

Global Change and Sustainable Development

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**A Synthesis of Regional Experiences
from Research Partnerships**

Edited by
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with an international group of co-editors

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Addressing major challenges of global and local change: self-made bridge crossing a highly polluted river and connecting two disadvantaged neighbourhoods in Abidjan, Côte d'Ivoire. In the absence of a satisfactory solution for linking the two communities, an inventive inhabitant set up a bridge and toll system that feeds his family and provides a needed service. The problem of pollution goes beyond technical solutions and requires involvement from a much broader range of stakeholders and concerned scientists. (Photo by Anne Zimmermann, February 2009)

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Introduction



Introduction: Research for Development – A Synthesis of Regional Experiences

Hans Hurni¹

Humankind today is confronted with numerous threats brought about by the speed, scope and unpredictable interconnectedness of global change dynamics. A concerted and informed approach to solutions is required to address the magnitude and severity of the numerous crises we are facing, related to the global economy, climate change and natural resource degradation, food security, poverty and social exclusion, water and sanitation, and conflict and governance, to name but a few. Generating shared knowledge and developing the ability to cross multiple borders between understandings of realities and issues are a key to addressing such global challenges. This is underlined in most of the peer-reviewed syntheses of regional research presented in this volume. The authors who cooperated to produce these articles are all members or former members of the Swiss National Centre of Competence in Research (NCCR) North-South, a development-oriented research programme guided by principles of sustainability. They review achievements of disciplinary, interdisciplinary and transdisciplinary work conducted in the past eight years and draw conclusions about future research agendas in nine regions worldwide (Figure 1).

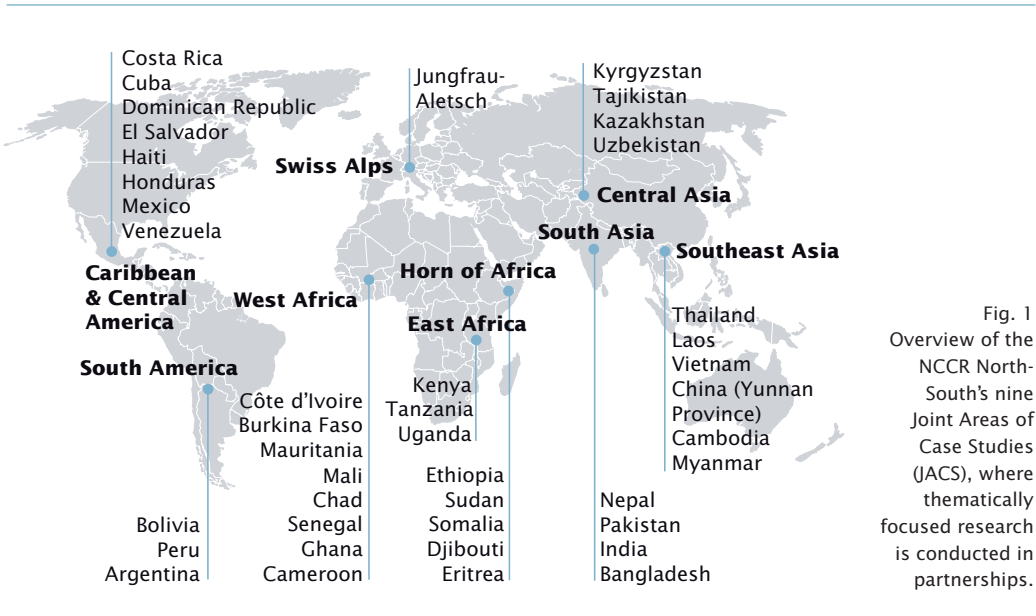


Fig. 1
Overview of the NCCR North-South's nine Joint Areas of Case Studies (JACS), where thematically focused research is conducted in partnerships.

