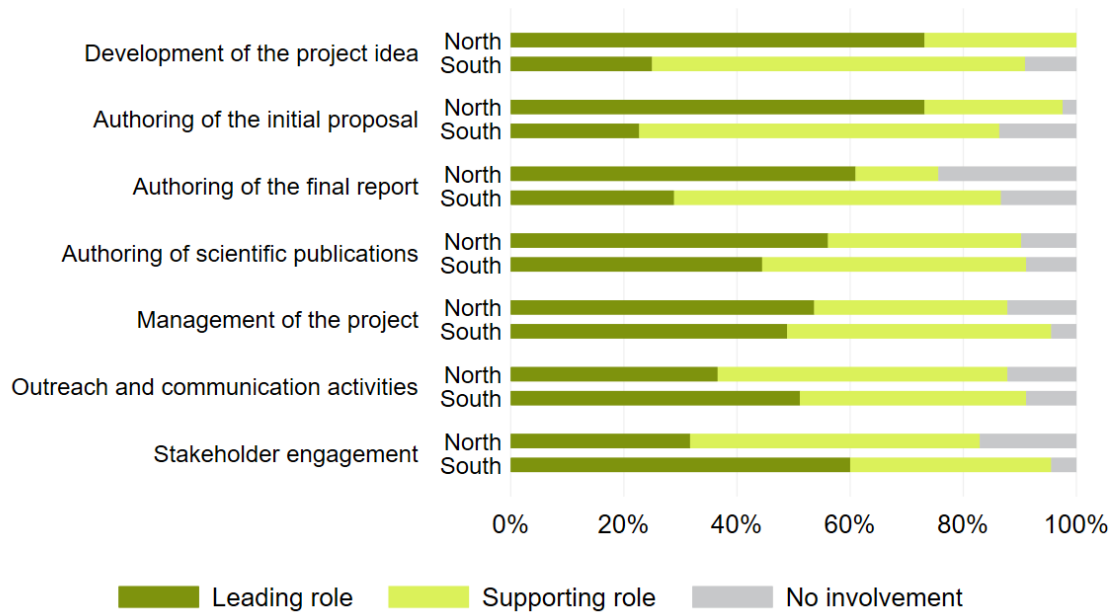
Source: Online survey; Question: Please indicate your level of involvement in the following project-related activities.

Often, the project participants did not perceive their collaboration as an equal partnership.[18] Especially the PIs from Switzerland were discontent with the fact that they had to lead the projects and manage the finances. They said that this made it more difficult to build effective, productive partnerships. We recognise that, given the SNSF's and SDC's funding rules, it may be difficult to organise this differently. Nonetheless, we recommend that the SDC and SNSF look for ways to resolve this challenge.

Most problematic, perhaps, is that the project participants from the Global South do not seem to have been involved equally as authors in the publications that resulted from the projects. The Table below shows that researchers from the North were awarded authorship more often than their colleagues from the Global South.

– Slightly more than half of all publications were co-published by authors from the North and the Global South (green box in the middle of the table).
– However, 34.5% of the publications were single-country publications authored by researchers from the North, without participation by authors from the Global South (see bottom left of the table). By comparison, only 11.5% of the publications were pure single-country publications authored by researchers from the Global South alone (top right).
– In 19.2% of the publications, at least two partners from the South were involved, an indicator for South-South collaborations.

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[18] This finding is supported by a number of survey responses: In open text fields, multiple survey participants called for a more equal partnership. Here is a selection of responses: "More emphasis on real, functioning and more equal partnerships between North and South." "Greater involvement of partners from the Global South in the design of the programme." "Partners from the Global South should have a more important role and have more responsibility. They should also have the possibility to participate more when designing the project and decide how to implement it. Relationships between the Swiss team and the other teams were unbalanced and this determined also the possibility to benefit less from the project's results."

Table 2: North-South publications patterns

		South			
		Not involved	Single-country	Multiple countries	Total
North	Not involved		53 (10.5%)	5 (1.0%)	58 (11.5%)
	Single-country	107 (21.2%)	140 (27.7%)	55 (10.9%)	302 (59.8%)
	Multiple countries	67 (13.3%)	41 (8.1%)	37 (7.3%)	145 (28.7%)
	Total	174 (34.5%)	234 (46.3%)	97 (19.2%)	505 (100%)

North-South: 273 (54.1%)	South-South: 97 (19.2%)	North-North: 145 (28.7%)

Source: SNSF data, own compilation

The finding that the project participants from the North were awarded authorship more often than their colleagues from the Global South, however, is not fully supported by the results from the online survey. The survey respondents from the North appear to have taken a leading role in the preparation of publications only slightly more often than those from the Global South (see Figure 9 above). However, the difference is small. An alternative explanation for the results presented in the Table above could be that authorship in scientific publications is less important to the project participants from the Global South than their colleagues in the North. Based on the information available to us, however, we cannot conclusively assess this.

> ### Compliance with KFPE-principals
>
> The Commission for Research Partnerships with the Developing Countries (KFPE) has elaborated a set of principles for transdisciplinary research.
>
> The fact that the project participants from the Global South did not have the same role in the design of the projects as their colleagues in the North represents a violation of the KFPE-partnership principle 1, according to which the agenda is co-developed by all partners together.
>
> Principle 9 states that profits and merits are to be pooled evenly. If we interpret co-authorship as merit, it does not appear to be shared evenly. Another interpretation could be that the project partners from the South were not awarded with co-authorship because they did not evenly contribute to the preparation of the project publications. If this interpretation was true, it would point at another problem, namely that the projects are not designed as equal partnerships.

3.3.3 Capacity to tackle gender issues

Gender was not part of the original results framework. Today, however, gender is recognized as an essential factor in global development and the pursuit of the SDGs. Addressing gender disparities and promoting gender equality is not only a goal in itself. It also leads to more inclusive,

equitable, and sustainable development outcomes. Therefore, the capacity of researchers to tackle gender issues is an important factor enabling them to contribute solutions to development problems. We have thus decided to include gender here in the chapter on increasing scientific competencies.

Even though the r4d programme did not have an explicit gender focus, many projects focused on gender issues. This was already observed in the mid-term evaluation, and it is supported by the results from the survey and our case studies. Of the survey participants, 35% stated that they explicitly studied how men and women were affected differently in their projects.

Figure 10: Research focus on gender

Yes	Partially	No	Prefer not to say
35	17	31	16
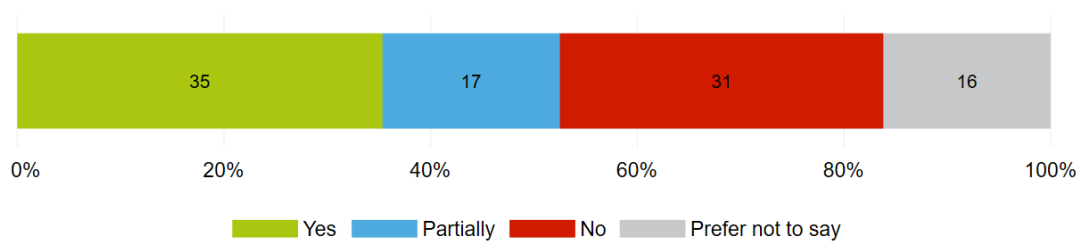
Source: Online survey; Question: In your r4d project did you study specifically if your research subject affects men and women differently?

We do not have data on the gender balance of the projects. However, 57% of the survey respondents stated that men and women were represented equally in their projects (see Figure below). 13% even stated that there were more women than men. Unfortunately, however, we do not have a benchmark against which to compare this.

Figure 11: Gender composition of consortia

Equal representation	More men	More women	Prefer not to say
57	26	13	4
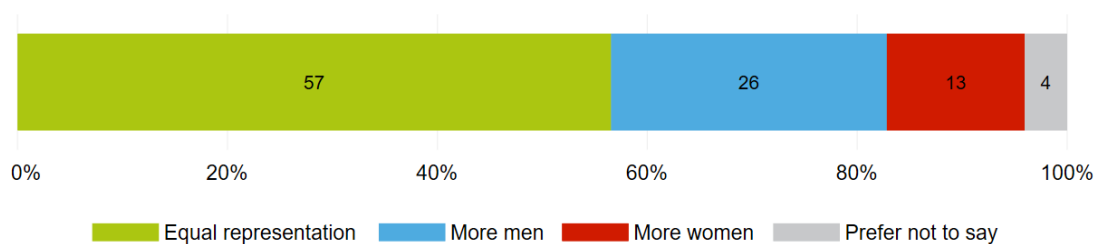
Source: Online survey; Question: Considering all team members in your project consortium (e.g., Principal Investigators, Co-Investigators, Researchers, PhDs, and other key roles), how would you describe the overall gender composition?

4. Efficiency

4.1 Design of the programme

4.1.1 Innovativeness of the programme

In many respects, the r4d programme was ahead of its time. It was meant to be inter- and transdisciplinary, development oriented, transformational/challenge oriented, and inter-departmental. As concepts, inter- and transdisciplinarity, internationality and solutions-orientation are, of course, older than the r4d programme. However, combining them in one programme was novel to the SNSF. And for comparison, the EU only started to implement these concepts in its Horizon 2020 programme in 2014.

With the innovativeness, however, came several challenges. Principles (inter- and transdisciplinarity and transformation orientation) had to be operationalised, so that they could be used by the reviewers to select, evaluate, and monitor projects. Moreover, said principles had to be reconciled with existing paradigms like scientific excellence and freedom of research. Multiple actors involved in the early phase of the programme that we interviewed confirmed this challenge.

Our interviewees suggested, however, that over time the people involved in the programme management, the steering committee, and the review panels learned to criticise these new concepts and to reconcile these with existing paradigms.

4.1.2 r4d as a living lab?

On the one hand, one could criticise it as a design flaw that these new principles were not clearly defined from the beginning. On the other hand, the r4d programme therefore provided the opportunity to the SNSF, SDC, and all other actors involved in the programme to gain experiences with these new principles ("transformation"). From that perspective, the r4d programme could be seen as a "living lab" that allowed both the SDC and the SNSF to experiment with novel concepts.[19]

For the SNSF, the r4d programme provided an opportunity to try new concepts such as transdisciplinary and transformative/mission-oriented research. And it provided an opportunity to reflect on prevalent concepts such as "bottom-up research" and "excellence" and how these could be reconciled with the requirements of transformative research. Moreover, the programme management tried out numerous synthesis activities of different formats, including fairs across the world, cross project initiatives, documentary films, workshops in digital storytelling, and many more. Each provided an opportunity to learn how these activities helped the projects generate impacts.

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[19] "Living labs" seek to create sustainable impacts through iterative feedback processes in real-life environments (European Network of Living Labs, 2023). This approach is closely connected to the open innovation literature (Chesbrough, 2003).

For the SDC, the programme provided an opportunity to reflect on concepts such as evidence-based policy making or decolonisation. Several stakeholders involved in the steering committee or the review panels mentioned this.

Most of the actors involved in the programme management, steering committee, and the review panels that we interviewed told us that their involvement in the programme provided them with a learning opportunity and new perspectives. The lessons learned continuously led to adaptations in the structure and management of the programme. The Transformation Acceleration Grants (TAGs), for example, were introduced in response to requests from the projects. The results from the mid-term review directly fed into the design of the successor programme SOR4D.

The lessons learned within the management, the steering committee, and the review panel regarding the implementation of inter- and transdisciplinary, international and development/challenge-oriented programmes, however, do not appear to have been formally recorded, documented, and communicated. The programme level knowledge that was generated mostly stayed informal or tacit. It was rarely made explicit in a way that it could be recorded and communicated. For the future, we thus recommend exploring how the knowledge and experiences generated at the programme level can be recorded, documented, and communicated into the SDC and the SNSF (EQ19). This programme level knowledge and experiences should include, for instance:

– How the review panels have defined inter- and transdisciplinarity and transformation and how they operationalised it for the evaluation of project proposals.
– The criteria based on which the project proposals were evaluated[20] and the challenges that the review panels may have encountered in applying these criteria.
– How were expectations regarding the scientific excellence of a project and its application orientation reconciled? Were they compatible? Were there conflicts between the two? If so, how were they resolved?
– The contribution of the diverse synthesis activities: Which ones worked? Which activities did not?
– What was the initial intervention logic described in a theory of change? How did the experiences and observations of the programme management confirm or diverge from the theory of change?

Maybe this could also be made the subject of the accompanying synthesis work. Clearly, this must start at the beginning of the programme.

4.1.3 Role of the synthesis and support activities and TAGs

Synthesis and support activities

The r4d programme provided various activities to support projects, synthesise results, and accelerate transformation. The survey and case studies show that some of these activities were highly valued. In particular, the site visits and mid-term reviews were appreciated by the researchers. In addition, the synthesis activities provided an opportunity for the projects to exchange ideas with other projects.

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[20] Typically, these criteria were defined in the tender documents.

Figure 12: Usefulness of r4d support/synthesis activities
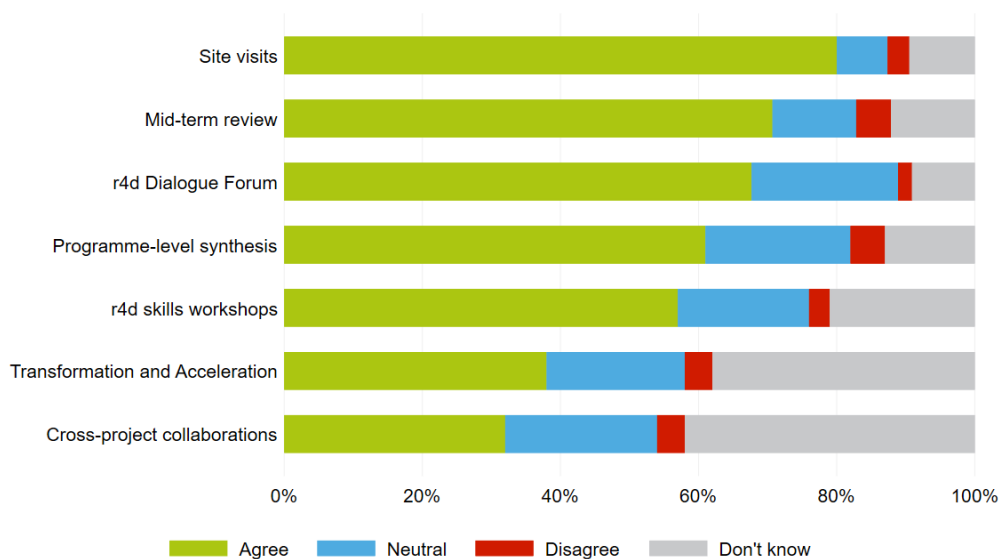
Source: Online Survey; Question: The r4d programme provided various support activities to assist participants. We would like to know your thoughts on their effectiveness. Please rate the usefulness of each of the following activities.

The findings from our case studies and interviews with project participants suggest, however, that many project participants were not aware of many of the synthesis activities. Some pointed out that participating in these activities required an additional effort from them, which they had neither anticipated nor planed in their projects. Others engaged in these activities enthusiastically. The evidence available to us, however, does not allow for a systematic and conclusive assessment of the added value of the synthesis activities.

Transformation Acceleration Grants (TAGs)

The TAGs were originally introduced in response to requests from researchers for additional funding that would facilitate and accelerate the utilisation of knowledge or technologies developed in r4d projects. Two calls were launched, one in 2019 and one in 2020. In total, 13 of the 57 projects (22%) received additional funding via TAGs of up to CHF 100'000.

The interviewed project participants appreciated the TAGs. And some even suggested that they were able to develop some of their most important outputs through the TAGs. The TAGs appear to have benefited especially projects that were more theoretical in their original project design. An example of this is the project on the "Challenges of municipal solid waste management", which originally had not planned stakeholder workshops. The TAGs allowed the project to visit municipalities in India, which, according to the project participants, did have a policy impact. Projects that already had a strong application focus also benefited from the TAGs. Here, the additional funding strengthened existing application efforts and expanded the scope of the impact. Examples include:

– The project on development outcomes of resource extraction[21] used the additional funding to demonstrate and promote their Resource Impact Dashboard through in-depth workshops with

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[21] Full name: "Measuring the development outcomes of resource extraction in producer countries"

key stakeholders from the public, private, and civil society sectors in four additional African countries coupled with implementation support in Southern Africa.

– The project on the preservation of Central Asian fruit tree forest ecosystems from fire blight used the TAG to develop a smartphone app that can efficiently informing farmers, forestry services, and private persons about the instances and dangers of fire blight, the correct way to recognize the symptoms, and the methods of disease control (Kurz et al., 2023).Therefore, the app might plausibly contribute to combatting and controlling the spread of fire blight.

However, our findings from the cases studies also suggest that without the TAGs, some of the projects might not have engaged in any dissemination activities. The idea of the TAGs, however, was to accelerate existing efforts, not to reward projects with extra funding that had failed to include dissemination activities in their projects, as they were supposed to.

4.2 Management of the programme

The r4d management was provided by the SNSF. Thereby, the programme could leverage the SNSF's capabilities in evaluating and selecting scientific project proposals. The programme could rely on the SNSF's infrastructure and services, for instance, its financial management and reporting systems, customer relations management, and project platforms (mySNF).

Due to the synthesis and support activities, the management of the r4d programme was, from the SNSF's perspective, more active and engaging than usual.[22] We argue that this is justified. As stated above, r4d was an innovative programme. And the active and engaging management helped define, operationalise, and implement the novelties (transdisciplinarity, co-creation, solutions-orientation) that transformative research meant to many of the project participants and stakeholders involved in the management of the programme. This can be seen most clearly in the synthesis activities through which the programme management sought to promote the dissemination of the projects' results and maximise impact.

4.3 SNSF-SDC collaboration

4.3.1 Complementarities

How well did the SDC and SNSF collaborate? Bringing both organisations together was necessary (EQ18) because the goals pursued by the r4d programme (solving global problems) cannot be achieved by one organisation alone. The SNSF and SDC bring complementary capabilities to the programme. The SDC can bring in its expertise in applying novel concepts to development problems. The SDC also has an expertise in monitoring, managing, and evaluating (ex-post) projects. The SNSF contributes its capabilities in evaluating (ex-ante) proposals and selecting research projects.

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[22] Compared to NRP, management costs appear to have been modest. However, they did not include the costs for the synthesis (CHF 1.2 Mio) which were categorized as research funding.

4.3.2 Institutional differences and convergence

Collaborations between different departments or agencies often tend to be complicated by the fact that organisations have different objectives and cultures.[23] Our interviewees involved in the management of the programme suggested that this might have also been the case here.[24] Within the steering committee, the review panel, and the management, the actors involved were often confronted with the different perspectives on issues such as research excellence, freedom of research, knowledge application, development, inter- and transdisciplinarity. Over time, however, these differences appear to have been bridged. At a working level, the members of the steering committee, the review panel, and the management learned to resolve these differences. They build a common understanding and learned to operationalise and implement said principles.

