

A14 Research Partnerships and Capacity Development in the South: A Social Learning Perspective

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Abstract

This article examines the impact of research partnerships on capacity development among individuals and institutional partners in the South, within the context of a major 12-year international programme, the Swiss National Centre of Competence in Research (NCCR) North-South: Research Partnerships for Sustainable Development. The programme was set up both to enable state-of-the-art research and to enhance individual and institutional academic capacity within partnership regions worldwide. Using recently gathered data from a self-analysis entitled “Exploring Partnership Dynamics”, the article argues that North–South and South–South research collaboration with a focus on sustainable development have made the programme’s capacity development component a successful strategic contribution. Southern partners were able to increase their visibility and recognition through the NCCR North-South partnership. At the individual level, a good proportion obtained better employment and came to occupy higher positions. At the institutional level, many partners were able to allocate more resources for research and support more publications, including in higher-ranked scientific journals; they also expanded their academic activities and collaborated more with other institutions. The article also highlights the role of social learning processes in developing capacity among individuals and institutions. It identifies conditions enabling or hindering capacity development efforts, and concludes that properly forged research partnerships and the application of principles of mutuality not only develop capacity among Southern partners but also enhance social learning, ultimately contributing to sustainable development.

Keywords: Research partnerships; capacity development; individual and institutional partners; social learning; visibility and recognition.

A14.1 Capacity development and social learning in the context of research partnerships

Developing research capacity is an important prerequisite for successfully addressing societal problems and the challenges of sustainable development in the South (Bradley 2007; Bradley 2008; Gaillard 1998; Maselli et al 2006). This article examines the role played by research partnerships between the North and the South in developing research capacity among the Southern partners of a twelve-year international programme.

Capacity development is a very broad term with differing definitions. Trostle defines capacity development in the context of research as “a process of individual and institutional development which leads to higher levels of skills and greater ability to perform useful research” (Trostle 1992, p 1321). In the present article, the term “capacity development” is used to refer to a learning process that leads to development of knowledge, attitude, skills, competence and confidence in research actors and institutions, enhancing their ability to undertake socially, environmentally, and developmentally relevant research. It therefore goes beyond the development of the mere capacity to conduct research in a specific project arrangement. Rather, it is a process of developing the material, human and intellectual resources of Southern research institutes and individuals and fostering their participation in deciding on, as well as specifying, accessing, analysing, synthesising, disseminating and applying research to address the challenges of sustainable development.

Learning is an individual as well as a social phenomenon. Individual learning alone is not sufficient to address complex societal problems; social learning is also required. Social learning creates an environment conducive to addressing contemporary challenges (Goldstein 1981). Social learning is an action-oriented paradigm (encompassing epistemology, ontology and methodology) for dealing with complex social problems using critical self-reflection and effective communication (Röling 1997; Röling and Wage-makers 1998; Maarleveld and Dangbegnon 1999). It builds on individual learning, recognising multiple perspectives and creating common platforms for concerted action, interactive goal-setting, and accommodative and collective vision-building that acknowledges multiple realities. Therefore, it comprises learning through observation and interaction within a specific socio-political context, leading to collective decisions and concerted action (Maarleveld and Dangbegnon 1999) that promote dialogue among stake-

holders (planners, policymakers, researchers, politicians, managers and resource users). Hence, this whole process structures learning to change human attitudes and behaviour in order to address societal challenges and problems of sustainable development.

A14.2 Moving towards equal partnership in research

The challenges of global change call for new forms of knowledge production in a North–South context (Gaillard 1998; Bradley 2007; Bradley 2008); these challenges include the increasing speed and reach of changes, large-scale human–environment interactions, leading to major uncertainties about phenomena that affect an increasing number of humans worldwide, and persistent disparities between the North and the South. At the same time, research capacities must be strengthened, particularly in the South, where education and science have often not received the attention and funds necessary to support development (Maselli et al 2006). Against this background, in the past 30 years major international donors have increased their investment in development-relevant knowledge generation (e.g. the Dutch, British, Canadian, and Swiss governments, as well as the European Union and Nordic research institutions, see Bradley 2008). However this investment has been largely one-sided, as research relevant to development in the South has been conducted mainly in the North and/or by Northern scientists. In a critique of this one-sidedness, Gaillard (1996, 1998) for example highlighted a need for change in the donor-driven approach to research collaboration between North and South, and the Swiss Commission for Research Partnerships with Developing Countries (KFPE) developed 11 principles for research partnerships (KFPE 1998) to address this limitation. Investment in research partnerships – meant to correct the one-sided North–South research relationship – has, however, generally received too little attention until the recent past.