The NCCR North-South is an international research network for which the University of Bern is the lead institution. It is based on research partnerships between people and institutions in nine regions of the global North, South and East. These partnership regions are called Joint Areas of Case Studies (JACS). The programme initially brought together seven Swiss institutions and their partners in developing and transition countries, in order to formulate and carry out research partnership projects. By early 2009 it had developed into an international network of over 190 institutions in 40 countries worldwide. The programme was made possible by the Swiss National Science Foundation (SNSF), which currently implements 19 such NCCRs in very different fields of scientific endeavour, ranging from nanotechnology to cancer research and affective sciences. The NCCR North-South is unique among these NCCRs: it is an international cooperative network seeking ways of increasing the effectiveness of development activities through research with solid societal support. Moreover, as it focuses on the impact of global change particularly in developing countries, the NCCR North-South is co-funded by the Swiss Agency for Development and Cooperation (SDC), with a view to enabling partners in the global South to contribute to, and benefit from, development-relevant research.

The programme is currently in its third phase, lasting from mid-2009 to mid-2013. Eight years of research partnerships on problems and potentials of global change have resulted so far in more than 1600 scientific publications. Over 250 researchers and 150 PhD students have been engaged in socially relevant research to date, and about 215 Master's students have conducted their fieldwork within this international framework. Currently, a new series of 15 research projects is being launched, involving 30 post-docs, as well as approximately 30 doctoral and 50 Master's students. After eight years of research the time was ripe for a synthesis of insights gained during the first two phases of the NCCR North-South, between 2001 and 2009. Apart from the thematically and regionally focused research results presented in this volume, programme members are also preparing a peer-reviewed synthesis of a more global nature, concerned with transversal topics, soon to be published in a companion volume in this series. The present book has 123 contributors: 45 women and 78 men, 72 coming from partner countries in the South and 51 from the global North.

The table of contents reveals a broad diversity of synthesis topics: from environmental sanitation and health to governance and conflict transformation, land degradation and sustainable management, poverty, institutional

transformation and livelihood assets, rural accessibility and migration, and social learning and sustainable regional development. This great variety of themes reflects what were considered to be the most pressing challenges of sustainable development by stakeholders consulted in the nine regions in 2001, when the partner institutions of the NCCR North-South initiated workshops in each JACS, with the aim of determining common problems and potentials (Hurni et al 2004). This negotiated compendium of research questions was defined as a “pre-synthesis of syndromes of global change”, meant to guide research activities in the years to follow (Hurni and Wiesmann 2004a). The topics identified in 2001 were defined in a transdisciplinary process (Hurni and Wiesmann 2004b), in which scientists from different cultural and scientific backgrounds and stakeholders in policy-making and from society participated in three-day meetings (Wiesmann and Hurni 2004) with the aim of elaborating a common understanding of core problems of non-sustainable development and assessing potentials for finding solutions (Messerli and Wiesmann 2004). This identification was followed by a considerable number of thematically focused research projects involving most of the staff of the NCCR North-South. The present book reflects both the diversity of the research themes within the programme and their clearly focused nature from a regional perspective, resulting from the initial negotiated definition of issues of particular concern to each region.

The synthesis of research carried out in the Joint Areas of Case Studies is presented in nine sections with four chapters each: the first chapter offers a general reflection on the overall focus in the region, followed by three thematic synthesis chapters (Table 1). The authors of each chapter review and discuss insights from a number of publications produced by NCCR North-South members, placing them within the context of broader international scientific debates on these themes. In the lists of references, asterisks indicate which publications resulted from research carried out within the programme.

All chapters reflect work carried out in research partnerships with the aim of contributing to the mitigation of, or adaptation to, the negative impacts of global change. Global change, as it is understood in the NCCR North-South, is much more than climate change; it embraces all aspects of global dynamics in the social, political, ecological, institutional and economic spheres. Another common characteristic of the synthesis chapters is that they result from multidisciplinary studies on the topics chosen. Very often, interdisciplinary cooperation between researchers also took place, and, at