4.3.3 Need for collaboration

The SDC helped with the application of the projects' results. For instance, the SDC helped communicate the research results into relevant research channels. In some cases, the SDC itself applied results from the projects. In other cases, SECO took up the results. This demonstrates the benefits of collaborations between the SNSF and other departments. The r4d experience clearly shows how such collaborations of a research funder with practice-oriented departments can increase the likelihood of research findings being applied. In the science, technology and innovation policy literature, it is therefore often argued that research funders should collaborate more intensively with other actors within and outside government (see Mazzucato, 2019, 2021; Lindner et al. 2021, p. 9; EFi, 2021).[25]

4.3.4 Involvement of the SDC

As shown above, the SDC did help valorise results from some of the project. However, from the stakeholder interviews we learned that, at least initially, there were expectations that the SDC should have played a more active role shaping the r4d programme and in valorising the results from the r4d projects. Stakeholders involved in the programme management and some of the project participants specifically criticised that the field offices of the SDC were difficult to involve in the projects, and that there was not a stronger link with the SDC's Global and Regional

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[23] We recognize that the SNSF is not a "department" like the SDC. It is an independent agency. Nonetheless, we argue that the SNSF needs to collaborate with departments like the SDC to maximize relevance and to promote the application of research results.

[24] One of our interviewees described one cultural difference as follows: "After the SNSF has selected a project and allocated the money, for the SNSF the work is over. For the SDC the work begins when the money has been allocated."

[25] Lindner et al. (2021, p. 9) write: "Der ressort- und politikfeldübergreifende Charakter von transformativen Missionen führt zu einem erheblich erhöhten politischen und administrativen Abstimmungsbedarf – horizontal wie vertikal. Um diesen Bedarf erfüllen zu können, müssen die grundlegenden Voraussetzungen für effektive Koordination geschaffen werden. Dazu sind die zuständigen Stellen in den Ministerien mit ausreichenden Ressourcen auszustatten. Erforderlich ist zudem ein Kulturwandel in den Ministerialverwaltungen, der Kooperation und Zusammenarbeit belohnt. Dazu sollten auch organisationsstrukturelle Maßnahmen ernsthaft in den Blick genommen werden, beispielsweise die Übertragung der Zuständigkeit für bestimmte Missionen an zentrale Stellen [...] oder die Auslagerung der Umsetzungsverantwortung an eigene Innovations- beziehungsweise Missionsagenturen."

Programmes.

A greater involvement by the SDC representatives in the review panels, steering committee, and management, however, was constrained by the fact that the SDC representatives had little time that they could allocate. Moreover, each SDC task manager operates in her own area of expertise and that did not always overlap with the area of the r4d projects. And because of the SDC's staff rotation system, the SDC representatives often changed and each time the person had to re-familiarise himself/herself with the programme. In that light, it is unrealistic to expect a stronger involvement. Moreover, the SDC' Global and Regional Programs follow a different planning cycle than the r4d programme. The screening of expertise and stakeholder mapping is followed by the drafting and approval of 4-year programmes (e.g., country programmes, work programmes) which, then, need to be implemented. The r4d projects ran on a different timeline. Therefore, again, a stronger involvement of the SDC seems to have been unrealistic.

Despite said challenges, we did come across several cases, where strong collaborations between the SDC, its field offices, and the r4d projects emerged. There were several projects where the SDC actively helped valorise the results of the projects and provided follow-up funding. In Section 2.3 we have already listed some of the projects that received follow-up funding.

To increase the involvement of the SDC, we recommend making available more time for the involved SDC representatives and to coordinate with the SDC's internal knowledge management system to facilitate knowledge transfer from the programme into the SDC. We also recommend that the SDC reflects on ways how the field offices could be engaged in the projects more systematically. As we recommend, each project should do a stakeholder mapping. The local field offices, for instance, may be able to contribute to this. They may also help feed the projects' results into relevant channels.

5. Sustainability

Will the programme's achievements last beyond the end of the programme? We see several outcomes and impacts that are likely to live on. The capacity building, for instance, is likely to have a lasting effect. Over 200 junior researchers were trained in transdisciplinary and international project settings. They have gained experiences and competencies that they will be able to reuse in the future. The transformative capabilities that the researchers have developed cannot be taken away from them.

The r4d programme helped many junior researchers to establish themselves in the science system. This especially true for the junior researchers in the South. More than 90% of the project participants from the Global South stated that their r4d project had a positive impact on their career development (see Figure 8). Many acquired permanent positions at universities. Others went into government. From these positions, they can continue with transformative research and help reshape the science system.

Many of the funded researchers stated that the r4d programme also changed their perspective on research. A vast majority of researchers stated that, because of their r4d projects, they now had a stronger application orientation, development orientation, and they have improved their ability to engage with stakeholders and beneficiaries (see Figure 8). In short, they have become more

open to transformative research. This effect appears to have been even more pronounced among the project participants from the Global South. These behavioural changes are also likely to last. The same goes for the networks and relationships that were established among researchers in the North and South, and the networks with practitioners and beneficiaries.

However, we do see an important limitation to the sustainability of the programme's outcomes and impacts. Without funding opportunities to carry out new projects, the established networks are likely to diminish over time. The gained competencies will be "unlearned", and the produced behavioural changes will be untrained.

Therefore, it is critical that the cohort of researchers that went through the r4d programme are provided with new opportunities to fund transdisciplinary and transformative research projects. Many researchers will be confronted with science systems, institutions, and incentive structures that still do not reward transdisciplinarity, interdisciplinarity, and challenge orientation. Without new funding, they will pursue different lines of research.

6. Conclusion

6.1 Impact

The evaluation's findings suggest that the programme has achieved its core objectives:

1. It clearly generated evidence and research-based solutions. The research results were successfully presented in peer-reviewed journals, and the projects also explored diverse new channels to communicate their results with relevant audiences, including workshops with local communities, knowledge databases, or policy briefs. Moreover, the projects enhanced international and interdisciplinary scientific networks, which enabled the development of numerous new projects.
2. Our findings show numerous cases of knowledge transfer to national and international stakeholders. We saw multiple examples of policy impact and one important case of market impact. These findings demonstrate that, at its core, the intervention logic of the r4d programme works.
3. The programme also helped increase scientific competencies and expertise, fulfilling its third objective. More than 200 junior researchers (postdocs included) were trained in transformative research settings. And the research perspectives of many senior researchers were changed. The competencies necessary to succeed in transformative and international research environments were developed, networks with research partners and stakeholders in the North and the South were built and strengthened. We regard the capacity building as one of the r4d programme's main successes.

6.2 Relevance of transdisciplinary research

In the face of the existential challenges that humanity faces today, the r4d programme is potentially more relevant than ever. Transformative research, which builds on the co-production of knowledge with partners from the Global South, is critical for achieving the SDGs (International

Research Council, 2022). Moreover, the r4d programme seems highly relevant to both the SDC and the SNSF. The funding of research targeted at the SDGs is coherent with the mandates and strategies of both. The r4d programme was – and today, its successor programme, SOR4D, is – the only transformative research programme in Switzerland targeted at the SDGs. The r4d programme can be seen as the proof of concept that demonstrates that transformative research works: It generates both excellence and impact.

Arguably, transformative research programmes like r4d or its successor, SOR4D, may also be important for the competitiveness of the Swiss science system overall. Transdisciplinary, interdisciplinarity, internationality, and the focus on global challenges (SDGs) are central elements of Horizon Europe, the biggest research funding programme in the world. While Swiss scientists currently do not have access to the programme, scientists across Europe – and the world – are being trained and are gaining experiences in transformative research. Should Swiss scientists be readmitted to Horizon Europe, they may find themselves at a disadvantage due to a lack of experience and competencies in these areas.

Our findings also suggest that the funded projects were highly relevant to the projects' respective beneficiaries and stakeholders. The funded researchers benefited greatly from the funding – especially the researchers in the Global South and the junior researchers both in the Global South and Switzerland. Many projects also showed great relevance to local beneficiaries.

6.3 Innovative design

In many respects, the r4d programme was ahead of its time. It was inter- and transdisciplinary, development-oriented, and transformational/challenge-oriented. These concepts are, of course, older than the r4d programme. However, it was introduced before many other programmes that claim these concepts. For example, the EU only started to implement these concepts in its Horizon 2020 programme in 2014. And combining these concepts in one programme was novel to the SNSF.

Due to the programme's innovativeness, novel principles such as transdisciplinarity and development orientation, had to be defined and operationalised for the selection, evaluation, and monitoring of projects. Diverging perspectives and cultures at the SDC and SNSF had to be negotiated. From that perspective, the r4d programme can be seen as a "living lab" that allowed both the SDC and the SNSF to try out new concepts and approaches to research funding. The lessons learned throughout the project led to numerous adaptations. While the lessons learned informed the design of SOR4D, the successor programme, it appears that they were not documented sufficiently for use in future programmes.

6.4 Sustainability

Several outcomes and impacts of the r4d programme are likely to live on. The capacity building, for instance, is likely to have a lasting effect. The funded researchers have gained experiences and competencies that they will be able to use in the future. Many of the junior researchers were able to establish themselves in the science system and will be able to apply and spread what they have learned during their r4d projects.

It is critical, however, that the trained researchers find new opportunities to fund transdisciplinary and transformative research projects. After their r4d projects, many researchers will be confronted with institutions and incentive structures that still do not reward transdisciplinarity, interdisciplinarity, and challenge orientation. The researchers will need new funding to continue with this type of research.

In principle, the SOR4D programme provides the required continuation from the r4d programme. However, the SOR4D programmes' budget of CHF 19 million is small – only a fifth of the budget of the r4d programme and roughly 0,3% of the SNSF's budget over the same period. Moreover, it only runs from 2022 to 2026. Therefore, the scale of SOR4D's budget and duration does not provide researchers with a clear indication that they can reliably base their careers on transformative, sustainable, and development-oriented research.

7. Recommendations

Programme-level recommendations:

1. We recommend that the type of funding provided by the r4d programme (transformative and SDG-oriented) is continued. Conventional research funding alone is not going to deliver the results that we need to achieve the SDGs. Without sufficient funding, the capacity building impacts of the r4d programme are likely to be lost. The r4d programme can be seen as the proof of concept that demonstrates that transformative research works: It is both scientifically excellent and impactful. Therefore, we argue that transformative research sits firmly within the mandate of the SNSF. To the extent that the SNSF wants to strengthen its commitment to the SDGs, we therefore strongly encourage the SNSF to reflect on the experiences gained with the r4d programme, and ultimately, allocate more funding toward sustainability-oriented transformative research.

2. We conclude that – while not without challenges – the collaboration between the SNSF and SDC was effective. We argue that neither one organisation would have been able to achieve the same impacts without the other. We therefore recommend that the SNSF and SDC continue to collaborate. To maximise organizational commitment and visibility, however, we recommend that such programmes are co-funded by both organisations. The collaboration between the SNSF and the SDC may also serve as a blueprint for similar collaborations on transformative research programmes between the SNSF and other government actors, such as the Federal Office for the Environment, the Federal Office for Energy, the Federal Roads Authority.

3. Valorisation of the programme level experiences: To ensure that the lessons learned from the management of the programme are documented and analysed, we recommend that future transformative research programmes be accompanied by an ongoing evaluation or research project ("Begleitforschung").[26] An ex-post evaluation alone cannot achieve this. Transformative research is still new and innovative, and we expect that there are still a lot of lessons to be learned.

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[26] The SWEET programme by BFE, which aims to leverage research for the transformation of the energy system, for instance, is accompanied by a research project that examines how well the transformative research agenda is implemented (Begleitforschung).

4. Research funders across the world are currently trying to work out how to best design and manage transformative research programmes. Therefore, we recommend considering options for collaborating with other research funders to share the experiences gained in Switzerland and learn from those of other countries. The SDGs are about providing global public goods. It thus stands to reason that research funders collaborate.

5. To increase the relevance and to strengthen the solutions-orientation of transformative research programmes, we recommend including more practitioners, stakeholders, and beneficiaries from the Global South in the programme management, steering committees, and review panels. This group could include, among others, development experts, representatives from civil society (NGOs), policy makers from the Global South, industry or international organisations. Their involvement would be particularly important in the definition of thematic focal points and the assessment of the relevance and impact potential of proposed projects.

6. We recommend strengthening the involvement of the SDC in transformative research programmes like r4d in the future because a) the SDC can be a direct beneficiary of the research that is being funded and b) the SDC has a lot of expertise it can contribute to the programme and its projects. This could be done first by providing the involved SDC representatives more time and resources to engage with the programme. Secondly, to facilitate knowledge transfer from the programme into the SDC, we recommend a stronger integration with the SDC's internal knowledge management systems. Finally, we recommend that the SDC tries to look for new ways to engage its field offices more systematically.

Project-level recommendations:

7. Transformative research projects should be required to involve stakeholders and beneficiaries from the beginning, ideally by making them part of the project consortium.

8. Transformative research projects should also be required to conduct a systematic stakeholder mapping in the beginning of their projects. To ensure relevance and maximise impact potential, they should identify the needs of local communities, beneficiaries, and stakeholders at the beginning of their projects. And they should continue to engage them throughout the project.

9. The projects should be required to develop a realistic Theory of Change describing how they will generate impacts. The Theory of Change should encourage the projects to develop realistic and measurable objectives, milestones, and indicators. This could then also form the basis for a more comprehensive monitoring of the projects. In transformative research there are many different pathways to impact. Therefore, the monitoring should also be project specific.

10. Our findings indicate that both the smaller open call projects and the larger thematic call projects had benefits. We therefore recommend that in the future, researchers are provided with the flexibility to propose projects of shorter duration and smaller budgets but also projects with larger budgets and longer duration. We conclude that the longer duration is critical for projects to a) have sufficient time to first conduct a systematic stakeholder mapping and engage with stakeholders during the early stages of the research projects and to b) have time to communicate results at the end. However, we also saw that smaller and shorter projects achieved impacts. Therefore, we recommend that projects are provided with the flexibility to do both.

Appendix

A. Evaluation questions

Relevance and coherence

1. Were the r4d programme and its projects relevant and compatible with relevant frameworks and similar initiatives?
2. How did the r4d programme fit into the Swiss and global research context related to SDGs as well as into the institutional logic of development actors (including SDC)?
3. To what extent did the programme and the projects respond to needs of beneficiaries and/or development stakeholders and researchers in the South?
4. To what extent were the r4d programme and its projects unique or complementary to other research funding programs? Which research gaps did it not cover?
5. How coherent was the approach to science-policy relations, at the level of the r4d programme as well as in the projects (pathways to change)?
6. How well was the programme integrated into the SDC and the SNSF?

Effectiveness

7. Has the r4d programme achieved its objectives and planned results (outputs, outcomes, 7impacts)?
8. To what extent have the results of the programme and its projects been co-developed by actors from Switzerland and LMICs?
9. Was the goal to combine scientific excellence with practical solutions for development realistic and transformed into action, in a good balance and adding value in terms of effectiveness?
10. Did the r4d programme increase interest of the Swiss research community in development issues? To what extent did it contribute to strengthen Swiss research in an international comparison?
11. Did the r4d programme make a difference in generating scientific knowledge and solutions useful for development actors and practitioners working on global issues such as poverty reduction?
12. To what extent did the r4d programme and its projects, together with implementation partners, induce change, in terms of problem definitions, policies, or practices? Which factors were decisive to make that happen?
13. Did the approach to allocate financial resources for communication and the diffusion of results facilitate this transfer and add to effectiveness? How well was it implemented? What could have been done differently to make it even more effective?
14. Were there knowledge transfers from the projects and the programme into international or national development agencies, or policy makers? What facilitated them?
15. Has the programme significantly contributed to establish or further strengthen an active scientific network on global development issues?
16. To what extent has the programme led to scientific contributions, and what is, in general, the evidence for the scientific excellence of the r4d projects?

17. To what extent and how were the funded researchers able to reconcile the requirement of scientific excellence and application/development with the incentive structures that they are confronted with in the science system?

Efficiency

18. How well did the two funding organisations (SDC, SNSF) cooperate (particular focus on expectations, their compatibility, organisational culture, complementarities, competencies)? How has this cooperation converged over time?
19. How did the structure (organisation, set-up) and management of the programme allow for efficient programme implementation towards the defined objectives? What could have been done better?
20. Were there any unexpected synergies with SDC programs in the field or at HQ?
21. How well did the cooperation between researchers from Switzerland and the Global South materialise and contribute to efficient programme implementation?
22. How did the various follow-up and support instruments (e.g. monitoring, site visits, mid-term evaluation, r4d Forum, r4d skills) contribute to achieve the objectives of the r4d programme and its projects?
23. How has the synthesis work contributed to reaching the objectives?
24. Overall, what were costs and benefits of this active and engaging programme management (synthesis, thematic modules, thematic review panels)?
25. To what extent did it add value to the programme that there were two types of calls (thematic, open)? Had this an impact on the success of the research projects?
26. Were the resources provided to the research projects and the programme (e.g. duration of 4 years, financial resources) adequate?
27. Were the three financial conditions of the r4d programme useful, understood and respected by the researchers?
28. To what extent did the research projects rely on junior researchers from Switzerland and the Global South, with what advantages and disadvantages for the programme and individual research careers?
29. Was there sufficient exchange and collaboration among researchers from different projects to ensure cross-fertilisation?

Transformation Accelerating Grants (TAGs)

30. Which results were achieved? What is the quality of the outputs?
31. How did the TAGs contribute to accelerate transformation towards solution-oriented results? In which contexts did the approach work? What were challenges in implementing TAGs?
32. Which aspects of the set-up of the TAGs (e.g. trans-disciplinarity) favored achieving the objectives, and which aspects have been less successful?

Sustainability

33. Will the programme's achievements last beyond the programme termination?
34. Were there capacity building effects, attributed to r4d, both in least developed or low and lower-middle income countries, as well as in Switzerland?

35. To what extent did the projects manage to establish sustainable structures, networks, partnerships, or further initiatives? Have new institutions emerged? Have existing institutions adapted their research focus?
36. Has the r4d programme raised interest beyond the research community?
37. Have there been follow-up projects, spin-offs or other research uptake initiatives, and which factors favored such development?
38. Have there been any behavioral changes at the level of the project participants? Are researchers taking a greater interest in development issues, trans- and multidisciplinary work and North-South collaborations?
39. To what extent has the programme improved the integration of researchers from the Global South/East into the international science community?

