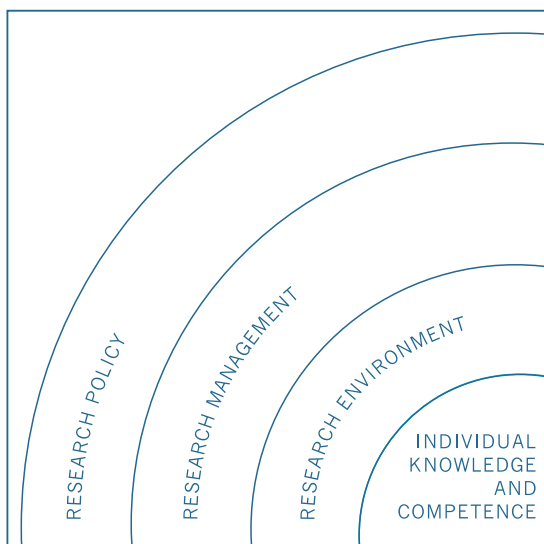


Research capacity

Towards the Millenium Development Goals





Cover illustration: The research domain can be viewed as a series of layers. Improving research capacity for poverty reduction and development involves training a core of individual researchers who are able to generate knowledge useful to the nation. They also require research environments at universities that support their activities. Sida is increasingly directing its support above the level of research environments – to the level of research management and financial administration within university structures and research policy and strategies at the national level.

Research capacity

Towards the Millenium Development Goals

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Meeting the Millennium Development Goals through increased research capacity

In 2005, Sida noted 30 years of support for research as part of Swedish development cooperation. The year was framed by two major events. In January, some 300 researchers debated development issues at a Stockholm conference on 'Structures of Vulnerability'. In December, Nobel laureates in discussions with researchers from developing countries underlined the role of research in addressing development concerns.

But just as we at SAREC were celebrating our first 30 years in research cooperation, almost everyone in the development sector was looking ten years into the future. The year 2015 is when the Millennium Development Goals (MDGs) established by the United Nations are to be assessed. Then we will know to what extent these noble ambitions will bear fruit and we will be able to analyse which factors have been responsible for successes and failures.

We know that the seeds leading to success were planted and nurtured by many actors over many decades, and supported by many organisations. In our 2005 yearbook we reflect on the role of research in this nurturing process. We believe that many of the seeds that will eventually bear fruit in combating poverty can be traced to research efforts and will try to illustrate such connections.

Some seeds were planted in Nicaragua over 20 years ago when support for health research started. Today, researchers have demonstrated links between child health and

health interventions and pointed to the negative role of domestic violence for maternal health. They run MSc programmes and have established close links with health authorities.

Other seeds have grown into research groups in Mozambique which can undertake environmental impact assessments, develop ICT for rural communities or negotiate conditions for exploitation of mineral resources. The establishment of a Ministry for Sciences and Technology in 2005 is a further achievement with roots in early Swedish research funding.

Replanting of forests destroyed by Agent Orange during the war in Vietnam, using improved tree varieties, is another example of how Sida-funded research efforts have proved their usefulness many years after research cooperation started. Similar results can be reported from Tanzania, Bolivia and many other bilateral partners, as the examples later in this yearbook show.

This yearbook is thus not concerned with a single year, because SAREC's scope is not confined to a single year. We allocate multi-year grants. These may result in academic degrees and research publications over a three- to five-year period. However, results in terms of action or impact are normally apparent after 10-20 years. We therefore report activities and results during 2005 as part of a longer sequence of phased commitments in support of research efforts.

So why do we choose to connect our

report with the MDGs? These goals, originally designed as indicators, represent only a subset of the efforts needed to combat poverty, and the goals are not in themselves perfectly well formed. But these indicators were chosen with the broadest possible participation.

This makes them, by any measure, part of one of the largest concerted efforts ever undertaken in the name of the world community. They provide a unique, easy to understand handle on the pressing problem of an extremely unequal world. They thus make a good framework for laying out accomplishments achieved through Sida research funding.

The impending date of 2015 does leave us with a central question: can increased research capacity in developing countries enhance their efforts of combating poverty, especially as measured by progress towards attaining the MDGs?

Our answer is yes. We have long argued that low-income countries need a proper basis for research. Part of that stems from the increasing dependence on science and technology that comes with globalisation. Research grounded in local conditions and informed by global findings serves as the basis for policy decisions, the basis for making sure that an educational system is geared to a nation's needs, and a basis for participation in sustained development.

