

Improving Impacts of Research Partnerships

The present publication is based on analysis of a number of case studies encompassing a wide variety of partnerships, discussions held during the various workshops of the «Impact Assessment Study Group», and the conclusions derived. Thus, while it does not pretend to be comprehensive, it aims to stress the importance of impact planning, monitoring and assessment as elements in the design and evaluation of research projects or programmes. In addition, it is intended to help in moving from «proving» to «improving» impacts.

The publication proposes 10 factors enabling or enhancing impact and points to 6 factors that hinder impact. In addition, conclusions and recommendations concerning enhancement of desired impacts are formulated for funding agencies and for researchers and their institutions.

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KFPE IMPROVING IMPACTS OF RESEARCH PARTNERSHIPS



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La KFPE

KFPE is dedicated to promoting research partnerships with developing and transition countries. In this way, it wishes to contribute to sustainable development.

It is engaged in Swiss scientific policies and is committed to promoting the interests of researchers and their affiliated institutions on both a national and international level. It furthers development-oriented research and elaborates research-strategic concepts. In this context, it ascertains that partnership principles are followed, that the quality of research is assured, and that the interests of all partners are respected. KFPE is a commission of the four Swiss Scientific Academies.

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Foreword

North-South research partnerships are considered a powerful tool for contributing both to knowledge generation and capacity building in the South as well as in the North. However, it appears that little is known about the impact of research partnerships, which stimulated the KFPE to launch the present study. The aims of this study are to (i) provide insights into how to achieve desired impacts and avoid drawbacks, (ii) stimulate discussion of impacts, and (iii) achieve better understanding of the functioning of research partnerships. Ultimately, the study aims to help improve the design and implementation of funding schemes that support research partnerships.

The present publication is based on analysis of a number of case studies encompassing a wide variety of partnerships, discussions held during the various workshops of the «Impact Assessment Working Group», and the conclusions derived. While it does not pretend to be comprehensive, it stresses the importance of impact planning, monitoring and assessment as elements in the design and evaluation of research projects or programmes. In addition, it is intended to help in moving from «proving» to «improving» impacts. The study fits well into the GDN project of «Bridging Research and Policy» (www.gdn.org), where mechanisms to enhance the usefulness of research for society are being analysed.

Analysis reveals interesting and surprising results, such as the many different side-effects generated by partnerships and the complexity of factors promoting or hindering expected impacts. Although the conclusions and recommendations may appear obvious at first sight, their implementation is likely to be much more difficult in reality. This means that real improvement will depend greatly upon the readiness to strive for impacts and to make the necessary efforts to achieve them. This is particularly true for planning and monitoring impacts.

Thanks to the variety of case studies analysed, understanding of the different nature of research partnerships has improved. Ideally, a research partnership should strive for a «dynamic equilibrium» in which all involved parties are open to a multiple transformation in terms of mutual learning, cultural understanding, scientific upgrading, capacity building, and attitudinal behaviour towards all partners. Applying transdisciplinary or multi-level, multi-stakeholder approaches, where all relevant stakeholders are actively participating, helps generate meaningful results and fosters processes that promote impact. In such partnerships all partners have a voice in decision-making processes and their capacities are used and further developed in a complementary and most fruitful way.

Anne-Christine Clottu-Vogel
President KFPE

Lyn Squire
Executive Director GDN

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Acronyms used in Parts I to III

CBO	Community based organisation
CDE	Centre for Development and Environment, University of Berne, Switzerland
DANIDA	Danish International Development Agency
DC	Developing country / ies
EF	Enabling factor
ERF	Economic Research Forum for the Arab Countries, Iran & Turkey
HF	Hindering factor
GDN	Global Development Network
IAS	Impact Assessment Study
IDRC	International Development Research Centre
IFAD	International Fund for Agricultural Development
KFPE	Swiss Commission for Research Partnerships with Developing Countries
NGO	Non Governmental Organisation
ODI	Overseas Development Institute
RAWOO	The Netherlands Development Assistance Research Council
RP	Research Partnership(s)
SDC	Swiss Agency for Development and Cooperation
SNSF	Swiss National Science Foundation

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- Box 2: Aims of the study
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Part I

Setting the stage



Setting the stage

1 Background

Research is a widely applied instrument for harnessing knowledge and providing insight into complex development issues. It helps in generating options for policy, management and action, and in empowering people and organizations in developing and transition countries, as well as industrialised countries. Ultimately this should make it easier to cope with the challenges of sustainable development under increasingly difficult circumstances. Research for development is therefore frequently placed in an application-oriented context, in which concepts like inter- and transdisciplinary research, equity, ownership, participation, etc. are widely accepted, but are not always put into practice. Research partnerships of various types and intensities, involving research institutions in industrialised and developing or transition¹ countries, are important means for contributing to knowledge generation and capacity building (SDC 2002, Laws 2003). This includes all kinds of research such as applied, action, or development-oriented research, as well as basic or fundamental research.

Classical research partnerships, as understood by the Swiss Commission for Research Partnerships with Developing Countries (KFPE 1998), comprise a combination of result-oriented research activities and capacity-building components at individual and institutional levels, or both levels simultaneously (see also SDC 2002). Typically such research partnerships bring together research institutions and individual researchers or research groups from developing or transition and industrialised countries. Ideally they should be driven by the needs and priorities of the South to achieve greater relevance, but in reality they are still mostly designed in the North. They should be based on mutual interest, trust, understanding, sharing of experiences, and a two-way learning process. In an ideal partner-

1. Decide on the objectives together
2. Build up mutual trust
3. Share information; develop networks
4. Share responsibility
5. Create transparency
6. Monitor and evaluate the collaboration
7. Disseminate the results
8. Apply the results
9. Share profits equitably
10. Increase research capacity
11. Build on the achievements

Box 1: KFPE's 11 principles of research partnership (1998)

ship, all partners will work together on an equal footing at all stages and levels. This is particularly important during the agenda-setting process, when research projects or programmes are being designed, as well as for implementation and management. The 11 principles developed by KFPE play a crucial role in realising such (ambitious) research partnerships (see Box 1).

The present study assesses the benefits and shortcomings of research partnership projects by addressing different domains and levels of impact. In particular, these include: **generation of new knowledge, changes in attitudes, strengthening of capacities, and impacts on target groups** such as policy-makers, local population etc, in both the North and the South. It was also considered important to focus on the wider context, i.e. to determine and learn from intended and unintended, and positive and negative impacts of research partnership projects on various stakeholders and at various levels. The question of whether such partnerships are more development-effective than research carried out without a partnership scheme has not been considered in the study.

¹ Transition countries are those countries of the former Eastern Bloc that have been moving towards democracy and a social market economy since 1990.

*DO YOU REALLY MEASURE THE
IMPACT OF AGRICULTURAL RESEARCH
IN KILOGRAM OF PEER-REVIEWED
PUBLICATIONS PER FARMER?²*



Figure 1: Assessment of impact based on amount of publications only
(by Karl Herweg 2001)

The main reason for this study is rooted in the perception of the KFPE that so far little is known about the impacts of research partnerships. To date, impact assessments of research projects have been mainly limited to the scientific merits assessed by peer-reviewed articles, ratings in citation indexes, or economic outcomes. But with regard to «research for development», societal aspects become more relevant. Monitoring and evaluation of such impacts is not only important for donors and program coordinators but also for directly concerned stakeholders. Participatory and transdisciplinary research approaches – including relevant stakeholders at all levels – are increasingly being used as a powerful tool to enhance the societal impact of research projects

(Lammerink & Wolffers 1998, Probst et al. 2003, Johnson et al. 2003).

So far, impact studies have usually been initiated by donors and, in most cases, the methodology applied has been poorly described. Most studies pay little attention to the context of a project and, last but not least, the attribution of impacts remains an insurmountable problem (Herweg & Steiner 2002).

The KFPE therefore launched an initiative jointly with the Global Development Network (GDN) to undertake the present study, originally called «Impact Assessment Study on Research Partnerships» (IAS). A number of organisations² contributed to the development of a common understanding and a methodological framework during

²The initial IAS Group consisted of representatives of the following institutions: Centre for Environment and Development CDE (University of Bern, Switzerland), Danish International Development Agency DANIDA, Economic Research Forum for the Arab Countries, Iran & Turkey ERF, Global Development Network GDN, International Fund for Agricultural Development IFAD, The Netherlands Development Assistance Research Council RAWOO, Swiss Agency for Development and Cooperation SDC, and the Swiss Commission for Research Partnerships with Developing Countries KFPE.

a workshop held in Switzerland in 2001. Subsequently, a series of case studies was carried out, on which the present publication is based. The basic idea of the study and the method envisaged was presented and discussed at the 3rd GDN Annual Conference (Rio de Janeiro, December 2001). The case studies were then presented and discussed during a workshop at the 4th GDN Annual Conference (Cairo, January 2003). During the 5th GDN Annual Conference (New Delhi, January 2004), four new case studies were included. The findings and conclusions of the present publication are based on eight case studies as well as expert knowledge from specialists participating in the workshops. This dual approach appeared to be fruitful, given the great variety of case studies analysed (Part IV).

2 Aims

The aims of the study are:

- 1) to assess various impacts resulting from North-South and South-South research partnerships, in different domains and at different levels, in a participatory way
- 2) to draw general conclusions and recommendations, based on description and analysis of various case studies
- 3) to help improve research partnership funding schemes so that they become more efficient, effective and goal oriented

Box 2: Aims of the study

3 Methodological approach

The present study is based on analysis of case studies provided by various concerned organisations (see footnote 2), and on expert knowledge gathered mainly during several workshops. The case studies analysed cover different types of research partnerships: long-term, short-term, those limited to backstopping, those involving full-fledged cooperation etc. This variety enabled

better understanding of processes, extraction of general conclusions, and formulation of recommendations on how to achieve impact. The case studies have been scrutinised with regard to a number of characteristics relevant to impact (see Part II). Analysis was done through semi-structured interviews with research partners from both the North and the South, donor representatives, and end-users such as farmers, decision-makers, community-based organisations (CBOs), etc. In addition, relevant project and programme documents were reviewed. Persons who had a stake in the programmes or projects carried out the analyses (see Part IV).

Domains of possible impacts

At the very outset, it was jointly decided to focus on 4 **specific domains** considered as particularly interesting and relevant to research partnerships:

- A** New knowledge and changes in attitudes of researchers
- Benefits for end-users:
 - B1** B1 at policy level
 - B2** B2 at societal level
- C** Individual and institutional capacity building

Box 3: Selected domains for the study

Special attention was paid to assessing and distinguishing **intended and unintended, and positive or negative impacts**. This approach allowed analysis of support schemes and projects with reference to their respective aims and focus.

New knowledge and changes in attitudes

A The primary goal of any research project is to generate new knowledge or to compile information in a novel way suitable to answering research questions or finding solutions to key problems.

A project can also help improve a methodological approach, and in the case of participatory research, the pertinence and acceptance of findings by end-users or decision-makers. Through a participatory research process, the attitude of involved researchers will be modified, too. Ultimately, this may lead to a change in perceptions of the usefulness of participatory and trans-disciplinary approaches involving stakeholders, field work, people-oriented research, complementary competences, and synergies created by involved academic and non-academic partners involved.

Benefits for end-users

In this domain, two broad categories of end-users or target groups were distinguished:

B1 at policy level³: This category includes decision-makers, politicians, administrators, development agencies, donors, etc.

B2 at societal level: This category includes society at large, e.g. farmers, women's groups, CBOs, local population, private sector representatives, etc.

Individual and institutional capacity building

C Capacity building can be considered both from an individual and an institutional perspective. In addition, distinctions should be made between benefits for the Southern and Northern partners involved. This can encompass individual training in preparing research proposals, carrying out MSc, PhD or post-doc level studies, upgrading infrastructure (e.g. for laboratories, libraries, ICT etc.), improving management and supervising capacity, etc.

Impact matrix

Based on the selected domains of impacts, a matrix of indicators was elaborated by the IAS Group in order to secure a basic common denominator for analysing the case studies. The matrix was developed for the four domains **A B1 B2 C**, and for the **impact chain** (Herweg 2002, Clarification of terms): possible output -> utilisation of output -> effects in form of benefits and/or drawbacks -> series of impacts.

Corresponding indicators and intended and unintended positive or negative impacts were pre-identified (see Annex) to stimulate discussion and identification of impact indicators, according to the needs of each specific case study.

³For other efforts in this domain, see the ODI/GDN study on «Bridging Research and Policy» (<http://www.odi.org.uk/RAPID/Projects/R0040a>) and the Public Policy Process of IDRC: «A Strategic Evaluation of the Influence of Research on Public Policy» (http://web.idrc.ca/en/ev-26606-201-1-DO_TOPIC.html)

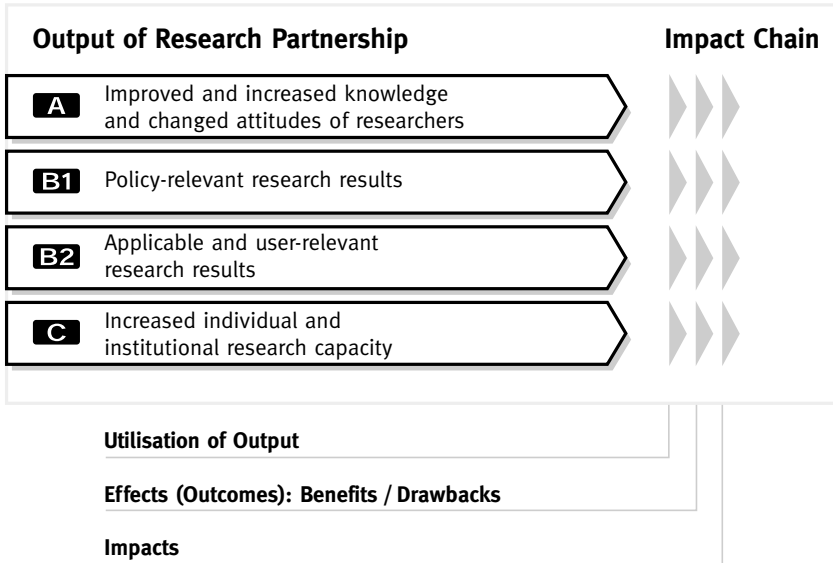


Figure 2: Impact matrix elaborated by the IAS Group

4 Clarification of terms

by Karl Herweg

Expected Results and Outputs

The term «expected result» refers to a planned achievement, while the term «output» refers to those short- to mid-term results actually achieved in the framework of a project (e.g. number of PhDs, data base, number of publications, etc.). Outputs relate to the efficiency (functioning, performance) of a project.

Impact

The term «impact» refers to a project's achievements, which go beyond mere outputs.

The term is often related to the **effectiveness** of a project – its success in contributing to its purpose and goal. In the present document, the term «impact» will not focus exclusively on the project goal but will be used as generic term referring to the entire impact chain (cf. below). «Impact» comprises the mid- to long-term impli-

cations a project has for the context and its population, be they **intended** (planned) or **unintended**. Already the presence of a project can have implications. Even without a project making any input or conducting any activity, expectations are created, stakeholders may change their behaviour, etc. But as soon as a project is planned, the purpose and goal reflect intended impacts. Certainly, a project will always aim to have **positive impacts** that contribute to the achievement of the overall goal. But there may also be **negative impacts**. Moreover, stakeholders may not consider an impact unanimously positive or negative.

Impact chain

The term «impact» covers a wide range of implications, and it is helpful to divide it into an impact chain of overlapping links (see Figure 3). The **utilisation** of project outputs already implies the idea of a broad impact (e.g. application of a new technology that has been developed through research). As a consequence of using

the outputs, initial effects (outcomes, direct impacts) can be observed (e.g. crop yield increases, soil erosion decreases, etc.) in the form of both **benefits** and **drawbacks** (e.g. higher crop yield is marketable and household income increases) that stimulate a learning process. Attitudes and perceptions of people change, and further (indirect) **impacts** may be triggered (e.g. local people gain self-confidence and further explore their potential). Finally, at least some of the impacts should relate to the overall goals of development co-operation (e.g. empowerment of local people, poverty alleviation, etc.).

Example:

When a research partnership programme plans to train PhD and MSc candidates to work for a certain research institution, the number of finalised PhDs and MScs is the output. In other words: capacity building/strengthening at individual level is considered the output or result of

the research partnership. This output may have **various impacts** at different levels:

- firstly, completed training (utilisation) may increase knowledge (effect) and may have led to attitudinal changes among the trainees and trainers (benefit/impact);
- secondly, the institutional capacity to conduct good quality research (impact) may have been increased by creating a nucleus (team, sub-unit) for a specific research realm (effect);
- thirdly, various end-users such as policy-makers, farmers, the private sector etc., may have benefited (impact) from improved research quality (effect, benefit),

Context

Every development project exists within a specific context, that is, its biophysical, socio-cultural, economic, institutional and political milieu or environment. A context comprises several levels,

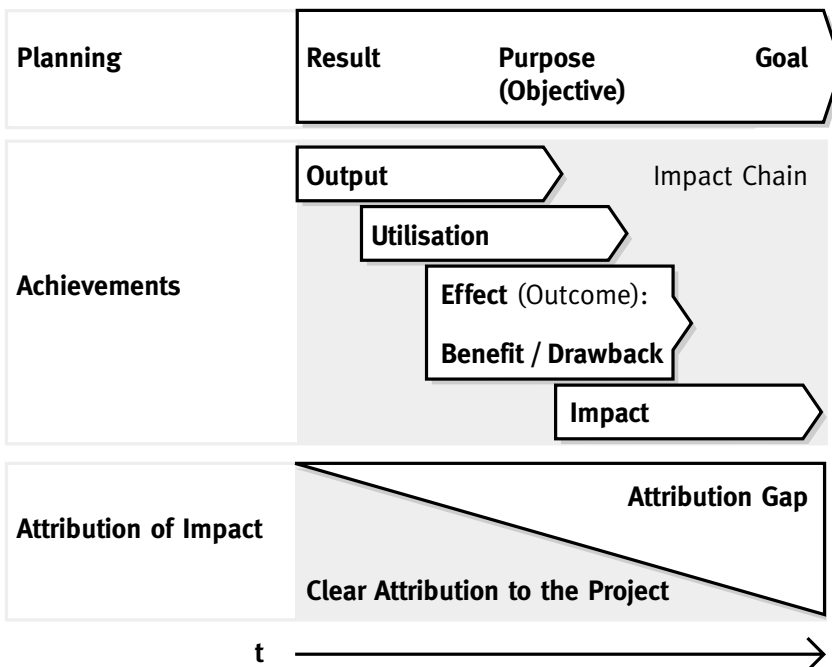


Figure 3: Impact chain and attribution gap (adapted from Herweg & Steiner 2002)

from the local (micro-) level to the macro level (policy, economy, etc.).

Similarly, a context consists of different stakeholders, such as local land users, women's groups, extension workers, trainers, teachers, health specialists, researchers, economists, policy-makers, etc. A single project can hardly operate at all levels and with all stakeholders. A selection must be made, depending on how wide or narrow its purpose and expected results are defined. To monitor and assess impacts, however, it is absolutely essential for a project to look beyond its concrete tasks and to consider a wider context that refers to the overall goal.