Historically, research partnerships have been dominated by the North, as they have been based on the conventional understanding of “doing good science for development” that resembles the “technology transfer” model they have been trying to overcome. Commenting on this phenomenon, critics such as Stiglitz (2000) have argued that the dominant type of technology transfer – top-down and donor-led research assistance from North to South – is a new form of colonisation, and therefore it cannot serve as a basis for building collegial partnerships between North and South. An assessment

conducted by the KFPE in 2001 has pointed out inequities in partnerships and recommended the need for translating the principles and guiding frameworks into action more systematically (e.g. the 11 principles for research partnerships proposed by them in 1998) to make research more socially relevant by enhancing Southern partners' ownership of research (KFPE 2001);² meanwhile, the KFPE has also adapted the 11 principles (2011, forthcoming). Toni and Velho (2000) and Velho (2002) confirmed that Southern partners were used mainly as research assistants to provide raw data for Northern researchers; these experiences provided an important research policy basis for developing a new model of research partnerships between North and South. Similarly, Hurni et al (2004) and Pohl and Hirsch Hadorn (2007) have underlined the need to adapt the practice of research partnerships and seek greater equality between North and South. Aware of the drawbacks of hands-off research support to the South, the Directorate General for Development Cooperation of the Dutch Foreign Ministry developed a new modality – a multi-annual, multi-disciplinary research programme to be jointly designed with partners from countries in the South (Velho et al 2004). Other research donors have meanwhile also responded to this process of addressing inequalities in implementations of research partnerships.

Here and elsewhere, learning from past experiences has led to initiation of innovative partnership arrangements that promote joint decisions on research themes, joint management of research activities, and joint publication of research results. However, to date, only few national donor agencies in the North have been supporting this type of research partnership. The Swiss National Centre of Competence in Research (NCCR) North-South is therefore one of very few innovative arrangements promoting equal research partnerships between North and South.

A14.3 Empirical evidence of capacity development in the South

The NCCR North-South Regional Coordinators' Forum³ conducted a global study among the programme's members and partners to examine the effects of NCCR North-South research partnerships on partners mainly in the South (Upreti et al 2011, forthcoming). The study was funded by the Swiss Agency for Development and Cooperation and the NCCR North-South, and managed and implemented by a core group put together by the Regional Coordinators' Forum from among its members. One of the objectives of this

study was to analyse capacity development in selected countries. The data for this study were collected by means of a questionnaire survey involving 104 respondents in 20 countries across Asia, Africa, Western Europe and South America. The present section of this article is based on some of the qualitative and quantitative results obtained in this study. In what follows, institutional and individual capacity development is assessed in terms of employment status, training and education, visibility and recognition, and managerial capacity.

A14.3.1 Employment status

Of a total of 104 respondents, 102 responded to the question related to employment. Sixty per cent of the 102 respondents were employed at the time of the survey in 2008. Most of the respondents who reported being unemployed were PhD students. Regional comparison of employment status shows that employment ranged from 61.5% in South Asia to 100% in East Africa. One respondent from Pakistan who had recently completed his PhD within the NCCR North-South wrote: “Yes, [as a result of the NCCR North-South partnership], immediately after obtaining a PhD degree I was promoted to Assistant Professor at the University of Agriculture, Faisalabad, and also started a post-doc within the NCCR North-South.”

A14.3.2 Technical capacity: training and education

Out of 104 individuals, 73 participated in different training programmes organised by the NCCR North-South; more than 90% of these respondents reported that this training was relevant. Most of the training was related to research methodology, concepts, data collection and analysis, and scientific writing and publishing. The field survey revealed that on average 70.2% of the individuals took some kind of training offered by NCCR North-South. The percentage of respondents that participated in training offered by NCCR North-South regionally or globally varied from region to region: In South Asia, all respondents participated in training, followed by the Horn of Africa (91.7%), South East Asia (85.7%), Central Asia (81.8%), East Africa (75%), West Africa (65%), Central America and the Caribbean (55.6%), and South America (41.8%).