Poor countries with enhanced research capacity may achieve sustainable progress and fight poverty

through contributions to healthcare, the physical environment, the social environment, agriculture, industry and much more.

From education to healthcare to commercial development, research can make a difference. Sida-supported researchers undertake projects that improve maternal health, that fight diseases known to be child killers, and engage in both medical and social research on HIV/AIDS epidemiology and treatment. Researchers undertake projects to understand how university actions can contribute to the Education for All goals, as well as how gender inequalities can be addressed at primary, secondary and post secondary schools.

In the area of environmental sustainability, Sida-supported biotechnologists in Bolivia have developed micro-organisms for biopolyester production, new sources of pharmaceuticals and new methods of treating commercial wastewater. In Vietnam, work with small landholders has led to integrated farming systems involving fish, ducks and rice.

Our support for global partnerships extends to economic development. Sida funding enables four African countries to perform economic micro-simulation modelling to help their governments design pro-poor policies, under the UN University's WIDER project.

The MDGs do not cover the entire range of areas needed in the fight against poverty and some research goes far beyond these goals in scope and time perspective.

Investments in research usually take a long time before leading to demonstrable results. Investments in building a basis for research have an even longer gestation period. If governments and external partners are serious in their intentions to strengthen the condition for true ownership, they should not hesitate to make investments which reach far beyond the magic date of 2015.

The Swedish commitment for research in development cooperation originates from the strong conviction that research should be used in the fight against poverty and underdevelopment, and that poor countries need research tools in order to make use of available scientific knowledge.

We have not employed a fixed model, but have tried to be responsive to different situations and realities. We do not expect countries to adjust to our support models but have been prepared to tailor support to fit perceived needs. Our experience shows that it is possible and fruitful to make investments in research even in very weak situations. In the future, we hope to encourage concerted efforts in support of committed plans for research development in low-income countries.

Change is possible with dedicated people, but people need the tools for change. Capacity for research is one such powerful tool for change.

Berit Olsson
Stockholm, July 2006



SAREC at a glance

SAREC, the Sida department for research cooperation, employs 41 full-time professionals to manage a research cooperation budget of 847 MSEK (2005).

Support is generally distributed this way: 30% to international knowledge development; 30% to regional research cooperation that focuses on both knowledge and capacity development, and 30% as direct support to research in partner countries. The remaining 10% goes to grants for Swedish development research.

Sida supports the development of policies, structures and capacity for research, including institutional reforms strengthening research management and research priority setting.

Through support to regional research networks and international research groups, Sida engages in research and research strengthening in areas closely linked to the fight against poverty and efforts to address the MDG issues.

Sida supports projects that improve maternal health and fight diseases that hit children especially hard, such as malaria and other tropical diseases. Others involve both medical and social aspects of HIV/AIDS epidemiology and treatment. Additional support goes to social sciences areas such as economic planning, democracy and human rights, and gender and demography. Natural resources and sustainable environments are major themes in many programmes.

Regional and international disbursements for 2005 totalled 416 MSEK, divided into thematic areas managed by two divisions: Human

Sciences for Social Development and Natural Sciences for Sustainable Development.

Our bilateral research programmes also offer many examples of support for creating sustainable livelihoods and improved living conditions. In 2005 SAREC supported bilateral research cooperation with 13 countries:

- Africa: Burkina Faso, Eritrea, Ethiopia, Mozambique, Rwanda, Tanzania, Uganda
- South America: Bolivia, Honduras, Nicaragua
- Asia: Laos, Sri Lanka, Vietnam

In Burkina Faso, a drought-prone country with severe degradation problems, research focuses on Sahelian eco-system management. In Ethiopia, research is carried out on integrated water resources and environmental economics.

Collaboration with Uganda is focused on the Lake Victoria environment, while environmental research in Tanzania covers semi-arid and marine environments. In Mozambique, environmental aspects include the effects of mining and research on groundwater.

Rwanda wants to use Information and Communication Technologies (ICT) in order to find development paths beyond smallholder agriculture. ICT is a key aspect of research cooperation, along with research on the environment and conflict resolution.

In Bolivia, multidisciplinary research on regional development also covers environmental aspects. In Nicaragua, which has long depended on cotton as a major export crop,

research on the effects of pesticides on the environment and on humans has produced important knowledge.

After hurricane Mitch in 1998, Sida recognised that research cooperation with Honduras would contribute significantly to natural disaster prevention. Preparatory steps involve how to plan and implement university reform processes.