Indicator

A project context is highly complex, and in order to make planning, monitoring and evaluation manageable, complexity needs to be simplified. The components of a context and their interactions are symbolised by simple and measurable representations: the indicators. Principally, project cycle management applies indicators in two ways. «**Output (performance) indicators**» help to monitor and evaluate a project's efficiency. They are used to determine whether planned activities or expected results have been achieved within a given time and budget. **Impact indicators** are used to monitor and assess a project's effectiveness. They describe whether the outputs of a project had further implications, intended or unintended, positive or negative, on the context and its population.

Whether an indicator is considered a performance or an impact indicator depends on the formulation of the project goal, purpose and results. There is no clear break, but a gradual transition between these two types. For example: an agricultural project which helps to develop improved crop production systems may use the indicator «60 % of the farmers have increased their maize production by 20 % within 3 years» as a performance indicator to show its efficiency. But the same indicator also addresses some links in the impact chain, «utilisation» of the outputs (broad impact, area coverage), and «effect» (production increase). A single indicator can neither describe

the performance nor the impact of a project sufficiently. The challenge is, therefore, to select a **set of impact indicators** that covers all important aspects of the context and that is manageable with the means and capacity of a project.

Attribution Gap



During planning, a project and its stakeholders define an overall goal, project purpose, expected results, activities and inputs. Achieving outputs is the first responsibility of a project, and therefore, outputs can be related to the expected results relatively clearly. But beyond that, the impact chain (utilisation, effect, benefit, impact) needs time to develop, time during which the number of actors and their interactions increases. This makes it increasingly difficult to determine the impact, i.e. to attribute a change to a single activity or project. This is known as the «attribution gap». Even with costly investigations, a project can only narrow, but not close the attribution gap. Instead, a project has to find and show **plausible relations** between its actions and changes in the context, in order to keep in close touch with reality.

Part II

Understanding processes and mechanisms for achieving impacts



Explanation of Symbols

-  This arrow indicates factors positively influencing (=enhancing) impact.
-  This arrow indicates factors negatively influencing (=hindering) impact.


Understanding processes and mechanisms for achieving impacts

Preliminary remark: The following section is based on the case studies analysed, which can be found in Part IV, as well as on discussions derived from them.


5 Partnership principles


The case study analyses and workshop discussions clearly revealed that the 11 partnership principles of KFPE (cf. Box 1, Part I) are a fundamental prerequisite, not only to allow for mutually beneficial research partnerships, but also to generate desired impacts.

This particularly applies to the preparatory stage of a research partnership, where partners decide to work together. **This initial phase is crucial**, and in some instances a pilot phase is needed to create a solid partnership, and to pay due attention to principles 1–5: decide on the objectives together (1), build up mutual trust (2), share information and develop networks (3), share responsibility (4), and create transparency (5). This is especially true for collaboration among new partners. In most cases, however, neither funds nor sufficient time are made available for this decisive «period of courtship» when the terms of reference are elaborated, and issues such as (hidden) agendas, intellectual property rights, benefit sharing, ethical issues etc. are to be addressed.

Such a well-managed «incubation period»  helps to enhance mutual trust and increases inter-cultural understanding and competences. Readiness to appreciate differences among partners helps in developing a stimulating and beneficial research partnership culture.


A good research partnership culture positively influences the empowerment of all partners. It includes regular face-to-face meetings at each partner's location, and mutual respect, where all involved partners have an equal voice and where there is no dominating or paternalistic «expert mentality» – particularly of the Northern partner – which eventually induces an inferiority com-

plex in the «weaker» partner (see also Part III). Personal empathy  enhances mutual trust and greatly contributes to the success of a research partnership, particularly with regard to end-user benefits.

For good quality research and corresponding impacts, an agreed choice, and joint development of appropriate methodologies and/or approaches are required. In addition, the sharing of management tasks, such as ensuring local coordination by local partners, gives credibility and confidence to all parties . Where the necessary managerial skills and experience are missing, appropriate training and support has to be provided.


6 Factors enhancing or enabling impact (EF)

Plan for impact (EF-1)

 When designing a research project, the main – or even sole – focus is usually on the contribution to scientific discourse. In collaborative research projects, however, aspects related to other domains such as capacity building, and impacts beyond the scientific findings are equally important. But these are often neglected or completely overlooked. This is why a change of attitude among researchers (and research funding institutions) vis-à-vis these other domains is needed. Planning for impact requires active inclusion of all concerned stakeholders and joint thinking about desired and undesired project impacts. This requires a sound understanding of the planned project and its context, by all involved stakeholders, and should lead to development of a strategy to achieve impact (Probst et al. 2003). But unless the desired impacts are clearly spelled out, discussed, negotiated, agreed upon, planned for, and tackled at the outset, they are unlikely to materialise (i) and undesired impacts cannot be mitigated effectively (ii). This requires the development of a common language and understanding – a continuous and time consuming process which is often underestimated. Such a reflective


process also helps to avoid unrealistic expectations from different stakeholders. It thus helps prevent tensions and potential conflicts. Where the necessary managerial skills and experience are missing, appropriate training and support has to be provided.

Monitor and evaluate impact (EF-2)


 To secure the planned impacts, a monitoring and evaluation scheme looking beyond the outputs has to be developed. Corresponding indicators have to be identified, which reflect the interests, concerns, and expectations of all stakeholders. Impact monitoring helps to learn, reflect and readjust, to improve the performance of all stakeholders involved (Hagmann et al. 2002). The demands of farmers may differ from those of environmental interest groups or scientists. Stakeholders' criteria and perceptions will determine the pertinence of the evaluation and the eventual sustainability of the investigated program. Participatory impact assessment (PIA) allows these different views, judgements, and observations to come to the surface (Herweg 2002).

Remark: Planning for and monitoring of impact is equally important for donors in designing new funding schemes! All too often, funding agencies simply make a decision on funding, but do not take an active role in monitoring, course correction, and facilitation. For this to happen, it might be useful to set-up an independent steering board composed of Northern and Southern experts from the very outset (see e.g. Case Study 1).

Make specific, additional resources available (EF-3)


 Many collaborative research projects appear to be completely absorbed by designing and implementing planned research activities. If time, manpower, and financial resources are not allocated in the planning phase, very little effort can be directed to address the issue of impact. Specific human and managerial resources are therefore needed to facilitate and evaluate impacts within a project. Impacts should not be considered as a simple research by-product.

Commitment, competence, continuity and complementarity (EF-4)


 The case studies demonstrate the important role played by key persons and their respective institutions (see e.g. Case Studies 3, 7). The **commitment** and **competence** of involved research partners are crucial to the success of a partnership project. Equally, the **continuity** of this commitment and **complementarity** of the partners allow for long-term collaboration. These «C⁴» characteristics (see Case Study 1) are fundamental for mutually beneficial collaboration which makes it possible to achieve the desired impacts. It is therefore crucial to identify the appropriate and reliable individual and institutional partners («matching partner»), both in the North and the South.

Experience shows that a sound assessment of science and technology competence, and assessment of needs, can build a strong basis for successful research collaboration. As mentioned above, a pilot phase to create a solid partnership can also be helpful in identifying the appropriate partner.

Mobilise local support for local sustainability (EF-5)


 Both strong ownership/identification of the stakeholders concerned with the project and recognition of the project's merits help in generating local resources (financial or in kind) that can secure sustainability. This may encompass long-term support for responsible institutions and implementation of findings (see Case Study 7). It also requires close cooperation and full communication among all stakeholders, including particularly the decision-makers and the end-users (see Case Study 3).

Promote participatory, transdisciplinary, multi-level, multi-stakeholder and gender-sensitive approaches (EF-6)


 A transdisciplinary, multi-level, multi-stakeholder approach promoting participation is crucial in development-oriented research (Hurni et al. 2004, Probst et al. 2003). It allows non-scientific actors (e.g. farmers, women's groups) to become active partners in

the research project and process. This assures that local (traditional, non-formal, indigenous) knowledge is considered. Also, by jointly spelling out needs and processes, ownership is increased, which positively influences achievement of the desired impacts. The diversity of perspectives stemming from different scientific disciplines, as well as from different representatives of society, helps balance values and ideologies. This also includes gender aspects. Through this collaboration, a mutual learning process can be generated which may lead to a change in understanding, in attitude, and finally in behaviour (see e.g. Case Study 2)⁴. For this, direct contact of researchers with the field is essential (see e.g. Case Study 7).

Create mutual learning platforms (EF-7)


 The fact that partners of different (scientific, social, cultural etc.) backgrounds collaborate in a participatory way offers opportunity and also calls for the creation of mutual learning platforms. The exchange and discussions stimulated through such instruments foster mutual learning, inter-cultural understanding, and readiness for change. This contributes greatly to achieving desired impacts, not only with regard to domains A and C, but also B1 and B2 (see e.g. Case Studies 2, 3, 7).

Incentives (EF-8)

 To maintain or enhance the motivation and integrity of all persons involved (including project staff in particular), appropriate planning of incentives is crucial. Extra remuneration, free lunch/snacks, invitations to meetings

and events allowing researchers to go abroad or meet international peers, and support for joint publications, etc. are examples of effective incentives that foster committed and full-time dedication to research work (see e.g. Case Study 7). The long-term commitment of the funding agency plays a crucial role, too, making it possible to secure the long-term involvement of individuals and strengthen (local) partners, as opposed to short-term collaborative projects with uncertain follow-up.

Communication, dissemination and feedback strategy/skills (EF-9)

 Competence (skills) and efforts in communication and dissemination facilitate the achievement of desired impacts. This calls for a clear-cut communication and dissemination strategy before, during and after the project. Appropriate and regular information needs to be prepared, catering for the needs and levels of different stakeholder groups and audiences such as policy-makers, the research community, the development community, society at large, etc. (see e.g. Case Studies 2, 8) User commitment is the key, taking communication beyond mere dissemination. The Overseas Development Institute⁵ states, that «most ... literature ... takes for granted that improved communication of research in the international development field will contribute to poverty reduction. This means that almost no time is spent debating the question «Will improved communication of development research actually lead to poverty reduction?», while much time is spent providing recommendations in answer to a second question

⁴Such deep changes relate to the theory of action and learning and to concepts of learning such as single, double and triple loop learning (Argyris C. and Schön D. 1996).

«Single loop learning occurs when the intervention brings about changes in people's existing practices without significantly changing their vision, objectives, norms, or values...


In double loop learning, changes take place not only in existing practices, but also in underlying insights and principles. It strives to achieve collective knowledge and understanding by learning about the assumptions and goals behind established routines.

Triple loop learning occurs when essential underlying principles are questioned to the extent that it includes (re)designing the norms and protocols that govern single and double loop learning. The learners inquire into previous organisational learning experiences, to discover what they did that facilitated or inhibited single and double loop learning for improving their organisational learning» (Groot 2002:135).

⁵http://www.odi.org.uk/rapid/Projects/R0163/Comms_review_intro.html, for a recent literature review see also Hovland 2003

«How can you improve your communication?». This is the tragedy of unquestioned assumptions. Appropriate feedback mechanisms have to be developed in order to satisfy the expectations of the targeted end-users, etc.

Documentation (EF-10)


 Sound documentation and record keeping is a general requirement in any research project. Given the complexity arising from collaborative work, it is important to secure safe storage and maintenance of data and information collected during research. This can help to overcome delicate situations when changes in personnel occur that may cause discontinuity and hamper the success of a project (see e.g. Case Study 3).

Moreover, it is recommended to track the research process as a basis for mutual learning and self-evaluation with regard to improving collaboration in future.

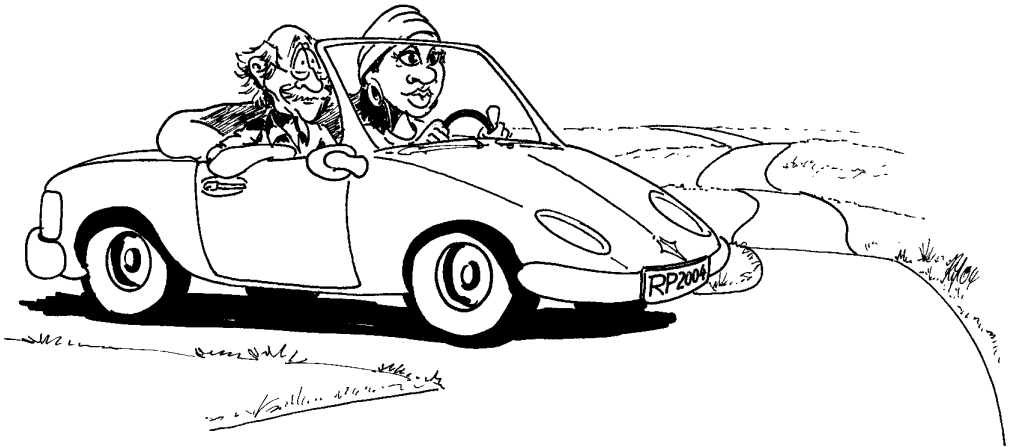
7 Factors hindering impact (HF)

If not appropriately taken into consideration, the above-mentioned enabling factors may turn into hindering factors. In addition, the following major hindering factors were identified, mainly during discussion in the various workshops:

Discontinuity (HF-1)

 Stop-and-go policies, abrupt changes, or discontinuity of support due, for instance, to policy changes or instability of governments, greatly hamper the success of a programme or project and its planned impact. Such insecurity also does not allow scientists to fully focus on research, as funds for the future must be sought permanently.

Should a premature end be unavoidable, appropriate measures must be foreseen in advance, e.g. in the form of a contract, in order to secure «decent termination» of the collaboration. This




Plan for impact; Monitor and evaluate impact; Make specific, additional resources available; Commitment, competence, continuity and complementarity; Mobilise local support for local sustainability; Promote participatory, transdisciplinary, multi-level, multi-stakeholder and gendersensitive approaches; Create mutual learning platforms; Incentives; Communication, dissemination and feedback strategy/skills; Documentation


Figure 4: Enabling factors of research partnerships (Cartoon by Karl Herweg 2004)

should address issues such as the period of notice, remunerations, equipment, intellectual property etc. Very few such legal regulations on the handling of collaborative research projects exist. For example, no legal recourse is possible in official national or international development cooperation commitments.

Inflexibility of funding (HF-2)


 Funding schemes with rigid disbursement regulations hinder meaningful and flexible use of funds for the project duration. Carrying over funds from one project year to the next should be allowed without causing budgetary reductions. This is particularly relevant in participatory research processes, which may take more time than foreseen in the original work-plan. Similarly, some adaptations between budget lines must be allowed for responding to emerging (sudden) needs.

Lack of internal information and communication (skills) (HF-3)

 Sound knowledge of the overall project frame, its aims, and intended impacts is a fundamental prerequisite for each involved scientist, students and leaders alike, to identify his/her possible or expected contribution. Frequently, researchers are not sufficiently aware of the research setting due to lack of internal communication. This hinders full understanding of the meaning of the research («Why this project?»), and hampers the impact in all four domains (knowledge/attitudes, capacity building, end-users, policy). In particular, this situation may arise when researchers in the South are contracted for a specific study without knowing the overall context of the research project. Efforts should be undertaken to maintain communication at all levels:

- between funding agencies and researchers
- between Northern and Southern researchers
- between research directors and staff (in the field).


Internal tensions and conflicts (HF-4)

 Tensions and conflicts may build up during any project, for example due to disparities in salary/remuneration between Northern and Southern partners and imbalanced power distribution or budget allocation between institutions. Some of these disparities are unavoidable and need to be discussed, clarified and made transparent (see Case Study 2). Likewise, tensions can occur between researchers participating in a North-South collaborative project, and those colleagues who do not. Compensation mechanisms, such as pooling some resources for the benefit of the whole institution, can ease the situation.


Cultural gaps may also cause misunderstandings, e.g. due to different perceptions regarding the handling of research processes. Regular face-to-face meetings at each partner's location provide opportunities for mutual learning and enhancing common understanding.

Students from the North frequently face a dilemma: their Northern supervisor expects them to play the role of a co-advisor in the field, which does not correspond to their hierarchical position. This creates unclear situations regarding roles and competences that affect the relationship between the partners (recognition). On the other hand, students (usually from South) benefiting from a stay abroad may come back with a higher level of competence than their (previous) superior, generating feelings of unease.

Prejudices and mindsets (HF-5)

 Given the lack of experience in participatory, inter- and transdisciplinary collaboration, researchers, donors and other stakeholders are reluctant to collaborate and hide behind prejudices and mindsets. Such attitudes hinder processes of change and mutual learning (see Case Studies 2, 7), hampering the achievement of desired impacts.

Overambitious project design (HF-6)

 The increasing competition for research funds frequently leads to overambitious project designs with overly optimistic timing, overloaded activity plans, etc. As a



Discontinuity; Inflexibility of funding; Lack of internal information and communication (skills); Internal tensions and conflicts; Prejudices and mindsets; Overambitious project design

Figure 5: Hindering factors of research partnerships (Cartoon by Karl Herweg 2004)

consequence, the promises made vis à vis funding agencies and the expectations raised among end-users cannot be fulfilled. This in turn leads to mutual deception and frustration, not only hampering successful project performance but often also leading to reduced commitment among all stakeholders involved, and even to negative impacts (see Case Studies 2, 3).

8 Conclusions

Analysis of the Case Studies (see Part IV) revealed that all collaborative research projects induced a certain number of impacts – achieved both in the South and the North – related to domain A, «New Knowledge and Changes in Attitude».

Elaboration and implementation of joint research projects also generates some capacity building effects (impact domain C). However, this is mainly limited to the individual level. Institutional capacity building, on the other hand, clearly

needs to be planned when the project is being designed, as it does not materialise simply as a positive side-effect of a joint research project. Moreover, substantial sustainable improvements of the overall research capacity in partner countries can only be achieved if both types of capacity building are jointly addressed.

Impacts at the end-user level (B1 «policy level» and B2 «societal level») were only identified in some of the case studies. This is not surprising, since impacts in this domain require more time and are usually apparent only after research has been completed. In cases where projects are still ongoing (e.g. Case Study 8) or where they have been recently terminated (e.g. Case Study 4), few or no impacts can be expected at the end-user level. Particular efforts are needed in order to achieve such impacts, and in general a participatory, multi-level approach enhances the chances of achieving them. The duration of a project or programme is another important factor that determines success in this domain.

Especially Case Studies with a longer duration achieved considerable impacts at the policy and societal levels (e.g. Case Studies 2, 3, 6, 7).

The effects and impacts identified in all Case Studies analysed, however, exceeded the expectations of the people involved in the analysis, and have had a wide influence. In particular, this includes some positive and unplanned impacts at the policy level in the North, where new support schemes developed (see Case Study 1). In another case (e.g. Case Study 7), the combination of several efforts to achieve desired impacts made the researchers involved and their institutions more attractive. This provided ideal conditions for reaching unexpected positive impacts and opened doors to future relevant research activities.

As a general rule, it was found that positive impacts at the end-user level are best achieved by participatory approaches, actively involving the target groups from the very outset of the project. In addition, it is crucial to plan for impacts while designing the project.

Specific recommendations concerning enhancement of desired impacts were formulated based on the analysis of case studies and the workshop discussions. These are summed up below.