B. Results framework

Hierarchy of objectives Strategy of Intervention		Key Indicators	Data Sources Means of Verification	
Impact (Overarching Goal)		**Impact Indicators**		
Research results of the five thematic modules and the thematically open module contribute to solving urgent global problems and securing global public goods in Africa, Asia and South America within the normative and conceptual framework of global sustainable development.		Evidence that newly identified and verified solution pathways addressing urgent global problems and global public goods benefit first and foremost poor people in Africa, Asia and South America. Evidence that policies at the international or regional level take into account or take up r4d research findings.	External evaluation Stakeholder survey Module reports incrementally building up on project reports Syntheses	
Outcomes		**Outcome Indicators**		**External Factors (Assumptions & Risks[i])**
Strategic Objectives	Outcome 1: Scientific evidence and research based solutions for reducing poverty and global risks are available.	Evidence that relevant, use-inspired knowledge feeds into policy debates and is shared with key stakeholders who apply it. Research based recommendations are taken into account / taken up by international or regional organizations or / and other relevant stakeholders.	Module reports incrementally building up on project reports Syntheses	*Assumptions:* Call does receive high interest in the research community High quality of submitted research proposals
	Outcome 2: National and international stakeholders are informed on the nature of the problems, trade-offs, and options for tackling and solving problems in a more systemic and holistic manner, and make use of the provided evidence and tools.	Evidence that relevant, use-inspired, systemic knowledge about trade-offs and options for tackling and solving problems feeds into policy debates and is shared with stakeholders who apply it. Research based recommendations are taken into account / taken up by international organizations or / and other relevant stakeholders.	Module reports incrementally building up on project reports Syntheses Survey (stakeholder interviews)	*Assumptions:* The issues addressed are on the mid- and longer term international policy agenda. *Risks:* Relevant results are not applied in practice and policy due to other priorities, funding constraints, and other factors beyond the sphere of influence of researchers.
	Outcome 3: Scientific competencies and expertise in dealing with the complexity of global issues for the benefit of societies in Africa, Asia, and South America are increased.	Competence level of inter- and transdisciplinary research is enhanced. Level and intensity of different stakeholder exchanges in the research process.	Module reports incrementally building up on project reports Syntheses	Assumption: Social and intercultural competencies are available
Outputs (per outcome)		**Output Indicators**		
For outcome 1: Scientific evidence and research based solutions for reducing poverty and global risks are available.				
Output 11	New, innovative concepts, methods, methodologies, techniques, technologies, products, tools, or approaches are identified, developed, validated, and applied.	Number of scientific peer-reviewed publications (together with some quality indicators) Number of presentations at international scientific	Module reports incrementally building up on project reports Syntheses	*Assumption*: Willingness to transnational scientific collaboration and interaction

		conferences outside of the r4d programme Number of products for scaling-up and/or replication Number of technological, social and political tools made available		with relevant stakeholders throughout the research process is confirmed
Output 12	An active scientific network on global issues for development is enhanced	Number and quality of research project teams Number of triangular North-South-South collaborations	Module reports incrementally building up on project reports Syntheses	

For outcome 2: National and international stakeholders are informed on the nature of the problems, trade-offs, and options for tackling and solving problems in a more systemic and holistic manner, and make use of the provided evidence and tools.				
Output 21	Research results are effectively exchanged with stakeholders and applied	Number of concrete application examples from the projects Number of presentations by projects partners in which the research results are discussed Number policy briefs and policy fora Reference to relevant international debates	Survey Module reports incrementally building up on project reports Syntheses Project specific communication and implementation strategy	*Assumption:* Willingness of stakeholders to take into account scientific evidence and act and decide based on evidence. *Risks:* Lack of interaction between research, policy and practice.
Output 22	Results of research are brought into relevant channels of international debate and regional and international policy dialogue.			
Output 23	Awareness on tackling global issues through systemic and interdisciplinary approaches has been raised			

For outcome 3: Scientific competencies and expertise in dealing with the complexity of global issues for the benefit of societies in Africa, Asia, and South America are increased.				
Output 31	Transnational research partnerships between researchers from Switzerland and Africa, Asia and/or Latin America are effective.	Number of co-authored scientific publications (peer reviewed articles) with authors from Switzerland and authors from Africa, Asia, and/or Latin America. Degree of compliance with the 11 KFPE partnership principles.	Module reports incrementally building up on project reports Syntheses	*Risks:* The division of work and the benefit sharing favors only Swiss research community Researchers have no or little interest or incentives in interdisciplinary collaboration due to lack of incentives
Output 32	Interdisciplinary collaboration between social, natural, and engineering sciences is strengthened.	Number of co-authored scientific publications with authors from social and natural sciences.		
Output 33	The capacities to identify and tackle new issues with a potential global impact for developing countries are strengthened.	Number of promoted researchers (gender disaggregated) Number of completed BSc, MSc, and PhDs with projects (gender disaggregated; in Switzerland / partner countries) Number of involved Postdocs within projects in Switzerland and in partner countries Number of participants in r4d Skills events		

C. Findings organized by evaluation question

Evaluation question	Findings
Relevance and coherence	

1. Were the r4d programme and its projects relevant and compatible with relevant frameworks and similar initiatives?	– Humanity is facing existential challenges. In view of these challenges, the United Nations General Assembly defined 17 Sustainable Development Goals (SDGs) in 2015. Switzerland has also committed itself to these goals (Bundesrat, 2020). Scientific progress and technological advances are crucial to achieving these goals. However, the United Nations' (2023, p. 39-40) recent report documenting the progress toward the SDGs criticises that the "potential of science, technology and innovation is vastly untapped" and calls on governments to increase research funding directed toward the SDGs. Specifically, the UN but also other like the International Research Council call for transformative research. In this light, the r4d programme is highly relevant. It is the only truly transformative research programme in Switzerland (see Section 2).
	– The programme was also highly coherent with the SNSF's mandate and the SDC's goals and strategy (see Sections 2.2 and 2.3).
	  – The Swiss National Science Foundation (SNSF) has also committed itself to the SDGs in its multi-year programme for 2021-2024 (SNSF, 2019, p. 16). This makes the r4d programme coherent with the SNSF's strategy. Moreover, the r4d programme is the only research programme in the SNSF's portfolio that is truly transformative.
	  – As shown in response to the next question, the programme is also highly coherent with the SDC's mandate.

2. How did the r4d programme fit into the Swiss and global research context related to SDGs as well as into the institutional logic of development actors (including SDC)?	– As outlined in the response to the previous question, the programme is highly relevant for and coherent with international strategies that Switzerland has committed to. – The programme also fits well into the institutional logic of the SDC. The SDC's mandate is to reduce poverty and to curb global risks. Article 29 of the Ordinance to the Federal law on International Development Cooperation and Humanitarian Aid (974.0) explicitly states the objective of promoting research for development. In Switzerland's Cooperation Strategy 2021-2024 academic research is referred to as a source of invaluable knowledge about population needs, evolving global challenges and the impact and effectiveness of international cooperation. The r4d programme is thus fully in line with the SDC's mandate and highly coherent with its objectives (see Sections 2.3).

Evaluation question	Findings
3. To what extent did the programme and the projects respond to needs of beneficiaries and/or development stakeholders and researchers in the South?	– The findings of our evaluation also suggest that the programme was highly relevant to beneficiaries. First, it was very relevant to the funded researchers in the Global South (see Section –). This was an important group of beneficiaries. Secondly, many of the funded projects also appear to have been very relevant to the projects' respective beneficiaries. However, our evidence is not conclusive on this. We can only conclude that in some cases the projects achieved high levels of relevance to their respective beneficiaries. Moreover, our results show that the projects engaged with a diverse range of different stakeholders and beneficiaries during all phases of their projects (see Figure 2). And the more the projects engaged with beneficiaries and stakeholders, especially during the early stages of the projects, the more relevant they became to these groups (see Section 2.4).
4. To what extent were the r4d programme and its projects unique or complementary to other research funding programs? Which research gaps did it not cover?	– As described in response to question 1 there is a large need for transformative research. The r4d programme is the only truly transformative research programme by the SNSF and in Switzerland that is focused on sustainability and the Global South. It therefore is unique, and it fills an important gap that would otherwise exist in the funding landscape. – We did not encounter any gaps.
5. How coherent was the approach to science-policy relations, at the level of the r4d programme as well as in the projects (pathways to change)?	– At the programme level, science-policy relations were conceptualized in the results framework. The results framework defines the objective that the projects' results are 1) exchanged with stakeholders and applied, 2) brought into relevant channels of international debate and regional and international policy dialogue, and 3) raising awareness on tackling global issues through systemic and interdisciplinary approaches. – We consider these objectives as realistic, plausible, and coherent with the overall intervention logic of the programme (or pathway to change). This is demonstrated by the fact that many projects did achieve these objectives (see Sections 3). This shows that, at its core, the intervention logic of the r4d programme works. – Clearly, not all projects achieved all objectives. However, this is in line with expectations, given the constraints discussed in Section 3.2.4: 1) Policy-changes typically take much longer than the typical project of 3 or 6 years. And it often takes more than a single research project to change policy. Therefore, it would have been unrealistic to expect large-scale policy changes or paradigm shifts. 2) One should not underestimate the role of chance. Many factors typically contribute to impacts. And many of these factors are beyond the control of the projects. Therefore, it also always takes a little luck for impacts to occur. – We thus recommend that the projects should not simply be judged by the impacts they have achieved (deterministic perspective) but by the efforts that the projects have taken to maximise the chance of impacts occurring (probabilistic perspective). And for most of the projects that we studied we gained the impression that they did take good efforts to maximise their chance of success.

Evaluation question	Findings
6. How well was the programme integrated into the SDC and the SNSF?	– In response to questions 1, 2 and 4 we showed that at the strategic level, the r4d programme is highly relevant for the SDC and SNSF. r4d is coherent with their mandates and strategies. – Our findings do, however, raise the question how well the programme was integrated into the SDC and the SNSF at the organizational level. Within the SNSF the programme does not appear to be very well known and does not appear to have a high standing. This is reflected in the small amount of funding that is allocated to it. – Concerning the SDC, our findings indicate that, on the one hand, the programme could have been integrated more strongly within the SDC. Many stakeholders at the programme level expected that the SDC should have played a more active role shaping the r4d programme and in valorising the results from the r4d projects. Stakeholders involved in the programme management and some of the project participants specifically criticized that the field offices of the SDC were difficult to involve in the projects, and that there was not a stronger link with the SDC's Global and Regional Programmes. This is largely explained by the fact that the SDC representatives involved in the programme had too little resources to engage with the programme in a more meaningful way. Moreover, the programme was not in sync with the programme cycles of the SDC (see Section 4.3.4). – On the other hand, however, we saw numerous cases where the SDC helped valorise project results (see Section 2.3)

Effectiveness

7. Has the r4d programme achieved its objectives and planned results (outputs, outcomes, impacts)?	– The funded projects clearly generated evidence and research-based solutions. This was the first goal of the programme. The research results were not only presented successfully in 474 peer-reviewed articles. The projects also explored diverse and new channels to communicate their results, including 644 workshops with local communities, 77 policy briefs and multiple knowledge databases. Moreover, the projects enhanced international and interdisciplinary scientific networks, which enabled the development of numerous new projects (see Section 3.1). – The funded projects have made solutions available to stakeholders, which was the second goal of the programme. Our findings also show numerous examples of cases where the projects generated knowledge transfer to national and international stakeholders. We saw multiple examples of policy impact and one important case of market impact. These findings demonstrate that, at its core, the intervention logic of the funding programme works (see Section 3.2). – Finally, the programme helped increase scientific competencies and expertise, the third objective of the programme. More than 200 junior researchers were trained in transformative research settings. More than 90% of the project participants from the Global South stated that their r4d programme had a positive impact on their career development. And the research perspectives of many senior and junior researchers were changed. The competencies necessary to succeed in transformative and international research environments were developed, networks with research partners and stakeholders in the North and the South were built and strengthened (see Section 3.3).

Evaluation question	Findings
8. To what extent have the results of the programme and its projects been co-developed by actors from Switzerland and LMICs?	– At the programme level, we did not see any degree of co-development. – At the project level, however, we often found a high degree of co-development. Often, the project participants did not perceive their collaboration as an equal partnership. Especially the PIs from Switzerland, were discontent with the fact that they had to lead the projects and manage the project finances. They said that this made it more difficult to build effective productive partnerships (see Section 3.3.2). – The project participants from the North and the Global South appear to have assumed different roles and responsibilities. The project participants from the North played a much bigger role in the inception and design of the projects and the authoring of the initial proposals and the final report. The project participants from the Global South played a bigger role in the outreach and communication activities and the stakeholder engagement. – As per the requirements of the programme, the funded projects must be led by a PI in Switzerland. Therefore, it does not surprise that they assume a leading role in the inception and design phase of the projects. It also seems like a natural division of labour for the project participants from the Global South assume a bigger role in the engagement of stakeholders, since many of the projects' stakeholders and beneficiaries are in the Global South. This division of labour, however, is not compliant with the KFPE's (Commission for Research Partnerships with the Developing Countries) principles for transformative research as we show in the text box below.
9. Was the goal to combine scientific excellence with practical solutions for development realistic and transformed into action, in a good balance and adding value in terms of effectiveness?	– Our findings indicate that scientific excellence and solutions-orientation are compatible, and many projects achieved both. We did not see a trade-off between generating scientific knowledge and creating real world impact. – At the level of the programme management, however, our findings indicate that it took some time to reconcile excellence and practice orientation (see Section 4.1.2). Several interviewees suggested, for instance, that in the evaluation panels scientific excellence was often given more weight than solutions orientation. At the project level, however, the researchers appear to have effectively reconciled both.
10. Did the r4d programme increase interest of the Swiss research community in development issues? To what extent did it contribute to strengthen Swiss research in an international comparison?	– Based on our findings, we cannot determine the overall impact on the Swiss research community in development issues. However, we can conclude that the programme helped train a large group of junior researchers and shift more senior researchers' orientation toward transformative and development-oriented research. – Based on our findings, we also cannot assess to what extent the programme helped strengthen Swiss research in an international comparison. What is clear, however, is that other European countries provide a lot more funding for transformative research. This is especially true for Horizon Europe, the biggest research funding programme in the world. In Switzerland, there is only the r4d programme. And the programme only accounts for a small share in the overall research funding in Switzerland. Therefore, its impact is bound to be limited.

Evaluation question	Findings
11. Did the r4d programme make a difference in generating scientific knowledge and solutions useful for development actors and practitioners working on global issues such as poverty reduction?	– Our findings suggest that the programme did achieve this objective – both according to the self-assessment of the funded researchers and according to the findings from our project case studies. In the survey, 64% of the respondents stated that their projects were successful in generating scientific knowledge to a "significant" or "considerable" extent. Only 3 percent of respondents stated that their project did not generate any new knowledge.
	– What is remarkable about the scientific output is what channels the funded projects have used to communicate their findings. As to be expected, the work has been presented in peer-reviewed journals – but not only. In addition to peer-reviewed journals, the 57 projects have used a wealth of other channels, which include: 589 conference presentations, 77 policy briefs, 259 stakeholder meetings and 385 stakeholder consultations.
	– According to the project participants' self-assessment, publications in scientific outlets (journals and books) were only the second most important outputs of their projects. Workshops – with other researchers or stakeholders – were mentioned most often. Also, presentations, contributions to knowledge databases and policy briefs were rated highly by the survey participants. These findings suggest that the funded researchers have internalised the programme's objective of contributing to problem-solving. The findings from the project case studies support this interpretation (see Section 3.1.1).
	– According to our survey results, 83% of the respondents stated that they transmitted findings from their projects to the relevant stakeholders and beneficiaries. 48% even stated that they were thereby able to influence these stakeholders' and beneficiaries' actions (see Section 3.2.1).
	– More than half of the survey respondents stated their projects achieved the objective of raising awareness on tackling global issues through systematic and interdisciplinary approaches. Slightly more than 40% stated that they were able to bring results of research into relevant channels of international debate and regional and international policy dialogue (see Section 3.2.1).
	– The results of our case studies suggest that around three quarters of all projects engaged with policy makers *and* succeeded in having at least some policy impact (see Section 3.2.1)

Evaluation question	Findings

12. To what extent did the r4d programme and its projects, together with implementation partners, induce change, in terms of problem definitions, policies, or practices? Which factors were decisive to make that happen?

– We outline in the response to question 11 that many projects did have such an impact.
– Contributing factors include:

– A systematic mapping of the stakeholder landscape and a systematic scoping of the beneficiaries' needs is critical and contributes to the impact of the projects.
– Co-creation: For the project results to be of value to stakeholders and beneficiaries, they must be involved throughout the project – especially in the project design. This requires the willingness to revisit and revise the project design to make sure that the research objectives are aligned with the stakeholders' interests. Projects that followed the typical procedure of data collection, analysis, publication, and then communication tended to have too little time left to actively engage with their stakeholders and beneficiaries.[27]
– Strong pre-existing networks and relationships with practitioners and beneficiaries make it a lot easier to address the just mentioned points.
– Prior experience with transformative, international and transdisciplinary research greatly contributes to the projects' success.
– Realistic objectives: The projects must define realistic objectives. Projects that focus on specific local problems tend to be more successful.
– Sufficient time: It takes time to systematically map the stakeholder landscape in the beginning of the project and to communicate the results at the end. Often this is not feasible in a three-year project. As we have argued above, the stakeholder mapping increases the relevance of the project to the stakeholders and beneficiaries.
– Follow-up funding: It takes time and resources to generate impacts. To exploit their full potential, many projects require follow-up funding. And some of the projects that showed potential were able to get full-up funding from various sources (more on this below).
– The collaboration is built on an equal partnership in line with the KFPE principles (see text box below).
– The factors that we have identified in the evaluation are in line with the factors identified by Eschen et al. (2021) and Jacobi et al. (2020).
– Constraining factors include:
– Not all partners from the South had an interest in generating an impact. Some saw the r4d projects as an opportunity to publish in international journals. Others were even less familiar with transdisciplinary approaches and working with policy makers and practitioners than their Northern partners.
– The language barrier between English (the language of science), national (official) and local languages.
– Several project participants criticised that the projects had to be led and the finances controlled by PIs (principal investigators) in Switzerland. They suggested that this made it more difficult to build an effective working relationship with some of the partners from the Global South (see Section 3.3.2 below).

Evaluation question	Findings
13. Did the approach to allocate financial resources for communication and the diffusion of results facilitate this transfer and add to effectiveness? How well was it implemented? What could have been done differently to make it even more effective?	– More than a third of all projects did not reach the required minimum share of at least 10-15 percent. – The results from our case studies suggest, however, that in many cases this led the researchers to invest more time into dissemination and communication activities than they might have otherwise. – What could have been done better? Our findings indicate that an early engagement of stakeholders contributes to the relevance and impact of the project. The effectiveness of the communication activities might be increased if researchers were encouraged to start engaging in these activities as the beginning of their projects.
14. Were there knowledge transfers from the projects and the programme into international or national development agencies, or policy makers? What facilitated them?	– We already showed in response to questions 7 and 11 that many projects transferred knowledge into international channels and to policy makers. The facilitating factors we also described in response to question 11.

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[27] Positive examples in which this phasing was challenged, were the relatively few projects with a transdisciplinary and/or transformative approach (e.g. Telecoupled Landscapes).

Evaluation question	Findings

15. Has the programme significantly contributed to establish or further strengthen an active scientific network on global development issues?	– The following findings suggest that this objective was achieved (see Section 3.1.2):
	  – The projects have helped establish new collaborations: 17% of the project participants had not previously collaborated with any of the other project participants. Only half had already collaborated with some of the project participants. That means that, in the funded projects, new collaborations were established. This also helped integrate researchers from the Global South into international research networks (see Figure 16 in Annex below).
	  – It is also positive to see that, according to the results of the online survey, 67% of the project participants continue to collaborate and 19% plan to do so after the completion of their r4d projects (see Figure 17 in Annex below. For a presentation of the direct follow-up projects please refer to the end of this section).
	  – While these findings are based on the survey results, our project case studies confirm the finding that scientific networks were enhanced through the r4d programme. This positive effect is not only limited to the circle of direct project collaborators: First, through conference participations, the project participants also reported that they could expand their networks to other researchers. For researchers from the Global South, the programme provided a rare opportunity to travel to international conferences.
	  – The results from our case studies also suggest that more than four fifth of all projects, analysed in a case study, helped establish new relationships with practitioners.
	  – According to SNSF programme data, more than half of the funded projects have already led to follow-up projects – and more are potentially to come. Some of these follow-up projects may have happened without the r4d projects. In many cases, however, follow-up projects directly resulted from the r4d project.

