



## Tracking Alumni Career Paths

Third NCCR North-South Report  
on Effectiveness

Eva Maria Heim, Sonja Engelage,  
Anne B. Zimmermann, Karl Herweg,  
Claudia Michel, Thomas Breu

NCCR North-South Dialogue, no. 42  
2012

*dialogue*

The present study was carried out at the following partner institution of the NCCR North-South:

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b  
UNIVERSITÄT  
BERN

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AND ENVIRONMENT

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The NCCR North-South (Research Partnerships for Mitigating Syndromes of Global Change) is one of 27 National Centres of Competence in Research established by the Swiss National Science Foundation (SNSF). It is implemented by the SNSF and co-funded by the Swiss Agency for Development and Cooperation (SDC), and the participating institutions in Switzerland. The NCCR North-South carries out disciplinary, interdisciplinary and transdisciplinary research on issues relating to sustainable development in developing and transition countries as well as in Switzerland.

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**Series Editing**

Anne B. Zimmermann, NCCR North-South, Management Centre

**Editing**

Anu Lannen, NCCR North-South, Management Centre

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*Left:* Joint fieldwork on a case study in Ethiopia during an Integrative Training Course (ITC) in 2010. *Right:* Discussion on the results from the field study, using a special toolbox for interdisciplinary communication. (Photos by Karl Herweg)

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## Executive Summary

The Swiss National Centre of Competence in Research (NCCR) North-South is an international research programme on global change and sustainable development. One of the NCCR North-South's goals is to improve research structures in Switzerland and in the South. To this end, the NCCR North-South provides research funding and training for Swiss and Southern PhD students, among others. Swiss PhD students conduct their research in the global South in close collaboration with local researchers on site. NCCR North-South research is conducted in an interdisciplinary and transdisciplinary manner. This means that researchers from different disciplines work together in research groups (interdisciplinarity) and with partners from outside academia (transdisciplinarity).

The NCCR North-South has specific aims with regard to the kinds of careers pursued by its trainees. It is hoped that former PhD students will obtain high-level positions either in research or in policymaking and decision-making professions. In this way, the NCCR North-South seeks to train experts who use the positions they acquire in policy and research fields to directly contribute to sustainable development. The present report is based on a survey of 83 NCCR North-South alumni – former PhD students – conducted in an effort to find out whether the NCCR North-South's aims were achieved, specifically with regard to capacity development and career building.

At the beginning of this report, we provide a short introduction to the NCCR North-South and its training concept. We then present the results of our survey: first, we look at **the socio-economic and educational background** of alumni in terms of sex, age, country of origin, and socio-economic situation. Without looking at the data, one might assume that the programme mainly reproduces existing elites by enabling students from higher social strata in the South to further consolidate their favourable position in society. However, as the survey results demonstrate, around one-fourth of our students in the South came from lower social strata and families of origin with lower education levels. Indeed, rather than simply reproducing elites in the South, the NCCR North-South has provided people in disadvantaged positions the chance to advance their careers.

Second, we look at alumni's **careers before and during the PhD**, including their prior university degrees, work experience, scientific output in connection with their PhD, and efforts towards societal outcomes. We show that a large part of alumni were by no means inexperienced prior to beginning their PhD. Many already had several years of post-graduate training when they joined our programme and/or had several years of work experience in the field of sustainable development – whether in research, application, or both. Further, our results show that alumni produced scientific publications and successfully communicated with non-academic partners during their PhD.

Third, examining **the career patterns of NCCR North-South alumni after their PhD**, we show that most NCCR North-South alumni chose careers in research, and not in development-related professions outside academia. Moreover, we show that the PhD produced a clear “career boost” among alumni in the South: 65% of Southern

Alumni had a high-level position at the time of the survey. This percentage was much higher than in the North, where only 38% were in high-level positions. We found no evidence of gender differences regarding obtainment of high-level positions in the North or the South. Nevertheless, particularly in the South, it appears more difficult for women to get on the academic path to a PhD, but once they have a PhD, the degree appears to outweigh obstacles of gender discrimination. Our data also show that most alumni continued working on issues related to sustainable development, with the majority involved in the topic of natural resources. In addition, and crucially, the NCCR North-South did not contribute to the phenomenon of “brain drain”: more than 90% of Southern alumni were working in a Southern country at the time of the survey.

Fourth, we evaluate **the NCCR North-South’s support of alumni** in terms of funding, training, and career support. Our results show that Southern alumni benefitted more from the NCCR North-South training than Northern alumni. They agreed more often than Northern alumni that the NCCR North-South had contributed to their basic research skills (e.g., qualitative and quantitative research methods) and their soft skills (e.g., communication and language skills, computing, and scientific writing). This might be attributed to the fact that formal training opportunities are relatively scarce in the global South, whereas PhD students in the North already have access to a wealth of training opportunities such as scientific conferences, summer schools, and colloquia.

The final section of this report summarises the **conclusions** of our evaluation and provides **recommendations** for the future. We emphasise that the NCCR North-South programme was particularly important for Southern alumni: they benefitted more from the training, and obtainment of a PhD boosted their career. Further, the training concept of the NCCR North-South – building research groups in the global South – was successful in preventing “brain drain”. We therefore recommend investing more funding in further development of research capacity in the global South. The fact that Southern alumni’s obtainment of a PhD enabled them to quickly acquire leading positions at Southern universities indicates that highly educated researchers with advanced degrees are in demand in the global South. In this way, the experts trained by the NCCR North-South will enable training of more students and researchers in the South, creating a virtuous cycle of increasing highly skilled individuals committed to sustainable development at home.



# 1 Introduction

## 1.1 Developing research capacity for sustainable development: the NCCR North-South

The NCCR North-South is an international programme for research in the field of global change and sustainable development. Based on research partnerships between scholars in Switzerland and in the global South, the programme seeks to find innovative solutions to diverse challenges involving natural resources, health, social conflicts, poverty, governance, and more. The NCCR North-South is co-funded by the Swiss National Science Foundation (SNSF), the Swiss Agency for Development and Cooperation (SDC), and the participating institutions.

In its effort to contribute to sustainable development, one of the NCCR North-South's core goals is to improve research capacity in the global South<sup>1</sup>. Research – resulting in the generation of knowledge and technology – has been crucial to the advancement of industrialised countries towards broad-based wealth and social security. The NCCR North-South assumes that research and knowledge are prerequisites for development in low-income countries as well. However, there is currently a major imbalance between developing and wealthy countries regarding the number of researchers per million and the favourability of research conditions in terms of funding and career options (UNESCO [United Nations Educational Scientific and Cultural Organization] 2011).

Not all kinds of research aim to promote development that is sustainable. By sustainable development, we mean development that is not only directed towards economic growth, but also respects the limits of our ecosystem and reduces existing social disparities between and within nations. This principle guides the NCCR North-South research approach.

Research for sustainable development involves highly complex human–environment systems that encompass biophysical, economic, social, and political aspects. This kind of research goes beyond traditional disciplinary science. Researchers must develop transdisciplinary skills that enable them to communicate and work productively with scientists from other disciplines (interdisciplinarity) as well as with non-scientists (Herweg et al. 2012). Such skills include developing a relevant research question in close collaboration with non-academic partners, continuously communicating with partners throughout the research cycle, and applying relevant results in practice. The NCCR North-South emphasises these skills when training PhD students.

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1 The NCCR North-South's four principle goals are listed in the programme's proposal for Phase 3 (NCCR North-South 2009, p. 14). They are listed in order of their relevance to the programme: (a) Research goal: to conduct disciplinary, interdisciplinary, and transdisciplinary research aiming to promote sustainable development and mitigate syndromes of global change; (b) Capacity development goal: to help strengthen institutions, primarily by building individual competence and capacity for developing socially robust knowledge for mitigation action; (c) Empowerment goal: to support societies in partner countries and institutions in their efforts to address syndromes in their regions and find means to mitigate them; (d) Structural goal: to develop a Swiss network of excellence in sustainable development research with high international recognition and linkage, and based on individual centres of excellence in research partnerships and on formal interuniversity training at post-graduate levels in Switzerland.

The NCCR North-South has specific aims with regard to the kinds of careers pursued by its graduates. It is hoped that former PhD students will obtain high-level positions involving either research or policymaking and decision-making. Their training in transdisciplinary research is expected to enable them to conduct their own relevant, high-quality research; to improve others' research capacity as teachers and lecturers; or – for those working outside academia – to absorb and employ research knowledge as decision-makers in policy settings or in the business community. In this way, the NCCR North-South seeks to educate experts in the global South who implement the principle of sustainable development both in research and practice. For this approach to be effective, Southern researchers must (i) remain in or return to their country of origin and (ii) obtain employment in their field of expertise.

The present report is the third in the NCCR North-South's "reports on effectiveness" series (Michel et al. 2010; Heim et al. 2011). This series documents the programme's impact on society and research, as its planned 12-year run nears conclusion. The first two reports on effectiveness dealt with the impact of NCCR North-South research on policy and development practice in the global South. Based on an internal evaluation, the present report aims to shed light on the NCCR North-South's effectiveness in strengthening research capacity. The next section briefly summarises the concept behind NCCR North-South training. And the last section of this chapter describes the evaluation methods used to assess the programme's effectiveness in strengthening research capacity.

## 1.2 The NCCR North-South training concept

In its effort to foster research capacity, the NCCR North-South offers funding for PhD studies (and some bachelor's- and master's-level studies) in Switzerland and in the global South, as well as different kinds of training and career support for PhD students. In the past decade, 227 PhD studies were funded, 136 (60%) of them in the global South. The PhDs are supervised by academics in Switzerland and in the Southern countries. The NCCR North-South particularly aims to promote Southern and female researchers as well as to reduce the gender-gap and the North-South gap regarding scientific publications and career advancement.

In contrast to other training programmes that attract Southern researchers to universities in wealthier nations, the NCCR North-South trains Southern PhD students in their home countries in close collaboration with local universities and research institutes. The goal is to minimise the risk of "brain drain": highly educated experts leaving their home countries to work in the industrialised world. Swiss PhD students also conduct their research on-site in the global South in close collaboration with local researchers and institutions.

NCCR North-South research is spread between thematic research groups. Each research group includes senior and junior researchers from Switzerland and Southern countries. The groups facilitate close collaboration between researchers from the North and the South and from different disciplines. Hence, in addition to the guidance

they receive from their PhD supervisor, students receive support from senior researchers within their research group. Further, PhD students not only receive training in their specific discipline – including its theories, approaches, and methods – but also in interdisciplinary and transdisciplinary research.

Besides “on-the-job” training, the NCCR North-South organises special training events. These events aim to strengthen basic research skills (e.g., qualitative and quantitative research methods, scientific writing), interdisciplinary research skills (e.g., sharing of methods), and transdisciplinary research skills (e.g., communication with non-academic partners). Especially with regard to transdisciplinary skills, the NCCR North-South has developed a specific integrative training approach: PhD candidates work with non-academic actors during joint fieldwork on a case study, enabling the students to see problems through different actors’ eyes and to formulate transdisciplinary research questions and methodologies. This training concept was developed and continuously adapted over the previous 11 years and published in the Guidelines for Integrative Training (Herweg et al. 2012).

In addition, the Management Centre of the NCCR North-South offers training and career-related services for PhD students. These include personalised support for scientific writing, professional skills development (e.g., workshops on work–life balance, time management, networking, holding presentations), and an Internet platform that enables alumni (i.e., former PhD students) to continuously update their profile and stay in contact.

### 1.3 Evaluation methods

To compile the present report, we contacted alumni and asked them to complete an online questionnaire about their career and their experience with the NCCR North-South. To develop the questionnaire, we conducted an extensive review of NCCR North-South proposals and annual reporting from the previous 10 years. Based on this review, we formulated the evaluation questions.

The questions were initially discussed with Management Centre staff in charge of education, training, career building, and advancement of women as well as with the programme coordinator. Next, the evaluation questions were further discussed and adapted in consultation with the Regional Coordinators of each of the NCCR North-South partnership regions. For this purpose, a focus group was conducted in March 2011.