One of the observations made in the survey conducted by the Regional Coordinators (Upreti et al 2011, forthcoming) is that local Master’s and PhD programmes tied to different training packages developed in the NCCR North-

South were a fundamental means of capacity development in the South. Integrated training courses and joint regional training courses involving researchers from all NCCR North-South partnership regions demonstrated that learning is enhanced by peer learning, sharing of experiences and knowledge, individual and collective writing, and reflection involving consciously constructivist and cognitive social processes. Education and training arrangements with NCCR North-South collaboration provided opportunities for the participants to acquire knowledge, skills, orientation, perspective and avenues for collective learning and societal interaction. However, in terms of the time frame for education, Southern researchers felt that time was short. For example, one of the respondents from Côte d'Ivoire wrote:

It is a very good partnership for the development of science in the South, particularly the training of young researchers to ensure a new generation of scientists and to reduce brain drain. But the programme must understand and take into account the realities in Southern universities. For instance, the time for writing a thesis in the South, due to the difficulties with local academic supervision, may be 4 to 6 years, while the Programme limits fellowships to 3-4 years.

Respondents indicated that education, training and career orientation opportunities in the NCCR North-South partnership have enabled Southern researchers to modify their accustomed behaviour and helped them to develop new forms of adaptive behaviour to tackle societal challenges requiring a conscious dealing with social constructions of reality. In many cases, for example, Southern researchers had focused on case studies and narrow disciplinary research before entering into research partnerships within the NCCR North-South. In active collaboration within the NCCR North-South, they began to link their research with societal problems, expanded conceptual and theoretical understandings, and also used and – even more importantly – actively engaged in inter- and transdisciplinary research to address societal problems.

In addition, the study revealed that transdisciplinary learning is a heuristic process of generating both scientific-academic and societal knowledge through a combination of 'finding out' and 'taking action' (through partnership action projects), adjusting to circumstances, and gaining new experiences and insights, both by adapting to change and by using new understanding and building on feelings, attitudes and values. Hence, it was a form of

social learning as defined above. In this regard, one of the respondents said: “[A]t the beginning I was a purely technocratic water specialist, but now, after NCCR North-South support, I have started thinking more and more about human aspects, and we integrate them now in our research activities.” Another respondent, a member of a sheep breeders’ association, said,

I for the first time feel a totally different approach to our organisation as a farmers’ organisation – we feel trust. We feel that we are not only an organisation supported by a grant but first of all an organisation that is responsible to our members for the implementation of our goals. This gives us other significant meaning.

A14.3.3 Visibility and recognition

Visibility and recognition are important factors in capacity development and even go beyond it. They are important elements in the empowerment of researchers. In empirical terms, 68% of the responses (282 of 415 responses from the 104 respondents) expressed the perception that collaboration with the NCCR North-South had raised their visibility and recognition.

Table 1 shows that 68% of the Southern researchers reported their visibility and recognition to have been generally enhanced. Of these researchers, 77.6% earned more prestige than before, 65.7% felt more heard than before, 71% got a promotion, 54.5% got a salary increase, and 69% published more after they started collaboration with the NCCR North-South. An academic

Table 1

Respondents	Northern		Southern		Overall	
	Agreed	%	Agreed	%	Agreed	%
Felt more heard than before	13	56.5	46	65.7	59	63.4
Got a promotion	19	82.6	49	71.0	68	73.9
Earned more prestige	11	52.4	52	77.6	63	71.6
Gave more public speeches and produced more scientific papers	13	52.0	50	69.4	63	64.9
Got a salary increase	15	62.5	36	54.5	51	56.7
Published more	18	78.3	49	69.0	67	71.3
Total values	89	64.0	282	68.0	371	67.0

Perceived increase in visibility and recognition at the individual level after collaboration with the Swiss National Centre of Competence in Research (NCCR) North-South.

Source: Field survey conducted in 2008.

partner in Kyrgyzstan said that “the Programme influenced our world outlook, our approach to research, and the significance of human factors.” Many respondents specifically stated that participation in integrated and regional training courses⁴ gave them international exposure and helped to increase their professional competences, reflected in the number and quality of publications. At their workplaces, their status was enhanced based on their academic degrees and their expertise. “Due to the NCCR North-South programme, I got international exposure and this exposure gave me an edge over my colleagues”, wrote a PhD graduate from Pakistan. In reply to the question whether conducting research within the NCCR North-South helped individual researchers earn more prestige and recognition and strengthen their capacities, one respondent, a PhD student from Nepal, said, “Yes, it has positive effects – academically and in network-building. It has made me more mature academically, and it has helped me develop useful networks. I’ve presented papers in important workshops regarding my area of research.”