16. To what extent has the programme led to scientific contributions, and what is, in general, the evidence for the scientific excellence of the r4d projects?	– In the 57 projects, 474 publications were produced. Both the results of our bibliometric analysis and the results of our project-level cases studies confirm this. On average, the publications produced in the funded projects receive 61% more citations as the average of all other publications in the given field.
17. To what extent and how were the funded researchers able to reconcile the requirement of scientific excellence and application/development with the incentive structures that they are confronted with in the science system?	– Especially for junior researchers that still need to establish themselves in the science systems and to obtain a permanent position, it is often still difficult to engage in transformative and development-oriented research. In many disciplines, peer-reviewed publications are still valued more than application and communication activities.

Evaluation question	Findings

Efficiency

18. How well did the two funding organisations (SDC, SNSF) cooperate (particular focus on expectations, their compatibility, organisational culture, complementarities, competencies)? How has this cooperation converged over time?

– As described in Section 4.3, bringing both organisations together was necessary (EQ18). The goals pursued by the r4d programme (solving global problems) could not be achieved by one organisation alone. The SNSF and SDC bring complementary capabilities to the programme.
– The SDC can bring in its expertise in applying novel concepts to development problems. The SDC also has an expertise in monitoring, managing, and evaluating (ex-post) projects.
– The SNSF contributes its capabilities in evaluating (ex-ante) proposals and selecting research projects.
– Within the steering committee, the review panel, and the management the actors involved were often confronted with diverging perspectives on issues such as research excellence, freedom of research, knowledge application, development, inter- and transdisciplinarity. Over time, however, these differences appear to have been bridged. At a working level, the members of the steering committee, the review panel, and the management learned to resolve these differences. They build a common understanding and to operationalise said principles so that they could be implemented.

Evaluation question	Findings

19. How did the structure (organisation, set-up) and management of the programme allow for efficient programme implementation towards the defined objectives? What could have been done better?	– One specificity of the organizational set up of the r4d is the collaboration between the SNSF and the SDC. This collaboration was not without challenges (Section 4.3). But we argue that it was highly coherent with the programme's overall intervention logic or pathways to change. It was important to ensure the relevance of the programme (see response to question 1). The SDC helped with the application of the projects' results. For instance, the SDC helped communicate the research results into relevant research channels. In some cases, the SDC also itself applied results from the projects. In other cases, SECO took up the results. The r4d experience clearly shows how such collaborations can maximize the likelihood of research findings being applied. These findings are line with the science, technology, and innovation policy literature, which, in the context of mission orientation, argues that research funders need to collaborate more intensively with other actors within and outside government to maximize impact (see Mazzucato, 2019, 2021; Lindner et al. 2021, p. 9; EFi, 2021). Our findings also show complementarities between the SNSF and SDC (see Section 4.3.1).
	– Another specificity is that, compared to other SNSF programmes, the management was that rather active and engaged. The engaged management style and the support provided by the management was highly appreciated by the project participants. Our results also suggest that this active management was necessary to help operationalize the novel concepts upon which the programme was based.
	– What could have been done better? (See Recommendations in Section 7)
	  – Considering that the r4d programme was rather innovative, we argue that the programme level experiences could have been documented and valorised more effectively through an accompanying evaluation or research project ("Begleitforschung").
	  – Research funders across the world are currently working on new ways to design and manage transformative research programmes facing this challenge. The programme might have benefited from a collaboration with other research funders.
	  – Several interviewees suggested that the development perspective often played only a smaller role than scientific excellence in the review panels. The commitment for transformation therefore might have been strengthened by including more development experts, representatives from civil society (NGOs), practice (industry or international organisations etc.) and researchers from the Global south in the management, steering committees, and review panels of future programmes for transformative research.
	  – To increase the involvement of SDC representatives, we recommend making available more time for the involved SDC-representatives and to coordinate with the SDC's internal knowledge management system to facilitate knowledge transfer from the programme into the SDC. We also recommend that the SDC reflects on ways that the field offices could be engaged in the projects more systematically. We recommend incorporating the KFPE principles more strongly in the project design, not only in the projects. We also recommend providing the involved researchers with training on the KFPE principles.
	  – We also found that the KFPE principles were not always complied with. Therefore, we recommend that the SNSF and SDC look for ways to transfer more responsibility to the researchers in the Global South, also in the financial management of the projects.

Evaluation question	Findings

20. Were there any unexpected synergies with SDC programs in the field or at HQ?	– We found several cases, where the SDC took up results from the funded projects or even provided follow-up funding to these projects:
	  – Agro-pastoralism in Kenya: SDC Regional Cooperation (SCO) funded a follow-up project called "Resilience for Pastoralist Communities in Northern Kenya".
	  – The Swiss Tropical and Public Health Institute (Swiss TPH) developed a tool for Malaria. SDC analysis and policy division funded a follow-up project on non-communicable diseases (NCDs) called "ComBaCaL".
	  – The Woody Weeds project received follow-up funding through the SDC's Horn of Africa Programme. The new project is called "Woody Weeds +".
	  – The project "Linking Education and Labour Markets: Under what conditions can Technical Vocational Education and Training (TVET) improve the income of the youth?" became part of the SDC's country program in Nepal (ENSSURE).
	  – The e-POCT project received follow-up funding by the SDC and the Fondation Botnar. The new project focusing on Ruanda and Tanzania is called "Dynamic electronic decision trees for managing childhood illness (DYNAMIC)".
	  – With the r4d project on health impacts of natural resource extraction the SDC field offices helped engage in policy dialogues that ended up influencing policy in five partner countries.

21. How well did the cooperation between researchers from Switzerland and the Global South materialise and contribute to efficient programme implementation?	– Overall, the cooperation between researchers from Switzerland and the Global South appears to have been successful. According to our online survey, 86% of participants plan to continue collaboration after the end of their projects. Many follow-up projects have already begun. – A constrained, however, was that the relationship was not always viewed as an equal partnership (see response to question 8). – Our results also suggest that a facilitating factor is that the project participants had already worked together previously. It takes time to build partnerships and establish an efficient communication. However, all the projects that we studied in depth did overcome these challenges. – Without the collaboration with the partners from the Global South, the programme is unlikely to have been as successful. The partners from the Global South contributed unique perspectives, country specific knowledge, stakeholders' networks, relationships to policy makers, and the ability to provide an effective stakeholder mapping and to communicate with the beneficiaries and a culturally sensitive way.

Evaluation question	Findings
22. How did the various follow-up and support instruments (e.g., monitoring, site visits, mid-term evaluation, r4d Forum, r4d skills) contribute to achieve the objectives of the r4d programme and its projects?	– The r4d programme provided various activities to support the projects. The results from our survey and the case studies show that some of these activities were strongly appreciated by the project participants. In particular, the site visits and the mid-term review were valued by the researchers. The project participants also appreciated the opportunity to exchange ideas with other projects. Due to Covid, however, some of these events that were meant to bring together the projects could not be held as planned. The synthesis activities were also appreciated by some of the project participants as they also mainly saw these as an opportunity for the to exchange ideas with other projects. All the support activities helped solidify the project participants understanding of what constitutes transformative research and how transformative research projects can be implemented.
	– The support instruments, like r4d skills, helped train the project participants.
23. How has the synthesis work contributed to reaching the objectives?	– The stakeholders and project participants that we interviewed also pointed toward weaknesses of the synthesis work.
	– The synthesis activities could have been started earlier. The original concept was that the synthesis activities would take the results from the projects and help communicate them to stakeholders and beneficiaries. This represents a rather conventional understanding of science communication. Potentially, an opportunity was sacrificed to engage with stakeholders and beneficiaries early as to incorporate inputs in the projects.
	– Many of the interviewed researchers were not aware of or not interested in the results coming out of the synthesis activities. This suggests that the outputs were either not relevant to them or not sufficiently communicated.
24. Overall, what were costs and benefits of this active and engaging programme management (synthesis, thematic modules, thematic review panels)?	– From the SNSF's perspective, the programme management was more active and engaging than is usually the case with SNSF projects. This had several clear benefits. As outlined in response to question 19, the funded researchers that we interviewed all underlined how much the appreciated the active engagement and the support that the management provided to their projects. This is confirmed by the results of the online survey. As described above, our results also suggest that this active management was necessary to help operationalize the novel concepts upon which the programme was based. We do not see, how the project could have been implemented with a less engaging management.
	– On the side of the potential costs, this might have led to higher management costs. However, we did not analyse the management costs in depth, and we also do not have a benchmark against which to compare theses costs.

Evaluation question	Findings

25. To what extent did it add value to the programme that there were two types of calls (thematic, open)? Had this an impact on the success of the research projects?	– Our case studies suggest that the projects from the thematic call that were funded for 6 years tend to have achieved more outcomes and impacts. However, our sample is too small to conclude that there is a systematic relationship between the duration of the funding and the impacts achieved by the project. The survey results also do not show significant differences between the impacts of the open call and the thematic call projects.
	– Nonetheless, our findings do show that there are several reasons why it is important the projects are given sufficient time:
	  – The first reason is that it takes time to systematically map the stakeholder landscape in the beginning of the project and to communicate the results at the end. Often this is not feasible in a three-year project. As we have argued above, the stakeholder mapping increases the relevance of the project to the stakeholders and beneficiaries.
	  – Second, mostly projects from the thematic calls had the opportunity to involve doctoral students, as the minimum duration of a PhD program is usually 4 years. Many of the doctoral students were employed in relevant positions after completing their doctorates.
	– Despite these advantages of longer and larger projects, some of the shorter and smaller projects funded through the open calls were also very successful in generating impacts. A clear advantage of the open calls was also precisely their openness. This allowed researchers to advance their own ideas within the r4d agenda. The numerous projects with a focus on gender issues, for instance, might not have come to be, as gender was not a focus of any of the thematic calls.
	– Therefore, we conclude that it is good to have the flexibility for both larger and smaller projects, bottom-up research and thematic focal points provided by the funding agency through thematic calls.

26. Were the resources provided to the research projects and the programme (e.g., duration, financial resources) adequate?	– We do not have much evidence concerning this question. In our case studies, some of the PIs from Switzerland suggested that the funding was insufficient, considering the high coordination costs for the PIs. Many of the partners in the Global South, by contrast, suggested that the funding was sufficient.

Evaluation question	Findings

27. Were the three financial conditions of the r4d programme useful, understood and respected by the researchers?	– Compliance (see Appendix G):
	  – Eight projects did not comply with the condition of sharing at least 40% of the budget with the partners from the Global South.
	  – Two projects did not comply with the condition that at least 50% of the person month must be spent in the Global South.
	  – 19 projects did not spend at least 10% on communication activities. The latter, some of our interviewees suggested, had to do with the fact that they some of their communication activities were not in a category accepted by the SNSF's data portal. Therefore, this might be due to a reporting problem.
	– Our findings indicate that these criteria were understood by the PIs. However, there were no consequences are sanctions in case the projects did not comply with these conditions.
	– Overall, our findings indicate, that these conditions were useful and contributed to the effectiveness of the programme. As outlined in response to question 21, the international collaboration between researchers from Switzerland and researchers from the Global South was instrumental to the success of the programme. This also needs to be reflected in the funding allocation.

28. To what extent did the research projects rely on junior researchers from Switzerland and the Global South, with what advantages and disadvantages for the programme and individual research careers?	– Overall, in the r4d programme over 200 junior researchers in the Global North and South were trained in trans- and interdisciplinary projects dealing with development issues through. This includes around 60 post-docs, 80 PhDs, and a substantial number of both graduate and undergraduate students (SNSF programme data). Most of the junior researchers were educated in the Global South. – An advantage of the strong reliance on junior researchers was that after the end of the projects these researchers took their experience and knowledge into academia or into positions outside academia like policy making. This may have been an effective way to promote knowledge transfer and diffusion. However, we only have anecdotal evidence supporting this. The capacity building effect (see question 7), which we see as one of the biggest strengths of the project, might have also been biggest among the junior researchers. Unlike their senior colleagues, many of the junior researchers in the Global South might not have been given the opportunity to do research and receive training otherwise. – Our findings do not suggest that the projects were too reliant on junior researchers. They appear to have been well supervised and received guidance from the senior project participants.
29. Was there sufficient exchange and collaboration among researchers from different projects to ensure cross-fertilisation?	– The programme promoted exchange and collaboration among the funded researchers through the r4d dialogue forums and the synthesis activities. The interviewed researchers strongly appreciated the opportunities to exchange ideas with researchers from other projects. Due to the Covid-pandemic, however, some of the planned events could not be held. Several interviewees suggested that would have liked to have had more opportunities for exchange and collaboration.

Transformation Accelerating Grants (TAGs)

Evaluation question	Findings
30. Which results were achieved? What is the quality of the outputs?	– The TAGs have been used to strengthen preexisting dissemination and application efforts. Almost all case studies involved in the TAGs were highly satisfied with the additional funding that the TAGs provided and the focus on application that the TAGs enabled. – Some interviewees stated that they were able to develop some of their most important outputs through the TAGs. – Main outputs were stakeholder events and workshops where results were presented or applied in new settings. In Section 4.1.3 we provide examples from our case studies. – Overall, however, the evidence available to us does not allow us to conclusively assess the quality of the outputs of the TAGs.

31. How did the TAGs contribute to accelerate transformation towards solution-oriented results? In which contexts did the approach work? What were challenges in implementing TAGs?	– TAGs were especially successful for two types of projects:
	  – First, projects that were more theoretical in their original project design. To benefit from the TAGs, these projects had to think more about the implementation of their results.
	  – Projects that already had a strong application focus also benefited from the TAGs. Here, the additional funding strengthened existing application efforts and expanded the scope of the impact.

32. Which aspects of the set-up of the TAGs (e.g., transdisciplinarity) favoured achieving the objectives, and which aspects have been less successful?	– Our findings suggest that positive aspects were the ability to focus exclusively on application and dissemination, not research. – A constrained, many interviewees suggested, was that the funding was limited.

Sustainability

33. Will the programme's achievements last beyond the programme termination?	– In Section 5 we conclude that the positive impact on the development of scientific competencies and the strengthened focus on transformative research will likely outlive the r4d programme. – It is critical, however, that the trained researchers find new opportunities to fund transdisciplinary and transformative research projects. After their r4d projects, many researchers will be confronted with institutions and incentive structures that still do not reward transdisciplinary, interdisciplinarity and challenge orientation. The researchers will need new funding to continue with this type of research.

Evaluation question	Findings
34. Were there capacity building effects, attributed to r4d, both in least developed or low and lower-middle income countries, as well as in Switzerland?	– Capacity building is one of the biggest successes of the r4d programme (see Section –). Overall, in the r4d programme over 200 junior researchers in the Global North and South were trained in trans- and interdisciplinary projects dealing with development issues. This includes around 60 post-docs, 80 PhDs, and a substantial number of both graduate and undergraduate students (SNSF programme data). Also, senior researchers stated that they developed new capabilities. – The capacity building effect appears to have been particularly strong in the Global South. More than 90% of the project participants from the Global South stated that their r4d programme had a positive impact on their career development. More than 90% of the project participants from the Global South also stated they benefitted through skill development. – However, also the project participants in the Switzerland benefited, especially the junior researchers.
35. To what extent did the projects manage to establish sustainable structures, networks, partnerships, or further initiatives? Have new institutions emerged? Have existing institutions adapted their research focus?	– Our findings suggest that the programme had a large impact establishing new scientific networks and expanding and strengthening existing networks (see Section 3.1.2). According to the results of the online survey, 67% of the project participants continue to collaborate and an additional 19% have plans to do so. The projects also helped strengthen transdisciplinary networks between researchers and practitioners. – We have not witnessed that new institutions have emerged because of the funding, with the exception maybe of the business that is developing out of the COCOBOARDS project. – Many researchers suggested that they adapted their research perspectives now focusing more on development oriented and transformative research. This is supported by the results of our online survey and the case studies.
36. Has the r4d programme raised interest beyond the research community?	– We do not have any evidence suggesting that the programme raised interest beyond the research community. However, several projects appear to have. For instance, they have raised interest from policy makers in the international policy community, in the Global South and in Switzerland (see Sections 3.2).

Evaluation question	Findings

37. Have there been follow-up projects, spin-offs or other research uptake initiatives, and which factors favoured such development?	– According to SNSF programme data, more than half of the funded projects have already led to follow-up projects. Some of these follow-up projects may have happened without the r4d projects. In many cases, however, follow-up projects directly resulted from the r4d project. Examples include:
	  – The project COCOBOARDS received follow-up funding by Innosuisse and SECO to develop their business case.
	  – Five r4d projects (ORM4Soil, IFWA, Ghana insect Compost, Food Systems Caravan, ORGAS) and TAGs received follow-up funding by the SNSF through the Implementation Networks programme to disseminate the research evidence generated in the r4d projects and TAGs.
	  – Agro-pastoralism in Kenya: SDC Regional Cooperation (SCO) funded a follow-up project called "Resilience for Pastoralist Communities in Northern Kenya".
	  – The Swiss Tropical and Public Health Institute (Swiss TPH) developed a tool for Malaria. SDC analysis and policy division funded a follow-up project called "ComBaCaL" as it was highly compatible with the SDC program in Lesotho.
	  – The Woody Weeds project received follow-up funding through the SDC's Horn of Africa Programme. The new project is called "Woody Weeds +".
	  – The project on linking education and labour markets became part of the SDC's country program in Nepal (ENSSURE).
	  – The e-POCT project received follow-up funding by the SDC and the Fondation Botnar. The new project is called the "Dynamic Project".
	  – With the r4d project on health impacts of natural resource extraction the SDC field offices helped engage in policy dialogues that ended up influencing policy in five partner countries.
	– Based on our findings, however, we are not clearly able to discern which factors Favor the emergence of follow-up projects. Several factors seem plausible. To mention but a few: The projects they need to have promising results, of course; the projects need to have the opportunity to reach out to stakeholders that can provide follow-up funding; the required funding must be available.

38. Have there been any behavioural changes at the level of the project participants? Are researchers taking a greater interest in development issues, trans- and multidisciplinary work, and North-South collaborations?	– Most of the project participants that we interviewed and that participated in our survey stated that the programme changed their research perspectives. Through the programme they developed a stronger orientation toward transformative, development-oriented, and application-oriented research. – They also developed a stronger orientation toward North-South collaborations.

Evaluation question	Findings
39. To what extent has the programme improved the integration of researchers from the Global South/East into the international science community?	– Our findings suggest that the programme helped establish research networks and thereby strengthen the integration of researchers from the Global South into the international science community. This happened through the project consortiums, most of which continued to collaborate (see Section 3.1.2). Some of the interviewed researchers from the Global South also suggested that the funding allowed them to attend more international conferences than they would have been able to otherwise.

D. Project case studies

Method

We carried out 25 in-depth case studies of individual projects (44% of all projects). Half of the projects were randomly drawn from the open call. Additionally, 2-3 projects were randomly drawn from each of the thematic calls. We provide the list of projects in the following section.

In the case studies, we used the following methods:

1. Document analysis of the proposal, mid-term review, final report, publications, and financial data.
2. Interviews with the PI (North) and the Co-PI (South). If possible, we also interviewed a former PhD student of the project. Interviews were semi-structured, following the DAC criteria.
3. Information from the web: Project websites, websites of potential beneficiaries.