Based on the review and internal discussions, we developed the questionnaire. It was then converted into an online survey and sent to all Regional Coordinators for approval. Finally, the survey was tested with five alumni. This helped us identify errors and optimise the questions. The entire process was supported by an external consultant who had conducted an extensive tracer study of former PhD students at the University of Bern. The questionnaire was then translated into Spanish and French, enabling the majority of alumni to complete the survey in a language they command.

All alumni were informed about the planned survey and asked to confirm their e-mail address in July 2011. In cases where alumni did not respond, we contacted their colleagues or supervisors to obtain their current address. Further, some alumni were located via Facebook and other social media. By the end of 2011, we had valid addresses for 111 of 112 alumni: there was only one alumnus who could not be located. Of these 111 alumni, 83 completed the questionnaire. A raffle (three \$100 Amazon gift cards) was organised to incentivise participation. All statistics were performed using SPSS 18.

In the following chapter, we present the results of this evaluation. For most of the variables, we analysed North-South differences as well as gender differences. However, we found little evidence of gender differences – only those that appeared relevant are reported below.

## 2 Results

### 2.1 Sample description

In this section, we examine the characteristics of the alumni survey participants in terms of sex, country of origin, socio-economic background, age, and number of children. There are two main reasons for a closer look at these sample characteristics. First, the NCCR North-South has worked for 10 years in a highly diverse context with people from all over the globe. Examining these characteristics sheds light on this diversity. The participants in the survey came from 27 different countries: about half were from Switzerland, Germany, and France, while the other half came from 24 countries in Africa, Asia, and Latin America (see Figure 1). Male Southern researchers were over-represented, whereas female Southern researchers were the smallest group of participants.

Second, the NCCR North-South seeks to aid development of experts in the South – PhD graduates who go on to obtain leading positions in academia, administration, politics, or business, and in these positions support the development of their country. Some may see a risk of the programme aiding reproduction of an existing class of elites, by giving students from higher social strata in the South the opportunity to further consolidate their favourable position in society. However, as the results of our evaluation show, about one-fourth of the students from the South came from lower social strata and families of origin with a lower level of education. For this reason, we argue that the NCCR North-South programme has not simply reproduced an existing class of Southern elites. In many cases, it has provided people in disadvantaged positions the chance to advance their career.

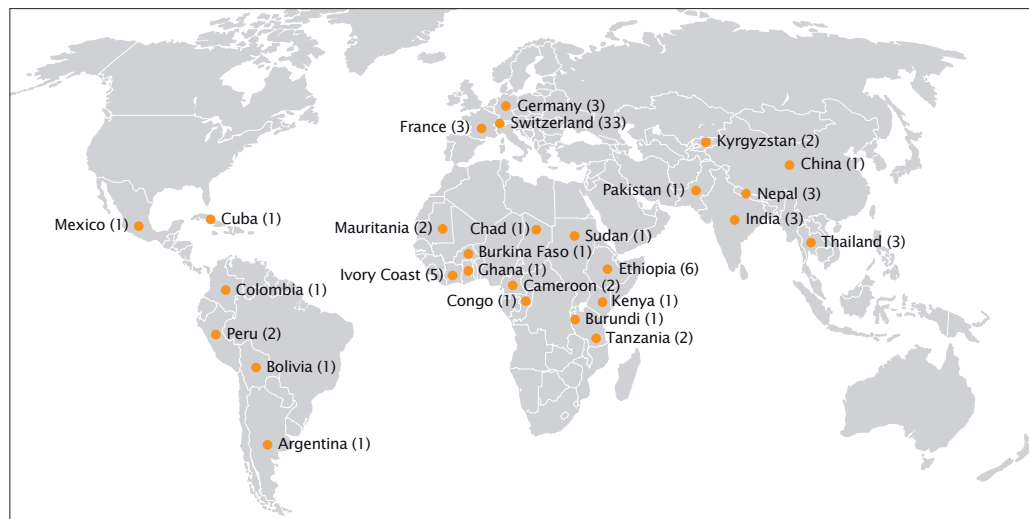
#### 2.1.1 Sex and country of origin

By December 2011, 111 alumni had completed their PhD within the NCCR North-South programme. Eighty-three alumni completed our survey, equalling a very strong response rate of 75%. Table 1 shows the male–female ratio of participants from the North and the South. The largest group by far were male, Southern alumni (40%), while the proportion of female Southern alumni was considerably smaller (13%). These numbers approximately represent the male–female and North–South ratios of PhD students for the NCCR North-South as a whole, including alumni who did not participate in the survey. The response rate was somewhat higher among female alumni (82%) versus male alumni (71%) as well as among Northern alumni (78%) versus Southern alumni (72%).

**Table 1:** Male–female ratio in the North and South. (N=83)

	<b>Male</b> N (%)	<b>Female</b> N (%)	<b>Total</b> N (%)
North	18 (22%)	21 (25%)	39 (47%)
South	33 (40%)	11 (13%)	44 (53%)
<i>Total</i>	51 (61%)	32 (39%)	83 (100%)

Figure 1 shows the countries of origin of NCCR North-South alumni. Thirty-nine alumni were from Northern countries (Switzerland, Germany, and France), while 44 alumni were from Southern countries (13 from Asia, seven from Latin America, and 24 from Africa). As each of the 24 countries in the global South has its own education system and particular cultural, societal, and political characteristics, our sample may be considered very heterogeneous. Thus, when referring to “Southern” alumni throughout this report, it is important to keep this diversity in mind. Moreover, because of the small numbers of participants in each country or region, no regional comparisons will be made.

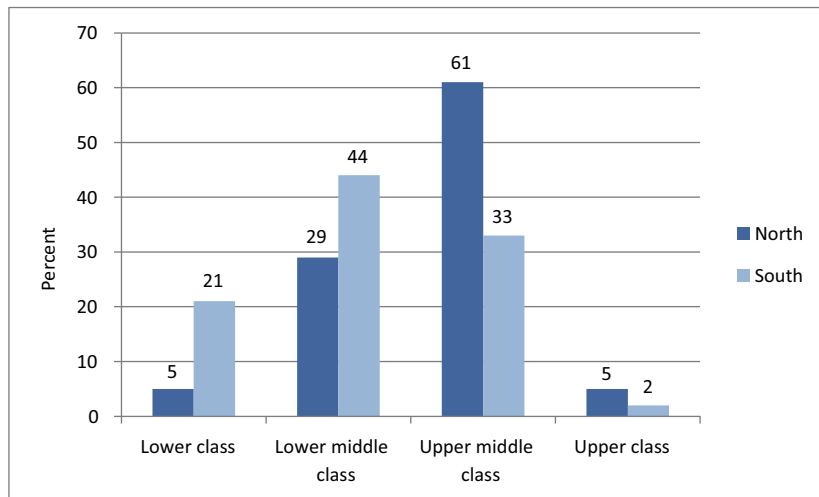


**Figure 1:** Countries of origin. (Map by Simone Kummer)

### 2.1.2 Socio-economic background

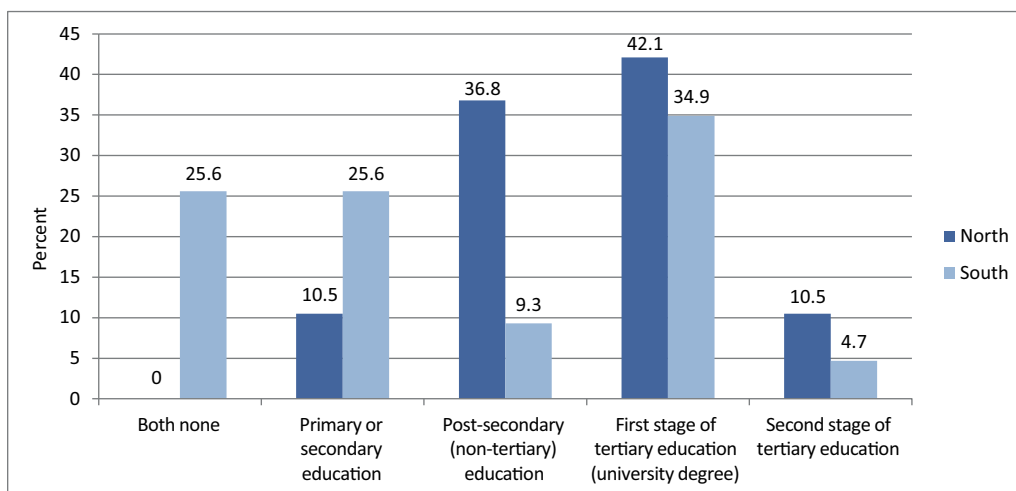
According to their own statements, 65% of alumni in the South were from lower-class or lower-middle-class backgrounds, while 66% of alumni in the North were from upper-middle or upper-class backgrounds (see Figure 2). This difference was statistically significant ( $p=.03$ )<sup>2</sup>.

<sup>2</sup> p refers to the significance level. A p value below .05 is considered statistically significant. The lower the p value, the lower the error probability (e.g.,  $p=.05$  means that the error probability is 5%).



**Figure 2:** Socio-economic background of alumni. (N=83)

We also asked alumni about the highest academic degree achieved by their mother and father. The results are displayed in Figure 3. We asked them to separately indicate the highest degree achieved by their respective parents. The bars show the percentage of cases where either one or both parents achieved a particular degree, with precedence given to the highest degree obtained (e.g., if the father obtained a bachelor's degree and the mother a PhD, it is labelled as "second stage of tertiary education").



**Figure 3:** Parents' highest academic degree. (N=81)

Figure 3 highlights a clear difference between alumni in the North and the South: in the North, 90% of parents had achieved a post-secondary degree; nearly half of them even a tertiary degree. In the South, 52% had either no formal education or a primary or secondary degree, while 49% had a tertiary degree. Pearson's chi-squared test revealed the difference to be statistically significant ( $p=.03$ ). The socio-economic background of alumni was highly correlated with the educational background of their parents ( $r=.5$ ,  $p<.001$ , Pearson Correlation).

Moreover, a significant difference between the sexes emerged in the South ( $p=.02$ ). All of the alumni whose parents (both) had no formal education were male. And among those alumni whose parents had solely completed a primary or secondary education, 73% were also male. This result might be interpreted as evidence that Southern men have an easier time beginning an academic career even if their family of origin has little or no education. Due to our small sample size, we cannot confirm such a hypothesis.

Aside from asking them directly about their socio-economic background, we used two additional indicators to measure whether alumni were from privileged social strata, particularly in the South: studying abroad and studying at private universities. We found that most alumni had obtained their previous university degrees in their country of origin. Among Southern alumni, eight had achieved a degree in a European country before starting their PhD. In addition, most alumni (88%) had studied at state universities.

Finally, we asked alumni about grants they had received before their PhD. Such fellowships are highly competitive and are thus an indicator of academic performance. Nearly half of students in the South had received a grant. Most often, these grants were provided by the government of their country of origin or the university itself. Some of the Southern alumni also received grants from donors such as the German Academic Exchange Service (DAAD), the International Foundation for Science (IFS), the Norwegian government, the Wellcome Trust, and the Optimus Foundation. In the North, only four alumni had received a grant before starting their PhD, two of which came from the NCCR North-South itself.

## 2.2 Career before and during the PhD

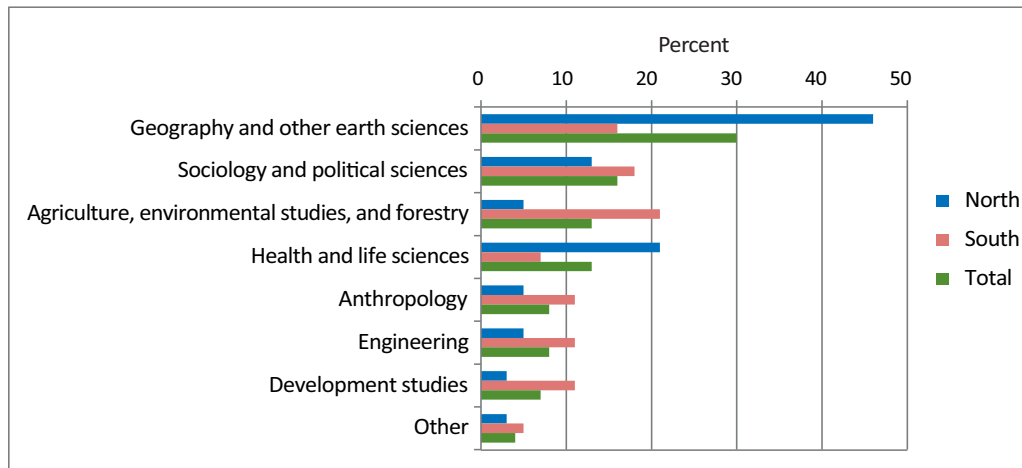
In this section, we look at the “educational career” of NCCR North-South alumni in terms of university degrees and specific disciplines, as well as their work experience prior to starting a PhD. The results indicate that a large proportion of alumni were anything but inexperienced prior to beginning their PhD. Many of them already had several years of post-graduate training under their belt when they joined our programme and/or had several years of work experience in the field of sustainable development, whether in research, practice, or both. Finally, we shed light on the scientific output of alumni regarding publications and conference contributions, as well as on societal outcomes achieved by channelling research evidence into policy and practice.