Research in Sri Lanka and Vietnam has contributed to improved management of marine resources in both countries.

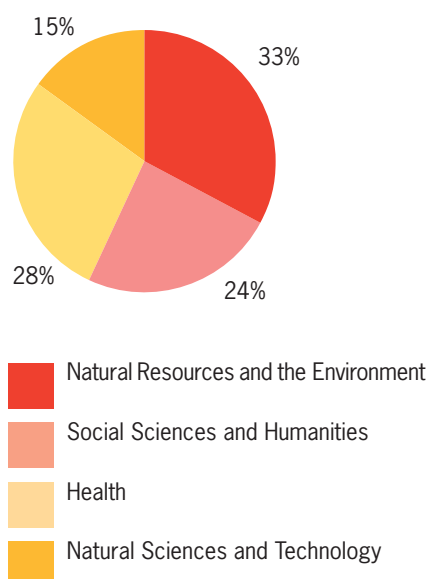
Cooperation between universities in Laos and Sweden involves upgrading staff to MSc and PhD levels, but also strengthening research administration and ICT. The overall aim is to develop and reinforce the conditions for democratisation and a greater respect for human rights.

Total bilateral disbursements in 2005 were 259.2 MSEK. As of 2005 more than 200 projects were underway, with over 120 Swedish university departments involved.

Bilateral programmes at SAREC are managed by the Division for University Support and National Research Development.

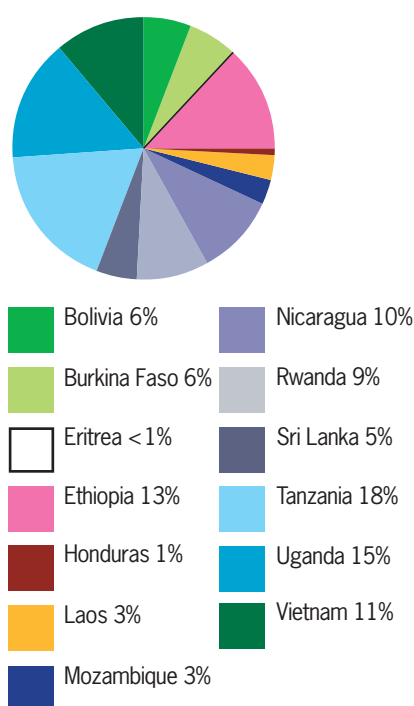


THEMATIC DISBURSEMENTS 2005, BY AREA



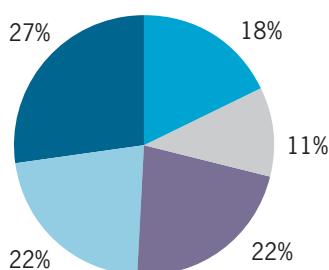
Total disbursed 2005: 416 MSEK

BILATERAL DISBURSEMENTS 2005



Total disbursed 2005: 259.2 MSEK

SWEDISH RESEARCH GRANTS, BY AREA



Total disbursed 2005: 99 MSEK

SAREC – A 30-YEAR ENGAGEMENT

An organisation can do a lot of growing up in 30 years. From an independent government agency founded in 1975 as the Swedish Agency for Research Cooperation with Developing Countries, SAREC has evolved into an integrated part of comprehensive Swedish development cooperation. It is a lean, committed organisation with extensive active partnerships throughout the world. The Swedish engagement in research has been a learning process in parallel with changing trends in international development cooperation.

Much as 'development assistance' has evolved from major infrastructure projects (roads, schools, hospitals, etc.) and 'knowledge transfer' to support for comprehensive development strategies, research cooperation has moved from projects and programmes to broad support for comprehensive institutional development in partner countries.

A similar change has occurred in relation to support for thematic research, as the early willingness to support individuals and groups with relevant project proposals has shifted towards long-term support for regional and international research organisations capable of mobilising researchers for identified research needs.

During its early years, SAREC struggled to find ways of supporting research in low-income countries. An early strategy to support national research councils was abandoned after ten years. In the absence of a scientific community, decisions to undertake research were based on political problem formulation without reference to scientific literature nor concern for sustainable research capacity.

By 1985, SAREC started to emphasise research training in order to support a basis for research development. The sandwich model was used, in which PhD candidates could spend time at Swedish universities for supervision and course work while problem formulation, empirical work and data collection were undertaken at home. The PhD theses were undertaken within a joint research framework of relevance to both partners. As part of the project, support was provided for the research environment: research infrastructure and scientific equipment, as well as support for information, libraries and archives.