Project list

Name	Call	PI
The Gender Dimensions of Social Conflict, Armed Violence and Peacebuilding	Social conflict	Elisabeth Prügl
Ethnic Power Relations and Conflict in Fragile States	Social conflict	Lars-Erik Cederman
Curbing illicit financial flows from resource-rich developing countries	Employment	Gilles Carbonnier
Linking Education and Labour Markets: Under what conditions can Technical Vocational Education and Training (TVET) improve the income of the youth?	Employment	Ursula Renold
Feminisation, agricultural transition and rural employment (FATE)	Employment	Sabin Bieri
Farmer-driven Organic Resource Management to Build Soil Fertility	Food security	Andreas Fliessbach
Biophysical, institutional and economic drivers of sustainable soil use in yam systems for improved food security in West Africa	Food security	Emmanuel Frossard
Towards Food Sustainability: Reshaping the Coexistence of Different Food Systems in South America and Africa (FoodSAF)	Food Security	Stephan Rist
Managing telecoupled landscapes for the sustainable provision of ecosystem services and poverty alleviation	Ecosystems	Peter Messerli
Oil Palm Adaptive Landscapes (OPAL)	Ecosystems	Jaboury Ghazoul
Woody invasive alien species in East Africa: assessing and mitigating their negative impact on ecosystem services and rural livelihood	Ecosystems	Urs Schaffner

Addressing the double burden of disease: Improving health systems for non-communicable and neglected Tropical Diseases	Public health	David Henri Beran
Inclusive social protection for chronic health problems	Public health	Jürgen Maurer
Health impact assessment for engaging natural resource extraction projects in sustainable development in producer regions	Public health	Mirko Winkler
Establishing a soil monitoring network to assess the environmental exposure to PAHs and PCBs in the province of Mayabeque, Cuba	Open call	Thomas Bucheli
Disability and Technology in Uganda from Local and Global Perspectives	Open call	Mareile Flitsch
Social Mobile Media to educate, connect and empower Frontline Health Workers in Nigeria, Zambia and South Africa	Open call	Urs Gröhbiel
Improving the HIV care cascade in Lesotho: Towards 90-90-90	Open call	Niklas Labhardt
Improving neonatal and infant outcomes using point-of-care tests for sexually transmitted infections in high prevalence settings	Open call	Nicola Low
Kick it like a Girl! Young Women Push Themselves Through Football in the African Public Space	Open call	Béatrice Bertho
Environmentally sound technology for the manufacturing of affordable building materials based on coconut husk and natural bonding agents	Open call	Frédéric Pichelin
Adapting and strengthening educational guidance and career counseling to promote decent work in two West African countries	Open call	Jérôme Rossier
Preservation of Central Asian fruit tree forest ecosystems, pome fruit varieties and germplasm from the recent epidemics caused by the invasive bacterial pathogen Erwinia amylovora	Open call	Theo Smits
Challenges of municipal solid waste management: Learning from post-crisis governance initiatives in South Asia	Open call	René Véron
Measuring the development outcomes of resource extraction in producer countries	Open call	Fritz Brugger

E. Interviews with r4d stakeholders

Method

We interviewed 17 key informants involved in the management of the programme. In addition, we interviewed 8 external stakeholders who were not actively involved in the programme but who are directly or indirectly affected by the program, such as KFPE and the Wyss Academy. Stakeholders from both groups were selected together with the evaluation task force.

We conducted most of the interviews individually. The questions were semi-structured and focused on the design and management of the programme.

List of interviewees

To address the evaluation questions related to the efficiency of the programme, its design and management, we led interviews with 18 stakeholders involved in the management and design of the programme.

Table 3: Stakeholders involved in the programme

Name	Organisation	Role
Regine Aebi Müller	Uni Luzern	SteCo chair
Nicolas Randin	SDC	
Gabriella Spirli	SDC	
Aurélie Righetti	SDC	
Riccarda Caprez	SDC	
Stuart Lane	Uni Lausanne	SteCo
Dimitri Sudan	SNSF	
Carmeneza Robledo	SNSF	Synthesis coordinator
Claudia Rutte	SNSF	Programme manager
Claudia Zingerli	SNSF	Programme manager
Patrick Sieber	SDC	Review panel member
Nils Rosemann	SDC	Review panel member
Mirjam Macchi	SDC	
Pierre Willa	SNSF	
Stephanie Hoppeler	SNSF	Coordinator of SPIRIT
Laetitia Philippe	SNSF	SNSF director
Anne Jores	SNSF	
David Svarin	SNSF	Programme manager

For an outside perspective on the r4d programme we interviewed the following experts and stakeholders.

Table 4: Interviews with other key informants

Name	Organisation	Role
Fabian Kaeser	KFPE	
Thomas Breu	KFPE	
Manuel Flury	SDC	
Peter Messerli	Wyss Academy	Director
Clara Diebold	Wyss Academy	TAG
Karin Önneby	Formas	Senior research officer

Geert Engelsman	Jalogisch	Evaluator of ETH4d
Smita Premchander		Evaluator of ETH4d
Nicole Schaad	SERI	
Karin Önneby	Formas – a Swedish research council for sustainable development	Programme manager at Formas

F. Survey

Sample

BSS invited all PIs, Co-PIs, and graduate students for whom an email address was available to participate in an online survey (356 individuals). The survey was conducted between September 13 and September 30, 2023. A total of 113 people responded. This corresponds to a response rate of 31%.

The sample of respondents is composed as follows:

– 36% female, 64% male
– 40% North, 60% South
– 53% PIs, 22% Co-PIs, 25% PhDs

Design

A total of 26 questions were asked in the survey. Respondents could choose between English, Spanish, and French.

No.	Question
1	Project involvement Please indicate your level of involvement in the following project-related activities: – Development of the project idea, – Authoring of the initial proposal – Authoring of the final report – Authoring of scientific publications – Management of the project – Outreach and communication activities – Stakeholder engagement
2	Stakeholder engagement Please identify the primary stakeholders and beneficiaries relevant to your project. – Local Communities – Local enterprises – Local NGOs and extension organizations – Multinational enterprises – National research institutions – Policy-makers in the Global South

No.	Question
	– Policy-makers in Switzerland – The global development community (donors, NGOs, UN..) – Other (please specify):
3	During which phase or period of your research project did you most frequently engage with these stakeholders? (Selected stakeholders from Question no. 2)
4	We are interested in understanding the influence and impact of your r4d project on the relevant stakeholders and beneficiaries. Please indicate your level of agreement with the following statements: – Transmission: Our research results were communicated effectively to stakeholders. – Cognition: Stakeholders have actively engaged with and comprehended the project's outputs. – Reference: Stakeholders have used the project's outputs as references in their reports, strategic plans, or policies. – Effort: We proactively facilitated stakeholders' adoption of the project's proposed solutions. – Influence: The project significantly guided stakeholders' choices and decisions. – Application: The outputs and results of the project gave rise to applications (e.g. concrete practices at the field) and extension/capacity building activities by stakeholders.
5	Collaboration Have you collaborated with any partners from the r4d project consortium in past projects?
6	Following the completion of your r4d project, did you continue collaborating with any of the project partners?
7	Follow-up funding Has your project secured additional funding after the support by r4d?
8	By whom has your project secured subsequent funding? Please specify:
9	Impact From your perspective, which of the following were the most valuable outputs of your r4d project? – Scientific papers, books etc. – Knowledge database – Workshops with stakeholders and beneficiaries – Presentations – Learning materials, handbooks etc. – Policy briefs – Media (radio, TV, print) contributions – Social media posts – Marketable products – Other (please specify):
10	The first objective of the r4d programme was to "bring results of research into relevant channels of international debate and regional and international policy dialogue." To what extent was your project able to do so?
11	Please provide the most relevant examples of instances where your project brought results into relevant channels of international debate and regional and international policy dialogue.
12	The second objective of the r4d programme was to "raise awareness on tackling global issues through systemic and interdisciplinary approaches." To what extent was your project able to do so?
13	Please provide the most relevant examples of instances where your project raised awareness on tackling global issues through systemic and interdisciplinary approaches.

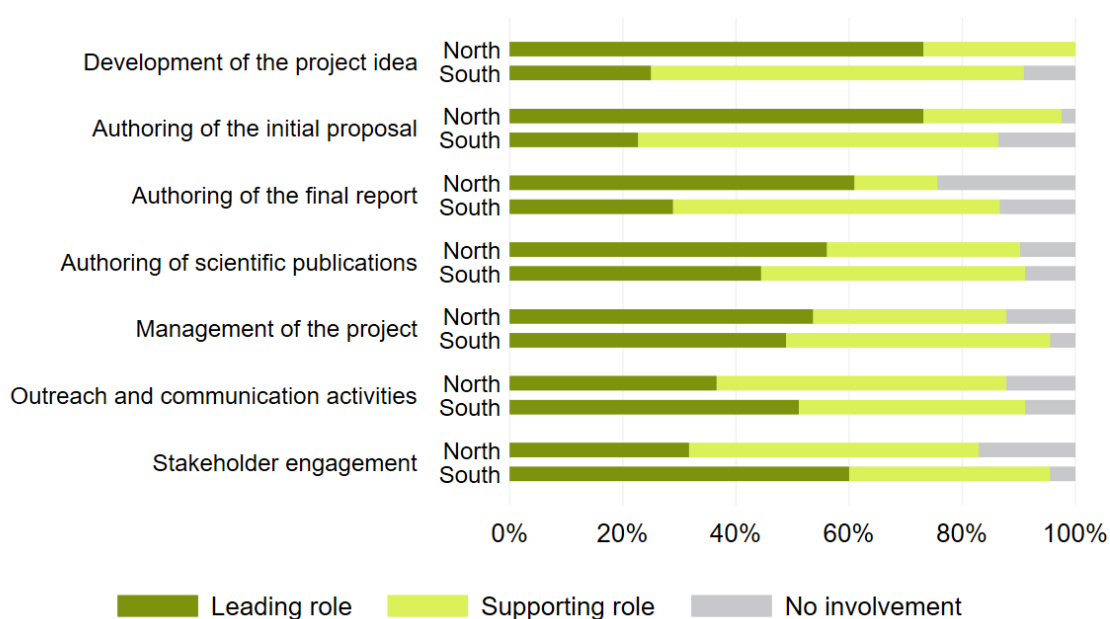| No.	Question
14	The third objective of the r4d programme was to "to generate scientific knowledge and research-based solutions for reducing poverty and global risks in least developed, low- and middle income countries." To what extent was your project able to do so?
15	Please provide the most relevant examples of instances where your project generated scientific knowledge and research-based solutions for reducing poverty and global risks in least developed, low- and middle income countries.
16	Experience We would like to understand your level of experience before the r4d programme. – International Collaboration – Development research – Application orientation – Transdisciplinarity
17	Impact on professional development We would like to understand how the r4d project has influenced your professional development and research approach. – Career Progression: The project has positively supported my career progression. – Skill Development: Through the project, I've been able to learn and develop new research-related skills. – Development Orientation: I now place a greater emphasis on the practical application of my research. – Application Orientation: I now place a greater emphasis on the practical application of my research. – Engagement Ability: My ability to engage with beneficiaries and practitioners has been strengthened due to the project.
18	Synthesis The r4d programme provided various support activities to assist participants. We would like to know your thoughts on their effectiveness. Please rate the usefulness of each of the following activities: – Site visits – Mid-term review – Transformation and Acceleration Grants (TAG) – r4d Dialogue Forum, e.g. discussions on project results – r4d skills workshops: e.g. how to write a policy brief – Programme-level synthesis activities (summaries, policy briefs, documentaries etc.) – Cross-project collaborations (e.g. Food Systems Caravan)
19	TAG Have you been involved in the TAG (Transformation Accelerating Grant)?
20	What added value did the TAG deliver in their project? What outputs did the TAG allow to produce?
21	Design and Management Do you see a way that the programme management or the programme design could have been improved to help the projects achieve their goals?
22	In what ways could the programme management or the programme design have been improved to help the projects achieve their goals? Please explain:
23	Gender Considering all team members in your project consortium (e.g., Principal Investigators, Co-Investigators, Researchers, PhDs, and other key roles), how would you describe the overall gender composition?

No.	Question
24	In your r4d project did you study specifically if your research subject affects men and women differently?
25	How did you study if there are different effects on men and women?
26	Why did you not study the different effects on men and women?

Results

Question 1

Project involvement. Please indicate your level of involvement in the following project-related activities:

**Figure 13: Project involvement of North and South partners**

Source: Online survey

Question 2&3

Stakeholder engagement. Please identify the primary stakeholders and beneficiaries relevant to your project. During which phase or period of your research project did you most frequently engage with these stakeholders?

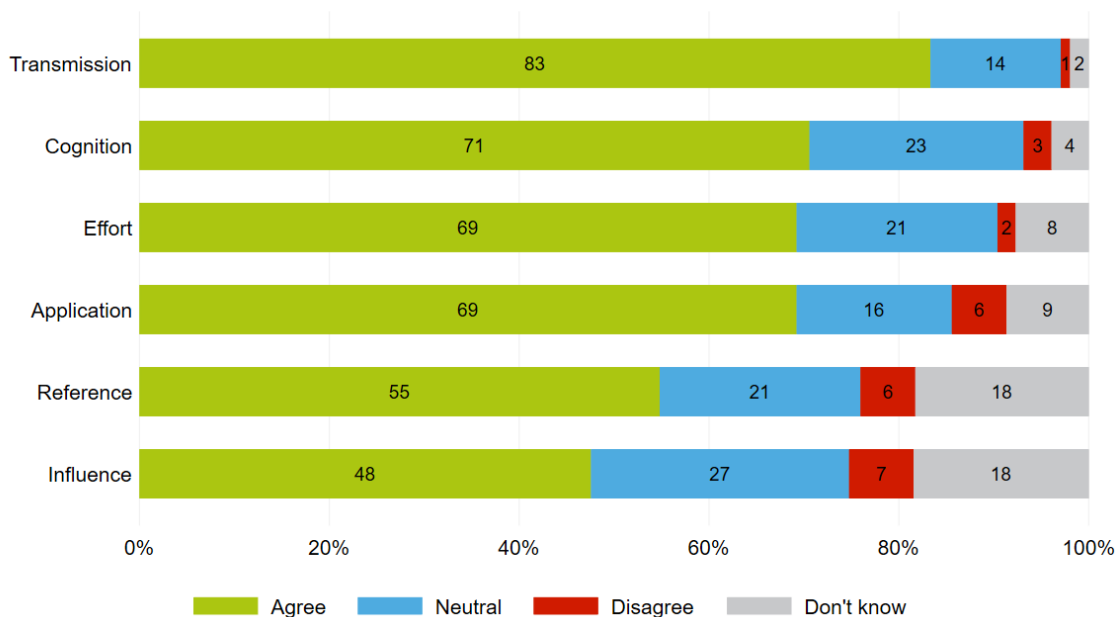**Figure 14: Most important stakeholders and main phase of engagement**
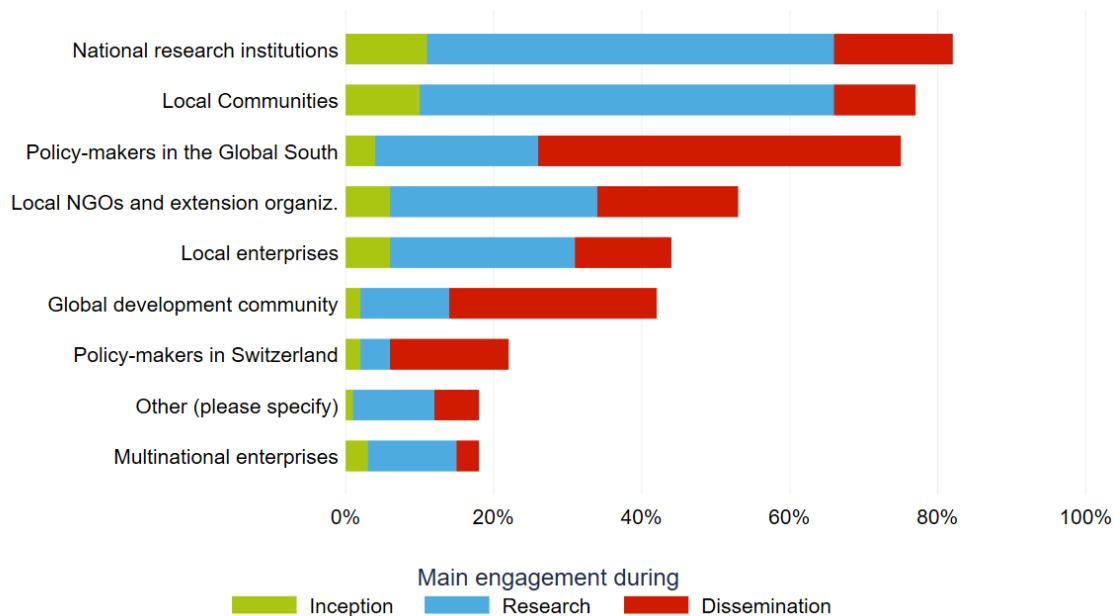
Source: Online survey

Question 4

We are interested in understanding the influence and impact of your r4d project on the relevant stakeholders and beneficiaries. Please indicate your level of agreement with the following statements:

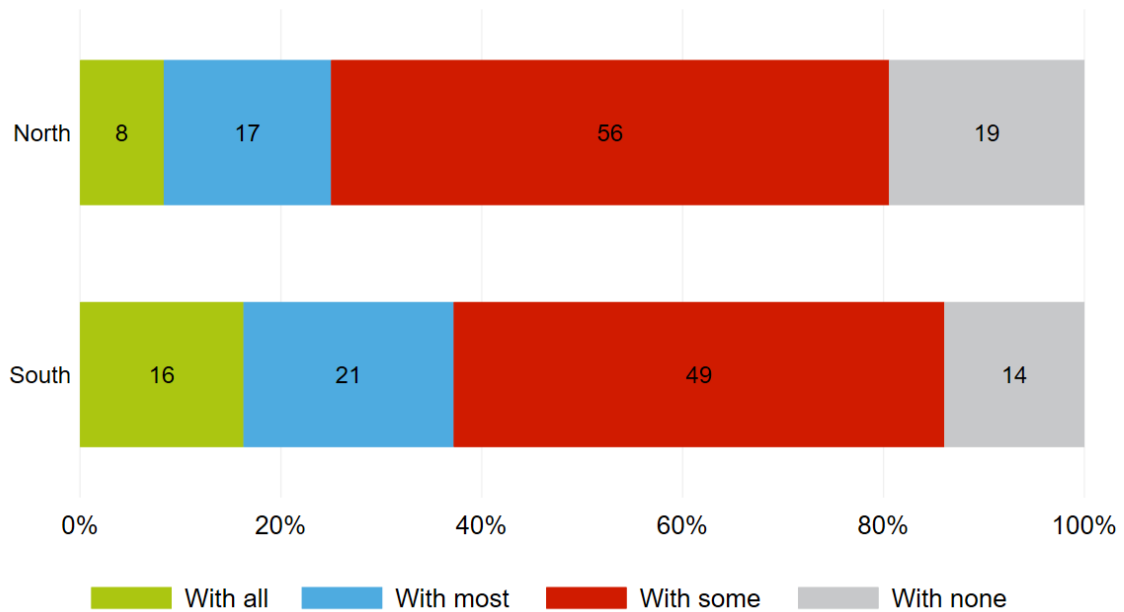**Figure 15: Channels of knowledge transfer**

Source: Online survey

Question 5

Collaboration. Have you collaborated with any partners from the r4d project consortium in past projects?
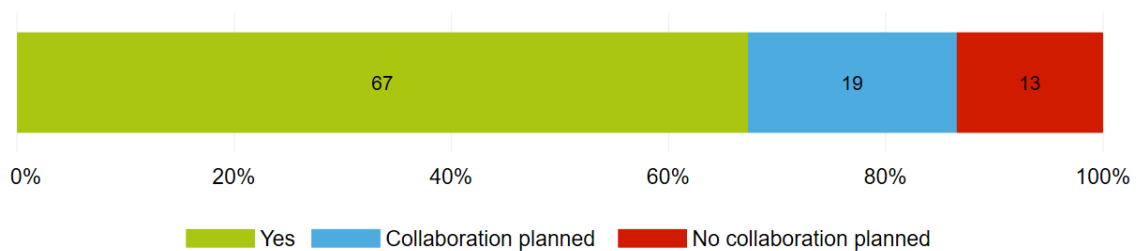
Figure 16: Collaboration in past projects

Source: Online survey

Question 6

Following the completion of your r4d project, did you continue collaborating with any of the project partners?