9 Recommendations

Recommendations for funding institutions

- Pay due attention to impacts when designing new research partnership support schemes. Include the views or expectations of the target region/country.
- Make sure that the (desired/planned) impacts are monitored and their achievement facilitated. Possibly set up a steering or accompanying board composed of North and South experts, and allow for regular site visits.
- Secure continuity in policy support and funding; aim for long-term programmes and projects supporting both capacity building and sound research.
- Allow for pre-phase funding and sufficient time in order to set up the project proposal

and clarify issues such as goals, intentions, roles, expectations, motivations, etc.

- Be more flexible in budget allocation.

Recommendations for researchers and their institutions

- Plan for impact: discuss, negotiate, and strive for impacts.
- Monitor and evaluate the (planned/desired) impacts; identify indicators.
- Select the right partner(s) who show(s) commitment, competence, continuity, and complementarity (C⁴); check these characteristics during the pre-phase stage («incubation period»).
- Create mutual learning platforms.
- Secure internal information, communication, and documentation.
- Aim for local sustainability and try to generate local resources (financial or kind).
- Address internal tensions and conflicts openly as normal features of an evolving partnership relation.

Recommendations addressed to both funding institutions and the research community

- Make specific, additional resources available for planning and assessing impact (finance, time, personnel).
- Promote participatory, transdisciplinary, multi-level multi-stakeholder approaches. Involve stakeholders right from the start in the design, implementation and interpretation of the project and its intended impacts.
- Create incentives (satisfactory salaries, mutual visits, etc.) and strive for an «enabling environment» to promote a fruitful research culture that also enhances the inter-cultural competences of all partners and institutions involved.
- Develop a communication and dissemination strategy (feedback events). Make funds available for its implementation.

Box 4: Recommendations addressed to funding institutions and researchers

Part III

Towards more balanced partnerships



Towards more balanced partnerships

10 Strengths of research partnerships

North-South research partnerships are often perceived as providing the potential for a number of added values, compared to non-collaborative research (RAWOO 2001, KFPE 2001). If carried out in an ideal way, «research partnerships enable exchange and mutual learning on the basis of complementary skills and knowledge, and therefore lead to an increased quality of research as well as to building of research capacity in the South and in the North» (KFPE 2001: 37–38).

Some of the points mentioned in KFPE 2001 were particularly stressed during the IAS. These included: a) mutual learning opportunities, b) mutual opportunities for training, c) mutual cultural understanding, d) complementarities of expertise, and e) prevention of brain drain (provided appropriate measures are taken to secure working opportunities in the country of origin).

In addition, the partnership scheme was considered as a «door opener» whose comparative advantages were highlighted during the IAS. These include primarily:

- Increased visibility and attractiveness – the so-called «lighthouse effect» – in particular for local actors, increasing their influence and improving their access to new resources (funding schemes, infrastructure, contacts, information etc.)
- Better access to information
- Better access to new fields of research
- Enhanced radius of contacts and interaction, reducing scientific isolation, enhancing confidence, facilitating access to international scientific outreach e.g. in peer-reviewed journals

- Easier access to communities and policy-makers
- Better opportunities to give voice to delicate issues, in particular through the external («independent») partner.

11 Shortcomings of research partnerships

In reality research partnerships also have shadowy sides. The potential shortcomings include in particular the issue of asymmetries or unbalanced partnerships (see below), e.g. when the South merely presents a «laboratory for the North» providing interesting scientific data⁶. Due to the – often inevitably – unbalanced power relation with regard to funding and scientific merit, the dominating scientific paradigm from the North is frequently imposed upon North-South partnerships. It inhibits the application and further development of approaches used by the partners.

12 Parameters affecting the nature of research partnerships

Analysis and discussions of the various case studies led to a debate on (i) how research partnerships could be classified to improve our understanding of factors that influence the partnership in a positive way, (ii) which kinds of relationships among partners lead to the best results, effects, outputs, or impacts, and (iii) which scheme has the highest ethical standard. The wide spectrum of possible types of research partnerships⁷ and different degrees of asymmetries can be located between the two extremes of

⁶A survey of US-based researchers revealed that they are significantly more motivated to collaborate with DCs on issues related to seismology, geodynamics, botany, and biology, mainly in order to obtain assistance in doing field work, gain access to information and materials, and benefit from local knowledge (Wagner et al., 2001). Such partnerships hardly help to build local research capacities.

⁷These can include specific collaborations where e.g. the main responsibility for and the control of the project is left in the hand of the Southern researchers and where Northern peers only provide backstopping; this kind of collaboration can be very cost effective when limited to milestones (design, mid-term review etc.) as shown in Case Study 4.



Figure 6: Unbalanced partnership (Cartoon by Karl Herweg 2004)

balanced partnerships and unbalanced partnerships⁸ (see Figure 6). With regard to an ideal situation, the notion of «dynamic equilibrium» emerged. This reflects the different types and stages of a partnership relation, with the ultimate goal of achieving balanced collaboration where complementary competences are ideally combined and used. With regard to the management of such dynamic partnerships, new tools stemming from process management should be used.

To characterise research partnerships, a wide spectrum of parameters has to be considered. Some parameters of a project or programme can be considered as being more or less independ-

ent or having no influence on the degree of balance (but of course not on the degree of impact!). This is the case for:

- Duration (short-term, long-term)⁹
- Scale (global, regional, national, local)
- Topic or issue addressed¹⁰
- Type of research (e.g. applied, academic, basic, fundamental, action-oriented, development, policy, strategic).

Parameters I to X influence the degree of balance or imbalance. Addressing the related questions will help in detecting and addressing asymmetries; the check-list below aims to stimulate reflection on all involved partners (including e.g. local stakeholders).

⁸An «extreme» example relates to the encountered «contract culture», where researchers in the South are not always considered as partners but merely as data collectors. In such situations the modalities should be negotiated and jointly agreed beforehand (e.g. utilisation of data). The socio-political interpretation stemming from such contracted research should be mutually agreed, too, and ideologies avoided. Moreover, the contractors should be «well equipped» and have the competence needed for the research.

⁹Obviously the duration and funds made available in a research partnership have an influence on the process of a partnership relation but not on the issue of balance as such.

¹⁰This includes its potential sensitivity (e.g. with regard to economic aspects, intellectual property rights; socio-political sensitivity: potential for empowerment and depowerment)

13 Parameters influencing the balance

I Initiative

- Who has the original idea?
- Who designs the project?
- Who sets the agenda?
- Who makes the conceptual inputs?
- Who selects and who is being selected?
- ...

II Interests

- Who has what kind of expectations in the project?
- Who has what kind of objectives in the project?
- Who has what kind of stake in the project?
- Are there any hidden intentions or agendas to be considered?
- ...

III Power

Money/funds

- Who generates the funds?
- Who negotiates with donors?
- Who decides on the use of funds? (financial/administrative competence)
- How transparent is the allocation and use of funds? (budgeting, accounting)
- How are accountability work and responsibility shared?

Methodology/competence

- Who has the scientific and methodological competence?
- Who decides about the methodological approach?
- Who has the contextual competence? (contact to the ground)

Role/position

- Who is involved and with what kind of role? (see also below)
- Who has what hierarchical position? (including e.g. charisma)
- Who has the negotiating power to handle different perceptions, conflicts, or differences?

- Who has to deliver what kinds of products to whom and by when?
- Who has what kind of prestige vis-a-vis whom? (notion or attitude of «expert»)
- ...

IV Operational responsibility and duties

- Who has the lead/responsibility for what?
- Who is responsible for management and coordination?
- Who has the authority to synthesise results/information/data?
- Who is responsible for supervision?
- Who invests how much time for what kind of work? (conceptual thinking, field work, synthesis, discussions, etc.)
- Who does the field work?
- Who collects what kind of data?
- ...

V Interaction

- Where and when do meetings take place?
- Who takes part in what kind of meetings? (steering, planning, reporting, ...)
- Who decides about the means of interactions? (types, timing, participation, ...)
- Who goes to the field and interacts with local stakeholders?
- Who meets official representatives, decision-makers, donors, etc.?
- ...

VI Support

- Who has back-stopping tasks?
- Who provides technical support?
- Who has access to what kind of infrastructure and technology?
- Who provides support for training? (e.g. in the field, on the job, in the classroom)
- ...

VII Information

- Who collects what kinds of information?
- Who generates new information?
- Where is information stored?
- Who has access to what kind of information?

- Who has control over information?
- How is information disseminated or/and exchanged?
- Who makes what kind of use of the information/data provided?
- ...

VIII Capacity building¹¹

- Who - at an individual level - can improve his/her capacity? (knowledge, skills, empowerment)
- Who - at an institutional level - can improve its capacity? (structural aspects, empowerment)
- ...

IX Benefits

- Who benefits in what way? (e.g. participation in conferences, publications, expertise/mandates, MSc/PhD titles, scientific and societal empowerment, applicable results for end-users, etc.)
- Who gets the scientific credit? (e.g. publications, awards, invitations to conferences etc.)
- How are benefits shared? (including aspects IPRs, commercial profits, publications)
- ...

X Varia

- Is there a difference in pace? How is this issue dealt with?
- How is the issue of gender being addressed as a whole?
- ...

Box 5: Parameters influencing the balance of partnerships

14 Designing South-North research partnerships – the RAWOO experience

by Paul Smith and Jaap Bijl, Members of RAWOO¹²

Since the late 1990s, the Netherlands Development Assistance Research Council, better known as RAWOO, has been engaged in designing a new type of research partnership involving partners from developing countries and the Netherlands. The programme design activities were guided by three basic objectives:

- creating developing country ownership of (South-North) research programmes;
- making the agenda responsive to pressing development needs by involving major stakeholders in the process of setting the national research agenda and in programme development;
- promoting genuine collaboration and partnership by giving an equal say to Southern and Northern partners in programme governance and management.

Pursuing these objectives entailed an interactive process of building bridges between stakeholders in research, government and society at large, between scientific disciplines, and between South and North. The following steps were taken in the process of designing the partnership programmes:

- choosing a broad area or issue, for example health or biodiversity, for programme-development; in this preliminary phase priorities were set by the RAWOO council as part of its mandate to identify research areas that should get priority from the viewpoint of development and poverty reduction (the members of RAWOO come from developing countries and the Netherlands);

¹¹ «Capacity-building should be mentioned as a specific aim of the partnership, and the work plan should describe the concrete activities for this purpose In fact, capacity-strengthening needs to be addressed at three levels: at the level of the individual, at the level of the institutions, and at the level of the national science system and the government» (RAWOO 2001:27)

¹² More information can be found on the RAWOO website: www.rawoo.nl; more specific information on the Ghana and Philippines partnership programmes can be found on www.partnership-programmes.org

- selecting the developing country to be involved in the programme-development exercise for the specific research area chosen;
- establishing a national working group representing the key stakeholders to assume responsibility for directing the programme-design activities, and selecting a local organization to support and facilitate these activities;
- conducting a national agenda-setting workshop bringing together researchers, policy-makers, practitioners and representatives of NGOs and community-based organizations;
- conducting a programme development workshop in the Netherlands in order to present the national agenda to the Dutch research community and assess the possibilities of matching the needs expressed in the agenda with the knowledge and expertise available in the Netherlands;
- drawing up a framework for a joint research programme in terms of content, process and structure/organization;
- submitting the programme framework to the Dutch government through RAWOO;
- upon receiving a go-ahead signal from the Dutch government, elaborating the programme framework into a concrete proposal for a joint research programme and submitting it to the funding agency.

Putting this approach into practice in Ghana (in the field of health research) and the Philippines (in the field of biodiversity research) has given the RAWOO the opportunity to learn from actual experiences on the ground and to assess the complexities involved in the process. The lessons the Council learned include the following:

- creating developing country ownership of research programmes entails a shift of leadership responsibilities, decision-making power and resources from Northern to Southern partners;
- if asymmetries between North and South are recognized and properly addressed, ways can be found to balance the principle of ownership with the principle of partnership. But it

is necessary not to be naive about this. The North needs to release control and accept considerable autonomy on the part of the Southern partner;

- a broadly-based consultative process, however painstaking and time-consuming it may be, should precede any programme;
- helping developing countries to initiate dialogue among local scholars, government policy-makers and representatives of civil society on specific research needs, sets off a process of discussing change and innovation and creates a learning environment and network for all the major actors involved;
- strengthening the capacity for socially relevant research should be a specific aim of the partnership.

Part IV



Case studies



Explanation of Symbols

The following short descriptions of case studies analysed have been compiled without a specific rigid framework imposed on the various authors.

In order to facilitate the attribution and visibility of

- (i) factors positively (= enhancing ) or negatively influencing (= hindering ) impacts, or
- (ii) the domains affected **A B1 B2 C**, various symbols are used below.

Case Study 1: Swiss Priority Programme Environment (SPP-E), Module 7 Environment & Development – A Northern Perspective¹³


by Daniel Maselli, former research desk officer at SDC and member of the SPP-E Expert Group

the desired or intended impacts within the presented case study analysis.

General context

The present case study attempts to assess the various impacts of the so-called «Module 7 Environment & Development» (Module 7), a component of the Swiss Priority Programme «Environment (SPP-E)» which operated from 1994 to 2000 with some activities extending to 2001. Module 7 was composed of a variety of research partnerships jointly carried out by Swiss researchers and their counterparts in the South. During the first phase (1994–1996) 18 projects were supported while during the second phase (1996–2000) this number was reduced to 14. The SPP-E was led by a Swiss Coordinator, affiliated with the Swiss National Science Foundation (SNSF), steered by an international Expert Group where both SNSF and the Swiss Agency for Development and Cooperation (SDC) were represented, and an additional «Accompanying Group» of experts for Module 7. The goals of Module 7 were:

- To test the joint venture between the SNSF and the SDC regarding an innovative funding scheme;
- To motivate and increase the number of Swiss researchers and research institutions willing to carry out research in partnership with counterparts in DC;
- To help build research capacity mainly in the partner countries – foremost at the individual and only to a limited degree at the institutional level;
- To help solve pressing problems in the partner countries related to environmental issues (e.g. solid waste management, drinking water supply, conflicts over natural resources etc.).

No thought was given to impact in the original design scheme. No pre-defined indicators existed . This also made it difficult to assess

Evaluation of Module 7

Module 7 was externally evaluated in 2000 under a mandate from SDC. The evaluation tackled the following three main questions in a participatory evaluation process:

- Was the concept / idea of North-South research partnerships meaningful?
- Did the strategy take into account all the needs of researchers in DC with respect to the development of research capacity?
- What style of project management produces the best yield with regard to research capacity and scientific results?

The re-assessment of Module 7 through the IAS of the KFPE focused specifically on intended and unintended impacts using possible indicators jointly elaborated by the IAS Working Group.

The assessment consisted of a series of semi-structured interviews carried out with various key persons within the SPP-E in general and Module 7 in particular. In addition, a limited number of documents were consulted. The «Rural Livelihoods Strategy» Project (RLS-Project; see Case Study 2) from India and the «Intermediate City» Project (IMC-Project, see Case Study 3) in Pakistan were chosen as case studies to be analysed in greater depth, jointly with Southern project partners. Given the various roles of the interviewed persons and their institutional affiliations, the character of the present analysis is one of **critical self-evaluation**. To better understand and cross-check statements about the impact at end-user level, external actors – in particular target groups such as local communities – should have been included. However, this was only done in a limited way, mainly when elaborating the Southern partners (see Case Study 2).

¹³For the Southern perspective see Case Study 2.

Situation prior to Module 7 in Switzerland

Prior to Module 7, North-South collaborative research was virtually non-existent, in particular for the SNSF, but also for the Swiss research community in general. It played only a very marginal role and was completely unknown to many. Consequently, Module 7 – a programme component of the SPP-E created as an off-spring of the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro 1992 – was from its very beginning a (politically) highly contested module within the SPP-E. It was actually cancelled due to lack of money, together with another module of the SPP-E, before it even started. Due to considerable political pressure and thanks to the innovative commitment of the SDC – which entered a pioneering joint venture with the SNSF, agreeing to cover all the expenses of the Southern partners – and to the permanent advocacy of a few influential individuals – Module 7 was finally launched in 1994, two years later than the other modules of the SPP-E.

Prevailing prejudices

North-South collaborative research initially suffered from a double critical mindset or prejudice in Switzerland:

from the perspective of «hard core» scientists and their institutions

«North-South collaborative research is not really research, it is of lower quality» (3rd class research); «the partners lack the intellectual capacity required to really contribute to good research», «North-South collaborative research is too development- and application- oriented and hence of little or no value for the scientific community and discourse as such»;

from the perspective of development practitioners

«North-South collaborative research is too academic, too expensive and of little use if not completely useless for development cooperation»; «North-South collaborative research is being promoted mainly to contribute to the survival of the Swiss research institutions involved but doesn't help improve development cooperation».

General role and importance of Module 7 for Switzerland

In retrospect, Module 7 has mainly created and offered a platform to discuss and become acquainted with collaborative research as a possible form of scientific cooperation with the South. Concretely, this led or contributed to

- the «forced» handling of project proposals by the SPP-E Expert Group, consisting of traditional researchers and representatives of various institutions – in particular the conservative SNSF and the SDC – as well as international experts included in the Expert Group **A**
- the creation of a special complementary Advisory Group for Module 7 by the funding organisation to handle this unconventional programme **A B1**
- controversial discussions among members of the Expert Group and with the financing institutions about the selection and evaluation criteria **A**
- tensions due to differing assessments and contradictory expectations of the two funding institutions (SNSF and SDC) with regard to project proposals which induced a mutual learning and negotiation process **A B1**
- recognition of the need for a Swiss Commission for Research Partnerships with Developing Countries (KFPE), funded in 1994 **B1**
- the organisation of two international Conferences by the KFPE on research partnerships in Switzerland (Berne 1996 and 2000), and development of the «11 principles for research partnerships with developing countries» (1998) which were widely disseminated in and outside Switzerland; these activities increased the awareness regarding the importance of research in developing and transition countries (particularly among administrative entities responsible for science), **B1** and
- creation and implementation of a new, additional instrument for collaborative research between SDC and SNSF (new financial venture) **B1**.

These processes and efforts finally led to a certain recognition of the pioneering efforts made in collaborative research in Switzerland as well as outside the country. This international recognition in turn influenced the Swiss research community as well as the Swiss research policy and funding community. Both groups started to become more sensitive to and aware of such scientific collaborations, as well as their scientific and development potential. This led to a change of attitude and to a partial change of behaviour among people closely confronted with such kinds of projects or programmes. **B1**

Assessment of the post-Module 7 situation in Switzerland

North-South collaborative research is more widely known and better accepted in Switzerland nowadays, particularly within some units of the SNSF and the Swiss Science Agency (SSA), compared to 10 to 15 years ago. Nevertheless, it continues to play a marginal role in general. However, the creation of an additional new «regular» programme at the SNSF with the joint support of SDC **B1** is a clear indication of increased scientific recognition and/or the increased importance assigned to such research (see also SDC research policy 2002).