### 2.2.1 Academic degrees and disciplines

Several differences were found between Northern and Southern alumni when looking at the number and kind of university degrees they had obtained before starting a PhD. In Switzerland, it is possible to start a PhD right after the university degree. By contrast, in Southern countries, the educational system is often not as highly standardised as the European one when it comes to the PhD track. A university degree typically does not entitle a student to directly start a PhD – they often have to complete a master’s degree before starting their PhD.



Our data confirmed this situation, as more Southern (77%) than Northern alumni (51%) had obtained two or three university degrees before starting their PhD. Accordingly, Southern male alumni started their PhD at an older age ( $M=35.1$ ,  $SD=5.5$ )<sup>3</sup> than all other participants ( $M=30.9$ ,  $SD=4.5$ ) ( $p<.001$ ). The mean duration of the PhD was 4.6 years, with a slightly higher average among Southern ( $M=4.8$ ,  $SE=1.7$ ) versus Northern students ( $M=4.3$ ,  $SD=1$ ). NCCR North-South alumni came from a very broad range of academic disciplines (see Figure 4).



**Figure 4:** Disciplines of PhD study. (N=83)

Alumni from Switzerland overwhelmingly had backgrounds in geography and other earth sciences. The social and political sciences, as well as agriculture, environmental studies, and forestry were more frequent in the South than in the North. As a discipline, economics was almost entirely missing from the picture. This stems from the thematic composition of the NCCR North-South research consortium. The NCCR North-South review panel has already criticised the lack of economics expertise at several junctures.

Further, our results confirm that the NCCR North-South is not a programme directed solely towards highly specialised researchers in individual disciplines. In both the North and the South, 67% of alumni remained in the discipline of their prior university degree when pursuing their PhD; however, 33% switched disciplines. Seven alumni even switched from the social sciences to health and life sciences or vice versa. Such changes between social and natural sciences are remarkable, as they often require adopting a completely different knowledge system. Alumni who have studied more than one discipline may be in a better position to understand researchers with different expertise when working together in interdisciplinary teams.

### 2.2.2 Work experience before starting PhD

The majority of alumni (58%) had several years of work experience before starting their PhD ( $M=6.3$ ,  $SD=5.0$ , Median=4). By far the greatest number of participants with work experience had been employed by universities or research institutes, both in the North and the South (32%). About 13% in the North and South had worked for

<sup>3</sup> M=Mean, SD=Standard Deviation

a non-governmental organisation (NGO). In the North, 26% had worked in the private sector. All other categories were mentioned less frequently (see Figure 5).

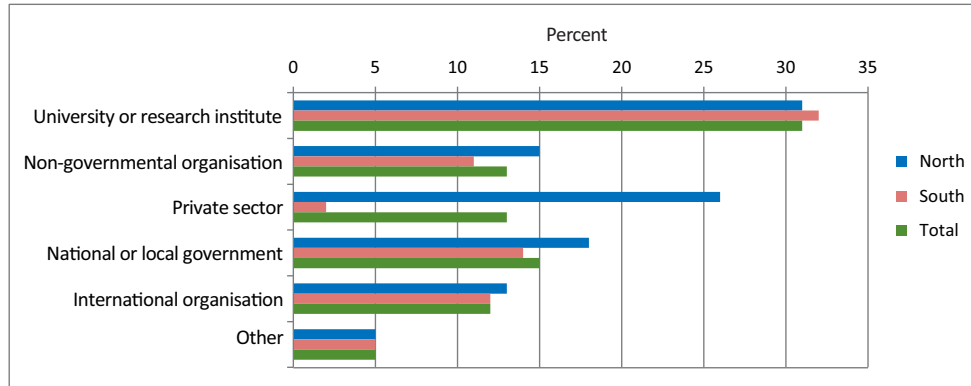


Figure 5: Institutions where alumni had worked before starting their PhD. (N=83)

Out of the 48 alumni who had been employed before starting their PhD, 44 (92%) indicated that their work involved at least one topic related to sustainable development; 22 even had work experience involving two or more topics of sustainable development. The topics are displayed in Figure 6. The figure shows that natural resources were the most frequent field of experience of NCCR North-South alumni (mentioned by about 60% of those with work experience): specifically, they had backgrounds in geography, agriculture, environmental studies, and forestry. In the South, 30% of alumni had worked in poverty eradication or health and sanitation. Issues related to social inequalities – gender and ethnic minorities – were reported more frequent in the South than in the North. All other topics were mentioned by less than 10% of alumni in both the North and the South.

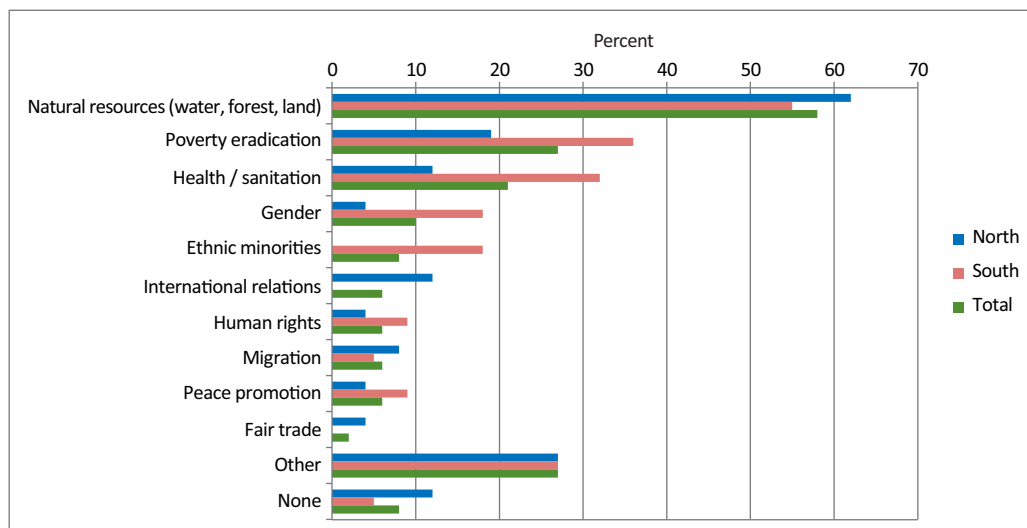


Figure 6: Topics related to sustainable development with which alumni had worked prior to their PhD. (N=48)

Finally, we also looked at the countries where alumni had worked before their PhD. The majority of Northern alumni (61%) already had work experience in a Southern country before starting their PhD, whereas most Southern alumni (91%) had only worked in

their country of origin. Since NCCR North-South research is mainly focused on developing countries, the pre-PhD work experience in these Southern countries – among both Northern and Southern alumni – may be considered a real asset.

### 2.2.3 Scientific output of the PhDs

The scientific output generated by alumni during their PhD is relevant for several reasons. Publications such as books and peer-reviewed articles are a prerequisite for a scientific career in most academic disciplines. Peer-reviewed articles, in particular, have gained in importance over the last decade. Further, attending conferences is very important at the PhD stage, as students must build and extend their network and exchange their knowledge and experiences with other scholars. Moreover, presenting NCCR North-South research at conferences contributes to international acknowledgement of the programme and its overall reputation.

When looking at the publications produced during the PhD phase, we found that on average (Median) Northern alumni had produced one book chapter, and alumni both in the North and South had produced one peer-reviewed and one non-peer-reviewed article (see Table 2). These data must be interpreted with caution. Many alumni left the question blank, resulting in 67% missing data. We added the missing values to the zero values, assuming that alumni who left the field blank had not produced a publication.

**Table 2:** Number of publications during PhD. (N= 83)

	None N(%)		1-2 N(%)		3 or more N(%)	
	N	S	N	S	N	S
Books (monographs)	28 (72%)	41 (93%)	11 (28%)	3 (7%)	0	0
Book chapters	18 (46%)	25 (57%)	15 (39%)	13 (30%)	6 (16%)	6 (14%)
Peer-reviewed articles	14 (36%)	15 (34%)	16 (41%)	17 (40%)	9 (23%)	12 (27%)
Non-peer-reviewed articles	19 (49%)	22 (50%)	17 (44%)	13 (30%)	3 (8%)	9 (21%)
Reports	20 (51%)	26 (59%)	12 (31%)	7 (16%)	7 (18%)	11 (25%)

Note: N: North (N=39), S: South (N=44)

In addition, we asked alumni about their participation at scientific conferences and about presentations of their own work. Most of them had visited up to five conferences during their PhD, and the majority had presented their work at conferences at least once during their PhD (see Table 3).

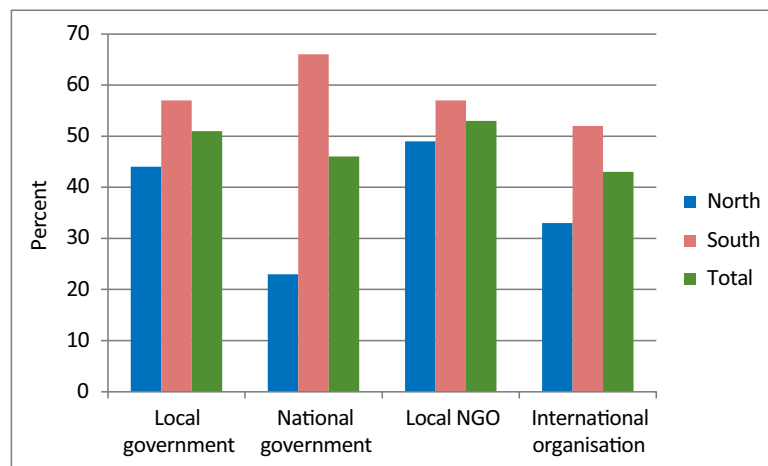
**Table 3:** Number of conferences attended and presentations held at conferences. (N= 83)

	None		1-5		More than 5	
	N	S	N	S	N	S
Conference: participation	2 (5%)	1 (2%)	26 (67%)	26 (59%)	11 (28%)	15 (34%)
Conference: presentation	4 (10%)	2 (4%)	31 (80%)	31 (70%)	4 (10%)	11 (25%)

Note: N: North (N=38); S: South (N=44)

### 2.2.4 Societal outcomes of the PhD

As described in the introduction, the NCCR North-South also seeks to achieve outcomes beyond academia through its transdisciplinary research approach. For this reason, we asked alumni whether they had managed to collaborate with non-academic partners in an effort to channel their research results into policy and practice. Indeed, about 50% of alumni reported that their data, tools, and recommendations had been taken up by non-academic partners, such as local or national governments, local NGOs, or international organisations (see Figure 7).



**Figure 7:** Percentage of alumni who felt that their data, tools, or recommendations had been taken up by specific non-academic partners. (N=83)

Many more Southern (66%) than Northern alumni (23%) felt they had achieved outcomes involving the governments of Southern countries. This difference was statistically significant ( $p < .001$ ). With regard to the other non-academic partners, North-South differences in perceived impact were found, but none were statistically significant. As legal citizens of Southern countries, Southern alumni likely have easier access to government representatives in these countries. However, the percentage of Southern alumni reporting having had an impact on national governments is still remarkably high and cannot be solely attributed to their citizenship. Our data do not enable full interpretation of this result. For such an interpretation, we would need to know more about the importance of science in the societies and politics of the respective countries and how local policymakers use scientific knowledge. However, as our sample included PhD students from 24 different countries, analysis of such complex questions is essentially impossible.