Table 2

Respondents by region	West Africa	East Africa	Horn of Africa	Central Asia	South Asia	South East Asia	Central America and Caribbean	South America	Overall
Statements									
Got a promotion	73.7	85.7	60.0	70.0	81.8	83.3	25.0	90.5	73.9
Earned more prestige	77.8	83.3	62.5	81.8	66.7	100.0	33.3	70.0	71.6
Gave more public speeches and produced more scientific papers	63.2	57.1	72.7	54.5	60.0	100.0	22.2	78.3	64.9
Got a salary increase	36.8	57.1	70.0	80.0	66.7	57.1	22.2	68.4	56.7
Published more	82.4	71.4	60.0	70.0	83.3	71.4	22.2	81.4	71.3

Comparison of responses in the different Southern partnership regions regarding increased visibility and recognition at the individual level after collaboration with the Swiss National Centre of Competence in Research (NCCR) North-South (percentages).

Regarding the effect of a socially enhanced position for researchers after collaboration with the NCCR North-South, 71.6% of the researchers reported that they enjoyed more prestige in society than before (Table 2). Regional data indicate that the partnership’s effect of enhancing researchers’ visibility and recognition was markedly weaker in Central America and the Caribbean than in the other regions, for all five indicators. Possible reasons include

already high salaries, while language difficulties may have limited publications in English. The regional variability in the programme's impact on visibility and recognition – the highest impact having been reported by South East Asian researchers and the lowest by researchers from Central America and the Caribbean – shows that some indicators may not be relevant for measuring success and therefore generalised indicators for assessment may not prove useful. Greater prestige in society from partnership with the NCCR North-South also depends on the natures of the various societies, and replies reflect personal perceptions of the respondents themselves. “More opportunities to present papers and give speeches”, another indicator of visibility and recognition, depends upon the research topic and the type of partner (e.g. academic institution or NGO). Similarly, more publications are not a useful means of gaining visibility and recognition in some regions (e.g. Central America and the Caribbean, followed by the Horn of Africa) although it is very useful in others (e.g. South Asia or West Africa). Plausible reasons for this variability include the varying priority attributed to publications in the different partnership regions and in their regional strategies, and the presence or absence of joint writing practices involving collaboration between senior and junior researchers.

Table 3 shows that 68% of the academic partner institutions had not introduced new programmes, whereas 57.7% of the non-academic partners had introduced new research or research collaboration programmes with academic institutions. In the case of complementary effects of NCCR North-South collaboration on partner institutions in terms of attracting other academic collaborations, 50% gave a positive answer. However, 81.8% of academic and 65.4% of non-academic partners said that cooperation had raised their status, and academic partners were able to attract more Master's and PhD students, which helped in mobilising budgets and producing more publications. Overall, the data in Table 3 thus clearly shows an increase in the visibility and the recognition of Southern partner institutions. The head of one of the departments of a cooperating university wrote in the questionnaire form, “[t]his North-South partnership has definitely helped raise the status of our institution by enhancing research capabilities of students and faculties.” Twenty-two academic and 24 non-academic institutions responded to the question of how the partnership benefited institutions in the South and in the North. Ninety per cent of the academic and 88% of the non-academic partners stated that both the North and the South had benefited from the partnership. One of the respondents said that “[i]t has been providing a forum for knowledge sharing and interaction. It is also an obligation for both part-

Table 3

Perceived increase in visibility and recognition at the institutional level after collaboration with the Swiss National Centre of Competence in Research (NCCR) North-South.	Respondents	Academic institutions		Non-academic institutions		Overall	
	Statements	Agreed	%	Agreed	%	Agreed	%
Source: Field survey conducted in 2008.	Introduced new degree and research programmes	8	32.0	15	57.7	23	45.1
	Attracted other academic collaboration	12	50.0	13	52.0	25	51.0
	Collaboration raised status	18	81.8	17	65.4	35	72.9
	Attracted more Masters and PhD students	16	64.0	13	50.0	29	56.9
	Mobilised more resources	14	60.9	14	60.9	28	60.9
	Enhanced publications	20	80.0	11	42.3	31	60.8
	Total values	89	64.0	282	68.0	371	67.0

ners, the North and the South, to facilitate each other based on the strengths and weaknesses of the partners.” Another respondent said, “The Northern researchers are able to broaden their horizon and get first-hand knowledge of Southern realities. For us it was an opportunity to link issues at micro level with meso-micro realities.”