The surprising success represented by creation of a National Centre of Competence in Research (NCCR) North-South against all odds in 2001 so far represents the climax of this increasing recognition **B1**. The fact that core issues which challenge DC in particular have remained at the top of the international (political) agenda and have been dealt with at a series of United Nations conferences (e.g. Beijing, Copenhagen, Istanbul etc.) probably facilitated the political support necessary in Switzerland to make such a proposal acceptable to the concerned decision makers, who were under considerable pressure from many competing scientific domains to choose economically much more attractive NCCRs.

Main findings and conclusions by stakeholder groups

Impacts on northern researchers / research institutions **A**

Some members of the Module 7 Expert Group and parties within the SNSF have changed their negative attitude with regard to North-South collaborative research, for example by realising that partners in developing countries do have the intellectual capacity to participate in research activities, and that this kind of research is often carried out under very difficult and demanding situations and working conditions.

Impacts on southern researchers / research institutions **A**

Given that Swiss project leaders repeatedly went to the field for both regular visits and their own field work, some high-ranking Southern partners were forced or motivated to go to the field (again) themselves. This in turn has encouraged or «forced» their collaborators (e.g. MSc or PhD candidates) to go to the field as well in order to encounter reality. Through this process «outdoor research» was made acceptable (again). This exposure to field reality has greatly contributed to better personal understanding of the real-life situation of concerned populations on the part of researchers who were used to doing research «on» and «for» but not «with» the population. Through the introduction of participatory, transdisciplinary methodologies by Swiss partners the end-users were given an active role in the research. The Southern researchers were thus stimulated to start doing research «with» the target groups.

Impacts on policy and decision makers B1

Module 7 has helped to raise awareness of such (development oriented collaborative) research. It has strengthened the role and the importance of the KFPE. Together with the increased importance of collaborative research demonstrated at the international level, to tackle issues in the South and East, this paved the way to the stage of having enough weight to be successful in the competition for new NCCRs.

Impacts on development practitioners B2

This is probably where the least impact has been achieved so far in Switzerland. This is most likely due to a clearly insufficient and non-adequate way of communication and valorisation of the research findings relevant to development practice.

It is, however, remarkable that the impact seems to be much greater in the South, where in various cases representatives of administrations, governments, local NGOs and even international organisations have acknowledged and even adopted or incorporated some of the findings and achievements of certain projects. This was particularly the case for the project in Jinja (Uganda)¹⁴ where the World Bank became interested in repeating the approach around Lake Victoria.

Shortcomings impeding (better) impact

Analysis of the case study has shown that in most instances no impacts had been planned at all. However, in those cases where impacts occurred or could have occurred, some conclusions regarding best practices can be drawn.

Delayed or missing publications ↙

Example: The final project publication of the «Rural Livelihood Strategies» (RLS) project (see Case Study 2) with the so-called «9-Square Mandala» as its core product – of use as a powerful working tool to improve the design and implementation of rural development program-

mes and projects – appeared only years after the termination of the project (2004 instead of 2001). The time elapsed must be considered a loss, since timely publication could have triggered potential benefits by making conclusions, findings, etc. available to a broader concerned audience.

Missing or insufficient (rudimentary) communication ↙

Example: Much progress was made in methodological approaches to tackling the various environmental issues dealt with by the various projects of Module 7. However, most of these were never properly put down on paper and never communicated, and hence never made accessible to others. Besides preventing further impacts through their application, this also led to the general impression that only little or no progress has been achieved at all.

Lack of interest in field contact and field research ↙


It appears that many Southern research partners at first resisted going to the field, pretending to know reality well enough or not to have enough time for such «inferior» activities. Surprisingly, this was also true in a few cases for the formal project leaders from Switzerland, who never took the necessary time to pay the research area(s) in the South a single visit! This hampered mutual commitment and shed a strange light on the notion of collaborative research on the part of Northern project leaders.




Enabling factors, favourable circumstances and best practices

From this case study, a set of four crucial enabling factors or favourable circumstances can be derived, summarised in the formula C⁴:

- **Commitment:** Projects that could build on strong personal, individual and also strong institutional commitment proved capable of


¹⁴«Use and Protection of Water Resources in Lake Victoria through Sustainable Management of Wetland-Ecotones' – project carried out by the University of Zurich (Switzerland) and the Fisheries Research Institute (FIRI) belonging to the National Agricultural Research Organisation (NARO) of Uganda.



generating more positive impacts; most of the people in these projects were open and willing to go beyond the traditional tasks of their research activities, thus actively encouraging a dialogue with concerned policymakers that paved the way for subsequent impact(s). 

- **Continuity:** Projects where the key persons remained for the duration of the project appeared to generate more positive impacts, as their networks and spheres of influence, through the process of confidence building, positively affected the generation of desired impacts. 
- **Competence:** Despite the scepticism of various stakeholder groups (end-users as well as policymakers or development practitioners) with regard to the usefulness of research for their concerns, convincing field competence among researchers who stayed in the field for a long time and had direct contact with the local population and authorities triggered a change in attitude and opened doors for impacts in many instances. 
- **Complementarity:** Cases in which the involved partners could build on and make use of complementary capacities or competences proved to be most fruitful when working in a context of applied and development-oriented research. Example: researchers contributed their conceptual approaches, NGOs contributed through their excellent contacts and trust anchored in the local population, and administrators used their contacts to influential policymakers. This complementarity was finally acknowledged by all the involved partners, in particular by the end-users and the researchers themselves. It had a positive influence on desired impacts. 

When surveying all Module 7 projects, a number of **best practices or enabling factors** positively affecting the desired impacts can be derived. These consist in particular of:


- **Participatory research approach:** transdisciplinary, multi-level multi-stakeholder approaches facilitate the trickle-down effect of the research process, generating new under-







standings for all those actively involved. It then becomes less difficult to convince concerned decision makers or directly affected stakeholder groups to adopt measures for improving a certain situation. 

- **High communication and intercultural competence:** the communication skills needed to successfully apply such a demanding research approach considerably influence the success of the project, not only with regard to scientific results but to all other aspects – impacts in particular. A flair for promoting discussion among stakeholder groups that have never met before, raising relevant questions in a participatory way, knowing how to go about touching on delicate issues and how to support solution-finding in a group process, are key elements for improved impacts at all levels. 
- **Documentation and sound knowledge management:** the collection, analysis and storage of information of various kinds and its active use or dissemination plays a crucial role in the success of a partnership project in which many persons and institutions collaborate. This aspect is often neglected and not taken into consideration when preparing the budget. Sound knowledge management and documentation may also help in overcoming eventual discontinuities in personnel over the lifetime of a project or programme. 

Lessons learned

The following lessons learned concern both involved researchers and responsible donors or funding institutions, since many of the activities proposed should be performed jointly, at least in part.

- **More direct contact with field reality:** All persons actively involved and responsible in particular for judging and evaluating North-South research partnerships should (regularly) get in direct contact with the relevant project or programme locations, in order to become familiar with the real, concrete context(s). 

- Better documentation, reporting and communication: Each programme or project must jointly develop an appropriate reporting, documentation and communication strategy, including an action plan that is as proactive and transparent as possible – not least to avoid unnecessary tensions or conflicts. 
- For each new collaborative programme or project an appropriate monitoring and evaluation (M&E) system should be jointly elaborated at an early stage, to allow assessment of work in progress and to take corrective measures if necessary. There must be a strong commitment to make proper use of this M&E by all concerned. 
- For any new programme or project, the desired or expected impacts should be discussed, defined and agreed upon at a very early stage; corresponding meaningful indicators have to be identified, and an appropriate evaluation of the impacts must be secured. 
- In order to create a favourable environment contributing to the achievement of the targeted impacts, the critical persons and institutions involved in a collaborative programme or project should clearly state their commitment to remain affiliated with the activity for a minimum period of time. This might be secured through clear and negotiated ToRs and corresponding contracts. 
- Each programme or project has to make sure that sufficient and appropriate feedback is given to the stakeholders involved in the research activity; a modest annual budget for some concrete development support to the local communities involved could be planned and put at their disposal for immediate actions to satisfy expectations for immediate support. 
- In each programme or project the requested human capacities and the necessary time for administration, coordination and management have to be foreseen; these corresponding tasks should be shared equally among the partners whenever possible. 

Based on experience in the SPP-E, it is best to include individual capacity building schemes in the goal of institutional capacity building, in order to be more efficient and cost effective. This means that one and the same funding scheme should tackle various domains simultaneously, thus increasing the impact and fostering the sustainability of capacity building.

Case Study 2: Indo-Swiss Research Partnership Project (SPP-E / Module 7) – A Southern Perspective

by Smita Premchander¹⁵, Southern research partner in the project and Chairperson, Sampark (compiled by Jacqueline Schmid)

Background and objectives of the research

In the early 1990s, a research effort emerged from a sectoral strategy formulated by the Swiss Agency for Development and Cooperation (SDC) for sustainable land-use in semi-arid areas in India. This research project, called «Indo-Swiss Research Project on Rural Livelihood Systems and Sustainable Natural Resource Management in Semi-arid Areas of India» (hereafter referred to as the RLS-Project), was started with the aim of shaping SDC's development assistance so as to contribute significantly and effectively to India's own development efforts in land-use improvement¹⁶. The goal of the applied research was to design and implement innovative development approaches that would strengthen the self-help capacity of farm households and communities for more sustainable management of natural resources. Specific objectives included: building capacities for interdisciplinary research and training, providing research findings on rural livelihood systems (RLS), and developing and testing participatory research methods. This research was conducted from 1994 to 1999 in the semi-arid regions of Gujarat and Karnataka, by three partner institutions in India, and one partner organisation in Switzerland¹⁷.

Topics studied

- Emerging rural leadership and sustainable management of natural resources
- Understanding livelihoods as complex wholes
- Reality and reflections: gender and leadership for sustainable natural resource management
- Role of non-economic motivation
- From «marey» to market: changing faces of rural livelihood systems
- The threshing floor disappears: RLS system in transition
- Appropriateness of agricultural technologies
- The «real realities» of life: exploring RLS from a gender perspective
- Core issues in the agrarian economy and society of Karnataka
- Rural-urban linkages
- Cross-ploughed field
- Participatory research on rural livelihood: sharing research findings for local empowerment

Phases of research

During the exploratory phase of the research project (1994–1996), the involved institutions together designed a research outline to facilitate better understanding of farmer's decision-making processes regarding the use of natural resources in the context of their livelihood systems.

¹⁵http://www.kfpe.ch/download/Paper_Smita_Cairo.pdf

¹⁶The research was funded by the Swiss National Science Foundation (under Module 7: Environment and Development of the Priority Programme «Environment»), jointly with the Swiss Agency for Development and Cooperation (SDC)

¹⁷Sampark is an NGO working for poverty alleviation and women's empowerment based in Bangalore.

The Institute for Social and Economic Change (ISEC) is an academic institution based in Bangalore. The Institute of Rural Management, Anand (IRMA) is an academic organisation, based in Gujarat.

The Post-Graduate Programme on Developing Countries (NADEL) is a unit of the Swiss Federal Institute of Technology, Zurich (ETHZ), Switzerland.

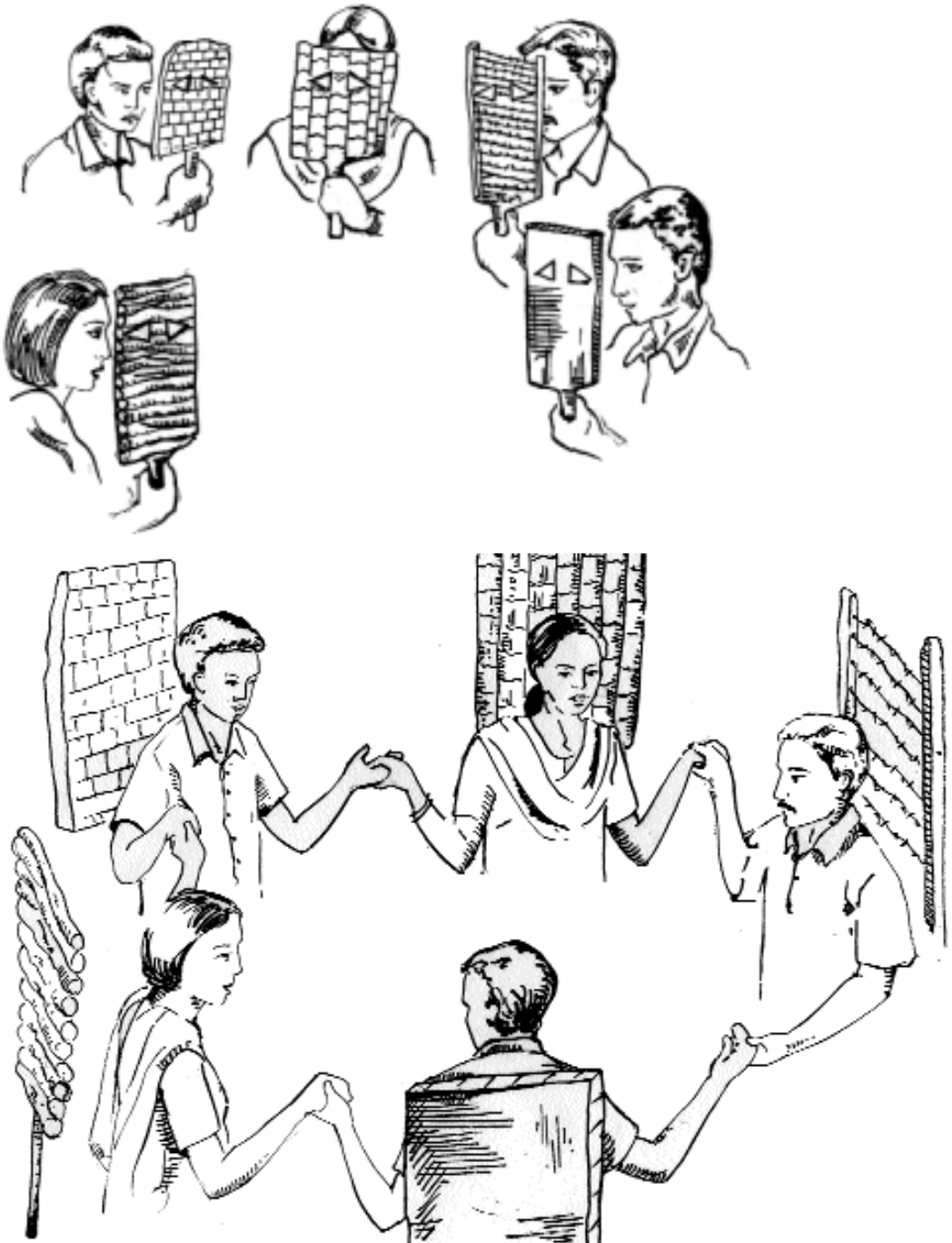



Figure 6: A pronounced expert attitude acts as a barrier in communication and collaboration. Only if going beyond such an attitude, true partnerships can develop and research and action become more effective. (Ramesh Kalkur, Sampark 2001)

During the field research phase (1996–1999), various scientists conducted research on different aspects of the livelihood systems. All partners used a participatory and gender sensitive approach. 


Impacts seen from a Southern perspective



The project came to an end in 1999, and thus offers the opportunity of assessing its impact after some time has elapsed. Impacts were analysed using the impact matrix developed by the IAS Working Group, and extended to an **additional Domain D** dealing with more general aspects of partnerships.

The impact of the RLS project is described in the following paragraphs, based on discussions with the Southern partners and documents provided by them.


Knowledge and attitudes

Conceptual approaches such as the «Nine Square Mandala Framework» developed in the RLS project¹⁸ are currently used by NGOs and development agencies (SDC in India) for livelihood assessments. This framework has now found flexible use, ranging from understanding livelihood systems, selecting beneficiaries, identifying inputs and monitoring indicators, to the analysis of impacts of development interventions. This, and other conceptual approaches developed through new knowledge, have an impact on development interventions.

Change of attitudes at the level of the researchers: All researchers in the RLS project felt that they had developed greater confidence in micro and ground (field) level research, and had established clearly for themselves the value of qualitative research and participatory methods, giving credence to people's perceptions, practices and indigenous knowledge . Attitudes towards gender relations shifted a little, but conviction about the value of gender-sensitive

research was unanimous, reflected in the fact that many researchers did not incorporate gender aspects in their research . The institutions involved more explicitly recognized the value of people-oriented research and the need for dissemination of results to concerned communities, as well as a wider audience of researchers, development practitioners and policymakers .

Capacity building

In addition to the research activities as such, national and international workshops, and training courses took place. Interaction with Swiss partners continued through seminars and lecture-sessions by them as well as visits by Swiss students to Indian institutions . Also, individual and institutional capacity building was valorised through publications in external journals and books (9), and in-house publications (19).

Individual capacity building

All researchers involved in the project felt that it had significantly enhanced their capacities to do participatory, inter-disciplinary and collaborative research. They had learned to conduct high-level qualitative research, and had also learned about research methods and concept development. They stated that they had built up capacities to do independent research. Many field researchers moved on to become independent heads of research projects, and two completed doctoral programmes during the project. Their capacities were recognized by external organizations as well as their own institutions, through invitations to design programmes and teach in fields concerned with participatory research and rural livelihood systems, e.g. by organizations such as SDC in India, the World Bank, DANIDA, DFID and the Indian government.

¹⁸A conceptual framework for the integrated and holistic approach to understanding RLS, which was developed in the RLS project

Institutional capacity building and impact on teaching methods **C**

The research partnership had an impact on teaching methods through the inclusion of Sustainable Rural Livelihood Systems in teaching programmes, including practical experience and field-visits to research sites and NGOs.

Institution building in the three institutions involved in the RLS project was not uniform. Nevertheless, each of them made remarkable changes including: Developing expertise in livelihoods analysis, community organisation, leadership and income generation. The three institutions received recognition for this in the form of training and other project support assignments from the government and donors, in large projects that benefit a large segment of the poor. New research was initiated on the topics selected. Some institutional procedures were relaxed, as the project funding was established under a separate head. This became the practice for collaboration in other projects at the institution. Research projects are now designed to meet research needs rather than the funding agency's proposal. A development agenda including expected impacts was developed by one of the institutions. International recognition led to stronger involvement in aid initiatives.

Policy level impact **B1**

- Training and advisory support by IRMA in the state of Andhra Pradesh, where strategies for improvement of livelihoods are now planned in a holistic manner. This has a positive influence on planning and implementing major programmes for the poor.
- Contribution by Sampark to the Planning Commission (through a consultant to DFID), at the time of formulation of the Tenth Five Year Plan of the Ministry of Agriculture, in policies and programmes for women-in-agriculture.
- Efforts by SDC in India to disseminate and utilize the findings of the RLS research as reference material for designing and implementing their own livelihood projects, as well as using the framework to assess projects supported by SDC.

End-user benefits **B2**

The use of participatory research methods had a significant impact on people's own understanding and articulation of their livelihoods. They gained several new perspectives, on issues such as gender, leadership, agricultural production, migration and natural resource management. The process of participatory research was itself an empowering process, as information was analysed and communicated through village level exercises **7**. The two feedback sessions conducted at village level not only involved people in the validation and understanding of their own situation, but also evoked responses in terms of demands for more advice, training and continued support **7**. In the case of Sampark, a field project was started in the villages where the research was conducted. The project currently reaches 1700 women in 40 villages through micro finance; women have saved more than two million rupees (USD 400,000), learnt to manage their savings and get external credit from banks and other sources, and made productive investments. For the next phase of field-work, a people's forum has been started for natural resource management at village level.