## 2.3 Career after completing the PhD

In this section, we will examine the career patterns of alumni following their PhD. The NCCR North-South’s stated goal in terms of alumni careers reads as follows: “... NCCR North-South researchers have jobs in academic and non-academic sustainable development professions worldwide and more female and Southern researchers have higher positions” (NCCR North-South 2009, p.313). Keeping this goal in mind, we were interested to learn whether NCCR North-South alumni worked in research or development professions, or both, and whether the special aim of promoting female and Southern researchers was achieved.

We found that after completing their PhD, nearly 60% of alumni in the North and South were employed at a university or research institute. Thus, the NCCR North-South has clearly contributed to research careers, but less to careers in sustainable development-related professions within NGOs or IOs. This latter result was unexpected. Nevertheless, our data also show that NCCR North-South alumni are far from working exclusively in “ivory towers”: more than 50% of the alumni working in research fields stated that they regularly shared their research with non-academic partners.

Our data revealed differences between Northern and Southern alumni regarding their post-PhD career trajectory: in the South, obtainment of a PhD had an immediate career-boosting effect. At the time of the survey, 60% of Southern alumni were in high-level positions (e.g., leadership roles or middle management), nearly twice as many as prior to the PhD. In the North, no such career-boosting effect was readily apparent. We did not find any gender differences with regard to high-level positions.

Beyond their career status, we also looked at the achievements of alumni such as publications, awards, and acquisitions of funding for research and development projects. Especially for alumni working in research fields, these achievements are indicators of professional success. We found no major North–South differences or gender differences with regard to such achievements. This is an important result, as it shows that the NCCR North-south has contributed to overcoming the gender and North–South gap with regard to publication output. Finally, our results revealed that more than 90% of Southern alumni remained in their country of origin: clearly showing that the NCCR North-South has not contributed to “brain drain”.

### 2.3.1 Research careers versus careers in sustainable development

At the time of the survey, NCCR North-South alumni were anywhere between their first and tenth year following PhD completion, with the average being four years post PhD completion. The time since PhD was significantly longer among Northern ( $M=5.0$ ,  $SD=2.0$ ) alumni compared to Southern alumni ( $M=3.6$ ,  $SD=1.7$ ). Accordingly, on average, Northern alumni had held two positions since their PhD, whereas the majority of Southern alumni were still in their first position following PhD completion at the time of the survey (see Table 4).

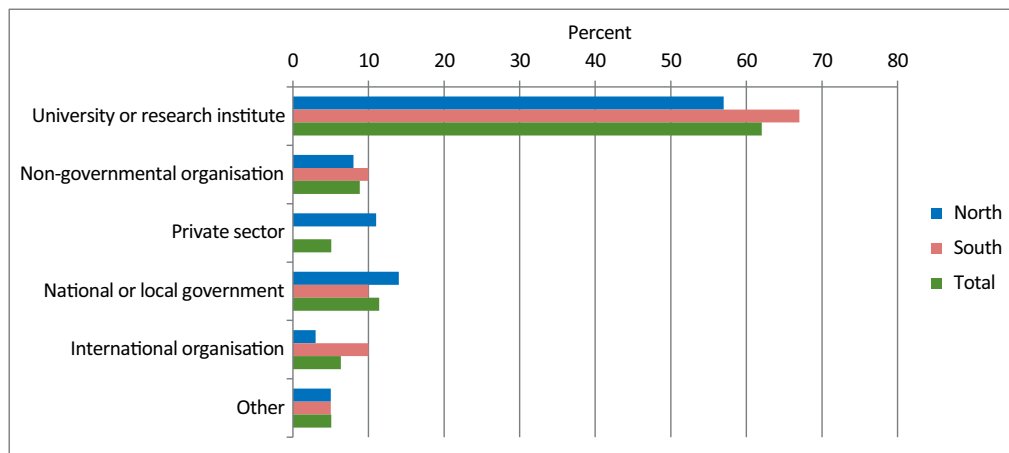
These data reflect the reality that more Northern than Southern PhD students were enrolled at the beginning of the NCCR North-South programme. According to Upreti et al. (2012), it was difficult to recruit PhD students in the South at the start of programme. For this reason, initially more MSc students were trained, some of whom continued on directly to pursue a PhD. For this reason, and because of steadily growing programme investment in the South, the percentage of Southern PhD students increased over time, whereas the number of Northern PhD students decreased.

**Table 4:** Number of positions held since PhD. (N=83)

	North (N=39)	South (N=44)	Total (N=83)
First position after PhD, N(%)	15 (39%)	32 (73%)	47 (57%)
Second position after PhD, N(%)	16 (41%)	6 (14%)	22 (27%)
Three or more positions after PhD, N(%)	6 (15%)	4 (9%)	10 (12%)
Currently unemployed, N(%)	2 (5%)	2 (5%)	4 (5%)

The types of institutions where alumni worked after their PhD are shown in Figure 8. The figures show that at the moment of the survey, the majority of alumni in both the North and South worked at a university or research institute. The percentage was even higher in the South, with nearly 70% of alumni working in academia. In general, we conclude that far more NCCR North-South alumni opted for research careers than careers related to sustainable development, for example, at NGOs or IOs.

This result was unexpected, as the NCCR North-South has sought to foster careers both within and outside of academia. In Switzerland, the percentage of alumni working in the private sector was much lower than before the PhD. Such career trajectories – beginning in the public or private sector and then entering or returning to a university or research setting – are rather unusual in academia.

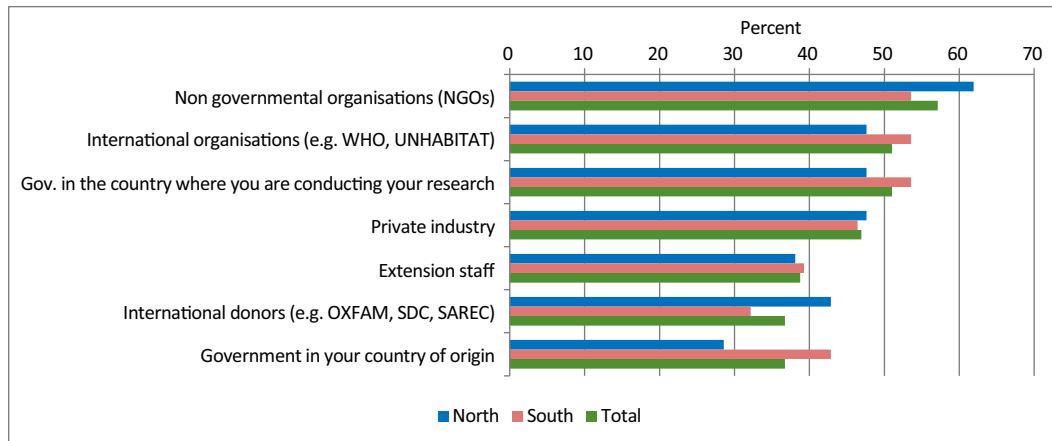


**Figure 8:** Types of institutions where alumni worked before and after their PhD. (N=83)

Thus, the NCCR North-South’s aim of contributing to careers in policymaking and decision-making in the global South was not immediately achieved among these alumni, as most continued in scientific careers. However, this result may change, as some alumni may leave academia in the coming years and pursue other careers. A follow-up study would be needed to identify changes over time.

Our data also show that alumni working in academia sought to influence policymaking and decision-making as researchers: they frequently communicated with policy and decision-making stakeholders regarding their research. More than 50% of those working at universities or research institutes had been in contact with non-academic

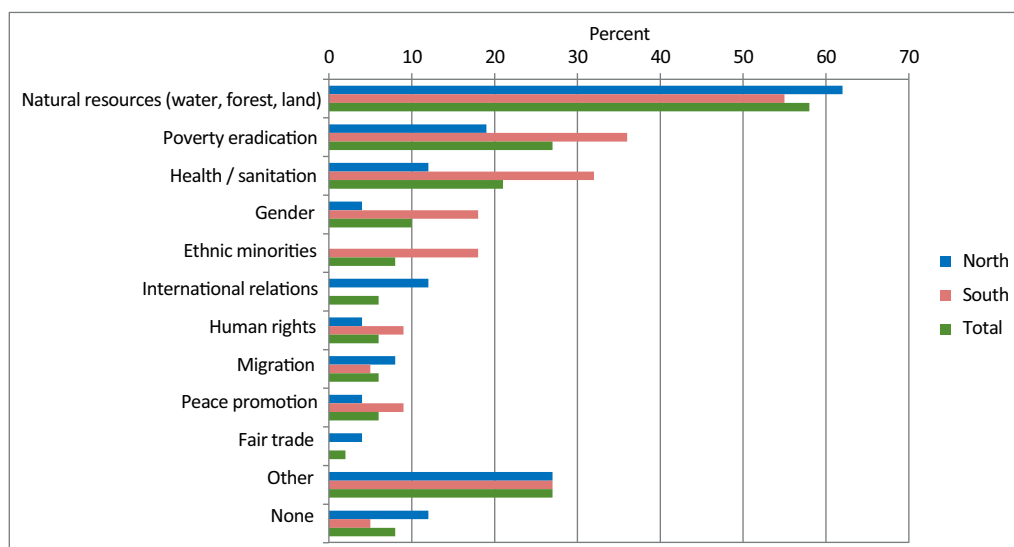
stakeholders at least once in the 12 months leading up to the survey. Figure 9 shows the percentage of alumni who indicated that they regularly communicated with non-academic stakeholders about their research (monthly contact or more often).



**Figure 9:** Researchers' level of contact with non-academic stakeholders (monthly contact or more often). (N=49)

In the South, more than 30% of alumni indicated regular contact with NGOs, and 20% reported regular contact with national and local governments. In the North, alumni were in more frequent contact with international organisations and donors. Thus, even if they did not personally work in sustainable development professions outside academia, NCCR North-South alumni continued the transdisciplinary approach promoted by the programme by frequently discussing their research with non-academic partners.

Moreover, according to their own reports, the majority of alumni continued their involvement with topics of sustainable development in their work (77% in the North and 100% in the South). The topics are shown in Figure 10. Again, topics related to natural resources were mentioned most frequently.



**Figure 10:** Topics with which NCCR North-South alumni are currently involved in their work. (N=83)

Finally, our data show that the NCCR North-South’s strategy to avoid brain drain was successful: after completing their PhD, 84% of Southern alumni were working in their country of origin while 7% were working in another country in the South. Among Northern alumni, 74% were working in their country of origin and 19% were working in another country in the North (e.g., US or UK). Only 7% were working in a Southern country.

### 2.3.2 Professional status

Besides looking at NCCR North-South alumni’s type of employment before and after their PhD, we also examined their professional status or rank. A key NCCR North-South goal was to promote obtainment of leading positions among alumni, especially Southern and female researchers. Our data show that this aim was achieved: the number of people in leading positions and middle management increased when comparing their last position before the PhD to their post-PhD position at the time of the survey (see Table 5). Among those who had worked before their PhD, 51% had the same hierarchical standing after the PhD, while 32% had obtained a higher position. The remainder were self-employed (e.g., as a consultant) either before or after their PhD, which cannot be assigned a specific hierarchical standing.

**Table 5:** Alumni in higher-ranked positions before and after their PhD.

	<b>Leading position</b>	<b>Middle management</b>	<b>Total</b>
Before PhD (N=47)	4 (9%)	11 (23%)	15 (31%)
After PhD (N=80)	17 (21%)	25 (31%)	42 (52%)

We also looked at the career development over time of those who had changed jobs once or several times following their PhD: two-thirds continued to have the same hierarchical standing in each job; however, one-third eventually obtained a higher position in their second or third job following their PhD. Thus, in general, we conclude that the PhD had an important career effect among NCCR North-South alumni, and the career patterns indicate continuous progress towards high-level positions.

Important North–South differences emerged regarding the hierarchical ranking of positions obtained. The positions before and after the PhD are indicated in Figure 11 for Northern alumni and in Figure 12 for Southern alumni.