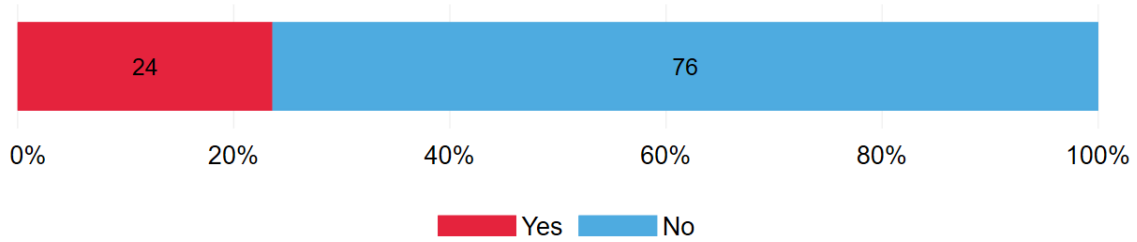**Figure 17: Continuation of collaboration after project end**

Source: Online survey

Question 7

Follow-up funding. Has your project secured additional funding after the suppsort by r4d?

Figure 18: Follow-up funding

Source: Online survey

Question 8

By whom has your project secured subsequent funding? Please specify:

Sources of follow-up funding
SDC, Darwin Foundation
Adaptation Fund, SDC
SDC, Worldbank (currently under evaluation)
SDC, Unitaid, Fondation Botnar
SNSF
SNF-SPIRIT, university in partner country
SNF- TAG funding
Swiss Network of International Studies, Swiss National Science Foundation
The Swiss Science Foundation
Marc Kenis
KEHATI
EU Horizon 2020 + private companies
GIZ
NIHR (UK)
NIHR UK
Project partners in LICs and in the USA
Sri Lankan partners
The Government of Mongolia
University
Private and public entities
I know a component from the project received extra support but I'm not sure of the source

Source: Online survey

Question 9

Impact. From your perspective, which of the following were the most valuable outputs of your r4d project?

Figure 19: Most valuable outputs of r4d projects
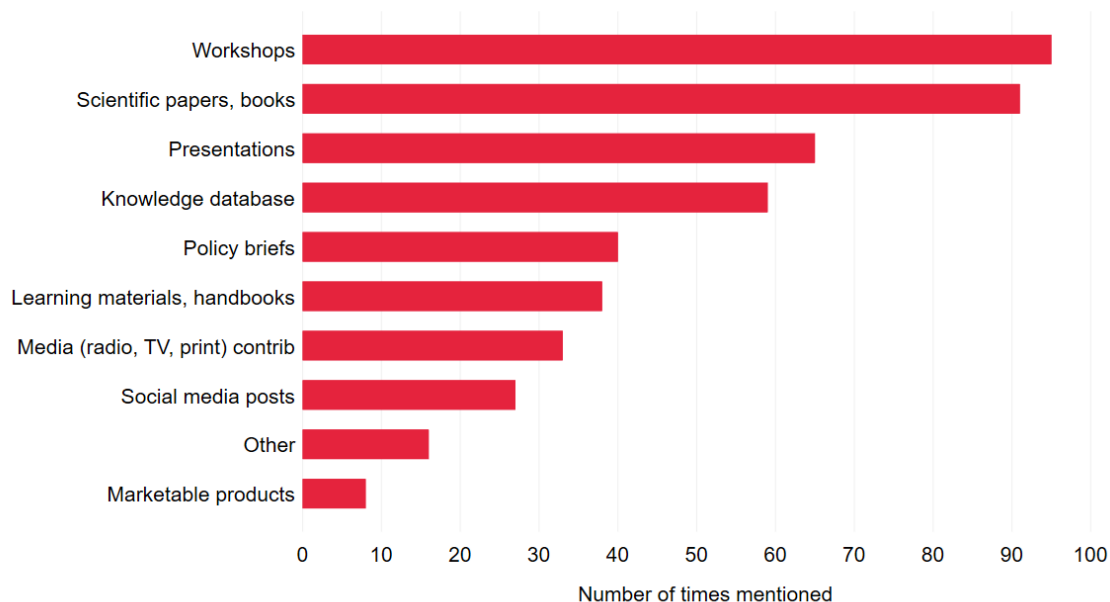
Source: Online survey

Question 10, 12, 14

The first objective of the r4d programme was to "bring results of research into relevant channels of international debate and regional and international policy dialogue." To what extent was your project able to do so?

The second objective of the r4d programme was to "raise awareness on tackling global issues through systemic and interdisciplinary approaches." To what extent was your project able to do so?

The third objective of the r4d programme was to "to generate scientific knowledge and research-based solutions for reducing poverty and global risks in least developed, low- and middle income countries." To what extent was your project able to do so?

Figure 20: Achievement of r4d objectives
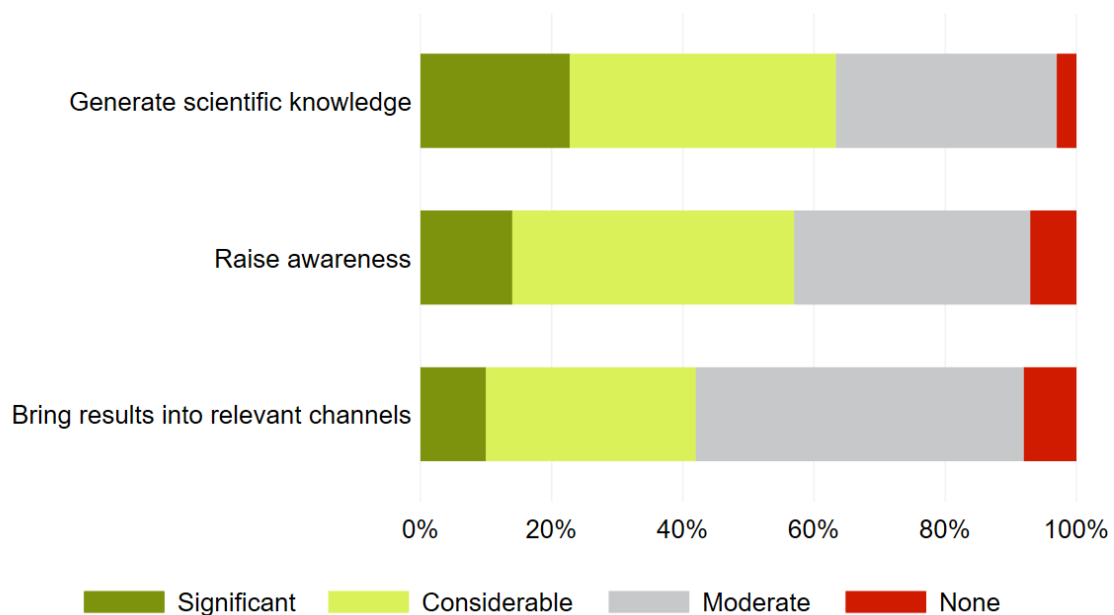
Source: Online survey

Question 11

Please provide the most relevant examples of instances where your project brought results into relevant channels of international debate and regional and international policy dialogue.

Examples of results brought into relevant channels
Foundation of the research institute. Inclusion in international research organization. Creation and current coordination of research network. Participation in international research project.
At international level, the results are mentioned in the recent expert assessment, and they were presented in a high impact workshop. The project had much more impact at national scale. It led to a new national strategy in an African country and it contributed significantly to the national strategy of another African country.
The project results have been presented and discussed at workshops with representation from other countries. It has been shared with ECOWAS to consider scaling-up projects.
The project initiated national debates in the two countries of research.
Conference and workshop presentations by participants in science-policy and international policy workshops.
Series of interviews of stakeholders were taken in order to collect data and information on the research topic, and at the same time to inform stakeholders about the issues that are relevant to them. The research results were disseminated through project website, policy brief, and organizing research result workshop in South countries and Switzerland.
The policy briefs were shared with development partners, sectoral policy-makers, regional bodies, and international offices. The results of this project were also discussed in a workshop.

Based on the detailed geophysical measurement during the r4d project, we have requested geothermal experienced government research parts from another country and private companies to develop a feasibility study next.

Consistent, quality-controlled dataset proofs climate change and serves as the fuel for evidence-based policy dialogue and stakeholder engagement with the aim of increasing the resilience of the local populations to the changing climate. The impact is classified as 'moderate' as the region the project worked on was limited to a subnational scale.

The project held an engagement at the FAO. It had an interactive engagement with the the academy of sciences in an African country. Several events were held in another African country including training for judges of Right to Food.

The project addressed the issue of youth employment in southern countries. The project made it possible to measure the impact of technical education and vocational training on access to employment and income for young people in southern countries. The project measured the link between the professional and educational environments for different technical education and vocational training programs in southern countries, and how this link contributes to facilitating the professional integration of young people.

The project has produced a policy brief intended to feed into debates and policies within the country.

Multi-epistemic debate between modern western medicine and traditional Maya medicine. Impact on Philosophy of Science on ontological openness and epistemic modesty.

Awareness of research topic in Asia. Scientific collaboration between partners in two Asian countries.

Discussion with WHO and the international research community about value of research topic.

International flagship reports, SDG indicator definition, papers and conferences, attendance of science fairs and important international forums, special issue of a journal, documentary film, website

Meetings and Workshops in Central America

Participation on international conferences

Some of our research was cited in textbooks and research by international organizations. It was also used to make decisions in some Swiss parliamentary debates.

Academic journal. Critical international debate on the results of the progamme with policy makers

The project has helped raise awareness of the research topic.

The results of the paper were presented in numerous workshops organized in international organizations in Geneva.

Use of Nature Contribution to people framework at national and local level in Asian country. High quality peer review publications

Through publications and radio programmes

Through publication of research results on reputable journals, policy briefs and preparing international workshops where different stakeholders are involved the project has brought results into relevant channels of international debate and regional and international policy dialogue.

Presentations conducted at international conferences pave the way for Asian researchers to discuss their findings with global level researchers and policy makers

We have facilitated policy dialogue processes with various ministries in four African countries. We are in the process of conveying our project outcomes to African Development Bank, WHO African Region and CDC Africa.

Research article, publications, international workshops

Change of screening policies for health issues and repeated interactions with WHO on risk assessment and health issues screening

Contributions to health financing reforms in an African country
The data and learning generated out of the research and documentation, sharing with wider stakeholders were the knowledge base to create awareness and sensitization as well as influencing the academic and policy discourse.
Publications in international and national journals; national and conferences, seminars, and workshops; policy briefs; involving national and local stakeholders in project activities
During the implementation of the project, every year I spoke in republican debates about the importance of the results obtained. An official speech was made to the deputies about the importance of our research.
Results were presented in relevant national and international fora
The research results may be used for review to compare in the South East Asia countries.
The project supports the dissemination of a resolution and contributes to the evaluation of the first and development of the second national strategy of an Asian country. Furthermore, the result of the project relevant to disseminate the ASEAN Regional Plan of Action.
The research topic is essential at the local, regional and global levels, so the project had an impact on the context of this debate and contributed to generate actions for decision making in this regard that are being built in the country and were enriched.
In an African country a multistakeholder workshop has been organized with a national research institute and was attended by civil society, government representatives, companies, and local academia. In another African country, presentations to a number of government ministries, development agencies and companies have taken place. A public event is planned.
Debate on social health protection and governance
Mentioning in the local press
International conference, attended by researchers from many countries as well as policy makers and development agencies.
Some project participants present papers at international conferences
Policy brief, presentation, exchange information with the team and journal
Hybrid event developed in the final phase of the project, which facilitated dialogue between academic, multilateral and health system actors in a South American country and Switzerland. Meeting with policy makers to disseminate the findings of the first phase of formative research. Publication of commentaries in reputable academic journals.
Participation in scientific seminars and congresses; Member contributions to other projects on the same theme (youth, gender) Scientific production in recognized international journals and editions
Film production. International fair. Production of articles in international journals.
Participation in conferences
The results have been discussed in national debates in southern countries and at the level of the international association in the field.
Several invited talks at conferences to showcase state-of-the-art practices.
National research institutes have appreciated and expanded knowledge transfer and support to farmers by training selected farmers on the research topic. Also, the a national development organization from the North, has begun a three-year project to improve urban sanitation and address biowaste in selected African countries.
Discussion of the outcomes or the project and application of research results in the future development of green renewable energy in an Asian country at the joint seminar of stakeholders including the Government representatives, experts, and diplomats from the Swiss mission.

Participation in UN processes on Right to Food, in particular infusing a gender perspective. Participation in UN process on gender equality and women's empowerment infusing themes from agriculture and the Right to Food.

In two countries our project contributed to political debates and policies for food sustainability at national and regional level. Findings were taken up in debates - to what extent they finally shaped policies is difficult to estimate.

Workshop to disseminate project results to FAO and to the academic community and practitioners/activists in an Asian country

Meetings with government agencies in the Global South and North. Sharing scientific publications with government agencies and NGOs in the Global South and North.

We have engaged quite extensively with different stakeholders in in multiple African and Asian countries. Stakeholders include the government, industry bodies and civil society organizations.

Reform lab, high-level reform leaders participated and use evidence to improve reforms.

At international and national conferences where some results were presented. At seminars and workshops organized with producers and associations of producers.

The papers we published in many peer-reviewed journals are readily available to all persons.

The review papers became influential in the debate. A Central American association was founded.

The results have been used to understand climate processes.

Source: Online survey. Answers are anonymised.

Question 13

Please provide the most relevant examples of instances where your project raised awareness on tackling global issues through systemic and interdisciplinary approaches.

Examples of instances where project raised awareness
Foundation of the research institute. Inclusion in international research organization. Creation and current coordination of research network. Participation in international research project.
The most obvious examples are the numerous interdisciplinary publications that were produce in the frame of this project; all PhD students were requested to publish at least one interdisciplinary paper. Also, the Local Implementation Groups (LIGs), which were established in all case study regions, were engaged in a decision process in which they co-selected management practices relevant for their region, considering social, economic and environmental criteria, and reflecting on possible trade-offs.
Conference presentations and publications
The result of the project raised awareness in global and local context. With better understandings on the issue, policy makers and participants in the research result workshop showed their interests in knowing more of the existence of the problem and on how to cope with it.
Development of standards for one African country.
Provided observational evidence of key climate change indicators as input to policy dialogue
The project held an engagement at the FAO. It had an interactive engagement with the national research institute of an African country. Several events were held in another African country, including training for judges on Right to Food.
The project combined applied models. Every year, the project organizes a summer school which brings together professionals from the North and South.

The research project was designed to carry out research over 3 years, and apply a local solution over the final three years. Research was carried out using innovative methods to understand the socio-ecological system.

A Central American country wants to engage in a specific health policy.

Visiting institutions, communities and schools to raise awareness to the research topic.

Workshops with the national health community (research institution, practitioners, provincial health authorities)

Interdisciplinary research: The project has actively engaged in interdisciplinary research, as demonstrated by various publications authored by experts from diverse fields such as economics, law, politics, and international development. This interdisciplinary approach helped to shed light on complex issues from multiple angles. Conceptual clarity: Project publications contribute to clarifying key concepts. Conceptual clarity is essential for systemic thinking and global responses as it ensures that researchers and policy makers share a common understanding of the issues at hand Analysis of multiple dimensions: The project publications analysing the legal, economic, and political dimensions of tackling the issue provide a holistic view of the issue. This generated a sound conceptual and evidence base for engaging stakeholders from different sectors and backgrounds with a role in addressing the problem. Global perspective: The project's global perspective, as evident in publications analyzing the problem in different countries highlights its commitment to addressing global issues. This approach underscores the importance of systemic thinking and understanding the global interconnectedness of the research problem. Policy options at different levels: The project's provision of an overview of policy options at different levels, from the local to bilateral and global, targeting different stakeholders, reflects a systemic approach to addressing the research problem. In summary, the projects diverse publications, conceptual and methodological advancements, policy insights, publication reach, global perspective, collectively demonstrate its success in advancing a more multidisciplinary and systemic approach to addressing the complex issue of the research problem.

Work with local communities.

Collaboration with mostly local stakeholders during project phase

We used multi-disciplinary approaches in the research

Through debate with policy makers and World Bank experts

Social representations of women. The question of women's autonomy. The gender issue Women's unemployment Women's participation in development.

The project invited policy makers and researchers on the relevant topic to Switzerland for an annual workshop, and organized several conferences/workshops abroad. The researchers and policy makers certainly came from a wide range of backrounds, as such the events could be categorized as interdisciplinary.

Policy notes

The project site identified were provided oppertunity to realise the significance of ecosystem services and its contribution in reaching to sustainble development goals at national level

The project were from different disciplines and were able to publish findings in single papers, through interconnecting the findings of the different subjects.

The project has raised the awareness of different stakeholders on the research topic through systematic and interdisciplinary approaches.

We raised awareness not only in the selected municipalities (or local councils) for the research study but also other local councils level officials as well.

Through multidisciplinary publications and discussions

Help place the research topic on the agenda in LIMCs. However, COVID was of course a major distractor in this as a major competing health policy priority. We are nonetheless confident that we helped raise awareness nonetheless.

Associations of decision and policy makers to research and research analysis in an African country.

The production of a documentary dedicated to festivals, the realization of Digital Storytelling, a very interesting medium for disseminating the research objectives.

The recent global understanding of the nexus between waste and farming, waste and environmental management, waste and gender issues, waste and livelihoods, waste and pandemic were broadly developed, understood and responded by the stakeholders.

As a project implemented in multiple countries our project raised awareness on tackling global issues through systemic and interdisciplinary approaches.

Workshops were held annually with the participation of local residents around natural forests, foresters, forest protection specialists, university students, researchers in the field, scientists from other universities and other interested parties. A book on the research topic written in local languages was distributed to all participants at each workshop. Training sessions with video material were conducted among the local population on how to recognize symptoms, how to correctly use the application on a mobile phone and send information.

Raise awareness for the utilization of plant material for certain products.

Gender issues. Sustainable development.

During the research phase we did several offline and online discussions to share the findings as well as encourage feedback with academics, local and national government, activist and students.