Factors affecting impact

In analysing the process that brings about impact, there are several factors that either facilitate or inhibit impact; these have been termed «contributors» and «inhibitors». These factors may relate to North-South and South-South aspects of partnerships, or may relate to intra-institutional processes, within the teams of each institution. Some contributors and inhibitors experienced during the RLS partnership are described in the following paragraphs.

Direct contact with the community **7**

Across the board, in all partner institutions and teams, the value of field visits was recognized. These help to create relationships with people and among research teams, change attitudes and trigger changes in behaviour. Contact with people also included feedback exercises, and

this resulted not only in validation of findings but follow up for capacity building, analysis and action at community level.

Mutual learning platform ↗

All institutional partners, with their full research teams, formed an RLS Forum, which met at least twice every year. These visits were often preceded by field visits by inter-institutional teams, often including Northern partners. The Forum provided scope for sharing experiences on research methods, approaches, findings, and conclusions and dissemination of research and development community outside the research project.

There was an undercurrent of competition between different researchers, and this resulted in inadequate support for innovative and new approaches from within the Forum ↘. Often researchers perceived that this attitude changed only after someone outside the Forum acknowledged the value of innovative research. However, the strengths and benefits of the Forum far outweighed the occasionally negative processes.

«Expert» attitude ↘

Each researcher considered himself or herself an «expert» in some field, be it agriculture, forestry, gender, or occupational diversification. This attitude inhibited researchers from relating to others, thus engagement in one another's research was very limited. Research would have been more fruitful, had it been possible to constitute a larger number of joint research teams.

Fears vis-a-vis new / unknown fields of competences ↘

Fear, anxiety and prejudice not only limited the quality of the partnerships, but also influenced opinions about the research of others. Gender-related research often led scientists to become involved with gender-related difficulties, and such emotion was seen as detracting from objectivity. It was only during the second phase of the project that emotionally moving experiences were recognized as powerful agents of change, and as positive influences, both in research and development.

Prejudices and inter-institutional biases ↘

The project involved research and academic institutions as well as NGOs. During the first phase of research, the research carried out by academic institutions was valued more highly than that of NGOs. This perception was fostered by the attitudes of the Northern donors. Extraeffort was required by NGOs to prove the value of their contribution to the research partnership. Such perceptions can result in financial inequities, especially as academic and research institutions already have greater government support than NGOs do. There was a shift in attitudes during the project period, and towards the end of the project, the value of NGOs, as institutions capable of «research plus action», was recognized both in terms of work and financial allocations **A**.

Speaking the right language

Having an impact at different levels requires speaking the language of those that one seeks to influence. For instance, most members of the RLS Forum felt that they could have had much greater policy level impact. They felt that though they had learnt to speak the language of the researchers, they did not speak the language of policy-makers.

Case Study 3: Urban Environment Management of Intermediate Cities – The Case of Mingora (SPP-E / Module 7)

by Daniel Maselli, former member of the SPP-E Expert Group, senior researcher¹⁹

History

The following description attempts to expose the various impacts of a project called «Concerted Management of the Urban Environment: Public Policies and Local Dynamics in Intermediary Cities – the Case of Mingora²⁰, North-Western Frontier Province, Pakistan». It is one project in the so-called «Module 7 Environment & Development», comprising a variety of research partnerships between Swiss and Southern institutions (see Case Study 1).

During the first phase (1994–1996) the project was conceived as a comparative study of three intermediate cities located on three different continents (Latin America, Africa and South Asia). The initial project intended to develop policies for sustainable environmental development; it was based on the following explicit hypothesis:

Intermediate cities offer a better ground for developing policies for sustainable environmental development than large cities («mega-cities») as participatory processes can more easily take place.

The scale of small and intermediate cities was also assumed to be more appropriate for implementing environmental policies, as different stakeholders might more easily be brought together. Moreover, intermediate cities have become increasingly important as they are hotspots of population growth in the developing world. This hypothesis was rejected after the first phase of the project, as it appeared that environmental policies had to be developed in large

cities in order to maintain economic activity and secure the functioning of urban systems. This was not the case in small and intermediate cities, where environmental concerns were left to the local political will and power – provided they existed. When the 18 initial Module 7 projects were reduced to 14 and arranged in 3 groups for the second phase (1997–2000), only Mingora was retained as a case study in the project presented by the Expert Group.

Context

When the project started, Mingora – a bastion of the fundamentalist Islamic movement in the North-Western Frontier Province of Pakistan – had already experienced about 15 years without elected local authorities (executive power). The town was therefore characterised by complete «urban and environmental anarchy».

Under these circumstances, an approach aiming to let representatives of society at large participate actively in the process of policy elaboration and implementation was truly innovative and challenged many actors concerned. For researchers, this constellation was at the same time an odd situation, a real challenge and an opportunity to apply participatory research in a very sensitive socio-political context. A young local NGO known as the Environmental Protection Society (EPS) and composed of independent professionals – mainly doctors, architects and teachers – was thus suddenly pushed into the role of replacing missing local authorities in the formal political system. The research project thus became an external agent for local development. This was tempting and fascinating, but very demanding at the same time.

¹⁹Centre for Development & Environment (CDE), University of Berne (www.cde.unibe.ch); see Case Study 1

²⁰also called «Saidu Sharif»

Methodological approach

The project adopted – via EPS – the methodological approach of organising informal stakeholder roundtables bringing together various – and of course not seldom conflicting – interest groups concerned with environmental issues in Mingora city. These roundtables offered unique opportunities to gather, get to know each other, discuss, seek solutions, and finally begin joint development of possible urban environmental planning [↗]. This set-up corresponded to a multi-level multi-stakeholder approach through which the traditional negotiation system of the «jirga»²¹ was revived. All steps were thoroughly documented and additional base information collected in order to allow a decision-making based on sound knowledge [↗].

Institutional and personal setup

The project was originally proposed by the Graduate Institute of Development Studies (IUED, linked to the University of Geneva, Switzerland) which tried to find an appropriate local partner institution for joint implementation of the project in Mingora. Thus EPS was identified and proposed via a contact person at the Sustainable Development Planning Institute, a private research institution based in Islamabad. Local students from the Department of Geography of the University of Peshawar and the Technical University of Peshawar were associated as MSc candidates.

During Phase 2 the project encountered major problems but fortunately received critical support from another prestigious «local» NGO – the Orangi Pilot Project (OPP) based in Karachi and led by a charismatic and very competent leader in urban issues affiliated with the Department of Architecture at Dawood College. For Phase 2 a local «urban observatory and urban resources office» for the «Urban Planning and Management Support Program» was created in Mingora [↗].

Main constraints and/or difficulties encountered (and means to overcome them)

In Pakistan / the South

- There was no experienced institutional/individual partner to work with [↙]. Therefore efforts at coaching support by the Northern partner were much greater than expected and planned – both in terms of time and financial means.
- The very particular situation of Mingora, a city without an elected executive power, created some difficulties but offered special opportunities, too.
- The sudden and long-term illness of the main responsible Southern coordinator for Phase 2 – who had become the «collective local memory» of the project – created a very delicate situation with regard to accessibility to results and the production of scientific reports [↙]. Many additional efforts were necessary to partially overcome this odd situation.
- Despite the first comprehensive monograph on Mingora City and the Swat Valley produced in English by the project, no real sustainable impacts were achieved at the local institutional academic level. This was mainly due to a lack of funds, time and planning – a common feature for most of the Module 7 projects [↙]. Both EPS and the elected municipality of Mingora requested translation of the monograph into Urdu. After the project ended, the new NGO «Hujra» offered to translate the book, while the Swiss National Science Foundation agreed to pay the additional printing costs [↗]. This helped to correct a somewhat unsatisfactory situation, as only the Urdu version of the monograph could be used in the curricula of the students at both universities of Peshawar. Moreover, it also serves as an information source for (m)any other interested and/or concerned social entities in the area.
- Proper accounting of expenditures in/for the South was not provided by the local partners; this led to unproductive tensions [↙].

²¹ Traditional meeting where important decisions are made and family quarrels and tribal disputes are amicably resolved.

Clear terms of reference with regard to budgeting / budget allocation, as well as overall accountability, are a prerequisite for a balanced and fair collaboration **A**.

In Switzerland / the North

- The initiators of the project withdrew for Phase 2 when further funding was denied for the two other case studies from Latin America and Africa. This suddenly left the remaining associated Swiss researcher as the sole responsible party in/from the North. Given the fact that his (teaching) assignment at the IUED was only 10%, the workload of the project exceeded by far the time theoretically available and created an ambiguous and uncomfortable situation **A**.
- The core competence of the newly responsible Swiss researcher was mainly limited to the field of architecture and urban environment, while this role increasingly required other competences such as moderation and mediation skills in particular. This was too demanding at times for the persons involved **A**.

Impacts in Pakistan / the South

Empowerment and competence building of EPS topped by new assignments **A** **C**

The project led to both direct and indirect empowerment and competence building in the still young and not yet recognised NGO EPS, founded in 1994 (creation of a positive 'image'). While at the beginning no contacts existed with the local administration, or with the hotel and transport lobby, many contacts were established, and confidence and trust were gradually installed. This materialised in a series of mandates given to EPS after the termination of the project, culminating in assigning the task of developing a transportation master plan for Mingora in 2003.

Creation of a new NGO **C** **B2**

These mandates, however, transformed EPS from an NGO initially concerned purely with advocacy to a sort of private consulting compa-

ny, working both for national and international organisations. Considering the fact that such mandates are frequently given to foreign (Northern) «experts» who seldom stay long enough to be very familiar with the context and who are much more expensive, this metamorphosis must be considered as something positive. However, this shift towards more economic and profit-oriented activity disturbed some of the former (initial) EPS members. Being concerned about the independent advocacy function of EPS, they founded a new NGO called Hujra («Holistic Understanding for Justified Research & Action») which became more active in the rural areas surrounding Mingora. Their leader can be considered as the major «pearl» discovered during the project.

Awareness raising among important stakeholder groups **A** **B2**

The regularly initiated roundtables provided the necessary platform for informal meetings, debates, discussions, new opinion making and trust building **A**. While awareness of urban environmental problems was non-existent within large portions of the society before the project, understanding and concern grew enormously, especially among targeted stakeholder groups and their representatives. This was particularly true for the hotel and transportation lobby of Mingora, whose members previously perceived the need for environmental action only in the planting of trees.

Financing of implementation measures with positive and negative effects **B1** **B2**

A This led to a pro-active and experimental attitude among the hotel lobby, which decided to finance the construction, installation and operation of novel dustbins and waste containers in Mingora to reduce garbage deposits all over the city's territory! The idea was implemented by EPS and led to a visibly cleaner city. However, no appropriate public deposit space for the waste collected was available outside Mingora. Hence the hotel lobby provided a private area. Unfortunately, this basically well-intended action was not accompanied by corresponding technical

support and led to serious health problems affecting animals and children living around the dust dump. This was a negative, undesired and unintentional impact, which required professional technical assistance to find a solution. Thus an unplanned MSc project at IUED was launched to analyse and tackle this issue.

Launching of a parallel women's roundtable series **B1 B2**

The organisation of an international workshop on urban environmental issues by the project in Mingora city in spring 1999 was used to propose that local stakeholders, and in particular official provincial representatives, launch a second parallel roundtable for women **A1**. This very unusual and rather «taboo» proposal voiced intentionally during the workshop was successfully implemented, and a series of at least four women's roundtables took place in Mingora afterwards. This made it possible for an important stakeholder group that had been neglected and excluded so far to be activated and included in policy activities.

Initiation of South-South collaboration: training and backstopping support by an experienced NGO **C**

The same international workshop introduced EPS to representatives of the Orangi Pilot Project, a very successful and internationally renowned NGO based in Karachi. Acknowledging the missing competences of EPS, the charismatic leader of OPP offered to train some members in Karachi in the field of sanitation planning and administrative management and to provide backstopping support to the project as a whole. Given the fact that the key person at EPS fell ill shortly after the workshop, this strong personal commitment **A1** was crucial in keeping the project from collapsing over the following two years until the person recovered.

Creation of CBOs and implementation of sanitation measures **C B2**

At the beginning of the project there were no CBOs in Mingora, while at the end 6 CBOs (out of a total of 13 new CBOs created) were address-

ing environmental issues. The project had thus managed to mobilise the most affected stakeholders – the local communities – to organise themselves with a view to improving their environmental living conditions **A1**. While the 1st CBO called «Bangladesh» collapsed due to political reasons, three of the 6 CBOs actively implemented sanitation and sewage installations in their streets. These initiatives were supported by the OPP and are still going on.

Impacts in Switzerland / the North

Organisation of a workshop **C B1**

After termination of the project, the responsible Swiss official, who had not been very familiar with the North-Western Frontier Province in Pakistan before, was asked to organise an international workshop on «the Political Situation in North-Western Frontier Province (Pakistan), Afghanistan and Kashmir» in March 2003, together with the «Research Centre for South Asia» (a private NGO based in Geneva).

Advice to the South Asia Group of the EU **B1**

The responsible Swiss official was also invited by the European Community in Brussels to inform and advise the «South Asia Group» in 2003, which later on organised an exploratory mission for some members of the Parliament to northern Pakistan.

Replication of the project process in Kigali **B1**

The responsible Swiss official was asked to launch a similar project in Kigali (Rwanda), which is currently going on based on a slightly adapted methodology.

Advice for Kabul development master plan **B1**

The responsible Swiss official was also asked to provide support for development of a master plan for the reconstruction of Kabul, Afghanistan.

Conclusions

The following general conclusions can be derived from the case study analysed:

- (Sustainable scientific) Institutional capacity building is not achievable as a mere side-effect of collaborative research projects. It needs special attention and sufficient human and financial resources over a reasonably long period of time [7]. However, this doesn't necessarily mean huge amounts of money.
 - The appropriate collection, storage, (long-term) maintenance (and eventually periodic up-dating) and sharing of information and data is crucial for the success of a collaborative research project (documentation aspect) [7]. This applies in particular to primary data collected during field work. A possible way of doing this could be to set up a jointly designed electronic database, eventually available to all involved partners via a (password protected) homepage.
 - High personal and continuous commitment – combined if possible with empathy – among all key partners involved in a research project is crucial for keeping motivation and participation high and for producing satisfactory results [7]. Moreover, it may help to make the collaboration and the relationship last beyond the duration of project funding.
 - It is worth investing sufficient time to identify the right, reliable and competent partner, both at the individual and institutional levels [7]. This frequently requires a certain presence on the spot, especially if there is no previous experience or relationship to build upon.
 - Working in a context of great need for development action where little or no research has been carried out so far favours the potential for more development-oriented impacts than academic oriented impacts (hypothesis). This has to be taken into consideration when designing the project and when negotiating the expectations of the donors / funding institutions.
- For an effective dissemination of results, as well as continued public reporting on research, specific activities have to be planned [7]. This includes scientific journals which publish peer-reviewed articles²², reports in newspapers, radio and television broadcasting etc.

²²Since the time elapsing between the submission of a paper and its publication frequently is around one year, early planning of this kind of dissemination effort is required.


Case Study 4: Participatory Impact Assessment of the Global Research Project on Explaining Growth


by Fernando Loayza, Consultant of GDN for GRP²³ (compiled jointly with Jon-Andri Lys)

Remark: the following case study was evaluated as part of a planned evaluation procedure by the GDN. This provided an opportunity for the IAS to increase the variety of partnerships by including a type where the degree of involvement of the partners and the duration are limited, thus helping to enhance the general understanding of mechanisms that promote desired impacts of research partnerships.

Background

The Global Research Project (GRP) on Explaining Growth was the first project of the Global Development Network (GDN)²⁴ to unite 7 regions and around 70 countries across the developing and transition worlds under a common research objective and methodology. It was, therefore, a pioneer project and part of a mutual learning and experimental process . The GRP adopted a collaborative method of inquiry, twinning national researchers from developing and transition countries with internationally recognized development specialists around the world. Its main objective was to compile the most comprehensive assessment of economic growth in these countries.

In the first phase, six regions of the world – Latin America and the Caribbean, South Saharan Africa, Middle East and North Africa, East Asia, South Asia, Eastern Europe and the Commonwealth of Independent States – were the focus of four thematic regional studies analysing the sources of growth: (i), growth and markets (ii), microeconomic determinants of growth (iii), and the political economy of growth (iv). Forty-six authors drawn from all six regions participated in this initial phase. Regional coordinating institutions²⁵ commissioned the studies covering the four thematic areas. The contracted authors/researchers worked with one another as well as with eminent economists designated to provide technical assistance, review papers, and participate in workshops²⁶ . At the same time, the «help-desk» data service at the World Bank facilitated access to the data needed by the authors doing thematic regional studies.

These studies provided a framework for the exploration of key issues at country level. As a result, the second phase of the project turned from broad growth themes to in-depth analysis of growth in about 70 developing and transition countries. The responsibility for the organization of the second phase of the GRP rested with the regional networks and coordinating institutions which implemented phase 1 . They designed and carried out the research competition for the country studies, held regional workshops to launch them, and were responsible for the final regional reviews, including a regional synthesis

²³http://www.kfpe.ch/key_activities/impact_study/content.html

²⁴GDN is an evolving network of research and policy institutes working together to address problems of national and regional development. GDN links research institutes from more than 100 countries and 10 regions of the world. It supports multidisciplinary research and mobilizes resources worldwide.

²⁵African Economic Research Consortium (South Sahara), Center for Economic Research and Graduate Education (Eastern Europe), East Asian Development Network, Economic Education and Research Consortium (former Soviet Union), Economic Research Forum (Middle East and North Africa), Latin American and Caribbean Economic Association, and South Asia Network of Economic Institutes.

²⁶Among the resource persons were Angus Deaton of Princeton University, and the Nobel laureates Robert Solow of the Massachusetts Institute of Technology, and Joseph Stiglitz of Columbia University. They were available for each particular theme, as well as for those covering each region.

paper. Regional coordinators, in addition, provided data, established electronic help desks, and assembled a team of advisors or resource persons to assist country authors. For the most part, resource persons were highly regarded economists from the region who, in several cases, had participated as authors in the first phase of the GRP. Their tasks were: (i) to attend the opening of regional workshops; (ii) attend the mid-term project workshop held in Rio de Janeiro in December 2001; (iii) comment on the terms of reference and help to draft country strategies for undertaking the studies; (iv) comment on the mid-term report and final drafts; and (v) answer specific questions by electronic mail.

Within the IAS, the GRP was analysed applying participatory impact assessment (PIA) methodology. This was based on a process of stakeholder consultation via a web-based survey²⁷.

Main findings

Research quality **A**

The regional thematic reviews provided useful insights into the literature on growth; they were favourably evaluated by the International Economics Association. New issues in the literature on economic growth were explored in the reviews on the «microeconomics of growth» and «markets and growth».

Capacity building **C**

Arguably, the GRP's greatest impact was building individual research capacity in developing and transition countries. Researchers from those countries benefited from participating in an international project and from regional and global exposure. Learning and upgrading of research skills also resulted from research partnerships between local economists with in-depth local knowledge and those familiar with general mod-

ern economic analysis. Backstopping and support provided by regional specialists or specialists from industrialized countries to the country teams was a critical element of success **B1**. Furthermore, most researchers acknowledge that participating in the GRP enhanced their teaching skills.