**Figure 11:** Positions before and after PhD in the North.



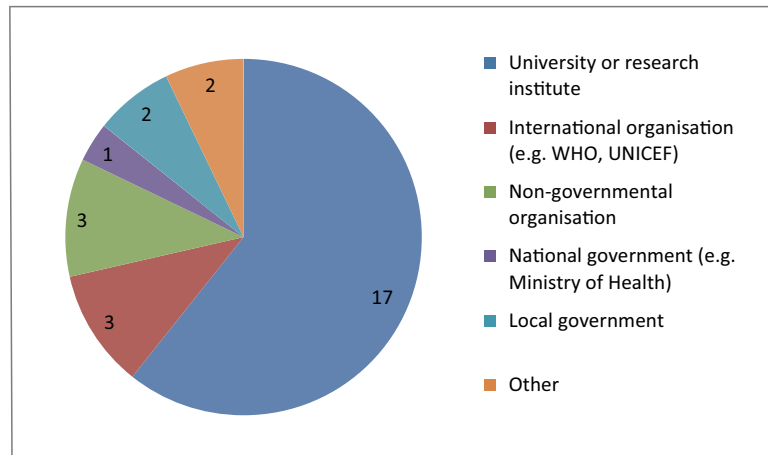
**Figure 12:** Positions before and after PhD in the South.

Before the start of the PhD, there was no difference between Northern and Southern alumni regarding their hierarchical rank at work. After the PhD, there were more Southern alumni (65%) in higher positions (e.g., middle management or leading positions) than Northern alumni (38%). This difference was statistically significant ( $p=.002$ ).

The career-boost effect in the South was impressive, equal to almost a 60% increase in leading or middle management positions among Southern alumni following their PhD. The great majority of these worked at universities or research institutes (see Figure 13).

From these results, we conclude that the PhD title had a very important effect on the careers of Southern alumni, especially those working in academia. When discussing our results with the responsible coordinators of the NCCR North-South in the South, they confirmed that researchers with a PhD title are scarce in their respective countries; therefore, they are in demand at universities. For this reason, the PhD might have given Southern alumni a distinct advantage in the education sector. However, our data do not explain whether it was the PhD title itself that helped NCCR North-South alumni obtain higher positions, or whether there were other factors related to the NCCR

North-South that played a role, for example, the large research network that alumni had access to or the skills in interdisciplinary and transdisciplinary research they had developed within the programme.



**Figure 13:** Number of Southern alumni working in leading positions or in middle management. (N=28)

The percentage of Northern alumni in higher positions after the PhD was considerably lower. This could be because it takes more time for researchers/scientists to obtain a leading position in Switzerland than in the South. Our data appear to confirm this assumption, as only Northern alumni whose PhD was five or more years behind them had obtained higher positions. Moreover, only two Northern alumni had completed their habilitation – an important prerequisite for a leading position at a university in Switzerland. More are expected to complete their habilitation in the coming years. Therefore, it is likely that the number of Northern alumni in higher positions will increase over time.

Another explanation for the differing post-PhD professional trajectory of Northern alumni may lie in the kind of research conducted within the NCCR North-South programme and the somewhat “unorthodox” careers of Swiss alumni. In Switzerland, academic career paths are highly standardised. Leading positions such as professorships or assistant professorships are typically given to highly specialised experts in one particular scientific discipline. Our results show that this kind of career was rather unusual among Northern alumni of the NCCR North-South. Most of them worked at the boundary between research and practical application – switching between roles outside academia to positions within universities and vice versa – and some changed scientific disciplines for their PhD. Northern alumni whose careers follow such paths may have more difficulty obtaining leading positions at Swiss universities.

Moreover, the NCCR North-South’s transdisciplinary research approach – emphasising application-oriented research and working with non-academic actors – might hinder Northern alumni from experiencing a classic academic career trajectory. In Switzerland, publication of peer-reviewed articles in high-ranked journals is among the most important factors in obtaining leading positions within universities. However, NCCR North-South alumni sought not only to publish their results on behalf of the

scientific community, but also invested a considerable amount of time working to apply their results and communicating with non-academic partners. Learning more about whether the transdisciplinary research approach has hindered the academic career trajectory of Swiss alumni appears crucial.

Besides North–South comparisons, we also looked at gender ratios regarding obtainment of higher positions (see Table 6), since the NCCR North-South has emphasised promotion of female researchers. Both in the North and South, the percentage of male alumni in higher positions did not differ from the percentage of female alumni in such positions. In other words, PhDs had the same career-boosting effect among Southern female alumni as seen among their male counterparts.

**Table 6:** Gender ratios regarding higher positions. (N=80)

	<b>Leading position</b> (N)	<b>Middle management</b> (N)	<b>Total</b> (N)
North-Male (N=17)	1	6	7 (41%)
North-Female (N=20)	1	6	7 (35%)
South-Male (N=32)	11	10	21 (66%)
South-Female (N=11)	4	3	7 (63%)

We were surprised to find no gender differences in the North and South regarding hierarchical positioning. The NCCR North-South’s goal of promoting female researchers in Southern countries appears to have been achieved. Particularly in the South, the value of the PhD title may outweigh societal attitudes that enforce a subordinate role among women, giving Southern women a particular advantage once they have achieved a PhD. In Switzerland, the percentage of female alumni in higher positions was somewhat lower than that of their male counterparts, but the difference was not statistically significant.

Finally, we asked alumni for their own assessment of how their PhD affected their career. When asked whether the PhD had provided them with the professional opportunities they expected, 41% in the North and 55% in the South said it had. Further, 68% in the North and 73% in the South felt their professional status had improved after their PhD. A significant North–South difference emerged with regard to salaries ( $p=.03$ ): while only 38% in the North reported a salary increase following their PhD, 63% in the South reported an increase.

### 2.3.3 Publications, awards, and acquisitions

Publications and awards are very important indicators of scholars’ advancement in their scientific career. For this reason, we asked alumni about their publications since their PhD. The results are displayed in Table 7. We only calculated the number of publications for alumni who indicated that they were still involved in academic research, which was the majority. The results show that most of the alumni had invested their time in peer-reviewed articles, with a median of two published articles among North-

ern alumni and one published article among Southern alumni. This difference was not statistically significant. Publications in book form were far less frequent, but the majority of Northern alumni had published at least one book chapter. This result can also be explained by the fact that the NCCR North-South published its own book series titled *Perspectives*, featuring contributions from current and former NCCR North-South researchers. We found no significant North–South differences or gender differences regarding post-PhD publications.

**Table 7:** Number of publications after PhD.

	None		1–2		3 or more	
	N	S	N	S	N	S
Books (monographs)	22 (88%)	29 (78%)	3 (12%)	6 (16%)	0	2 (5%)
Book chapters	7 (28%)	20 (54%)	9 (36%)	11 (30%)	9 (36%)	6 (16%)
Peer-reviewed articles	6 (24%)	11 (30%)	8 (32%)	14 (38%)	11 (44%)	12 (32%)
Non-peer-reviewed articles	16 (64%)	24 (65%)	6 (24%)	5 (14%)	3 (12%)	8 (21%)
Reports	14 (56%)	23 (62%)	6 (24%)	3 (8%)	5 (20%)	11 (30%)

Note: N: North (N=25), S: South (N=37)

Besides publications, awards and presentations at scientific conferences are important career indicators. Two Swiss alumni and four Southern alumni received awards for their work. Nearly all alumni had participated at scientific conferences and presented their work after completing their PhD. We did not find any noteworthy North–South differences or gender differences in this area.

**Table 8:** Number of conferences.

	None		1–5		6–10	
	N	S	N	S	N	S
Conference: participation	3 (12%)	1 (3%)	13 (52%)	19 (52%)	9 (36%)	15 (40%)
Conference: presentation	5 (20%)	8 (22%)	15 (60%)	17 (46%)	5 (20%)	12 (32%)

Note: N: North (N=25), S: South (N=37)

Finally, we also examined the acquisition of research and development projects among NCCR North-South alumni. About 12% in the North and South had acquired one or two research and development projects after their PhD, while 23% had acquired three or four projects. In Switzerland, most projects were financed by Swiss funding agencies such as the Swiss National Science Foundation (SNSF) or the Swiss Agency for Development and Cooperation (SDC). In the South, eight projects were financed by Swiss donors, 13 by international donors, and nine by Southern funding agencies. The other projects were not further specified.

## 2.4 Support received by NCCR North-South alumni

In the NCCR North-South, PhD students receive funding as well as training and career support. In this section, we analyse the alumni's assessment of these different kinds of support and how they felt they benefitted from the NCCR North-South. With regard to funding, we show that most alumni financed their PhD mainly by means of an NCCR North-South fellowship, but some had other sources of income as well, such as other fellowships or employment. In addition, we looked at the skills that alumni felt they improved within the NCCR North-South framework. As mentioned above, research for sustainable development demands that researchers have special abilities – such as communication, advocacy, and application skills. In this section, we show that most alumni felt they had strengthened these skills within the NCCR North-South programme, and the majority felt that these skills were required both for their PhD study and in their later career. We also found that Southern alumni benefitted more than Northern alumni from capacity strengthening in these areas. Further, most alumni indicated that the various entities of the NCCR North-South – such as supervisors or the Management Centre – had supported them in their career. Finally, we show that our respondents valued the alumni network, but that the platform must become more user-friendly and more adapted to the specific needs of alumni.

### 2.4.1 Funding

Within the NCCR North-South, we distinguish between integrated and associated PhD students. Integrated students receive funding and training, whereas associated students receive less funding and may participate in training courses of their own volition. More than 80% of respondents in our sample were former integrated students. Most of them (76%) indicated having covered 50% or more of their research and living costs with NCCR North-South funding. Most of the associated students (78%) indicated having financed 25% or less of their PhD with NCCR North-South funding. We conclude that the NCCR North-South substantially contributed to the funding of most alumni's PhD.

About 30% of alumni received another fellowship besides that of the NCCR North-South. Moreover, 31% in the North and 16% in the South were employed by a university during their PhD; 15% in both North and South were employed outside the university; and 15% had other sources of income. Hence, many of the NCCR North-South alumni had to diversify their sources of income during their PhD, but for most of them the biggest portion of their funding came from the NCCR North-South.

### 2.4.2 Capacity strengthening

More than 90% of the alumni in the North and South felt that at least one of the different NCCR North-South entities had contributed to their disciplinary, interdisciplinary, and transdisciplinary skills. Southern alumni stated more often than Northern alumni that the NCCR North-South had contributed to strengthening the following skills: quantitative research methods ( $p=.003$ ); qualitative research methods ( $p=.004$ ); management and administration ( $p=.03$ ); practical application of scientific knowledge ( $p=.005$ ); language ( $p=.005$ ); scientific writing ( $p=.05$ ); communication ( $p=.04$ );

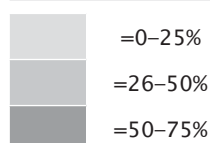
teaching and lecturing ( $p < .001$ ); and computer skills ( $p = .001$ ) (Pearson’s chi-squared test). We conclude that Southern alumni benefitted more than Northern alumni from the programme, particularly with regard to basic research skills (e.g., qualitative and quantitative methods) as well as the “soft skills” required for research (e.g., scientific writing, language, communication, and computer skills).

There are several possible explanations for this result. The supply of training opportunities might be smaller in Southern countries, and Southern alumni might have had fewer chances to develop and hone these skills in their previous education. For Northern alumni, the supply of such courses in Switzerland and Europe is vast and diverse, including scientific conferences, summer schools, postgraduate courses, and colloquia. Another explanation might be that Southern alumni answered more frequently according to the principle of “social desirability”, that is, tending to respond to survey questions in a manner that will be viewed favourably by others.

As indicated in the introduction, training and career building takes place at different levels of the NCCR North-South. With these different entities of the NCCR North-South in mind, we asked alumni who they felt had contributed most to strengthening their skills. The results are displayed in Table 9 (for Northern alumni) and Table 10 (for Southern alumni).