The question on how locally created low-cost sensors could be used to collect reliable data in the meteorological context has been proved. Debate with local government and meteorological office with their official validation of the project results is a major result. In several conferences where government, industry and academia is present was used to show results and rise awareness.

The project was developed with systemic and interdisciplinary approaches to achieve the specific objectives, which strengthened discussions, actions and decision making.

Data quality is a major concern in the target region. I am convinced that the project was able to raise awareness on this subject and show that even in a country with limited resources it is possible to greatly improve past datasets.

Presentations to policy actors.

Co-construction of production systems by producers and researchers. Training of producers and agents of the Ministry of Agriculture and Livestock.

In the face of a natural disaster, the government of the province and the national government took on the task of carrying out analyses in the areas affected by the smoke plume, an aspect that contributed to define that there was no public health problem in those affected areas, guaranteeing food sovereignty to provide safe food.

Our project made good achievements in terms of interdisciplinary synthesis but the awareness raising on global issues is still underway, and too early to comment on.

The project tapped expertise from multiple disciplines: Agronomy, Soil Science, Communications, Sociology and Agribusiness

Development of Skills formation System in the Country

In addition to those mentioned in the answer to the previous question, participation in academic (conferences) and global health events in Switzerland and other countries helped to raise awareness and educate on the relevance of a socioecological and critical approach to health. Publications generated by the project (e.g. scientific articles, policy briefs) and dissemination material (e.g. videos).

On the theme of transitional justice, the project was able to address it by focusing on aspects sometimes not approached with innovation such as gender issues; the dominant discourses depending on what the elites in power want can therefore change; interdisciplinary aspects, archival issues, production of data until the unenviable produced.

The production of a film has helped to raise awareness of the food crisis and the various ways of solving the problem.

Training on research methodologies. Funding to trainings.

In a South American country, it had an important impact on small oil palm producers.

Mainly had an impact on the two southern countries concerned.

Awareness of health issues due to air pollution in an Asian country and the pressing need for alternative energy resources already exists. Our project caught broad attention by UNICEF, the Swiss Consulate, and others. Several meetings to discuss our project and results were held. Unfortunately, after the project was tremendously delayed due to the Covid-19 crisis further implementation abruptly stopped due to the discontinuation of our research at Swiss academic institutes, which do not provide necessary employment conditions for PIs to complete such projects under unforeseen circumstances.

The project utilized expertise from different partner institutions to develop concrete research outputs that dealt with solving the underlying problem and publicized in referenced journal and uploaded in global research depository for the global community.

The work between the participating countries on the knowledge of the different contexts of palm oil production, the awareness-raising exercises using this information in Europe, the use of the tools with decision-makers to discuss the importance of non-forest ecosystems, and the use of the tools with decision-makers to discuss the importance of non-forest ecosystems.

Integration of the activities of the government agencies and academic institutions and other foreign partner on the studies of the research topic in an Asian country.

Training of judges on the Right to Food in Ghana combined our social science results with legal knowledge. Workshops with local administrators in Cambodia similarly combined our social scientific findings with an effort to develop relevant policy scenarios.

The project raised awareness on the importance of food sustainability and the necessity to understand and increase food sustainability through systemic and interdisciplinary approaches. The project demonstrated to complex interconnections of food systems and the importance to approach food system sustainability through transdisciplinary approaches.

Scientific publications and workshop to disseminate project results to FAO and to the academic and practitioner/activist community in an Asian country.

We made a Massive Open Online Course within an interdisciplinary team and raised awareness regarding SDG 5 and SDG 8.

Workshops and direct interactions with various national stakeholders, helped spread knowledge about systemic farm- and value chain-level approaches to sustainable agriculture

Different stakeholders have been engaged quite extensively on the policy options and possibilities

International reform lab created a community of practice.

Through the publications, we demonstrated the role that social media can play in preventing professional isolation among recent graduates of schools of nursing.

The use of organic residues increases yields.

The indices of extremes identified in the study were useful for this purpose.

Conducted a multidisciplinary comparative study in two countries.

Source: Online survey. Answers are anonymised.

Question 15

Please provide the most relevant examples of instances where your project generated scientific knowledge and research-based solutions for reducing poverty and global risks in least developed, low- and middle income countries.

Examples of instances where project generated scientific knowledge
International Postgraduate Course. International Scientific Workshop. Postgraduate Course and Scientific Workshop Program of activities. Postgraduate course and international scientific workshop. Multiple publications.
Based on our findings, an African country has changed its policy in tackling the problem underlying the research.
Urban waste management company have considered using the results; small-scale farmers have also used the results to reduce cost of production and increase productivity in their enterprises.
These discussions did not take place at global level, but rather at regional and national level. e.g.: improving the supply of social housing for the poorest populations.
Publications
The project research elaborated well literature reviews, scientific methodologies in estimating the problem and the results of key informant interview to supplement the missing data and quantify the quantitative research result. Since the research was done using cases from local context, the result is more or less contributing to reduction of the risk of the problem in the host country.
Through the knowledge generated by the project
The project was able to test and identified key farm biological waste for the production of insect larvae for use by local farmers either for feeding their poultry and or setting up small scale enterprises for the production of insect larvae meal as an economic venture.
The policy briefs were shared with development partners, sectoral policy-makers, regional bodies and international offices. The results of this project were also discussed in the a workshop. They were also discussed in the final events.
Scientific involvment of local scientists was very good, but transfer to operational services provided by national institution was limited.
The project released an edited book. Individual researchers such as myself have published academic papers and other output from the project
The project has shown that companies that take on young people as part of dual apprenticeship training programs benefit significantly from this type of program in southern countries. Furthermore, the project data confirm that dual apprenticeship training facilitates the professional integration of young people. On the basis of these results, we can deduce that reforms of technical education and vocational training systems that promote dual apprenticeship training are useful in southern countries.
Several articles have been produced by project members.
Maya communities and traditional healers were involved in locally adapted health policy.
Awareness of plant diseases opens options for fighting it. The local population recognizes the disease better. By reducing the risk of spreading, locals can still grow their own products. New genomic information about the spread of plant diseases Central Asia enhances chance of following epidemiology of the disease.
Analysis and dissemination are ongoing. The parent trial from the project is stimulating discussion with WHO and other international researchers because the results show (unexpectedly) no overall benefit.

Methodological advancements. Estimates of the problem. Value Chain Risk Maps. Tackling the problem. Policy Options.

The work experience of indigenous nurses was systematized with the emphasis on contributing to and strengthening primary health care in rural areas.

Useful knowledge on applicability of participatory technological innovation

Research on risks of the problem in two countries

Scientific publications. Local press. Policy brief

Numerous scientific publications in top scientific journals regarding the impact of trade on labor market outcomes (wage inequality, unemployment, information)

Two high quality reserach papers were publihsed and one under review. These publications are pioneering papers linking nature and SDGs to add narratives on its contributions and tradeoffs.

The project brought together scientists from different fields and generated scientific knowledge and research-based solutions through publishing outstanding articles in reputable journals on how to control the problem in East Africa.

Produced project reports, Scientific papers and workshops conducted at the local, national and international level assisted to achieve third objective

We have published approximately 30 papers in the peer reviewed literature around the research topic. By widening the evidence-base on the topic we anticipate to promote better management/prevention, and thus contribute to reducing poverty and global risks in least developed and low-income countries.

We put to use some of the research results by engaging in partnership activities for rural employment, which led to raising of incomes and increasing production of marketable agricultural produce

Major publications in international peer-reviewed journals and high-level policy outreach events related to this research.

Pathways in two African countries to Universal Health Coverage

Scientific articles and teaching development

In most of the developing countries, there are many poor families engaged in the waste chain for their livelihoods. Among the waste workers, majority are women and they are being organized for their voices to demand for safe working conditions as well as skill training to convert waste to enterprises.

The research activities carried out by the project generated scientific knowledge and research-based solutions for reducing poverty and global risks.

Our research was directly related to identifying the spread of a new dangerous invasion in our country. However, during the project, we traveled to many regions where people may suffer from not receiving fruit harvests due to severe damage from the disease. In such places, we made our contributions to prevent poverty by giving them the necessary scientific and practical advice on how to protect their garden or fruit nurseries from the invasion of disease.

New data on production from plants.

Poverty in nonmonetary perspective is quite new.

One of the research findings is gender dimensions that contribute to escalate and deescalate economic issues and problems such as poverty; especially in the context of post-conflict environment. Therefore, efforts to reducing poverty should look at gender issues and addressing process to gender equality.

Papers and other open material has been produced to share scientific results with the academic community.

It has made it possible to know how the link between vocational technical education and training and the labor market is presented, highlighting weaknesses and proposing actions to improve it, which has

been measured and throughout the project it is shown how it has been improved in relation to the instruments provided to the actors of the institutions involved.

The project did that by indirectly providing "good" data that will be later used in projects with direct impact in people's lifes

A peer-reviewed article has been published. It argues for a new and comprehensive methodology to assess development outcomes from resource extraction

Discovery of new termite species not previously reported in an African country. Optimization of termite and maggot production techniques. Improvement of poultry feed

The project generated national reference values for environmental contaminants in soils with different uses, an aspect that had never been studied in our conditions. The main contaminants in food (vegetables and milk) were identified, contributing to food safety and providing safe food to the population.

This was the key outcome of our project, although publications are still underway.

The project identifies a low-cost soil fertility management practice that brought cost saving measures to farmers. Hence, they were able to save money and reduce their expenses on inorganic fertilizer

The project must find out the data and refer to these data must develop a scientific model to sole or reduce the problem of low- and middle income countries.

Academic articles generated and disseminated through international conferences/meetings with key stakeholders. Design of evidence-based interventions with the active participation of the communities that would benefit from them.

Scientific knowledge helps to turn the page on transitional justice; plural memories to deal with the problems of poverty and development in general, which remained unresolved during political instability.

Techniques for the agricultural production

We published several peer reviewed articles and policy briefs.

Has had an impact on the field studied and related practices in the two southern countries concerned. The aspect of transposition to other countries has not yet really taken place (can still be done via our manual, etc.).

We showcase how to explore for geothermal systems, which could be used to provide heating and affordable renewable energy in countries with cold climate. The effect would be manifold: reducing burning of coal for heating would reduce air pollution and positively impact health and quality of life. Such geothermal system exist in large numbers but they are poorly understood and new subsurface imaging approaches are required as we succeeded to show.

The project utilized expertise from different partner institutions to develop concrete research outputs that dealt with solving global waste menace.

The games created and used served as a tool for local stakeholders to systematically understand the environmental and social challenges of palm oil production and others, and this understanding is a key first step in advancing solutions.

The outcomes of the project will be the basic research results for the next step of the green renewable energy initiatives in an Asian country. The scientific report of the project will be used as an important knowledge of the site survey projects for geothermal sources which might be used for the heating system of local towns.

The project identified ways in which gender is relevant in agricultural development trajectories from a rights perspective and we published an open-access book on the matter.

The project generated concrete solutions to improve sustainability of food systems. Solutions targeted various levels from improved processes to increase local creation of value for smallholder farmers to

insights on how to reduce the use of agro-chemicals with negative environmental impacts or dependences on international markets.

Scientific and policy-oriented publications (policy papers) highlighting the intersectionality, gender differences and relations in particular, of food insecurity issues and options for reducing them.

Publication in peer-reviewed papers

Learnings about the real challenges (land market, lack of finance…) of farmers in an East European country, difficulties of transforming commodity value chains to more stable, sustainable chains. => a lot of learnings that helps us design more targeted projects

We are still engaging on this, and number of research papers are under consideration

Randomized controlled trial

At international conferences

Increasing yields of food crops and replacing chemical fertilizers.

Methodologies were proposed to improve data quality control in the framework of climate services
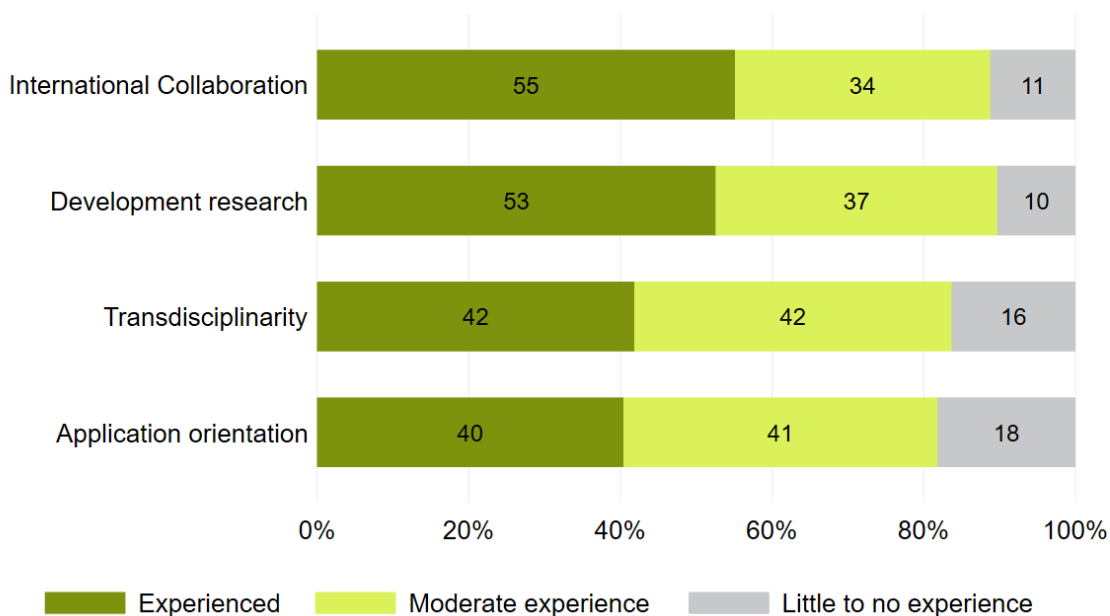The Climate Atlas has been a valuable tool for decision making

Conducted a multidisciplinary comparative study in two countries

Source: Online survey. Answers are anonymised.

Question 16

Experience: We would like to understand your level of experience before the r4d programme.
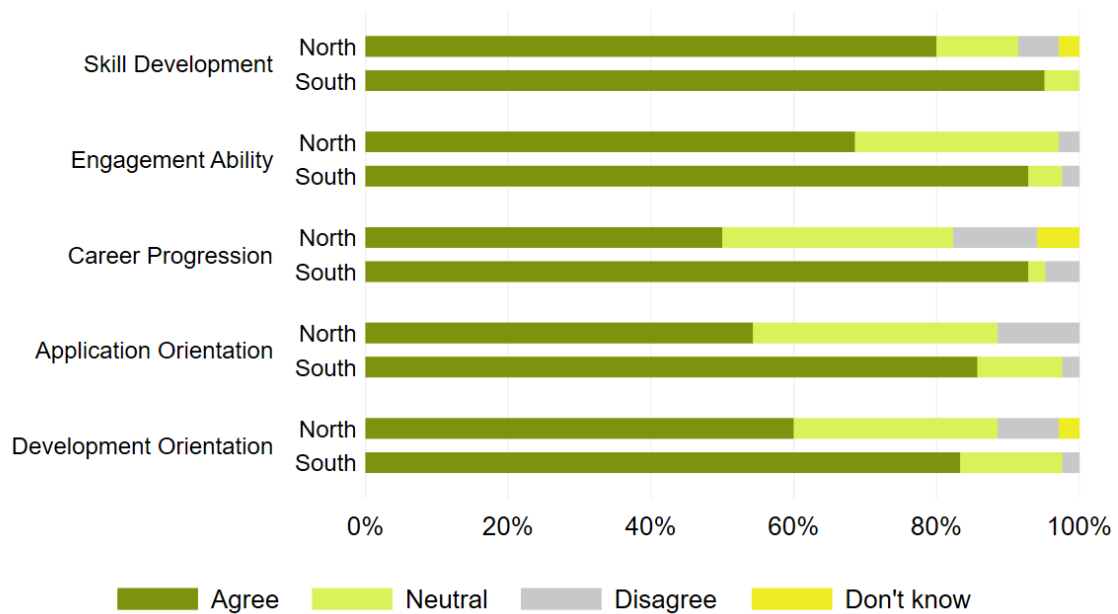
Figure 21: Pre-r4d experience of respondents

Source: Online survey

Question 17

Impact on professional development: We would like to understand how the r4d project has influenced your professional development and research approach.
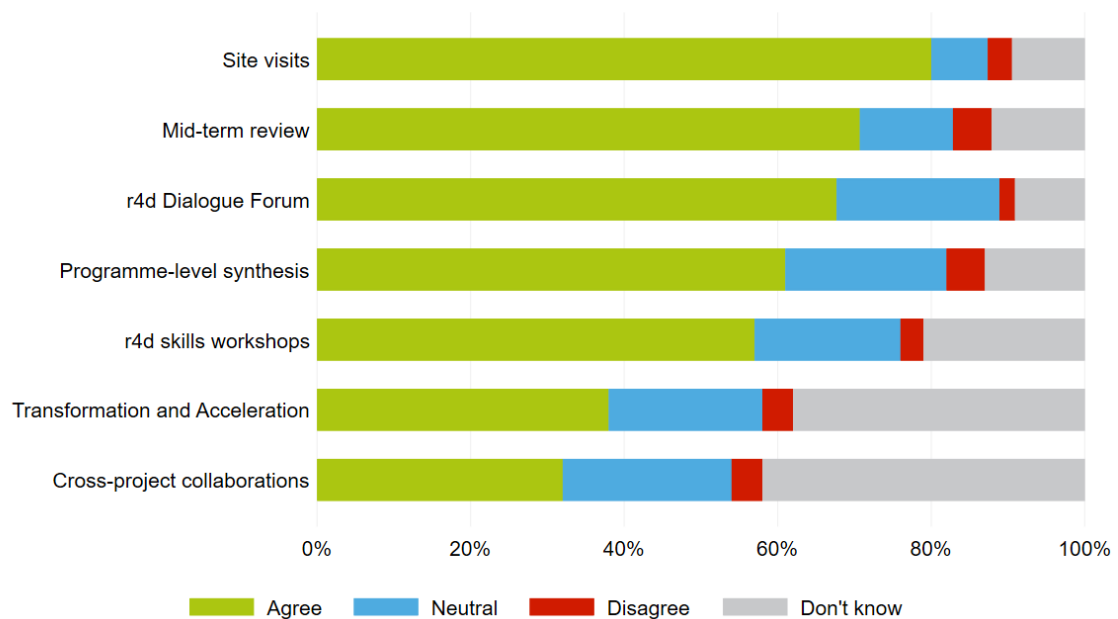
Figure 22: Professional development due to r4d

Source: Online survey

Question 18

Synthesis: The r4d programme provided various support activities to assist participants. We would like to know your thoughts on their effectiveness. Please rate the usefulness of each of the following activities.
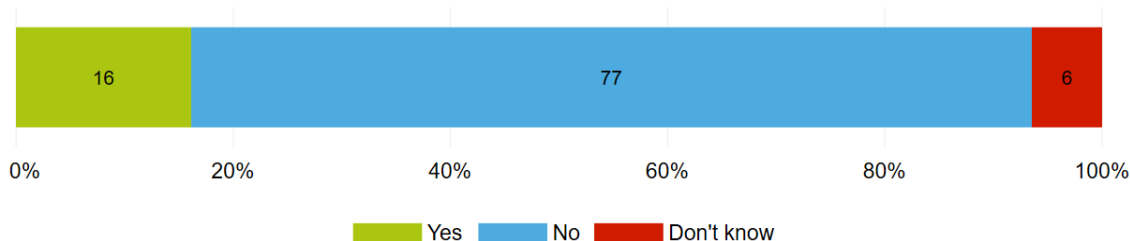
Figure 23: Usefulness of support activities

Source: Online survey

Question 19

TAG: Have you been involved in the TAG (Transformation Accelerating Grant)?