Policy influence **B1**

Some time needs to elapse after project completion before policy influence can be evaluated. As the GRP was evaluated during its closure stage, this impact could not be assessed. However, a weakness of the GRP was to postpone the adoption of a dissemination strategy addressed to the broader policy and development community until research activities were completed **B2**. Dissemination followed a traditional approach, making exclusive use of workshops, conferences, and printed and electronic publications. Publication and convocation activities explicitly targeted at policy-makers and development practitioners were not considered by the regional coordinating institutions when the evaluation was carried out.

Lessons learnt

Combining surveys and case studies

For GDN's global research projects, the GRP on «explaining economic growth» demonstrated the effectiveness of combining case study analysis at country level with surveys at regional level providing thematic reviews, making it possible to situate the national studies in a regional context. The assessment highlighted, the need to fine-tune the survey findings and the regional calls for country study proposals, in order to select the country studies more efficiently. To this end, the surveys' main outcomes must

- provide an explanatory framework to be tested in the country studies;

²⁷The GRP stakeholders were consulted twice. First, they were consulted on the questions, indicators and criteria to be applied in the assessment. Second, they completed the questionnaires which included their suggestions on the assessment exercise. 17% and 33% of the GRP stakeholders participated in the first and second round of consultation respectively; this can be considered a fair participation rate for this type of exercise.

- identify those country studies that have the potential to shed light on key topics when set against the explanatory framework developed;
- set the criteria for choosing additional country studies that allow comparison or replication.

Accordingly, a two-tiered research competition is proposed, composed on the one hand of proposals for critical country studies and on the other hand of proposals for complementary country studies, with a potential to contribute to or challenge the explanatory framework developed in the survey studies.

Focused research partnership **C**

The research partnership applied in the GRP can be called a «focused» partnership, where researchers from developing and transition countries collaborated with each other and with renowned researchers from industrialized countries over a period of 6 to 12 months. The participation of researchers from industrialized countries was limited to providing technical assistance and giving advice at key stages during the research cycle, namely,

- in the preparation of the work plan,
- during the review of mid-term reports and final drafts, and
- in conferences or workshops where the mid-term or final research results were presented.

The strategy for this kind of partnership consisted in (i) exposing researchers from developing and transition countries to a regional and global exchange of ideas through workshops and conferences, and (ii) providing assistance to obtain data, access to specialized information, and on-line technical assistance.

These «focused» research partnerships applied in the GRP were cost-effective in achieving the project's objective compared to more intensive and broader partnerships where researchers work together throughout the entire project. In the GRP, the resources allocated to support researchers from developing and transition countries were maximized, as less than 5% of the GRP's budget was spent in covering the costs of industrialized country partners. This was

crucial for the GRP's feasibility and for supporting more than 200 researchers across the developing and transition world. Principal researchers also attended at least one regional and one global workshop **A**. The almost marginal costs of the partners from industrialized countries made it possible to foster collaboration among developing and transition countries respectively **A**. Usually a senior country-based scholar knowledgeable about institutions and a recent graduate proficient in modern economic analysis were twinned in a country team to optimize mutual learning and to enhance individual and institutional research capabilities. **A**

The impact of these «focused» research partnerships on research quality depended upon the expertise and competences of the researchers involved. The impact both on capacity building and research quality was highest where the expertise and competences of the researchers from developing and transition countries were less developed **C**. In such cases, the partnership contributed to significant individual capacity building. Equally, researchers from industrialized countries who were less familiar with certain regions or countries benefited from the partnership by learning about institutional and historical aspects of growth in the countries concerned. Participation in a GDN global research project provided many researchers with a strong incentive to travel abroad and exchange experiences with foreign colleagues **A**. This helped to strengthen commitment to the studies as well as to the overall research project.

The assessment revealed three possible improvements for similar projects in future:


- avoid country teams composed exclusively of nationals living and residing in industrialized countries;
- optimise the benefits from workshops and conferences, e.g. by including international experts different from the regional reviewers, to provide a critical review of the country studies from a global standpoint when holding the mid-term global workshops;
- increase the participation of stakeholders from developing and transition countries

when identifying the objectives and issues to be covered by the project. This will increase the relevance of the regional reviews and country studies. Example: the analytical framework of the GRP could have better fitted the transition region if stakeholders had been more broadly consulted during the initial identification stage.


allowed greater participation in the design phase and more flexibility in managing their funds under agreed parameters and procedures with the GDN.

Electronic help desks

The weakest component of the GRP implementation strategy was the electronic help desks. This tool was used only very little or not at all, mainly because the regional coordinators were not convinced of the potential advantages of a well-functioning electronic help desk. For electronic help desks to be of greater use they should be available in all regions. The regional coordinators need to be convinced of the potential advantages of a properly functioning electronic help desk, and stakeholders should be trained in how to fully exploit electronic help desks and other E- or web-related technologies for facilitating development research.

Consequently, for future global research projects, it is suggested that GDN establish a technical assistance and training program addressed to its regional partners, which aims at fully exploiting the advantages of electronic help desks and web-related technologies .

Networking

The GRP was fully designed and funded by the GDN, but managed regionally by the regional network heads, which proved to be an effective organizational approach . However, the assessment showed that some coordination across regional networks is needed. This can only be provided appropriately by the GDN itself. On the other hand, greater participation by the regional networks in designing global projects and more flexibility in managing the GDN grants could have an important pay-off in terms of the regional relevance and quality of the research output. Therefore, it is suggested that in future global research projects, the GDN should have greater coordinating power over the regional networks, which, as compensation, should be

Case Study 5: Generating a Shift in Attitude and Behaviour – From Working «for» to Working «with» (IFAD²⁸ Case Study)

by Philippe De Leener, Consultant for IFAD
(compiled by Daniel Maselli)

Initial setting and preliminary remarks

In Niger²⁹, an IFAD-funded rural development project run by the Government provided the learning environment for understanding the transformation processes affecting partnerships when introducing a new participatory approach. The renewed collaboration ended up with deep changes and generated impacts at several levels: in the Aguié District at village and inter-village level, in local and regional administration at policy level, and even in IFAD at the funding policy level, paving the way for a new form of negotiating, formulating and implementing investment projects. The related development activities were directed as typical action-driven research, thus combining social and technological experiments. Three detailed papers provide information and data on the various aspects of this case:

- The first one (written in 2001) provides information on how farmers, developers and researchers (can) carry out joint research and action³⁰. The key point analyzed is the close relationship between technological and social innovations and the key message is

that no technology improvement (change) is possible without organizational improvement (change).

- The second addresses the issue of partnership. The main purpose is two-fold: (i) to understand the true nature of partnership, bringing together partners who frequently hold more or less very different visions of the world, and (ii) to elicit basic mechanisms of change active both at personal and organisational levels. Analysis of changes both at village and project administration level paves the way for better understanding of the generation of impacts³¹.
- The third is devoted to exploring an approach likely to trigger off deep transformation, at both the personal and organisational levels. The paper explains how to practically carry out a so-called «self-reflexive analysis» of one's own professional activity. It discusses how self-reflexivity can bring about changes, mainly at personal level³².

Key components of the partnership

In the present case the partnership setting is composed of a complex of several social categories: farmers and village communities, extension services (both private and public), the Ministry of Rural Development, several divisions

²⁸International Fund for Agricultural Development (<http://www.ifad.org>)

²⁹Maradi region, Aguié district

³⁰De Leener Philippe, 2001. From technology-based to people-oriented synergies: A case study on how the in-depth analysis of a synergy between farmers, researchers and developers invites reconsideration of some basic perspectives on pro-poor agricultural research, Rome: IFAD / GFAR, Technical workshop on methodologies, organisation and management of Global Partnership Programmes, 9-10 October 2001, 19pp.

³¹De Leener Philippe et al., 2003, How changes generate impacts: Towards attitudinal, behavioral and mental changes in the footsteps of research partnerships (ENDA / IFAD / NIGER), Part 1, Workshop «The Impact Assessment Study on Research Partnership», KFPE-GDN, Cairo (Egypt), 15-16/01/2003, 30pp. (http://www.kfpe.ch/key_activities/impact_study/content.html)



³²De Leener Philippe 2003b, Self-analysis of professional activity as a tool for personal and organisational change (ENDA / IFAD / NIGER), Part 2, Workshop «The Impact Assessment Study on Research Partnership», KFPE-GDN, Cairo (Egypt), 15-16/01/2003, 10pp. (http://www.kfpe.ch/key_activities/impact_study/content.html)


of IFAD (an international NGO based in Rome), researchers, academics, and students from the Universities of Niamey (Niger) and Louvain (Belgium).

The project encompassed different activity lines related to partnership activities: village-oriented research, joint actions in different fields (technology, agriculture, micro-economy, and organisation), project management, decentralised and joint planning/monitoring, and project cycle.

Main lessons regarding the generation of impact



The following lessons have been drawn from experience gained when considering how to best promote the generation of desired impacts:

- The most fruitful way consists in letting the staff actively participate in the analysis of impacts, since they are both responsible for the partnership project and are supposed to generate impacts. By making staff members scrutinize the details of their own professional activity, the way is paved for in-depth transformations, both at the individual and the institutional levels . This means that the process of studying impacts itself generates impacts!
- Change at field level is closely linked to change at the office level. In other words: if a change at field level is needed, a process of change at the office or project level needs to take place simultaneously, since both processes are closely interlinked. This requires a readiness and openness to change . Organizational and personal processes of change cannot be separated. They must be considered as facets and targets of the same process. Therefore, both dimensions must be considered as crucial fields of action or intervention in a process of change.
- «Working with» is very different from «working for». To better understand the mechanisms, a self-reflexive – not just a self-reflective – analysis is the key. This helps in following any progress and change in partnership activities and relationships. The dynamics of

self-identity and inner dialogue lead to profound mental restructuring, just as carrying out research with farmers leads to quite different thinking .


- Without a strong mandate, change is doomed to failure, since those who promote change have no protection against risk. Without such protective (political, institutional) backstopping, tensions are likely to evolve into conflicts, thus hampering the process of change.

Characteristics and key factors of «genuine» partnerships


From the Aigué Case Study, characteristic features of «genuine partnerships» can be derived: Joint activities («doing together») are based on previously negotiated shared goals, understanding, and benefits . The partnership is thus built on freely decided conscious common purposes. It is «change-driven» and therefore brings about significant mutual changes in real life situations (e.g. related to poverty reduction, empowerment, peacemaking or gender balance). Ideally, there is a balanced exchange between the partners, exhibiting a win-win situation in the sense that each partner has the clear impression of receiving as much as he/she gives. The partnership is not instrumentalised by one leading and dominating partner . The partnership triggers off both knowledge generation and learning processes among all the partners. True partnerships are not limited to the exchange of existing knowledge, but imply production of shared new know-how and concepts. Hence partnerships bring about transformations at three different levels: personal, organisational and professional.

Instrumental versus intentional partnership

According to these characteristics, doing the same thing at the same time with similar means, methods, goals and prospects is clearly not sufficient to create a genuine partnership, although these are often necessary pre-conditions. People

working along the same line in a factory are not necessarily partners as such – even if they work together. They collaborate within the framework of a sophisticated division of tasks. At best, this can be called an «instrumental partnership». In «intentional partnerships», partners decide freely to act together in the framework of a previously shared and negotiated perspective ; partnership then means being together on a free basis.

Capacity building through previous un-building

Learning as such is not simply a matter of storing knowledge in one's mind. In a reductionist sense, learning means incorporating new knowledge representing new concepts, ideas or practical skills. However, in order to integrate new knowledge, we need to partly deconstruct what we knew before in order to allow the new knowledge to become consistent with already incorporated knowledge. Learning as a process therefore means reorganising one's knowledge system in order to preserve internal coherence. By providing opportunities to exchange, discuss, debate etc., partnerships help to revise and refine one's own conceptions . New ways of thinking or operating then progressively become effective. For this to happen an attitude characterised by a readiness to accept the partial deconstruction of existing knowledge is fundamental. Only then will innovative approaches like transdisciplinarity become meaningful and provide the necessary enabling environment for mutual learning and mutual change for sustainable development.

Case Study 6: Improving Oral Re-hydration Solution – Anatomy of an International Research Partnership

by B.S. Ramakrishna, Southern research partner in the project (Wellcome Trust Research Laboratory, Vellore/India)

Remark: The following Case Study was added after the IAS workshop in New Delhi (2004) and hence could not pursue the same methodology of performing interviews, etc., but is based on the author's direct personal experience.

Background

Until the early 1980s, approximately 5 million people (largely children in developing countries) died of diarrhoea every year. Treatment of dehydration (the predominant cause of death in diarrhoea) by oral re-hydration solution (ORS), containing specific proportions of salts, glucose and water, can reduce or prevent deaths from diarrhoea. Early use of ORS in diarrhoea led to a decrease in annual mortality from 5 million per year to 2 million per year at the beginning of the 21st century. However, use of ORS remains limited in many communities for many reasons. One is that the glucose-salt ORS does not reduce diarrhoea, and may actually increase it, although it does prevent or reverse dehydration.

Description of the research partnership and its planned outcomes

The research partnership between an Indian medical college and an American university³³ started against the background of a common interest **7** in intestinal salt and water absorption and management of diarrhoea. Both part-

ners had independently worked on large intestinal absorption of salt and water, making observations that were relevant to diarrhoea. In the case of the Indian partner, there was a long-standing record of research on the epidemiology and mechanisms of diarrhoea, since the disease was common in the villages surrounding the hospital of the medical college located in Vellore. In the case of Yale University, there was a long record of research into the fundamental mechanisms by which bacteria cause fluid secretion into the intestine, and the mechanisms by which salt and water are absorbed from the intestine.

The partnership began in 1990 when the Indian partner worked in the American laboratory at Yale in order to learn techniques for studying intestinal ion transport **7**. During this period both partners jointly explored the possibility of using the knowledge obtained from physiological studies to treat patients with diarrhoea **7**. For the initial exploration of the concept, funding was obtained from the Thrasher Fund, an organization in the USA funding research that is likely to have impacts on child health in a relatively short period of time. Results indicated the feasibility of introducing an intervention that would reduce diarrhoea by inducing mothers of children with diarrhoea to use a new ORS containing indigestible starch. In 1995, the research partnership was expanded to include a partner³⁴, involved in studies of how the human large intestine handles a particular kind of indigestible starch. Studies were designed to test whether this indigestible starch would be useful in treating adults with cholera. The clinical trial with cholera was funded by the Nestle Foundation, Switzerland. It showed that the starch-containing ORS was superior to regular ORS in significantly reducing the amount and duration of diarrhoea **A**. Since children are the most affected by diar-

³³Between Dr. Ramakrishna, a gastroenterologist at the Christian Medical College, Vellore, India and Prof. Henry Binder, a gastroenterologist and physiologist at the Yale University, USA

³⁴Prof. Graeme Young from Adelaide, Australia

rhoea, a possible extrapolation to children had to be tested. For this the research partnership was further expanded in 1998 to include an Indian pediatrician³⁵. The new starch-containing ORS was again found to be superior to the regular ORS **A**. This study was funded by the National Institutes of Health, USA.

While all this was taking place, other investigators concluded that a reduction in the sodium and glucose content of ORS was desirable and was associated with fewer complications. This conclusion was derived from a stepwise process similar to that described above, i.e. experimental studies in animals, studies in adults and children with diarrhoea, followed by international collaborative studies to ensure replicability of the findings. This work, initiated in the mid-1980s, finally led the World Health Organization in 2002 to change the recommended form of ORS to one with a lower salt and glucose content **B1 B2**.

Since 2001, the research partnership has been examining use of the new form of ORS in adults with cholera and in children with diarrhoea. It can be anticipated that these examinations will be followed by community trials to assess whether the new form ORS will be acceptable to the community or not. Should the new ORS appear to work better, there will be a need to replicate these studies in other parts of the world. In order to ensure this, lines of communication have been established with other investigators in this field, to conduct such studies should they become necessary **7**. If international studies indicate that the inclusion of starch indeed benefits all individuals suffering from diarrhoea, policy making bodies such as the World Health Organization will need to be engaged in a dialogue in order to ensure that standard recommendations for management of diarrhoea are modified accordingly. Should this happen, impacts at B1 and B2 will materialise.

The impacts of this research partnership already realized or likely to occur are listed in the common matrix developed for the IAS. Enhanced research capabilities, influence on other

researchers, training of developing country researchers, presentations at various national and international meetings, and research publications **A B1** are some of the most visible and prominent direct impacts. Impacts on clinical practice are currently very localized, but could eventually be on a large scale. The research conducted so far concerns the invited membership of scientific review committees related to diarrhoea and nutrition, practice guidelines committees, and task forces related to diarrhoea, in turn influencing research and practice elsewhere in the world **B1**.

³⁵Prof. Raghupathy from Vellore

Table: IAS Impact Matrix for Oral Re-Hydration Solution (ORS) Research

Output of the RP	Impact Chain	Utilisation of Outputs	Effects (Outcomes)	Benefits / Drawbacks	Impacts
A) Improved knowledge and changed attitudes of researchers		Realisation of benefits derived from large-scale clinical application	+ Widened scope of research and expansion of the partnership; + Publications and presentations including invited lectures	+ Sensitisation of researchers and funding agencies + generation of new funds for further research – Results and improvements may divert attention from educating population on how to prevent and treat diarrhoea	Parallel studies being conducted by other researchers in other parts of the world -> increased tackling of the issue
B1) Policy-relevant research results*		Change in treatment policy for diarrhoea and cholera at national, regional, and international level;* Increased recognition of scientific merit of the partner from DC	+ Increased acceptability of ORS for treatment of diarrhoea & cholera* + Request to participate in scientific review committees + Request to participate in Task Forces of professional bodies to handle health problems	+ Reduced mortality from diarrhoea and cholera* + Increased ability to review scientific research related to diarrhoea and cholera + Increased influence on management policies related to the treatment of diarrhoea and cholera	+ Improved health in DC* + Influence on the direction of research at national, regional and international level + Influence on professional recommendations for managing diarrhoea and cholera in the community
B2) Applicable and user-relevant research results		Altered management of diarrhoea and cholera due to sensitisation and improved ORS	Currently still limited scale of implementation	+ Improved management of diarrhoea and cholera	+ Reduction of diarrhoea and cholera currently still limited impact ; if further research proves universality of ORS application, then the impact will be much wider
C) Increased individual and institutional research capacity		Successful application for other /additional research grants	+ Increased research capacity of developing country partner + increased recognition of competences in the field	+ Successful bids for new competitive research grants –/+ Loss of some well-trained research fellows to laboratories abroad («brain drain»)	+ Researcher(s) from DC consulted for policy making + Ability to attract good/better research students

* Expected if investigations provide evidence of enhanced performance by new ORS

Case Study 7: Collaborative Biomedical Research as a Pivot for Health Care Development – The BIRDEM Experience

by Liaquat Ali, Southern research partner in the project, collaborator BIRDEM³⁶

Remark: The following Case Study was added after the IAS workshop in New Delhi (2004) and hence could not use the same methodology of conducting interviews, etc., but is based on the author's direct personal experience.