Similarly, a Tajik partner said,

[t]he interest of the Institute in GIS has grown recently due to collaboration with the programme. Now we make every effort to shift from manual soil mapping to GIS. Even the Institute has followed a new strategy – development of soil maps – with the help of GIS technology.

Once visibility and recognition increase, it is easier for researchers to influence changes in policy, though not all respondents felt this way. In this regard, both academic and non-academic Southern partners stated that they had access to and influence on policy-making at local, regional, and national levels. One respondent from a non-academic partner organisation in Kyrgyzstan said:

Of course, it's now very early to say anything about our influence on policy changes, but we already have good feedback from farmers, governments, and the Ministry of Agriculture. In any case, we try to contribute to development of rural areas by making the concerns of rural people known to the government and to the people who take decisions. We have tried to create a platform for dialogue between different actors.

Institutional capacity in partner institutions and organisations was strengthened by supporting e-learning and library resources, strengthening computing services and networks, developing an effective communication strategy, and collective efforts to generate financial resources.

Enhancement of managerial capacity was another indicator used in the assessment. However, none of the respondents reported having explicitly obtained management training as part of the collaboration with the NCCR North-South. Managerial capacity increased as a result of on-the-job learning.

A14.4 Capacity development and social learning

In an enabling environment, learning occurs at individual, institutional, social, and societal levels. The transdisciplinary approach of the NCCR North-South provides an avenue to all four levels of learning. Transdisciplinary research is basically built on a constructivist perspective: it assumes that multiple realities (and epistemologies) exist and it addresses complex problems that require constant collective interaction and concerted actions, and negotiation of values as well as understandings of where the knowledge production process should lead those involved in it (Wiesmann et al 2008; Pohl et al 2010). Confronting multiple and conflicting social realities as the product of human intellect and adaptation requires that researchers take a social-constructivist perspective (Röling 1999).

Differences in interests, objectives and world-views encourage individual researchers to examine reality through the constructivist lens to address societal problems, tackle conflicting goals, and negotiate shared goals by using various platforms of negotiation (Röling 1999; Röling and Wagemakers 1998). The NCCR North-South partnership provided such a platform for researchers.

It was reported that by getting involved in NCCR North-South research, institutions and individuals expanded their knowledge networks, used available platforms, expanded options for collaboration in research and publications, and developed transdisciplinary perspectives to promote purposeful action for addressing the challenges of sustainable development arising from ‘messy’ and complex problem situations with fuzzy goals (Checkland and Scholes 1990).

Some of the respondents saw a need for more interaction and sharing between North and South. This is reflected, for example, in the statement of José Luis Coraggio, who implemented a partnership action within the framework of the NCCR North-South:

[A]t the beginning there was a group (NCCR North- South people) with whom we could discuss in depth all the issues, and it would have been good if we could have kept on working together, but all in all, they played a role in proposing ideas and presenting projects, and then we implemented them within the institution; we had no chance for mutual growth and enrichment.

A14.5 Enabling and limiting factors for research capacity development in the South

The study also addressed the question of which elements and conditions of the NCCR North-South partnership had enabling and which had limiting effects on research capacity development in the South. The following factors were found to have had an enabling influence:

- Making better coaching, backstopping and supervision available to students and researchers
- Clear roles and responsibilities, coupled with autonomy
- Encouragement of publications, dissemination of results, and reflection
- Platforms for sharing and reflection
- Research combined with training and education
- Platforms for enhancing visibility and recognition
- Mutual trust among the collaborating partners in the North and the South
- Career opportunities after training in collaboration with Northern partners
- Innovative character of capacity development in the NCCR North-South partnership

- Development of a critical mass of young researchers through Master’s, PhD and post-doc programmes
- Transdisciplinary research approach

The transdisciplinary approach to research adopted by the NCCR North-South became a powerful means of capacity development, in that it required researchers to focus on designing an interface between society, policy and research. The transdisciplinary perspective also induced a shift from dominant disciplinary research strategies to collective work and social learning about complex societal problems. By contrast, capacity development in the South was limited by the following factors:

- Significant lack of access to high-quality scientific information, research and academic forums and platforms in the South
- Rigid rules and regulations as well as operational procedures in partner institutions restricting flexibility and innovation
- Poor connections between teaching and research, undermining research aspects in teaching
- Lack of resources and institutional backing
- Lack of human and financial resources in academic institutions
- Political interference

A14.6 Conclusions

The NCCR North-South research programme has adopted innovative practices in negotiating, planning, implementing, and monitoring research partnerships and sharing benefits. This has challenged the conventional modality of research collaboration focused on ‘technology transfer’, where Northern partners extend technical assistance to researchers in the South and are seen as the reservoir of knowledge, while Southern partners are seen as mere users.