Gradually, support shifted from individuals

to institutions and research training became part of institutional staff development. A further shift was made at the beginning of the 1990s to favour more comprehensive support to enhance research capacity at national public universities. All countries should have at least one university capable of undertaking research-based higher education and graduating doctoral degrees. This would also improve sustainability of research investments.

As research capacity developed, the Swedish cooperation has started to shift to support supervision of local research training and capacity to award master's and PhD degrees.

In 1995, SAREC was integrated into Sida along with other Swedish development cooperation agencies. Decisions about engaging in support for a basis for research became part of country cooperation strategies. Also in this new organisation, the Sida Research Committee checks that scientific quality and policies are considered in decisions on research cooperation. The committee has eleven members and includes representatives of the Swedish research community and Sida.

As time went on it became evident that there are many barriers to creating research cultures. Issues of research management at the university level – including financial management and administration – as well as research policies and strategies at the national level, have emerged as important areas of Swedish support for national research capacity in low-income countries. Research strategies must naturally be part of country policies for development and strategies for combating poverty.

Sida support for regional and international research has also changed over the years. Small and short-term projects have given way to long-term funding of more established organisations that keep abreast of development-related international research and identify relevant knowledge gaps. While Sida provides and promotes core funding for these organisations and their agreed research agendas, they are usually under pressure to accept funding for specific projects or activities. Another challenge for these organisations is the balance between engaging in research and research capacity activities.

Research capacity essential in the fight against poverty

RESEARCH IS OFTEN undervalued as a means to address poverty, but without a strong knowledge base, any country must struggle to thrive. Knowledge is even more important in the era of globalisation. Those who are cut off from the global knowledge process will be left behind. Today, only a small portion of all research deals with the specific problems of poor countries, and an even smaller fraction is actually carried out in low-income countries. The lack of access to proper information and lack of active researchers in low-income countries makes it difficult for them to provide quality higher education and build up research institutions of their own.

This is where Sida, through its Department for Research Cooperation, SAREC, for the past 30 years has developed strategies for support. SAREC's objectives are to strengthen research-based national institutions and their access to international research findings. In turn, this makes it possible for research groups at national universities and regional research organisations to become part of the international research community, and to access, interpret and utilise available scientific information.

Unlike traditional research funding, Sida chooses to strengthen research capacity at the institutional level, rather than limiting support to research projects or research training of individuals. The model chosen to carry out this support has stood the test of time and achieved

substantial results. In general, with increased research capacity, countries supported by Sida have gained enhanced ability to:

- Exploit natural resources to further the country's economy
- Develop society in a way that is consistent with the principles of sustainable development
- Choose technologies that attract foreign direct investments
- Negotiate on the international arena.

Research leads to insights, processes and products of particular concern for addressing poverty and promoting sustainable development. It also establishes links between regional and international research programmes and national research in low-income countries, including their capacity to draw upon relevant research globally.

A sustainable approach

Sida strongly believes that countries without research actually lack the capacity to make use of findings generated by the international research community. They lack the capacity to formulate research problems and define research priorities, as well as the capacity to negotiate research cooperation opportunities. Thus, with an enhanced research capacity, low-income countries can better formulate and enforce their own agendas for research and research cooperation.

Sida supports the capacity of

institutions to plan for and implement research, particularly in countries where conditions for research are weak. The main approach is to strengthen research capacity at university faculties, starting with academic staff development and leading to capacity to train and graduate their own researchers. In this way, researchers in low-income countries will be able to produce new knowledge that is essential for their own countries' development as

“...with enhanced capacity for research, low-income countries can better formulate and enforce their own agendas for research and research cooperation”

well as means to contribute to global sustainable development.

Research is by nature a tricky and long-term undertaking. It is a search to understand nature, human behaviour and society, and to apply methods that may reveal hidden connections and underlying causes. Basic data are also missing in many poor countries, which need to map natural resources such as plants, trees, mineral and marine resources, soil, water and weather conditions, as well as to compile demographic data and establish databases and archives.



Knowledge also needs to be shared. Support from Sida enables researchers in low-income countries to present their findings in scientific papers and to ensure that established findings make their way to users and applications. This happens via a range of national, regional and international exchanges.