Background

In the late 1980s a collaborative research program on antidiabetic plant materials was initiated between the Department of Medical Cell Biology, Uppsala University (Sweden) and the Research Division of BIRDEM, the Central Institute of the Diabetic Association of Bangladesh (DAB), a non-profit social organization. The program was supported by the International Program in the Chemical Sciences (IPICS), Uppsala University (Sweden). The Department of Chemistry, University of Dhaka, was included as a partner to conduct chemical analysis of the plants. The Program started in 1991.

In the following years the biological studies of plant materials conducted at BIRDEM created a new momentum in other areas of research, as it was quickly realized that the facilities, expertise and techniques developed in the antidiabetic plant material project could also be utilized in other areas of biomedical and, ultimately, health research **A C**. With a continuous influx of young and enthusiastic researchers and stu-

dents **A C**, the Biomedical Research Group (BMRG) was created, and it has been able to attract national and international scientific collaboration and resources (Table 2). BIRDEM has thus become a sustainable research institute recognized by the WHO as a Collaborative Centre for Research on Prevention & Control of Diabetes, and also by the Third World Network of Scientific Organizations (an enterprise of TWAS) as a Centre of Excellence. Apart from direct contribution to scientific studies, the Group has played a vital role in turning DAB into the largest non-governmental health care chain in Bangladesh **C B1 B2**.

Impacts

Stimulating scientific outputs **A**

The Group has screened more than 70 plant materials selected from folkloric reputation and a search of literature for their antidiabetic activities, from Bangladesh as well as countries in Asia and Africa. Methodological improvement of testing in animal models was also achieved and results published. Only a few active materials have been investigated for their mechanism of action, and only a few of the selected ones have been picked up by commercial organizations for drug development programs.

The Group has made substantial contributions to understanding diabetes mellitus (DM)³⁷ in the Bengali population. The relative contribution of insulin secretory defect and insulin resistance has been explored, and the classification of

³⁶Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM)

³⁷Diabetes Mellitus (DM) is a group of devastating metabolic diseases caused by insufficient insulin (a hormone of central importance) secretion, increased insulin destruction or ineffective insulin action. The metabolic imbalances that occur (with the most obvious symptom of hyperglycemia, ie high blood glucose levels) have serious and, in many cases, life threatening consequences. As per estimation by the World Health Organization 151 million people in the world (about 4.6% of 20–79 year age group) suffered from DM in the year 2000; the projected number for 2025 is 299 million. The incidence of DM is increasing, particularly in DC, due to rapidly changing lifestyles and food habits, unplanned urbanization, environmental population, etc. By 2025 the South East Asia region will have the highest number of diabetics in the world (estimated 79.5 million; by comparison: in 1995 the number was 27.6 and in 2000 already 32.7 million).

Table 1: Collaborating institutes and major sponsors for research collaboration with BIRDEM**Collaborating Institutes**

International: Dept of Medical Cell Biology, University of Uppsala/Sweden; Department of Medicine, Royal London Medical College, University of London/UK; Dept of Biological Science, University of Ulster/Northern Ireland; Dept of Internal Medicine, University of Basel/ Switzerland; The Royal Veterinary and Agricultural University Copenhagen/Denmark; Cell Biology & Physiology and Human Genetics, University of Pittsburgh/USA; Human Nutrition School of Molecular and Microbial Biosciences, University of Sydney/Australia; Dept of Animal Nutrition & Physiology Research Centre, Foulum/Denmark; University of Montpellier/France; Lab de Physiopathologie de la Nutrition, Paris University /France

Regional: Dept of Chemistry, Mahidol University, Bangkok; HEJ Research Institute of Chemistry, University of Karachi/Pakistan; Dept of Chemistry, University Science College, Calcutta/India; Natural Products Development Division, Dept of Plant Resources, Kathmandu/Nepal; Cinchona Research Laboratory, Darjeeling/India; Dept of Pharmacology, Calcutta University, Calcutta/India

National: Dept of Biochemistry, Dept of Nephrology, Dept of Gastroenterology, Dept of Neuromedicine (all Institute of Postgraduate Medicine & Research, IPGMR, Dhaka); Dept of Chemistry, Dept of Biochemistry, Institute of Nutrition and Food Sciences (all Dhaka University); Dept of Pharmacology, Jahangirnagar University; Department of Nutrition, Home Economics College, Dhaka

Sponsoring / Supporting Organizations

International: International Program in the Chemical Sciences (IPICS), Uppsala University, Sweden; International Foundation for Science (IFS), Sweden; ENRECA Project (Supported by DANIDA, Denmark); Government of France; International Diabetes Federation (IDF), Stanley-Johnson Foundation; Novo Nordisk A/S; University of London, UK

Regional: World Health Organization (WHO), SEA Region; Palm Oil Research Institute of Malaysia (PORIM); Asian Network of Research on Antidiabetic Plants (ANRAP)

National: Diabetic Association of Bangladesh (DAB); Ministry of Science and Technology, Govt of the People Republic of Bangladesh; Bangladesh Medical Research Council; Prof Mazharul Haq Trust; Hamdard Foundation; Various Industries

young onset DM in the population has been clarified to a great extent.

Nutritional evaluation of local food materials is a major research area of the Group. It has screened a good number of local food materials for their glycemic index. A long-term project to identify the cut-point of body mass index (BMI, a marker for individual nutritional state) in the Bangladeshi population is now running actively. Another group of studies is producing data on the knowledge, attitude and practice (KAP) of subjects regarding various aspects of health.

The BMRG Coordinator³⁸ initiated a Health Economics Unit under DAB **C**; it is conduct-

ing studies on cost-effectiveness analysis and other socioeconomic aspects of health care from the local perspective.

Most of the scientific results have been published in journals or reported in various scientific conferences and seminars. Within the last decade the BMRG has published 68 original articles (45 international, 23 regional/national), 203 conference reports and 66 theses.

Reduced reluctance for interdisciplinary collaboration **A**

In Bangladesh medicine is taught and practiced largely as a technology, not as a science. Accor-

³⁸Prof. Liaquat Ali

dingly, medically qualified persons are not interested in applied research activities, and basic research is virtually absent in this community [L]. Usually medical professionals see themselves as «superior», since the best students apply to study medicine by competitive admission tests and there is an almost complete separation between medical and non-medical science departments and people [L]. Since biomedical and health research is essentially multidisciplinary in nature – requiring collaboration not only with biological and physical sciences but with social sciences as well – this attitude is a major obstacle to developing medical science in the country [L].

The most important contribution of the BMRG relates to the generation of a change in attitude in some sections of the medical profession. The BMRG is the first national group in Bangladesh that has been able to incorporate various disciplines into biomedical research through core group members (Table 2) and appropriate collaborations (see national collaborations in Table 1) [C] [A]. Through this interaction, some of the research tradition existing in general university departments in the country (although very limited), has been transmitted to BMRG.

However, the major change in attitude came from exposure of the group members to advanced research cultures through mutual exchange visits by fellows and students with collaborating groups in Europe and also through the attendance of many members at international meetings and conferences³⁹ [A]. The 66 post-graduate theses produced as a result of research activities by the Group also reflect this multidisciplinary nature⁴⁰.

Improved working environment [A]

Introduction of an informal and friendly environment, introduction of self-help systems, tradition of working extra hours and holidays when nec-

Table 2: Distribution of the core BMRG academic staff according to discipline and degree (as per January 2004)

Discipline	Degree	Total Staff
Medical Discipline	4 PhD, 3 MPhil, 5 MBBS	12
Chemistry	2 PhD, 1 MPhil, 2 MSc	5
Pharmacy	4 MSc	4
Biochemistry	1 MPhil, 5 MSc	6
Zoology	1 MSc	1
Food & Nutrition	1 MPhil, 11 MSc	12
Health Economics	1 MPhil, 1 MSc	2
Grand total		42

essary, and motivation to use science as a tool for social development are among the crucial steps taken within the Group. After consultation with the major sponsor, IPICS, the members were given modest financial support (and free lunch and afternoon snacks) so that they would not leave for private practice or a second job in the afternoon [A]. Full-time dedication by researchers was assured through these steps. Given its congenial environment for research and career potential, BIRDEM became one of the most attractive centres for young students with the brightest academic records [C] [A].

d) Improved gender balance [A]

By contrast with the male domination of higher education and research institutes in Bangladesh, BMRG is attracting a large number of female researchers and students who are demonstrating excellent activity in all respects. The overall male-female ratio of the core academic staff is 13:29, and for postgraduate theses it is 32:40. This greatly changed the attitude of male colleagues as well as of the society in general towards female competence in science [A].

³⁹BMRG members have attended 27 International, 20 Regional, 18 National Conference/Seminars during the last decade.

⁴⁰Chemistry 2, Nuclear Medicine 1, Cell Biology 1, Dermatology 1, Biochemistry 5, Med Biochemistry 16, Nephrology 3, Gastroenterology 2, Neurology 1, Endocrinology 9, Gynecology 8, Environmental Studies 1, Anatomy 1, Physiology 1, Nutrition 14

Increased institutional and political support and recognition **B1 C**

The change in attitude among policy-makers was also a great achievement of the project. From a virtually nonexistent research culture, the executives of BIRDEM and policy-makers of DAB began to provide substantial moral and practical (including financial) support to the collaborative project, thus recognising its high value and utility.

In parallel to research activities, there was a rapid development of academic activities in BIRDEM. Before 1990 there was only a Diploma and an MS Course in diabetes, endocrinology and metabolism (conducted at Dhaka University). By 2001 BIRDEM had become the second-ranking (the first being the Bangabandhu Sheikh Mujib Medical University, a government run university) degree-granting organization in the country in postgraduate medical education, and is now running 14 courses in various medical disciplines. Thus BIRDEM is now playing a vital role in generating postgraduate health manpower in the country and the BMRG laboratory is used by most of these postgraduate students for thesis work.

Increased budget (funding) and staff expansion **B1 C**

Although a separate Research Division was planned in BIRDEM from its inception in 1975, applied research was virtually absent in the Institute before the present collaborative program was initiated. The altered attitude of policy-makers in DAB, described above, was soon translated into policies, with increased budget and manpower for research departments. By the end of the 1990s, about 20 regular posts, ranging from Professor to Animal Keepers, were installed and this, along with recruitment of fellows and students, helped to create the critical manpower for sustainable research activities **7**. The research group has grown to a fairly large «family», with 42 members as core staff (see Table 2). As mentioned above, a large number of postgraduate students from different universities and disciplines have earned degrees by doing their thesis work in the Group. The Group attracted national and international resources

and laboratory facilities and clinical research capabilities were thus substantially increased during these years **7**. Apart from the group members themselves, a good number of clinicians in BIRDEM were motivated to undertake research activities and, although a lot more remains to be done in order to improve quality, they have at least started to generate some data and ideas in their own areas.

Influence on the Diabetic Association of Bangladesh (DAB) **B1**

Within a few years of its initial activity, BMRG attracted the attention of DAB policy-makers and became a focal point for future planning and expansion of DAB activities. For a more scientific and systematic approach, a Health Economics Unit was created, with the Coordinator of BMRG as the Executive Advisor. Two economists and one physician (turned health economist) were recruited for the Unit. This team and the members of BMRG played a crucial role in planning the overall activities of DAB. These focused on the decentralization of DAB activities beyond BIRDEM and a new project, the National Healthcare Network (NHN) was created in 1996, which now runs 18 health centres in and around Dhaka city serving thousands of diabetic and nondiabetic patients through a self-sustained approach based on a cross-financing model with a safety net for the vulnerable groups **B2 B1 C**. The Unit also helped to upgrade and expand the affiliated associations, located all over the country (now 49 in number), and many of these associations run 30–200 bed hospitals. DAB has now become the largest health care chain in the country next to the government **B2 B1 C**. The next major quantum jump in DAB's activities is scheduled for 2004, with a 45 million-Euro health care project (including a University hospital), of which Euro 19.3 million will be supported by the Dutch Government under its Oret Program. The Health Economics Unit of DAB is playing the central role in materializing the project, and the Coordinator of BMRG acts as the contact person from DAB for the project. In addition, increased recognition of the competence of BMRG members led to membership in

various policy making bodies at different levels **➤ B1**, such as the Task Force for the Health and Population Sector Program (HPSP), the Health, Population and Nutrition Sector Program (HPNSP), the Fellowship Committees of the Bangladesh Medical Research Council and the Ministry of Science & Technology, the Advisory Panel of Health Consumers Right Forum, the International Expert Group Meeting on the Classification of Diabetes in the Tropics, the International Advisory Panel on Diabetes and Ramadan, the TWAS Workshop on Sustainable Use of Plants, etc.

Increased number of patients treated **B2**

In 1990 the total registered diabetic population served by BIRDEM was around 70,000, and the total number of patients served by DAB and its affiliated associations was around 130,000. At the end of 2003, the corresponding numbers were approx 320,000 and 550,000 (including those served in NHN). This phenomenal increase in services is, to a significant extent, related to the planning and hard work of the Health Economics Unit, which in the true sense is a daughter of BMRG **C**. It must be emphasized that a proportionately greater number of nondiabetic patients are served by the DAB Projects. Over the years, BMRG introduced a good number of new and advanced techniques for routine clinical care **A**. For example, prior to the 1990s, hormones were assayed in BIRDEM by Radioimmunoassay (RIA) for diagnosis and treatment of endocrine disorders. This technique required radioactive reagent kits which had to be imported from the West. Apart from cost and risk for the lab personnel, this created lot of delay and inconvenience for the patients. Sometimes the radioactivity decayed due to delays in transportation and customs, and all kits became unusable. BMRG researchers started to use alternative techniques of chemo-luminescence and fluorescence-based ELISA (enzyme linked immunosorbent assay), and routine clinical use of the techniques rapidly followed in BIRDEM as well as in other labs in Bangladesh **➤**. Another example is the introduction of HPLC (high performance liquid chromatography) based

Hemoglobin A_{1c} (HbA_{1c}) assay into the country. HbA_{1c} is a better tool for assessing long-term (2–3 months) blood glucose control in diabetic patients and it is an indispensable test for the management of patients in the developed world. BMRG researchers initiated the test in their own research projects, and on their advice and support it was introduced for routine clinical use **A**. Still, the BMRG equipment gives HbA_{1c} clinical service to the patients of BIRDEM and other DAB projects. Many clinical laboratories (including private laboratories) now regularly take advice from BMRG researchers regarding the best and most cost-effective techniques for their labs.

User benefit from research output **B2**

As from 1995, the BMRG began to organize the annual Diabetes & Endocrine Conference **➤** with the participation of a large number (about 1000 in 2003) of physicians and health care professionals from all over the country and even from neighbouring countries **C B2**. Through this Conference, the national and international seminars of the Asian Network of Research on Antidiabetic Plants (ANRAP), and the biannual «Diabetes & Endocrine Journal» and popular Magazine «Kanti», BMRG disseminates most of the data to professionals and other concerned parties **➤**. The antidiabetic plant material data have enlightened the physicians (including the traditional practitioners) about the rational use of these plants, which are still the chief form of medication for much of the population in developing countries. The nutritionists – and ultimately the patients – similarly profited from the glycemic index data, while the data on basic pathophysiology of diabetes in the Bangladeshi population helped physicians to adopt a more scientific approach to diabetes management **A B2**.

Creation of a regional network and support for fellowships

In order to promote interaction among researchers – primarily in the field of antidiabetic plants – the Asian Network of Research on Anti-diabetic Plants (ANRAP) was created in 1994 **↗** with BIRDEM hosting the Secretariat. With sponsorship mainly from IPICS, ANRAP played a significant role in stimulating scientific activities in various countries of the region, as well as in Africa **C A**. In most cases BMRG played the role of the host group for fellows coming from different countries⁴¹ **↗**. Most of the fellows stayed for 3 to 6 months, and some even had multiple visits. Recently, a fellow worked with sponsorship from OPCW, while further requests have been addressed to WHO, IDF and TWAS.

Good relationships with Northern partners

It is very pleasing to mention the extremely friendly, trustful and mutually respectful relationship of the BMRG with its partners in developed countries **↗**. In some cases, BMRG played the role of host for the Northern researchers⁴². These visits allow young researchers and BMRG students to exchange views with colleagues from the West, not only with reference to science but also to attitudes **↗ A**. In general, most BMRG partner groups in the West are enthusiastic about continuing and strengthening the partnership with BIRDEM.

⁴¹BMRG hosted 4 fellows from India, 3 from Pakistan, 5 from Nepal, 2 from Srilanka, and 1 from Cameroon, during the period.

⁴²E.g. for a collaborative PhD student from Basel who stayed about two years in Dhaka, for a post doctoral student from Copenhagen who stayed five months, and for a female fellow from Ulster who stayed for six months.

Case Study 8: Microbial Control of Insect Pests – A Southern Perspective of an Indo-Swiss Research Projekt

by Mani Chidambaranathan, Soraya Verjee, Smita Premchander (all Sampark)⁴³, and M.V. Deshpande⁴⁴, Southern research partner in the project, National Chemical Laboratory, Pune/India (compiled by Jon-Andri Lys)

The Indo-Swiss Collaboration in Biotechnology (ISCB), a bilateral agreement between the Indian and Swiss governments, promotes research partnerships in various areas of biotechnology and fosters technology transfer to the end user. The main goal of this collaboration is to increase the productivity of wheat and pulses in semi-arid and rain-fed agricultural systems and to support the sustainable management of natural resources⁴⁵.


Background

Objectives and phasing of the project

The National Chemical Laboratory (NCL), Pune (India), the Department of Microbiology at the Swiss Federal Institute of Technology (ETH Zurich), the Atlas Agro (Zurich) and the Swiss Federal Research Station for Agroecology and Agriculture (FAL, Zürich Reckenholz) are currently engaged in a collaborative research projekt under the ISCB entitled «Microbial Control of Pests: Entomopathogenic Fungi as Mycoinsecticides». The aim is to produce a bioinsecticide to reduce damage to pulse crops, especially chickpea and pigeon pea, caused by the pest *Helicoverpa armigera* and other related insects. The agent being developed is fungal-based. This means that as a result of its contact with the insect, spores grow on the pest, immobilizing and

finally killing it. The project started in April 2000 and the first phase ended in August 2004. The second phase should last until 2007. It will include trans-sectoral issues such as farmers' education, and help promote the bioinsecticide outside India as well.

Role of partners

The initiative came from the project co-ordinator in the South, who approached the Northern partners in order to establish a partnership for the purpose of developing the bio-insecticide. All partners already contributed their expertise in setting the agenda. 

A large proportion of the labwork, including e.g. the collection and selection of the strain, was carried out at the NCL. All field testing was carried out in India⁴⁶ by the NCL. The partners in the North were mainly involved in labwork, too, such as strain isolation and risk assessment. Once the research and development phase is completed, Atlas Agro will play a role in marketing and commercializing the product.