**Table 9:** NCCR North-South entities contribution to specific skills: % agreement in the North.

North	Super-visor	RG	RC	ITCs	RTCs	MC Staff
Specific disciplinary knowledge	77	59	18	43	18	13
Interdisciplinary and transdisciplinary knowledge	62	51	26	59	26	31
Quantitative research methods	41	28	8	21	15	13
Qualitative research methods	59	31	10	23	15	10
Management and administration	26	26	13	10	8	21
Leadership of employees	36	18	10	3	3	10
Practical application of scientific knowledge	59	36	26	31	13	15
Advocacy skills	31	18	10	13	5	13
Scientific writing	46	28	13	41	10	28
Language skills	18	18	8	13	5	26
Communication skills	39	28	8	28	10	18
Teaching/lecturing/learning skills	31	15	8	13	5	3
Computer skills	10	8	3	3	0	5



Note: The table shows the percentage of alumni who agreed that a particular entity of the NCCR North-South had contributed to a particular skill. The number of missing values varies from 10% to 19% across the different kinds of skills. RG=Research Group; RC=Regional Coordinator; ITCs=Integrative Training Courses; RTCs=Regional Training Courses; MC=Management Centre.

The tables show that the supervisors, the research groups, and the Integrative Training Courses contributed the most to capacity strengthening, both in the North and South. Regional Coordinators and Management Centre staff were less relevant for strengthening capacity. This result is not surprising, since the latter were less involved in the daily supervision and training of PhD students than the others

**Table 10:** NCCR North-South entities contribution to specific skills: % agreement in the South.

South	Super-visor	RG	RC	ITCs	RTCs	MC Staff
Specific disciplinary knowledge	73	52	21	52	41	14
Interdisciplinary and transdisciplinary knowledge	55	66	32	71	57	21
Quantitative research methods	59	41	23	48	36	14
Qualitative research methods	77	55	23	57	43	16
Management and administration	32	46	34	11	9	27
Leadership of employees	34	32	23	25	9	9
Practical application of scientific knowledge	68	64	27	50	43	25
Advocacy skills	41	36	23	36	30	16
Scientific writing	77	52	32	61	46	32
Language skills	41	36	21	41	36	21
Communication skills	52	48	30	52	39	32
Teaching/lecturing/learning skills	66	32	18	41	36	18
Computer skills	30	27	16	14	18	11

	=0–25%
	=26–50%
	=50–75%

Note: The table shows the percentage of alumni who agreed that a particular entity of the NCCR North-South had contributed to a particular skill. The number of missing values varies from 10% to 19% across the different kinds of skills. RG=Research Group; RC=Regional Coordinator; ITCs=Integrative Training Courses; RTCs=Regional Training Courses; MC=Management Centre.

Finally, we asked alumni whether the skills strengthened by the NCCR North-South were required for their PhD study and in their career. About 90% of alumni in the North and South agreed that disciplinary, interdisciplinary, and transdisciplinary knowledge were required both in their PhD study and career. The agreement was high in general for all other skills, with more than 50% agreeing that most of the skills strengthened within the NCCR North-South were required both for their PhD study and for their career.

### 2.4.3 Career support and the Alumni Network

The majority of alumni said they had received career support in the NCCR North-South. The percentage of alumni who reported having received career support was much lower in the North (64%) than in the South (89%) ( $p=.01$ ). About 50% of alumni in the North and South had discussed their career with their supervisor. Moreover, 30% in the North and 50% in the South were introduced to strategically important people by their supervisor or received some kind of mentoring. And nearly 26% of alumni in the North participated in a course for professional skills development (e.g., workshops on work-life balance, time management, networking, holding presentations) offered by the Management Centre.

As mentioned in the introduction, the NCCR North-South Management Centre established and continues to maintain an Alumni Network. At the end of the questionnaire, we asked alumni whether they thought the network was useful, and whether it should be continued after completion of the NCCR North-South in June 2013.

We found use of the network to be extremely low. Seventy-five per cent of alumni were still in contact with other alumni. However, only 10% (four alumni) in the North and 16% (seven alumni) in the South actively used their alumni profile on the NCCR North-South internal website. Only four alumni (North and South together) updated their profile regularly, three Northern alumni uploaded their publications to the website, and four Southern alumni contacted other alumni via the website.

Interestingly, 79% in the North and 96% in the South felt that the Alumni Network should be maintained in the future – a result that appears at odds with the low use of the existing platform. We conclude that alumni indeed have an interest in the network, but that its current features are either not user-friendly enough or not relevant enough to motivate their active use.

We also asked alumni what features they would appreciate in such a platform. Sixty-eight per cent said they would highly appreciate access to libraries and journals; 54% said they would appreciate information about events and conferences; and 55% said they would appreciate job announcements. Fifty-four per cent even stated they would pay an annual fee for such services. For this reason, we recommend development of a new user-friendly platform that is adapted to alumni's needs.



### 3 Conclusions and Recommendations

The NCCR North-South is not a conventional research programme. Its two main funding agencies – SNSF and SDC – pursue very different goals: the SNSF funds research and aims to build scientific excellence in Switzerland, whereas the SDC’s overarching goal is to improve people’s living conditions in developing countries. The NCCR North-South is accountable to both institutions and therefore seeks to contribute to the aims of both.

The NCCR North-South has sought to support creation of a growing class of scientific experts in the global South who contribute to more sustainable development in their countries – both in research and decision-making. It is hoped that once Southern alumni complete their PhD, they will go on to fill leading positions in their country and use their leverage to contribute to social change. In this sense, the NCCR North-South differs from conventional development projects, because it does not necessarily or exclusively work with the poorest and most disadvantaged population groups themselves, but rather with highly educated people who have the potential to contribute to far-reaching changes in their country.

With this approach, the programme runs the risk of further benefitting population groups who already have the power and financial resources to gain leading positions in their countries. Also known as the “Mathew effect”, this risk essentially refers to the process by which the rich get richer and the poor get poorer (Merton 1968). There is also a risk that those trained will obtain high-level positions that buffer them from the problems around them, such that they no longer care about sustainable development in their country. Or, “brain drain” could occur, whereby they simply leave their countries to find better-paid jobs in wealthy countries.

In Switzerland, the NCCR North-South seeks to train young researchers in research for sustainable development. For this aim, PhD students are given the chance to conduct research in developing countries, working together with researchers from other disciplines and with non-scientists. While living abroad and working together with local experts, the PhD students are exposed to complex and often volatile situations in the global South. On the one hand, they become experts in development-related topics and learn how to link research with policy and practice. Their experience abroad might be considered a particular career asset. On the other hand, as mentioned above, the transdisciplinary research approach may pose risks for those wishing to pursue a “classic” academic career in Switzerland.

In the following, we summarise our results in view of the aims of the NCCR North-South and the risks outlined above. Moreover, we highlight once more the career patterns of alumni and shed particular light on the experience of Southern and female researchers. Finally, we look ahead and offer some recommendations for the future.

### 3.1 Conclusions

In drawing conclusions from our results, there are clear distinctions to be made between Southern and Northern alumni. In the global South, the NCCR North-South achieved its aim of training experts who go on to obtain leading positions. Most Southern researchers experienced a “career boost” after completing their PhD, with about two-thirds having obtained a higher position at the time of the survey. Moreover, most alumni stated that their professional status and their salary improved following completion of their PhD. As mentioned above, our data cannot show whether it was the PhD title itself that helped NCCR North-South alumni obtain higher positions in the South or whether other factors played a role.

**Key finding 1:** Southern researchers experienced a career boost after completing their PhD, with about two-thirds having obtained a higher position at the time of the survey.

Our data also clearly show that the NCCR North-South did not simply benefit privileged population groups in the South, but rather gave researchers from lower social strata the opportunity to start and/or maintain a research career and obtain a higher position. This is remarkable, since the literature describes how – both in the North and South – people whose parents have little or no formal education seldom aspire to higher education themselves (Trusty 1998; Marjoribanks and Mboya 2000). Indeed, this phenomenon was confirmed in the North, with 66% of Northern alumni coming from higher social classes and 90% coming from highly educated families.

The fact that two-thirds of the Southern alumni were from lower social strata is important in view of the NCCR North-South’s goal of contributing to sustainable development: researchers from lower social strata know the realities of disadvantaged population groups from their own experience. Drawing on this experience, they are able to conduct research that benefits the poor and incorporates their perspective.

**Key finding 2:** The NCCR North-South did not simply reproduce existing elites in the South, but rather enabled researchers from lower social strata to pursue research careers and obtain high-level positions.

In the North, the percentage of alumni who had obtained a higher-level position at the time of the survey was much lower than in the global South. The relative lack of a “career boost” in the North has yet to be explained. It is possible that this difference between Northern and Southern alumni will shrink over time – simply because advancement in a research career takes more time in the North than in the South. However, leaving time effects aside, it appears important to reflect about the career patterns of scholars conducting transdisciplinary research in Switzerland. As mentioned above, this type of research does not always align perfectly with standardised academic ca-

reers. Many NCCR North-South alumni in the North worked outside academia before starting their PhD and spent a considerable amount of time during their PhD working and communicating with non-academic partners. Further, many of them studied several different disciplines, a few even switching from the social sciences to the natural sciences and vice versa. This kind of research clearly differs from the type of highly specialised, disciplinary research typically published in high-ranking journals – and it is the latter type that currently leads to academic career advancement in most cases. From the perspective of the NCCR North-South programme, it appears important to learn whether the career patterns of Northern alumni placed them at a disadvantage in traditional academic circles.

**Key finding 3:** In the future, it is important to carefully analyse whether researchers' adoption of the transdisciplinary research approach limits their academic career in Switzerland.

The NCCR North-South aimed to train experts both in research and decision-making. However, our results show that the majority of alumni – both in the North and South – opted for research careers within academia. This result was unexpected, as we expected more to obtain leading positions in development agencies, NGOs, IOs, and similar organisations.

In the South, this result might be related to the job market. As mentioned above, well-trained researchers with expertise from an international research programme are highly valued by Southern universities. However, our data cannot indicate whether alumni were also well placed to obtain leading positions in policy or international development organisations. One possible interpretation of our data is to assume that, in the South, the first step is to “fill the reservoir” at universities, that is, to fill key positions with highly educated experts. The hope would be that these experts would then train students who will begin working directly in policy and practice. Only longitudinal research would be capable of showing such effects over time.

**Key finding 4:** Well-trained researchers with expertise from an international research programme are highly valued by Southern universities.

The majority of Northern alumni and all Southern alumni stated that their work involved issues of sustainable development, with natural resources cited most often. Further, we found that alumni were in frequent contact with non-academic partners, such as NGOs, IOs, governments, private industry, and extension staff. Of course, our data cannot show whether alumni actually contributed to more sustainable development in their countries – but it does indicate that many alumni made a conscious effort to apply their knowledge and experience in practice. In this sense, they carried on the transdisciplinary research approach emphasised by the NCCR North-South.

**Key finding 5:** NCCR North-South alumni continued to work in the field of sustainable development after completing their PhD.

We also found that more than 90% of Southern alumni remained in their country of origin or worked in another country in the South. In other words, the “brain drain” phenomenon was averted. Among Northern alumni, the majority worked in their country of origin at the time of the survey. We were surprised to find so few Northern alumni employed abroad – especially considering that many of them had already worked in the developing world before starting their PhD and had spent several months or years in a developing country for their fieldwork. However, we did not determine whether some simply had a Swiss employer but actually worked on location in a Southern country.

**Key finding 6:** The NCCR North-South did not cause “brain drain”.

When it comes to promoting female researchers, the NCCR North-South’s aim was at least partly achieved. We were concerned – but not surprised – that fewer female researchers than male joined the programme from the South. Our assumption that women have a harder time getting starting on the path to a PhD was confirmed. Moreover, our data revealed that all female Southern researchers were from higher social strata. This suggests that it is difficult, if not impossible, for women from lower social strata in the South to gain entry to the second stage of higher education.

On the other hand, our data revealed that – both in the North and South – the number of female alumni in higher positions following their PhD did not differ from the number of male alumni in such positions. Further, we found no gender differences whatsoever regarding women’s number of publications or awards. It appears that once women have gained access to higher education and research, their PhD seems to “outweigh” many obstacles posed by gender discrimination. However, the number of female Southern alumni was so small that caution is advised when drawing such conclusions.

**Key finding 7:** In the global South, it is more difficult for women to pursue a PhD, especially if they are from lower social strata. But once they have gained access to higher education and earned a PhD, it seems to “outweigh” many obstacles posed by gender discrimination.

Most alumni agreed that the NCCR North-South had contributed to strengthening their skills and that these skills were required both for their PhD and in their career. Southern researchers seem to have benefitted more from the NCCR North-South training than Northern alumni. One reason for this might be that training opportunities in the

global South are scarce, whereas in Switzerland, PhD students are offered a broad range of training opportunities, such as summer schools, conferences, or colloquia.