The development of capacities among Southern researchers with regard to research, publication of results, and engagement in theoretical and conceptual debates is crucially important for addressing societal challenges. Therefore, a long-term investment in these areas is strategically important. The NCCR North-South research partnership has helped Southern researchers to promote their potentials and link up with the global knowledge community, and, ultimately, has broadened knowledge and brought about changes in atti-

tudes and behaviour among researchers. The NCCR North-South has provided researchers in the South with space as well as methodological and theoretical instruments to develop competence in conducting quality research and broaden their options. It has enhanced their visibility and recognition, and has assisted them in charting a career path. One of the important lessons learnt from cooperation within the framework of the NCCR North-South is to build on existing capacity, carefully assessing potentials and making the impacts of research one of the important components in the research partnership.

Capacity development is a complex and dynamic process of learning, action and interaction, and reflection and adaptation within society. It requires time, investment of resources, and targeted efforts. Capacity development is relevant only if the acquired knowledge, skills and experience of researchers are used to tackle societal problems.

The NCCR North-South research partnership seems successful in bringing Southern and Northern researchers together for collective learning, joint problem identification, joint research, and concerted action for publication and synthesis. The NCCR North-South has provided platforms for Southern collaborators to engage in an interactive process by exposing themselves to multiple perspectives and complex problems. These platforms offered space for different researchers to work together and develop common understandings of social dynamics and complex problems. The networks developed from such interactive processes are instrumental in developing the ability of researchers to explore different strategies, to negotiate between conflicting interests, and to accommodate differences. As societal challenges and problems of sustainable development are related to both ‘hard’ ecosystems (where outcomes are defined by natural laws) and ‘soft’ systems (where outcomes are determined by social processes), dealing with these systems requires an interface (Long and Long 1992) between hard and soft systems, and suitable capacity.

Endnotes

Full citation for this article:

Will be inserted at a later stage.

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² Within the NCCR North-South programme, a few voices have expressed doubt as to whether the KFPE principles can really solve the fundamental issue of persistent disparities between the North and the South with regard to research set-ups: "The guidelines are not relevant for research practice. [...] [They] are very functionalistic. They do not see the people in the research partnerships, which imply conflict and getting involved with each other. The partners need to develop a level to relate to each other and to establish mechanisms to continue relating to each other. The guidelines still have a paternalist undertone. [...] Questions of competence and authority, power, and responsibility would need to be part of the guidelines." This echoes the critique expressed by Bradley (2007). But on the whole, the respondents of the study conducted by the Regional Coordinators' Forum (see section below and Endnote 3) felt that the 11 KFPE principles had been well followed by the NCCR North-South.

³ The Regional Coordinators' Forum (RCF) is a body within the NCCR North-South research partnership arrangement consisting of all Regional Coordinators, i.e. the leaders of the 9 NCCR North-South partnership regions. Eight of these 9 regions are situated in the South, and are coordinated by leaders from the South. The RCF launched an independent research project entitled "Exploring Partnership Dynamics", which was funded by the South-South Fund of the NCCR North-South and by SDC to promote South-South collaboration. The South-South Fund is an outcome of a learning process within the NCCR North-South programme, in the course of which the donors and the NCCR North-South Board of Directors realised that there was a need for allocating additional funds for collaboration among Southern partners with an agenda defined by them rather than by Northern partners.

⁴Integrated training courses (ITCs) are events in which PhD candidates and senior researchers from all 9 partnership regions participate; they are conceived in a modular way, as an opportunity for learning to work in a more inter- and transdisciplinary manner. Regional training courses (RTCs) are events organised by the Southern regions, based on demands from PhD candidates and senior researchers working in the regions. Some RTCs have been organised jointly by several Southern regions as continental RTCs, increasing the level of exposure of participants to international exchange.

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