Table 1

General topic	JACS	WAF	EAF	HOA	CAS	SAS	SEA	CCA	SAM	ALP
Development challenges and research		X	X	X	X	X	X	X	X	X
Health risks, social exclusion		X						X		
Wastewater management, environmental sanitation		X					X X			
Risk perception and management									X	
Natural resource conflicts and governance		X		X		X		X		
Soil and water resource management			X	X X	X					
Adaptation to climate change			X X							
Sustainable regional development							X			X
Land use and institutions in transition					X X	X				
Migration, state and social organisation						X		X	X	
Negotiating protected areas									X	X X

General synthesis topics addressed and their distribution in the different JACS. Each chapter is identified by a cross in this matrix. (Abbreviations are spelt out in the text.)

specific times during the research process, transdisciplinary phases were included, during which representatives of stakeholder groups were invited to join the research process, e.g. to identify problems and potentials, help formulate research questions, assist in orienting the research towards finding pathways for mitigation of, or adaptation to, the negative impacts of global change, or even help validate the results of research in concrete development projects.

Three JACS regions are in Africa. In West Africa (WAF), the focus is on health risks, wastewater management and natural resource conflicts and governance. Approaches developed are vulnerability and resilience in health, equity effectiveness in environmental sanitation, and autochthony and conflicting rights in natural resource management. In East Africa (EAF), the chapters address water management using a multi-level and multi-stakeholder perspective, strengthening of institutions to enhance adaptation to climate change, and increasing the resilience of the most vulnerable and empowering them to mitigate syndromes of global change. In the Horn of Africa (HOA), the overall theme is improved governance of natural resources. This includes dealing with pastoral conflicts and state-building activities, water management and conflict transformation, and land degradation and sustainable land management issues.

Three additional JACS regions are in Asia. In Central Asia (CAS), understanding transformation processes remains an important issue despite the fact that 20 years have elapsed since the collapse of the Soviet Union. The three syntheses relate to new ways of managing water resources, to land use in transition, and to natural resource institutions facing privatisation and decentralisation. In South Asia (SAS), the general focus is on livelihoods, institutions and migration. The topics are access to livelihood assets, state building, resource governance and conflict issues, as well as patterns and politics of migration. In Southeast Asia (SEA), environmental management is addressed using integrated approaches: decentralised wastewater management, tools for environmental planning and river basin management, and assessing accessibility in rural areas as a determinant of social and economic disparities.

Two JACS regions are in Latin America. In the Caribbean and Central America (CCA), the development challenges discussed are social exclusion, migration, and environmental governance. Poverty and insecurity are barriers to development and lead to exclusion and migration, considered to be responses exhibiting both problematical and promising features. Local responses to environmental problems are also analysed in terms of their positive and negative aspects. In South America (SAM), relationships and conflicts between states and citizens are addressed with a view to reconstructing them, sharpening perceptions of natural hazards and enhancing risk management, as well as improving the governance of protected areas inhabited by indigenous peoples.

Perhaps surprisingly for a research programme focusing essentially on developing countries, one JACS region is in the European Alps, more specifically in the Swiss Alps (ALP). There, research focuses on sustainable regional development using the example of a protected area, on reconciling global and local dynamics and stakes, on the construction of meaningful spaces in negotiations about conservation, and on the potentials and limitations of transdisciplinary approaches to managing a World Natural Heritage Site. JACS ALP has hosted programme activities of two kinds: research focusing on regional issues analysed from the perspective of both Northern and Southern researchers, leading to interesting insights into power structures and mutual learning, and international conferences as well as annual planning meetings involving all project coordinators, to coordinate interdisciplinary activities and conceptual frameworks.

The 36 chapters of this book reflect the broad spectrum of research questions, approaches, disciplines and institutional contexts that characterise the NCCR North-South programme. Readers can either dip into individual regions or themes, or explore the book as a whole and discover what holds it together: a common effort to make research more relevant to society, a commitment to conducting research in complex partnerships where issues of difference and power need to be addressed on a daily basis, a willingness to cross disciplinary and other epistemological boundaries whenever necessary for developing a common understanding of issues and possible solutions, and a commitment to mutual learning for sustainable development.

Endnotes

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