Our results also showed that – both in the North and South – supervisors played a very important role in capacity strengthening. Therefore, it is important to reflect on how supervisors in the South can be supported in the future to provide optimal training to master’s and PhD students. They should also be sensitised to the importance of encouraging promising female students to enrol in PhD studies.

Both Northern and Southern alumni felt that working in research-group teams strengthened their capacity. Building such interdisciplinary research teams, which enable “on-the-job training” for PhD students, appears to be a valuable strategy for capacity strengthening. In addition, both Southern and Northern alumni felt that the training courses had strengthened their disciplinary, interdisciplinary, and transdisciplinary research skills. Further, Southern alumni benefitted from these courses in terms of basic research skills (e.g., qualitative and quantitative research methods) and soft skills (e.g., language and communication skills, scientific writing, and computer skills).

**Key finding 8:** The NCCR North-South has contributed to capacity strengthening both in the North and South, but Southern alumni have benefitted even more than Northern alumni.

### 3.2 Recommendations for further training and research

The NCCR North-South programme is coming to an end. The funding agencies of the NCCR North-South – SNSF and SDC – launched the Swiss Programme for Research on Global Issues for Development (R4D) in 2012. Within this programme, about CHF 100 million will be invested in partnership-based research. This programme will continue to finance PhD studies in the North and South, but investments are no longer being made in specific activities directed at research capacity development.

Our data clearly show that investing in PhD training in the global South has important benefits for Southern researchers themselves and societal development more broadly. Once Southern researchers acquire a PhD, they are able to obtain high-level positions at universities, and may then contribute to the training of future researchers. Moreover, they are in constant contact with policymakers and decision-makers who may take advantage of the NCCR North-South’s accumulated knowledge and resources. In this sense, funding Southern PhDs has far-reaching effects in academia and society in developing countries. For this reason, we highly welcome the R4D’s commitment to continue such investment.

**Recommendation No. 1:** Investing in PhD training in the global South clearly benefits Southern researchers and the societies in which they live. This investment should be maintained or even increased.

Our evaluation further showed that the NCCR North-South training concept was highly successful in developing research capacities, both in the North and South. Southern alumni especially benefitted from the NCCR North-South training events. The trainings were crucial to their mastery of basic research skills. As described in the introduction, the integrative training concept consists in partnering PhD candidates with researchers from other disciplines and with non-academic actors during joint fieldwork on a case study. The alumni in the North and South almost unanimously stated that they had benefitted from this particular training approach and strengthened their interdisciplinary and transdisciplinary research skills. While most academic training programmes will strengthen participants' basic disciplinary research skills, interdisciplinary and transdisciplinary skills are also vitally important when it comes to research for sustainable development. We therefore highly recommend finding ways of securing funding to continue integrative training courses like those developed by the NCCR North-South (Herweg et al. 2012). A crucial component of this is the "training of trainers": the training of key persons at Southern universities who will work as multipliers by training students and university staff themselves.

Further, Southern alumni in particular developed important soft skills through the programme – such as language skills and scientific writing skills – that enabled them to publish internationally, to attend international conferences, and to receive recognition and improve their standing in the scientific community. Moreover, Southern researchers in particular established important connections with the governments in their countries. Such experiences should be published and shared with the international development community, which needs to hear more from a Southern perspective. Indeed, strengthening the soft skills of Southern researchers is vitally important – it enables them to make their voices heard.

**Recommendation No. 2:** Aside from "on-the-job training", specific training events are necessary to strengthen the interdisciplinary and transdisciplinary research skills required for research for sustainable development.

Should further funding be invested in research capacity building, it will also be very important to continue the work of monitoring and evaluation. The present data has provided an initial glimpse of the effects of research capacity development in the global South. In our view, more specific information is needed about the context in which the capacity development in the global South takes place. Due to the high diversity of our Southern alumni – 44 alumni from 24 different countries – such contextual information was beyond the scope of the present analysis. Many of our results would need to be looked at against the specific backdrop of each individual country, in terms of its

educational system, the relevance of science in local policymaking, and the relative standing of researchers and universities in society. Such information would enable a better understanding of the difficulties and challenges confronted by alumni.

Another key challenge for the future is to learn more about the obstacles that Southern women face in pursuing a PhD and what can be done to improve their opportunities for higher education. Based on the experience of our Northern alumni, it also appears important to find out more about the possible hindering effects of the transdisciplinary approach to research careers in Northern university contexts. In view of the R4D programme, which is also transdisciplinary in nature, this issue will likely continue to be especially relevant.

Finally, we recommend conducting further research on NCCR North-South alumni's contributions to development policy and practice, from their posts within and outside of academia. It would be very useful for further research programmes to learn how interactions with non-academic partners work best. Our data only revealed the frequency of alumni's interactions with non-academic partners. However, it would be very worthwhile to learn more about the kind and quality of their interactions, and possible outcomes of these interactions in terms of policies and decision-making.

**Recommendation No. 3:** More research is needed on the specific contexts in which researchers in the global South are embedded, especially regarding the relevance of science in local policymaking, the relative standing of researchers and universities in society, and the obstacles to pursuing a PhD, particularly for Southern women.





# References

- Heim EM, Michel C, Salmi A, Breu T. 2011. *Does it Work in Practice? Fostering Knowledge Exchange for Sustainable Development. Second NCCR North-South Report on Effectiveness*. NCCR North-South Dialogue 29. Bern, Switzerland: NCCR North-South.
- Herweg K, Rist S, Liniger HP, Prasuhn V, Schneider F, Ledermann T, Fry P, Zimmermann A, Hurni H, Wiesmann U. 2010. Transdisciplinarity: An option of applied landscape ecology in complex and uncertain contexts. Special Issue: Landscape Ecology and Beyond. *Die Erde: Zeitschrift der Gesellschaft für Erdkunde* 141(4): 1-16.
- Herweg K, Schäfer N, Zimmermann A. 2012. *Guidelines for Integrative Training in Inter- and Transdisciplinary Research Settings. Hints and Tools for Trainers of Trainers*. Bern, Switzerland: Geographica Bernensia.
- Marjoribanks K, Mboya M. 2000. Family and individual correlates of academic goal orientations: Social context differences in South Africa. *Psychological Reports* 87: 373-380.
- Merton RK. 1968. The Matthew Effect in science. *Science and Public Policy* 159(3810): 56-63.
- Michel C, Heim EM, Herweg K, Zimmermann AB, Breu T. 2010. *Making Research Relevant to Policy-makers, Development Actors, and Local Communities. NCCR North-South Report on Effectiveness of Research for Development*. NCCR North-South Dialogue 23. Bern, Switzerland: NCCR North-South.
- NCCR North-South. 2009. *NCCR Proposal for Continuation*. Bern, Switzerland, NCCR North-South. [Internal document: ]
- Trusty J. 1998. Family influences on educational expectations of late adolescents. *Journal of Educational Research* 91: 260-270.
- UNESCO [United Nations Educational Scientific and Cultural Organization]. 2011. *Human Resources in R&D*. UNESCO Institute for Statistics Fact Sheets 13 and 15. New York, NY: UNESCO.
- Upreti BR, Zimmermann AB, Berhanu Debele, Cissé G; with contributions from the NCCR North-South Regional Coordinators. 2012. *Partnerships in Development-oriented Research: Lessons Learnt and Challenges Ahead*. Kathmandu, Nepal: NCCR North-South, South Asia Coordination Office.

# Appendix: Questionnaire

## Educational Background

1. What university degrees did you complete before starting your PhD?

- University degree (e.g. MSc, Lic)
- Postgraduate degree (e.g. Master of Advanced Studies)
- Other (please specify): \_\_\_\_\_

Discipline:			
Discipline: Other (please specify)			
University:		<input type="checkbox"/> private	<input type="checkbox"/> state
Country:			
Year degree awarded:			
Grant / fellowship:		<input type="checkbox"/> not applicable	

Table above is shown for 3 different degrees.

2. When did you start your PhD?

Month:		Year:	
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3. When did you complete your PhD?

Month:		Year:	
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4. In what discipline did you do your PhD?

List of disciplines

5. At what university did you submit your PhD?

Name of University: \_\_\_\_\_

6. In which country did you submit your PhD?

Country: \_\_\_\_\_

7. In which countries did you conduct your field work?

Country 1: \_\_\_\_\_

Country 2: \_\_\_\_\_

Country 3: \_\_\_\_\_

Country 4: \_\_\_\_\_

8. How was your PhD financed?

Multiple responses possible

- NCCR North South
- Other fellowship (please specify):
- Employment at University
- Employment outside University
- Contribution by parents or others
- Other source (please specify): \_\_\_\_\_

9. What was the share of your NCCR North-South fellowship to your total income during your PhD?

- Less than 25%
- Between 25% and 50%
- 50%
- Between 50% and 75%
- More than 75%

10. What was your personal motivation for doing a PhD?

Please indicate on a scale of 1 to 4 the relevance of the following items as a source of motivation:

1 = not relevant

2 = somewhat relevant

3 = quite relevant

4 = highly relevant

	1	2	3	4
Scientific interest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professional reputation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better job prospects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better salary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Has the PhD in general offered you the professional opportunities you had expected?

- not at all
- more or less
- fully

12. Do you think that your current salary is higher than it would be without a PhD?

- yes
- no

13. Do you think that your current professional status is higher than it would be without a PhD?

- yes
- no

14. Do you feel that the following specific parts of your PhD were used in policy and practice by any of the listed actor categories? If so, please check appropriate box.

	Data, information	Tools, methods, instruments you developed	Specific recommendations
Local stakeholders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local NGO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
International organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Your Career

15. Did you start your PhD directly after completing your MSc (within 6 month)?

- Yes
- No, I worked in other jobs before I started my PhD
- No, for other reason (please specify):

16. In which type of institution did you work before your PhD?

Multiple responses possible

- University of research institute
- International organisation (e.g. WHO, UNICEF)
- International development agency (e.g. SDC, GIZ)
- Non-governmental organisation
- National government (e.g. Ministry of Health)
- Local government
- Private sector
- Other (please specify): \_\_\_\_\_

17. Please list the institution(s) you worked for before your PhD (please only indicate the most important ones in terms of salary):

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18. For how many years did you work in other jobs before starting your PhD?

Less than one year

Number of years: \_\_\_\_

19. Did you work in one of the following fields related to sustainable development?

Multiple responses possible

- International relations
- Natural resources (water, forest, land)
- Poverty eradication
- Human rights
- Health / sanitation
- Gender
- Ethnic minorities
- Fair trade
- Migration
- Peace promotion
- Other (please specify): \_\_\_\_\_

20. In which country or countries did you work before your PhD?

Country 1: \_\_\_\_\_

Country 2: \_\_\_\_\_

Country 3: \_\_\_\_\_

Country 4: \_\_\_\_\_

21. What was your last position before you started your PhD (main source of livelihood)?

Leading position (e.g. Director, Head)

- Middle management
- Employee
- Intern, trainee
- Independent (e.g. consultant)

22. Last position before PhD: Job description

Please provide a short description of your work (e.g. project management in the field of sanitation, teacher in elementary school; etc.)

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23. What was your first position after completing your PhD (main source of livelihood)?

("First position" refers either to a new position you obtained directly after finishing your PhD, or a position you already held during your PhD and continued to hold after completing your PhD.)

- Leading position (e.g. Director, Head)
- Middle management
- Employee
- Intern, trainee
- Independent (e.g. consultant)

24. First position after PhD: Type of institution

- University or research institute
- International organisation (e.g. WHO, UNICEF)
- International development agency (e.g. SDC, GIZ)
- Non-governmental organisation
- National government (e.g. Ministry of Health)
- Local government
- Private sector
- Other (please specify): \_\_\_\_\_

Name of institution: \_\_\_\_\_

25. First position after PhD: General description

Please provide a short description of your work (e.g. project management in the field of sanitation; post-doc research in the field of migration; etc.).