Figure 24: TAG involvement

Source: Online survey

Question 20

What added value did the TAG deliver in their project? What outputs did the TAG allow to produce?

| Added value of TAGs |
| --- |
| New equipment, devices, research instruments to accelerate and give more rigor to scientific research. Resources to support experimental farmers and establish a workshop for the production of new products obtained from the recycling and reuse of local resources. |
| The TAG was an opportunity to test the reflections made and to put into practice some of the results obtained during the r4d project. |
| We developed a mobile app for use in two Central Asian countries, which helps the local population to recognize a plant disease, but also to create a report of an incidence. This mobile app was used intensively in the last phase of the project during dissemination activities in Central Asia. There is also interest from other countries to use it. |
| This has helped us to raise the profile of our work and increase its impact on the community of practitioners in the 2 southern countries. |
| The TAG was the most useful part of the r4d program because we could implement our research findings directly into the context. The project we implemented was introduced in a participatory way, which led to the success of the TAG-project. The major achievement of the project was, that we could strengthen the economic situation and improve the well-being of people who were included in the project. Furthermore, we could strengthen the already existing relationships with the local stakeholders. |
| A dashboard was developed as main results from the r4d, with successful testing in four mines in two countries. The dashboard is an instrument to support evidence-based policy deliberations in resource extraction areas. To promote uptake of the dashboard and the application in mining sites in other resource rich countries in Africa, the TAG project promoted the dashboard through in-depth workshops with key stakeholders from the public, private and civil society sectors as well as from development agencies involved in resource governance and local academic institutions in four additional countries in Africa coupled with implementation support in Southern Africa. |
| Policy brief, reseach presentation, journal and book. |
| Very concrete s-s learning infrastructure |
| We scaled up some of the empirical research findings by testing in new different areas in the country. We found that the results could be replicated to new places. We also learnt that the interventions |

increased the resilience of households participating especially in the presence of shocks such as Covid-19 pandemic that happened during the implementation of the grant. These TAG grants were very valuable for testing empirical research results in practice.

Source: Online survey. Answers are anonymised.

Question 21

Design and Management: Do you see a way that the programme management or the programme design could have been improved to help the projects achieve their goals?

Figure 25: Improvements of programme design
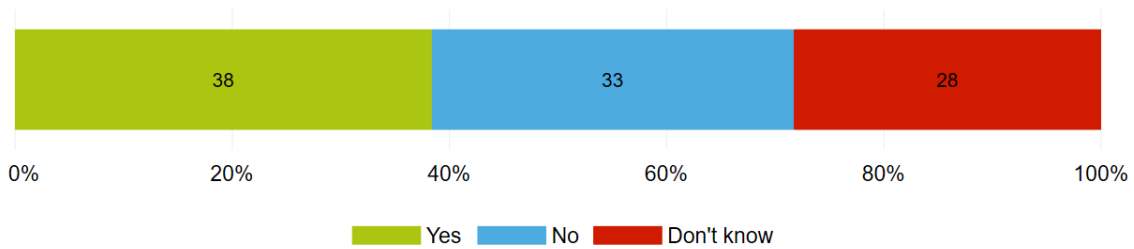
Source: Online survey

Question 22

In what ways could the programme management or the programme design have been improved to help the projects achieve their goals? Please explain:

Suggestions for improvement, categorized
Equal relationships
More emphasis on real, functioning and more equal partnerships between North and South
Greater involvement of partners from the Global South in the design of the programme
Partners from the Global South should have a more important role and have more responsibility. They should also have the possibility to parrticipoate more when designing the project and decide how to implement it. Relationships between the Swiss team and the other teams were unbalanced and this determined also the possibility to benefit less from the project's results.
More meaningful engagement of south
Mid-term and final evaluation
The Mid-term review should be seen by the SNF more of a support tool for the project and not an exam that the team needed to pass.
Inform potentially problematic projects ahead of mid-term review and suggest options to improve upon
Somebody received no feedback on the final report
PhDs
More training and fellowship for younger researchers on the project.

Increase scientific support from Swiss research institutions for PhD students from southern countries. Mobility programs could be set up to enable PhD students from the South to attend courses at Swiss research institutions.

Make more stringent demands on doctoral students and supervisors to ensure that theses are defended within the set deadlines.

Synthesis and knowledge provision

Strengthening the capacity of research organisations to carry out transdisciplinary international research for development

The creation of an R4D community or North-South research community and a strong focus on the synthesis of the different projects from the beginning of the programme would have increased a long-term impact of the programme.

More technical know-how on comaparative survey design, sampling and interdisciplinary methodologies

Administration

Inter-university partnership has been very time-consuming. University organizations are very bureaucratic and unresponsive.

Some financial reporting frameworks were not suitable for some African countries

The design of the r4d projects requires a lot of effort from project members. Sometimes the resources are not adequate for that.

Unsorted

Participation of programme members in project events, particularly in developing countries to bring Swiss official endorsement

Local partners should be more transparent with the communities they are involved in

Support of better integration of the different working groups from different countries

Make sure that PIs have contracts which are as long as the project duration (employment conditions of project members?)

Due to the nature of the projects, there should be enough time to adapt the project design if needed

Stronger focus on marketization of projects; Future projects should be designed to serve as support to start-up enterprises

Strengthen its requirements for the application and dissemination, both practical and political, of research results; this strengthening is evident in the SOR4D programme.
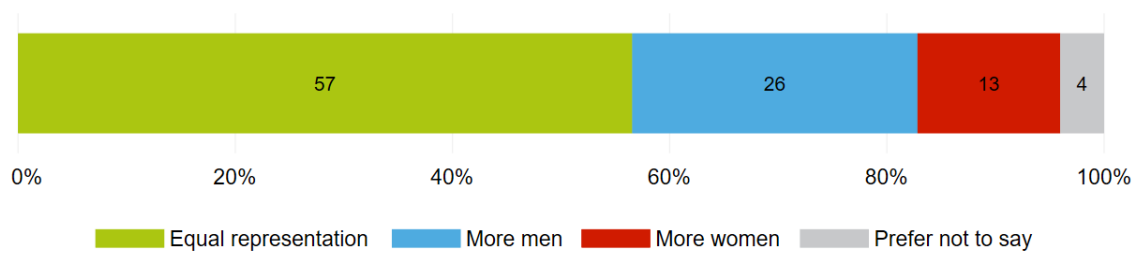
Increase the timeframe for the TAG-Project to 3-4 years.

Expand to different areas but also the level of fundings

Source: Online survey. Answers are anonymized and categorized.

Question 23

Gender: Considering all team members in your project consortium (e.g., Principal Investigators, Co-Investigators, Researchers, PhDs, and other key roles), how would you describe the overall gender composition?

Figure 26: Gender composition of consortia

Equal representation: 57	More men: 26	More women: 13	Prefer not to say: 4

Legend: Equal representation | More men | More women | Prefer not to say

Source: Online survey

Question 24

In your r4d project did you study specifically if your research subject affects men and women differently?

Figure 27: Research focus on gender

Yes: 35	Partially: 17	No: 31	Prefer not to say: 16

Legend: Yes | Partially | No | Prefer not to say
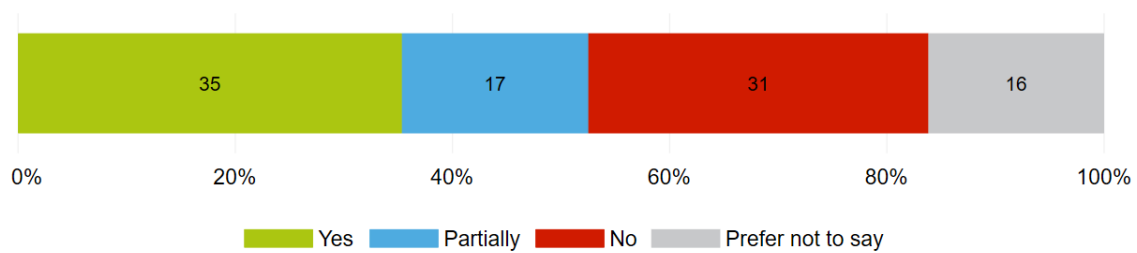
Source: Online survey

Question 25

How did you study if there are different effects on men and women?

This valorization is important to work for rural development and the implementation of low technology in our countries. It is included in participatory innovation technology
Knowledge, perception and willingness to manage invasive species was assess using a gender-dis-aggregated approach.
This question is very pertinent, but not easily adapted to the subject under study
Social research, in research design
Agrarian practices in West Africa are highly gendered, so it was important to consider this, but the analysis was not in-depth.
Yet to undertake any post project impact on gender
Women are always involved in cooking in their households and are affected by smoke or indoor air pollution which is the cause of smoke-related diseases in households. The research provided results of several cooking technologies that could alleviate this problem and free women from those diseases. Men are affected through their support for their families. Disease burden to women also affects men,

who are providers of money for treatments, buying more fuel wood for cooking. Awareness of cooking solutions that will serve fuel wood and reduce disease burden, is the redemption for the households and also men

Different exposure due to different roles of men and women to meteorological information and alerts

My PhD thesis analysed the different ways agrarian change affects women and men

Gender analysis was carried out only in certain cases. For example, a systematic analysis using an econometric model was carried out to measure the effect of gender on young people's access to employment.

During dissemination activities, more males were informed, mainly as forestry and plant pathology in the Central Asian countries are still biased in their composition. This was not observed during school and community dissemination activities.

We have taken gender into account in our modeling. Some parameters are affected by gender, while others are not.

The project squarely focused on the differential impact of land and agricultural commercialization on women and men. All research instruments thus systematically differentiated by gender.

Relational approach to gender; specific survey work on gender relations and with women (specific questionnaire modules, purposive sampling for semi-structured interviews).

My whole research had a gender focus.

RCT

We introduce various types of gender analysis, including estimating the women's empowerment index

The study targeted men and women agro-industrial horticulture actors mainly as producers. It was evident that women in the setting did lower paying more labor-intensive unskilled work, limiting work related benefits like maternity as compared to men who were engaged as skilled workers with better pay, majority as out grower producers as they owned land something women were disadvantaged

Since many of the waste chain managers are women, it is very important to impart knowledge and skills by the local governments in enhancing their knowledge and capacity. The waste to cash could be a greater source of income and employment for women in specific.

During the research, we consider equal representation of female and male's informants.

The approach to the actors showed the differentiated access of men and women to the labor market and proposes it as a variable to be considered for decision making and for further studies according to the information collected specifically in the country.

The household survey analysis was done gender-based.

A core focus on the project was on differentiated employment outcomes for men and women.

Each country has different gender constructs, so the approach to gender varies significantly. However, in two of the countries in particular, the differences between men and women in their health care were addressed during data collection and analysis. I did my PhD in Switzerland as part of this project and one of the areas I focused on was gender, which resulted in two academic publications addressing the topic.

Through the participatory approach where men and women; from different generations, backgroud social by giving them the floor an opportunity to share their experiences, their views and taking them into account in the analysis.

Cultural aspects of producing the project's target crop, which is considered a human activity.

Indigenous men and women still maintain the sexual division for the performance of certain tasks. Similarly, in the case of medical treatment.

Quantitative and qualitative data disaggregated by gender (as well as class, ethnicity, etc.) Gender analysis of policies

Considering targeting survey specifically for male and female. So able to develop specific insight for their role.

By analyzing survey data and cross-referencing information from male and female interviewers. There is a difference between men and women, but the question of stereotypes in women's soccer needs to be addressed.

Wage and employment discrimination by gender in several of the papers in the project.

Gender sensitive research design and data collection, inclusive engagement of both the genders and marginalized communities among others

I was involved in a socio-economic survey that looked at adoption rates of selected organic soil fertility management strategies

By including the gender variable in different models

Interviewing both men and women selecting them as equal sample size.

We have specific publications investigating the difference in effective and perceived impacts of extractive industries on health determinants and health outcomes in men and women

Gender-disaggregated data, focus groups with men and women separately, module on intra-household time allocation etc.

We disaggregated men and women at all levels and collected data on them. We also studied how men and women are affected by the proposed interventions.

Accounting for gender differences is essential in health research. We, therefore, tried to take account of such differences throughout our research.

Gender sensitive analysis of research results and findings

Our research is feminist in orientation. Our focus is on supporting women.

Source: Online survey. Answers are anonymised.

Question 26

Why did you not study the different effects on men and women?

I was not in charge of designing the project but only of offering suggestions on some aspects of it. Therefore, I could not give my opinion on the way it was built.

Research on gender issues was undertaken after the project ended.

It did not form part the study objectives.

Used mostly secondary/routine data

The project was for pregnant women - we didn't involve male participants in the research and didn't consider the impact on men

The research topic, according to both our women and men colleagues, does not affect men and women differently. It is only indirectly that we could imagine that this has a differentiated impact.

Focus was on household rather than gender.

Because both men and women participate in the same way in the production of palm fruit, and we always had an important participation of empowered women in the workshops.

It was not clearly indicated as a required or mandatory task.

Because there were numerous other, fundamental challenges to tackle, namely COVID-19 and the Russian attack on Ukraine.

It was not part of the objectives of our research

Was simply not relevant

Was no objective of project

Our project is working basically at the systemic level.

It has no direct impact on life of people regardless of their sex

The nature of the project

Activity was mainly carried out by men

It was not initially included as an objective, but women do play an important role in field work.

Our work did not investigate gender dimensions.

We didn't think it was useful for the project.

We stratified results by sex of the sick child and did not observe differences beyond what is already known in terms of biological differences in infectious diseases

It was not relevant

Source: Online survey. Answers are anonymised.

G. Analysis of the financial conditions

The r4d programme imposed three financial conditions on the projects. The following section analyses how these conditions were met. We base our analysis on the 2022 financial report, which was provided to us by the SNF.

Condition 1: At least 40% of the approved amount must go to the partners from Country group 1 (developing countries).
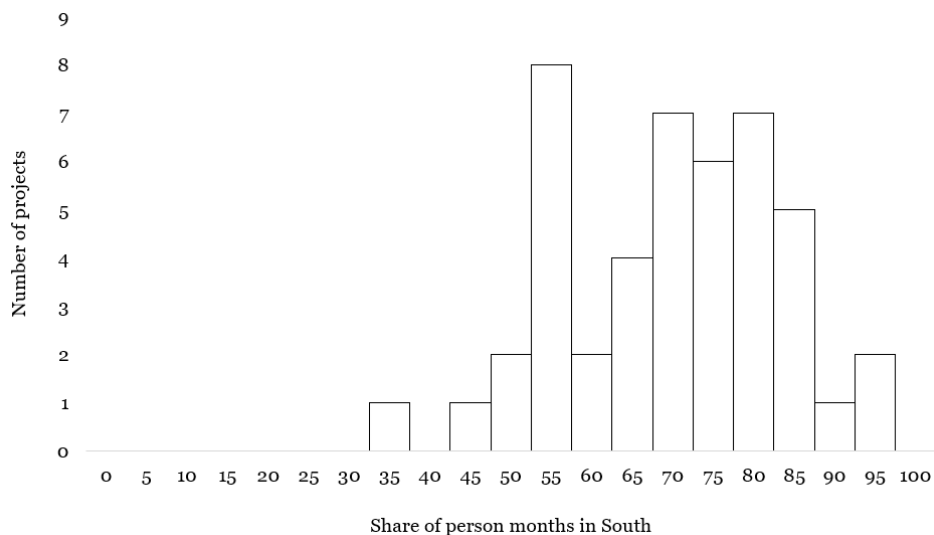
Figure 28: Share of funds going to North partners
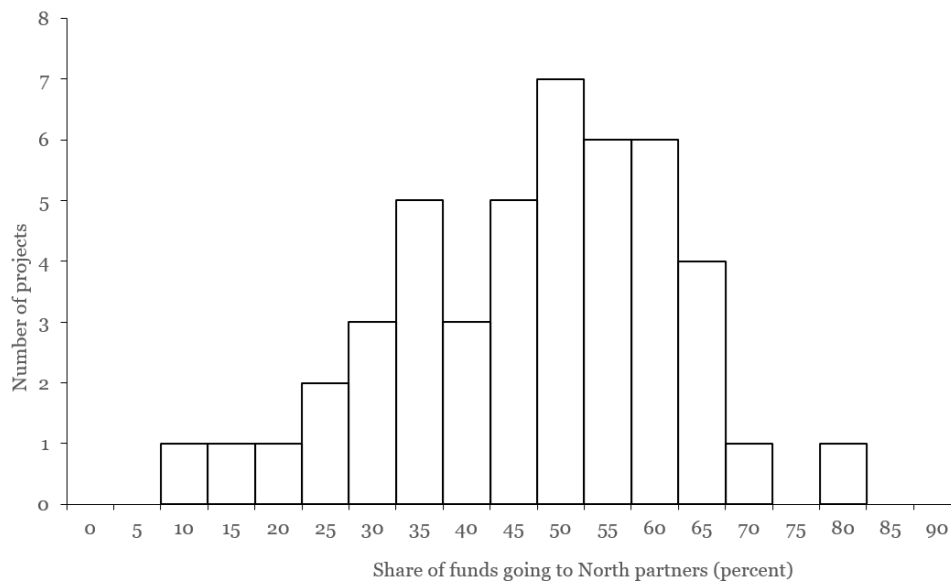
Source: Financial reporting SNF, own analysis

Condition 2: At least 50% of the academic research personnel (in person months) per project resides in poor developing countries (group 1)
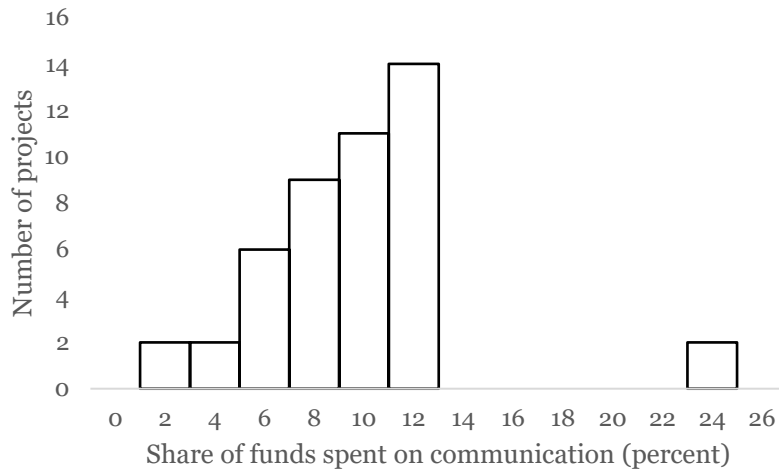
Figure 29: Share of person month going to the Global South

Source: Financial reporting SNF, own analysis

Condition 3: The share of the total project budget that goes to communication activities should be at least 10 to 15 percent.

Figure 30: Share of funds spent on communication

Source: Financial reporting SNF, own analysis

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