Aim and methodology of the case study

The aim of the study is to understand and analyse the impacts of this collaborative research projekt, from a Southern perspective. For this, Sampark contacted the project co-ordinator at NCL, visited the laboratory, and conducted a series of interviews including the project co-ordinator, three research assistants, the head of one of the research stations in the agricultural universities involved, and a private farmer, using the IAS impact matrix as a guide. Field visits were made to both the agricultural universities and a

⁴³BSampark would like to thank the following people: Pallavi, Priya, and Gouri at NCL, the research participants from MPKV, IPORS, and the farmers for sharing their thoughts and experiences on the project and for all their support during our field visits and validation process.

⁴⁴http://www.kfpe.ch/key_activities/impact_study/content.html

⁴⁵For more information about ISCB see: http://www.biotech.biol.ethz.ch/india/Projects/3_sci_prog.html

⁴⁶at two agricultural universities – in Maharashtra State and in Karnataka State – and two private farms.

private farm to understand how the testing was being carried out and how the product would impact farmers. The draft report produced based on the information obtained during visits and interviews was then shared with the NCL to verify results, fill in gaps, incorporate further inputs, and refine the content. Following this, a final report was completed.

Impacts

Remark: Since the project has not yet reached the application phase, little or no impact at the end user and policy-making levels has been recorded. More impacts can be expected from activities foreseen for phase two.

New knowledge and changes in attitude **A**

Prior to the project, the co-ordinator in the South had never carried out participatory, transdisciplinary research. It was the first time this approach was used and the project showed the researchers the value of incorporating farmers' concerns, intentions, needs and knowledge into applied researcher projects. Thus readiness to do more research with the participation of farmers in future increased. So far, however, indigenous knowledge has not yet been utilized. It will be incorporated into the Integrated Pest Management (IPM) system after the research and development phase is over.

Information on the research has been disseminated widely to the public through radio broadcasts, newspaper articles, scientific papers, publications, and (roundtable) conferences in India and abroad **↗**. This helped promote the approach of participatory research among scientists and increased understanding of such endeavours in society at large.

Several mutual visits to India and Switzerland were carried out to observe progress and participate jointly in the work at hand **↗**.

Regarding the prioritization of outputs related to desired effects and impacts, differences arose between the perspectives of the Northern and Southern partners. For example, the project co-ordinator from India preferred to publish in

Indian journals in order to serve the country where the project is located, while the Northern partners preferred to publish in international journals, believing that this would yield a better result than publishing in local journals.

Individual capacity strengthening **C**

The project helped significantly to increase the level of knowledge of the Southern research assistants, through their strong involvement in laboratory research as well as in the field trials. The research assistants and the project co-ordinator also benefited extensively – both personally and professionally – by significantly enhancing their capacities and skills in scientific and collaborative research. The results of their research have been widely published, and the project allowed them to participate in national and international conferences **↗**. The research assistants won the best paper award at a conference in Jaipur, India, thus increasing their self-confidence and enhancing their scientific status.

During the project, two male entomologists left, due to low government salary structures **↘**. The organisation did not hire any other entomologists, and so the women microbiology research assistants on the project took over both tasks – microbiology and entomology. They quickly learned how to do the entomology work and at the same time performed their microbiology work. This increased their areas of competence as well as their recognition within the team **C A**.

Two of the three research assistants travelled to Switzerland as part of the project activities **↗**. One of them had the opportunity to work there, thus further developing her research and presentation skills. This helped open doors for future professional activities such as the possibility to pursue further studies, or a career either in India or abroad. However, institutional constraints do not permit researchers from India to extend their stay in Northern countries and avail themselves of learning opportunities, as they risk losing their job security in their own country **↘**. As a result of experiences gained at NCL, past research assistants have benefited by either moving abroad or to higher positions in equally reputable

institutions **C**. However, such movements have been easier for male than female scientists.

Through the project, the Southern research partners have had teaching opportunities within and outside the NCL, with other students and professionals, on topics concerning biopesticides **A**. Presentations related to their research are also constantly being made to the public and within NCL.

As a result of project co-ordination in the South, the competences and skills to administer such a project financially and scientifically have increased, as all these tasks were carried out efficiently and effectively **A**. The coordinator meanwhile started an additional collaborative project with Belarus, using a certain method learnt in this project.

Institutional capacity strengthening C

The NCL – a well established and highly reputed research centre in India – has benefited from equipment procured abroad and from additions to the library **A**. Other researchers at the NCL have been utilising the research results and facilities established. The institution is now focussing more on practical applications, participatory research and collaboration with other researchers and organizations **A C**.

The project is about to produce at least two to three PhDs for the research assistants involved, as well as a constant stream of MSc students who can base their studies on this research.

Policy relevant research results B1

When the product is ready for the market, the Council of Scientific and Industrial Research (CSIR) at the NCL, the Department of Biotechnology (DBT), the Swiss Agency for Development and Co-operation (SDC), the ETH, Atlas Agro, and FAL will be involved in handling policy-related matters **A**. Once the research and development phase is complete, a technology package will be assembled and then transferred to an industry group. The issue of Intellectual Property Rights (IPR) will have to be addressed, and equitable shares provided to Northern and Southern partners. Working with the two agricultural universities who are experienced in handling such

issues will help in the process of having the product officially registered. Their wide dissemination of the product and the recognition they have gained from doing this research will help to influence policies **A**.

Application and user-relevant research results B2

Extensive testing has been carried out successfully in the field at two agricultural universities and on two private farms. All parties have positive feelings about the results and research being carried out, and anticipate distribution of the product on a large scale. However, unless the product is formally approved, it will not be used widely. Despite this conditionality, local farmers in the vicinity have been made aware of the research **A**. Thus they responded positively to future application of the bio-pesticide, as they witnessed the harmful effects of chemical pesticides, while those participating in the field trials received positive results **A**.

Factors affecting impact

Contributors

A **Team effort** in designing and implementing the project and in utilising specialized inputs from all partners involved; all researchers contributed their respective expertise, thus creating the feeling of a joint contribution to the project. Differences regarding motivations and intended impacts were sorted out at the start, so that during the partnership, misunderstandings and tensions within the collaboration were avoided or at least reduced. Discussing work cultures, intended impacts, outputs and motivations in the initial stages of a partnership not only helps scientific collaboration but also enhances social collaboration.

A **High dedication and strong perseverance** on the part of the persons involved generated the special efforts needed to disseminate the knowledge gained and produce and test the bio-insecticide in the field. Compensation for time spent and equal distribution of benefits played an important role in this regard

➤ **Having the project co-ordinator in the South** has been an important factor in the success of the project.

➤ **Maintaining 100% transparency** based on fast and easy communication between the partners, having international exchanges, distributing workloads equally, and sharing knowledge and equity (responsibility) in decision making and agenda setting are paramount to achieving success in a project.

➤ **Supply of missing equipment** by the Northern partners made it possible for the Southern partners to perform their research more efficiently.

➤ **Clearly spelling out objectives, aims and timetable** before the start allowed all parties to carry out the work efficiently and competently. The government and scientific institutions on both sides were vigilant of the progress being made and helped to keep the project on track.

➤ **Strong and determined project leadership** has been a motivational force for all involved, and has contributed not only to the success of the project but to the cohesion of the partnership

➤ **Team co-ordination and co-operation** among the researchers at the NCL helped in overcoming a lack of certain specialized skills and in learning what was missing and needed to work successfully and quickly.

➤ **Equal sharing of IPRs and authorship** of all papers and publications contributed not only scientifically, but also in maintaining the social cohesion of the partnership; it helped to build mutual trust and respect.

➤ **Wide dissemination of information** about the research (locally and internationally), has been important in reaching all stakeholders, from the farmers to researchers in India and abroad.

Inhibitors

⚡ **Loss of personnel** (two male entomologists) due to low government salary structures

⚡ **Difficulties in accessing land for testing**

⚡ **Cultural barriers or realities not perceived**

led to various misunderstandings and put certain strains on the partnership. For instance, as the Southern partners work more closely at the field level, they are forced to deal with the hardships faced by Indian farmers. Without being intimately in touch with the field work and daily reality, it is very difficult to fully understand these hardships. This left the Northern partners with certain expectations of how the testing should be carried out, which sometimes were not feasible for the Southern partners. The Southern partners felt that the Northern partners have more distance from the end-user and therefore do not always exhibit the sensitivity required at certain times. However, these issues didn't have enough weight to affect the effective and efficient development of the product.

Recommendations

- **Provide (working) opportunities to research assistants** who will be the scientists of the future; both the government and the partners have a vested interest in ensuring future employment and having a salary structure that adequately compensates trained people.
- **Open doors for female research assistants** and provide career counselling for senior female scientists, helping them for their future career.
- **Assess the partnership** through an internal evaluation; partnership aspects are just as important as scientific operations.
- **Allow for a sufficient number of mutual visits.** This is crucial to bring both sides closer to the work being done and to gain a larger understanding of the cultures involved and the struggles they may face.

Annex



Impact matrix

Proposals based on feedback from the workshop participants and other contributors included:

- distinguishing the impacts of research partnership projects in the following **domains** and **levels**:

A New knowledge and changes in attitudes of researchers

Benefits for end-users:

B1 Policy-making

B2 Public/society at large
(e.g. local communities, farmers, private sector /enterprises and others)

C Individual and institutional capacity building /strengthening

- distinguishing **positive** (desired) impacts and **negative** (undesired) impacts.

The matrix below represented as a reference frame is the result of joint brainstorming among the institutions involved. It contains an overview of possible outputs, their utilisation, effects, benefits /drawbacks, and possible positive and negative impacts of research partnerships on different domains, as well as possible impact indicators. This list is not comprehensive, but should be used to stimulate discussions – particularly with the Southern and Eastern partners involved in research partnerships, in order to make a final selection of impact indicators. Additional or more accurate impacts and indicators can of course still be added.

Possible Impacts and Impact Indicators in Domain **A**:

Knowledge & attitudes (S & N, scientific, indigenous, institutional, tacit knowledge)

Output of Research Partnership

Improved and increased knowledge and changed attitudes among researchers

Impact Chain

Utilisation of Output

- Application of increased capacity to generate know-ledge with societal relevance and to adapt knowledge to local conditions
 - proportion of basic, applied, adaptive and participatory research
 - number of publications in popular mass media
 - types of dissemination appropriate to different Stakeholders (documents, training, press conferences, etc.)

Effects (Outcomes)

- Greater capacity to manage research institutions
 - ability to attract research funds
 - staff turnover
- Attitudinal changes among researchers (e.g. cultural understanding, professional attitude)
 - changes in orientation/activities/goals of the project from «pure scientific» to more relevance for the target group / end-users
 - better incorporation of end-users' concerns (e.g. listening to farmers' needs, ideas, visions etc.)
 - recognition of end-users (e.g. farmers) as being researchers in their own right
- Knowledge production is hybrid (merged scientific and indigenous knowledge)
 - both scientific and indigenous knowledge help to design the research methodology
 - generated results serve both end-users and scientists
- Greater capacity to conduct state-of-the-art research
 - number of publications in reviewed journals
 - number of presentations in conferences

Benefits/Drawbacks

- Relationship between Northern and Southern partners balanced
 - agenda jointly set by Southern and Northern partners in future
 - equitable distribution of financial resources
- Too high opportunity costs of research partnership (time, money etc.)
 - agenda-setting-process (how to arrive at the re-search agenda)
- Scientific knowledge is marginalised
 - scientific pertinence is lost for the sake of pure application
- Misused indigenous/local knowledge
 - economic valorisation by the external partner without sharing with the original holder of the knowledge; no prior informed consent; no intel-lectual property right agreements/contracts negotiated / signed despite (potential economic) benefits

Impacts

- Increased sensitivity of society at large to scientific research (committed citizens – «research is also my concern»)
 - increased appearance of scientific topics in the mass media
 - increased number of end-user-led trials (e.g. by farmers)

Legend

- criteria
 - indicator
-

Possible Impacts and Impact Indicators in Domain **B1**:

End-users' benefits (S & N, policy making)

Output of Research Partnership

Policy-relevant research results

Impact Chain

Utilisation of Output

- Relevant issues responding to needs of policy-makers are addressed by researchers / the RP
 - formulated demands
 - documentation from meetings

- Contribute to the misuse of knowledge
 - Political instrumentalisation
 - Serving privileged groups
 - Serving personal career
 - Serving private companies
 - availability of information, obstacles to getting it
 - no relevant changes in legislation

Effects (Outcomes)

- Linkages / two-way-exchanges between policy-makers and researchers in North and South
 - increased R+D budget
 - shift in project goal towards development orientation
 - clearinghouse function of research centres
 - popular fora include policy-makers and researchers, oral presentations, publications and summaries
 - advocacy actions by both researchers and policy-makers
 - number of references made to results of research by policymakers
 - research results being used by politicians / policy makers

Benefits / Drawbacks

- More researchers move to adequate positions in policy
 - number of former researchers moved to policy making or governmental think tanks

Impacts

- Contribution to overall goals, such as poverty alleviation / better livelihoods
 - information / knowledge developed relevant for poverty alleviation (housing, health, security, jobs)
 - research results increasingly used to improve development programmes
 - end-users' opinion of research quality and impact

Possible Impacts and Impact Indicators in Domain **B2**:

End-users' benefits (S & N, the public / farmers, private sector / enterprises, others)

Output of Research Partnership

- Applicable and user-relevant research results

Impact Chain

Utilisation of Output

- Development of a knowledge generation process and more knowledge to empower user groups to make better decisions
 - degree / number of involvement of end-users (e.g. listening or actively shaping)
 - practice of local language and modes of communication (theatres, films, videos etc.)
 - amount / number of user friendly events, meetings, publications to make results known
 - analytical capacity gained through research partnership is applied / adapted by locals to other fields of concern

Effects

- Improvement of the enabling environment supporting various end-users
 - e.g. increased number of small & medium-size enterprises (S & M)
 - e.g. increased loans by banks for S & M enterprises
 - improvement / changes in the legislation governing various sectors
- Local consulting firms established by former researchers
 - number of consulting firms newly established
- Building research partnerships around local initiatives / «innovations»
 - number of research projects based on local initiatives / needs
 - explicit processes followed for developing agenda on local initiatives

Benefits / Drawbacks

- More researchers move to senior positions in private companies and NGO's.
 - number of former researchers moved to adequate positions in private companies and NGO's

- Decreased dependencies
 - expatriate personnel / experts replaced by national researchers
- Reduced societal relevance due to dominance of the international scientific reward system
 - involvement and influence of local stakeholders in agenda setting (workshop, ...)
- Contribution to higher quality teaching of students
 - number of teachers involved in research project and consultancy (experienced outside university)
 - researchers involved in teaching
- Sustainable Research Partnerships
 - development of stable, long-term partner relationships (financial, personal commitment, increased trust)
 - establishment of long-term commitment between users, policymakers and researchers
- Users more involved in entire research process (trans-disciplinary research: agenda-setting, data gathering, development, implementation, dissemination and management of projects)
 - number / degree of involvement of the end-users (just listening, actively shaping)
 - explicit processes for involvement of users in different steps of the research process
 - degree of original intentions of both sides visible in the final proposal
 - mutually signed document
 - increasing demand-driven research

Impacts

- Contribution to overall goals, such as poverty alleviation / better livelihoods
 - information / knowledge developed relevant for poverty alleviation (housing, health, security, jobs)
 - research results increasingly used to improve development programmes
- end-users' opinion of research quality and impact
- Contribution to consensus building among conflicting parties
 - research results used implemented in real life
 - research results used for consensus building

- No significant change in problem areas:
 - social disparities, tensions and conflicts, natural resources degradation, etc.
- occurrence of social disparities, tensions and conflicts despite research on this topic
- increased poverty and marginalisation
- accelerated loss and degradation of resources
- no or limited technology development, etc.
- No impact due to inappropriate dissemination of results (language, format etc.)
 - results available in appropriate translation

Possible Impacts and Impact Indicators in Domain :

Individual and institutional capacity building / strengthening (S & N)

Output of Research Partnership

Increased individual and institutional research capacity

Impact Chain

Utilisation of Output

- Interdisciplinary (transparent) methodology is institutionalised/part of mainstream («rules of the game»)
- criteria exist for selection of research proposals
- involved partners reach consensus

Effects (Outcomes)

- Creation of a favourable environment for framing / accompanying individual researchers
 - infrastructure (laboratory, library, PC, etc.)
 - competitive salaries
 - sufficient individual supervision
- Contribution to the creation / strengthening of (catalytic) centres of excellence
 - quantity and quality of output (no. of publications / hits on website, use of library; assessing the quality of meetings, documents)
 - no. and quality of invitations to international conferences, etc.
 - number of PhDs (or even MSc, MBA, etc.)

Benefits/Drawbacks

- A better / more effective division of tasks and responsibilities (e.g. researchers / extension-system, end-users)
 - evidence of collaboration between research and others
 - behaviour of end-users
- Abuse of funds for logistics and equipment
 - relative decrease of quantity and quality of scientific outputs
 - significant deviation from standard benchmarks (relative increase of admin. costs, compared to other institutions)
- Creation / acceleration of dependencies
 - reduced mobilisation and reduced control over funds by the South

- Contribution to South-North brain drain
 - number of trained Southern researchers going abroad (to the North)
- Neglecting and boycotting Southern journals, etc. in favour of Northern ones
 - number of publications in Southern / local journals versus Northern ones?
- Scattered knowledge in the South converged in the North, e.g. leading to more intellectual property rights in the North
 - processing and publication of research results (IPR, products)

Impacts

- Sustainable institutional capacity building / strengthening
 - researchers continue being active in their profession and in adequate institutions (maintenance of a critical mass)
- Fragmentation / conflicts / competition between national research institutes (between and within)
 - duplication of research work without plausible explanation
 - decreased networking
- Increased asymmetries within national research system from the centre to the periphery
 - research activities and outputs
 - allocation of funds
 - internal brain drain towards central institution
- No sustainable institutional capacity building / strengthening
 - researchers leave for inadequate work / profession
- Exploitation of Southern partners due to Northern dominance (increased inequalities)
 - division of tasks / responsibility of the Southern partner (data collection, management, publishing, agenda setting)
 - increased personal institutional capacity after project (N and / or S)

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Persons actively involved in the IAS Group

Launching Workshop in Switzerland, Moosegg, 2–4 May, 2001

- El Shinnawy Azza (ERF)
- Harabi Najib (ERF)
- Herweg Karl (CDE, Univ. Berne)
- Lammerink Marc (RAWOO)
- Lys Jon-Andri (KFPE)
- McMahon Gary (GDN)
- Maselli Daniel (SDC)
- Meschinelli Alessandro (IFAD)
- Winkel Klaus (DANIDA)

3rd GDN Annual Conference in Rio de Janeiro, December 9–12, 2001

- Maselli Daniel presented the IAS concept in a workshop during the conference

Workshop during the 4th GDN Annual Conference in Cairo, 15 & 16 January 2003

- Bijl Jaap (RAWOO)
 - De Leener Philippe (IFAD)
 - El Shinnawy Azza (ERF)
 - Loayza Fernando (GDN consultant)
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 - Maselli Daniel (CDE, Univ. Berne)
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 - Nkurunziza Janvier (Burundi / Harvard)
 - Premchander Smita (Sampark)
 - Yudaeva Ksenia (Russia)
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Field-visits and Workshop during the 5th GDN Annual Conference in New Delhi, January 22–26, 2004

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 - Chidambaranathan Mani (Sampark)
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