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Country: \_\_\_\_\_

26. First position after PhD: Do you consider this position to be in the field of sustainable development?

- yes
- no ( go to question 28)

27. First position after PhD: Topic

- International relations
- Natural resources (water, forest, land)
- Poverty eradication
- Human rights
- Health promotion
- Gender
- Ethnic minorities
- Fair trade
- Migration
- Peace promotion
- Other (please specify): \_\_\_\_\_

Questions 23 to 27 also apply in case of a second, third and fourth position after completing PhD.

28. Have you experienced one or more phases of unemployment (lasting 3 or more months) since your PhD?

- yes
- no ( go to question 30)

29. For what reasons?

- No adequate jobs available
- Family work
- Continuing education
- Private time-out (e.g. travelling)
- Illness
- Other

30. What was your career goal when you started your PhD? (Max. 2 responses)

- Scientific career
- Career in administration
- Career in politics
- Private business
- Independent consultancy
- Career within national development programmes
- Career within foreign or international organisation
- Other (please specify): \_\_\_\_\_

31. What was your career goal when you completed your PhD? (Max. 2 responses)

- Scientific career
- Career in administration
- Career in politics
- Private business
- Independent consultancy
- Career within national development programmes
- Career within foreign or international organisation
- Other (please specify): \_\_\_\_\_

### Publications, awards, and acquisitions

32. Please list the number of your publications with first and co-authorship:

	During PhD	After PhD
Number of books (monographs)		
Number of edited books		
Number of book chapters		
Number of peer-reviewed articles		
Number of non-peer-reviewed articles		
Number of reports		
Number of policy briefs		
Number of education materials		
Other (please specify): _____		

33. In how many scientific conferences did you participate during or after your PhD?

	None	1-5	6-10	11-20	More than 20
During PhD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After PhD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34. Please indicate the number of conferences at which you presented your research:

During PhD: \_\_\_\_\_ After PhD: \_\_\_\_\_

35. Did you receive any awards during or after your PhD?

- yes: during PhD: \_\_\_\_\_  
After PhD: \_\_\_\_\_
- no



36. Have you successfully acquired funding for academic research projects?

- yes
- no ( go to question 38)

37. Please specify the following aspects for your research acquisition:

Donor: _____	Amount: _____
<input type="checkbox"/> During PhD <input type="checkbox"/> After PhD	<input type="checkbox"/> I acquired the project / funding on my own <input type="checkbox"/> I acquired the project / funding together with my supervisor or research team

(4x)

38. Have you successfully acquired funding for other projects (e.g. development)?

- yes
- no ( go to question 40)

39. Please specify the following aspects for your acquisition:

Donor: _____	Amount: _____
<input type="checkbox"/> During PhD <input type="checkbox"/> After PhD	<input type="checkbox"/> I acquired the project / funding on my own <input type="checkbox"/> I acquired the project / funding together with my supervisor or research team

(4x)

40. Are you currently involved in academic research?

- Yes, full-time
- Yes, part-time
- No ( go to question 48)

41. What is your current position in research?

- Assistant / scientific collaborator
- Post-doc researcher
- Lecturer
- "Privatdozent" (only for Swiss Alumni)
- Assistant professor (CH: Assistenzprofessor/-in)
- Associate professor (CH: Ordinarius)
- I conduct research outside academia (e.g. in an NGO, ministry, etc.)
- Other (please specify): \_\_\_\_\_

42. What percentage of your working time did you invest in research during the past 12 months?

\_\_\_ % of working time

43. Do you consider your research to be in the field of sustainable development?

- yes
- no

44. During your research activities, do you usually work alone or with other scientists?

- Alone ( go to question 46)
- With other scientists

45. Whenever you work with other scientists, do you usually work in disciplinary or in inter- and transdisciplinary teams?

- Disciplinary
- Interdisciplinary
- Transdisciplinary

46. How often did you communicate with the following people regarding your research in the last 12 months?

	Never	Once or twice	Every two or three months	Monthly	Weekly	More often
Scientists in your department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scientists from other institutions in your country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scientists in other countries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non governmental organisations (NGOs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
International organisations (e.g. WHO, UNHABITAT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
International donors (e.g. OXFAM, SDC, SAREC)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extension staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government in the country where you are conducting your research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government in your country of origin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private industry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

47. Have you completed your habilitation or are you currently working on your habilitation?

- No
- Yes, I am working on my habilitation
- Yes, I have completed my habilitation

### Support received in the NCCR North-South

48. In how many ITCs (Integrative Training Course) or RTCs (Regional Training Course) did you participate?

Number of ITCs: \_\_\_\_\_ Number of RTCs: \_\_\_\_\_

49. Did the different entities of the NCCR North-South contribute to strengthening the following capacities?

Please fill each checkbox with a number:

- 1 = yes
- 2 = no
- 0 = not applicable

	Super-visor	IP/WP	RC	ITCs	RTCs	MC Staff
Specific disciplinary knowledge						
Interdisciplinary and transdisciplinary knowledge						
Quantitative research methods						
Qualitative research methods						
Management and administration						
Leadership of employees						
Practical application of scientific knowledge						
Advocacy skills						
Scientific writing						
Language skills						
Communication skills						
Teaching/lecturing/learning skills						
Computer skills						

50. Were these skills required for your PhD study and / or in your career?

Please fill each checkbox with a number:

1 = yes

2 = no

0 = not applicable

	PhD study	Career
Specific disciplinary knowledge		
Interdisciplinary and transdisciplinary knowledge		
Quantitative research methods		
Qualitative research methods		
Management and administration		
Leadership of employees		
Practical application of scientific knowledge		
Advocacy skills		
Scientific writing		
Language skills		
Communication skills		
Teaching/lecturing/learning skills		
Computer skills		

51. Did the fact that you were part of the NCCR North-South network contribute to your finding a job?

yes

no ( go to question 53)

52. How did the fact that you were part of the NCCR North-South network contribute to your finding a job?

Multiple responses possible

The job was/is within the NCCR North-South network (e.g. post-doc)

The job was/is at a partner institution of the NCCR North-South

I started working with my employer institution / organisation during my PhD (e.g. through a PAMS)

I received the call for applications through the NCCR North-South network

Other (please specify): \_\_\_\_\_

53. What kind of career support did you receive from the NCCR North-South or other sources?

Multiple responses possible

	Supervisor	NCCR North-South post-doc or senior researcher	HIP	RC	MC	Outside NCCR North-South
Discussions about career	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Job offers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being introduced to people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Career-related courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Childcare support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mentoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Alumni network

54. Are you still in contact with other NCCR North-South alumni?

- yes  
 no ( go to question 56)

55. With how many NCCR North-South alumni are you still in contact?

- None  
 1-5  
 6-10  
 11-20  
 More than 20

56. Have you actively used your alumni profile on the NCCR North-South website?

- yes  
 no ( go to question 58 )

57. What features of your alumni profile have you used?

- I have updated my profile regularly (once a year or more often)  
 I have uploaded my publications  
 I have contacted other Alumni  
 I have consulted the NCCR North-South website (e.g. journal and publication database, information on career opportunities, etc.)  
 I regularly read the NCCR North-South internal newsletter  
 I read information about new NCCR North-South publications, projects, and events

58. Do you think the alumni network should be maintained after the end of the NCCR North-South (July 2013)

- yes
- no ( go to question 60)

59. If yes, for what purpose?

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60. What features of the Alumni Website would you be interested in for the future?

	Not at all	Minimally	Moderately	Highly
Access to library and journals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information about events and conferences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Job announcements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

61. Would you be interested in other features? (please specify)

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62. Would you be willing to pay an annual financial contribution to the alumni network?

- yes
- no

## Demographics

63. Sex

- Male
- Female

64. Country of origin

List of countries

65. Year of birth: \_\_\_\_\_

66. Number of children

<input type="checkbox"/> No children	<input type="checkbox"/> First child, age: ____ <input type="checkbox"/> Second child, age: ____ <input type="checkbox"/> Third child, age: ____ <input type="checkbox"/> Fourth child, age: ____
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67. What is the highest educational degree your mother and father achieved?

	None or pre- primary education	Primary education	Secondary education	Post- secondary (non-tertiary) education (e.g. vocational programme)	First stage of tertiary education (University degree)	Second stage of tertiary education (PhD)
Mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Father	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

68. How would you classify your parents' social status?

- Upper class
- Upper middle class
- Lower middle class
- Lower class

### Open questions

69. What did you like in the NCCR North-South?

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70. What did you dislike in the NCCR North-South?

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71. What should be done differently in the new IGS?

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## Acknowledgements

The authors would like to express their sincere gratitude to all the evaluation participants from inside and outside the NCCR North-South who shared their knowledge and experiences with us.

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## About the Authors

**Eva Maria Heim** is a psychologist. She works at the Management Centre of the NCCR North-South as a project coordinator and in monitoring and evaluation. She conducted her PhD fieldwork in Bolivia. Her main research interests lie in the fields of applied psychological research in developing countries, and in the translation of scientific evidence into development policy and practice. She is experienced in conducting evaluations in different contexts, including health promotion, international development, and capacity building.

**Sonja Engelage** is a researcher in the field of education. She completed her PhD in sociology at the University of Bern, Switzerland, where she focused on career-building processes of highly educated academics from both a labour-market and a gender perspective. She currently works for the School of Teacher Education at the University for Applied Sciences and Arts Northwestern Switzerland. Her main research interests are the sociology of education and educational psychology, including aspects of professionalisation and motivation.

**Anne B. Zimmermann** coordinates publications and career development for the NCCR North-South programme and is associate editor of *Mountain Research and Development*, an international journal with a mission to bridge the gap between research and development. She is a senior research scientist at the Centre for Development and Environment (CDE) and has a PhD in languages, literatures, and post-colonial studies. Her current research focuses on the practical, theoretical, and training aspects of transdisciplinary research for sustainable development in North–South contexts.

**Karl Herweg** is a physical geographer. His main fields of research are soil erosion, soil and water conservation, and sustainable land management. He has conducted field studies in Germany, Italy, Ethiopia, Eritrea, and Switzerland, and has focused for many years on methods of impact and outcome monitoring. He is the head of CDE's education and training for sustainable development cluster, a lecturer at the University of Bern's Institute of Geography, the deputy coordinator of the NCCR North-South, and is responsible for interdisciplinary and transdisciplinary training and education. He also holds an adjunct associate professorship at Mekelle University, Ethiopia.

**Claudia Michel** holds a PhD in social and political geography. She coordinates knowledge sharing at the NCCR North-South and is responsible for the programme's monitoring and evaluation activities. Her research interests include theories of social change and creativity, organisational learning, and activism directed towards the realisation of women's rights and human rights in Switzerland and elsewhere.

**Thomas Breu** has a PhD in geography and over 10 years of experience in developing and transition countries in Southeast Asia and Central Asia. He is the deputy director of CDE and the programme coordinator of the NCCR North-South. He has conducted research on watershed management, sustainable land management, modelling of spatial environments, and participatory strategy development.

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Where are they now? After a decade of investment in capacity development of Southern PhD students, the Swiss National Centre of Competence in Research (NCCR) North-South wanted to find out what had become of its alumni. The findings were surprising, and contradicted the widespread assumption that a research programme such as this perpetuates a class of elites in the South by enabling only students from higher social strata to further consolidate their favourable position in society. The survey results clearly showed that the NCCR North-South has provided people in disadvantaged positions in developing countries with the chance to advance their careers. Obtaining a PhD produced a clear career boost among alumni in the South: at the time of the survey, two-thirds of Southern alumni held a high-level position such as director of a research institute. Most crucially, the NCCR North-South did not contribute to the phenomenon of brain drain: more than 90% of Southern alumni questioned were working in a Southern country. Finally, the majority of alumni in the North and South continued to work in a field related to sustainable development.

As an international research programme on global change and sustainable development, one of the aims of the NCCR North-South is to improve research structures in Switzerland and in the South. To this end, it provides research funding and training for Swiss and Southern PhD students, with Swiss students conducting their research in the global South in close collaboration with local researchers on site. Using a capacity development approach, the NCCR North-South seeks to educate experts who use the positions they acquire in policy and research fields to directly contribute to sustainable development. NCCR North-South alumni are expected to obtain high-level positions either in research or in policymaking and decision-making professions. The present report is based on a survey of 83 NCCR North-South alumni – former PhD students; it was conducted in an effort to establish whether the NCCR North-South's aims were achieved.

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