One of Sida's special niches, well established and recognised among its partners, is support of basic sciences, which are instrumental to furthering research capacity. The bilateral support for research facilities and postgraduate studies is supplemented by support to international organisations for mathematics, physics, chemistry and biology. These organisations contribute scholarships and grants to researchers active in institutions in developing countries. In cooperation with UNESCO and the Royal Swedish Academy of Sciences, Sida arranged a conference in 2005 to discuss how these programmes could best be designed to strengthen research capacity at the institutional level in the poorest countries.

Facing the challenges

Low-income countries face serious challenges in building research capacity. University funding for research is often fragile, jeopardising the sustainability of individual research training efforts. While Sida's strategy to fund the basic prerequisites for research at universities has enhanced a number of research environments that are now capable

of analysing poverty and development issues, frameworks must be developed to maintain such capacity. To realise the full potential, governments with support from external agencies must make national policies and strategies for research. Thus Sida has increasingly directed its support above the level of research environments – to the level of research management within university structures and research policy at the national level.

Another challenge is maintaining academic integrity and opportunities for researchers to pursue challenging research leads, while also being prepared to address issues of immediate need. Room must be made for merit-based research funding of ideas generated by researchers, as well as for projects targeted to societal priorities, since low-income countries have to make the best use of scarce academic resources. There is also a need to avoid fragmenting resources and to concentrate on a few key research institutions. This is why Sida, in its bilateral research cooperation, concentrates funding to one or a few national universities that are potential hubs for national research and research training, as well as promoting research council functions.

Research councils, in addition to allocating research grants, may have a role in promoting useful application of basic research funding. One example comes from the Vietnamese Ministry of Science and Technology, which recently launched a research

fund to encourage new, innovative research on development issues – a step to introduce academic peer-review and quality control for decision making in research. The fund is being primed with 10 MSEK of the 100 MSEK agreed upon for research cooperation between Sweden and Vietnam for the years 2004-2007. Research applications will be reviewed by a scientific advisory committee with nine members – four Vietnamese and four international researchers, with a Vietnamese chairperson. Support will be directed to research on health, biotechnology, rural development and the environment.

“This type of research support will likely flourish and eventually replace traditional bilateral research cooperation,” says Solveig Freudenthal, who administers cooperation with Vietnam at SAREC. “Research will be competitive so that the best applications will be awarded funding, the research will be owned by the country itself and directed by merit-based peer review.”

While the bilateral support has an institutional focus and may be used for a broad range of nationally defined priorities, Sida support for regional and international research, by contrast, has a thematic focus. Research towards applications of primary interest to the poor is underfinanced. Sida supports research programmes that target neglected areas of major importance for addressing poverty and sustainable development. Here Sida also prefers

“We suddenly understood that the programme was ours and not a Swedish university programme...”

to concentrate resources and provide core support for organisations and networks that develop an agreed research agenda-based on their overview of existing knowledge and gaps.

While in principle, research findings produced by the international research community ‘on and for development’, should be available to everyone, there are enormous gaps in the capacity to utilise findings and develop useful applications. Many thematic research organisations engage in efforts to build capacity within their area of research. However, utilisation of research findings will remain weak as long as countries and supporting agencies hesitate to support the long-term build-up of structures and capacity for national research ‘in and by countries’ themselves.

Looking to the future

As the international development community increasingly notes the need for science and technology for development, the time may be ripe for concerted efforts towards strengthening capacity for research in low-income countries. So far, conditions for applying the new ‘Paris agenda for aid effectiveness’ have not been in place for research. Countries need to find ways of better utilising international organisations and offers of support. Sida will intensify its efforts in supporting countries in their formulation of research development strategies and, among funding agencies, advocate alignment of support.

Mechanisms for peer review and research priority setting need to be enhanced in national research granting structures. Countries also need to discuss to what extent such mechanisms could be shared and supported at the regional level. Such regional research funding organisations are in place for social sciences both in Africa and in Latin America. The New Partnership for Africa’s Development (NEPAD) is making efforts to launch similar regional frameworks for natural sciences and technology. Stronger national structures will facilitate such networking. Sida is open to supporting regional structures that are shared and that have a clear ownership.

Regional networks may join in voicing ‘Southern concerns’ in the international research community and development debate. One such example is the Africa/Asia/Latin American Scholarly Collaborative Program, supported by Sida in 2005. This South-South cooperation promotes collaborative research and exchange of experiences, particularly around issues of democracy, governance and peace and conflict studies. As one of the participants noted, “We are not used to quoting each other’s work, since we are so used to looking to the North for scholarly inspiration.”





SHARED RESPONSIBILITY

Sweden's policy for global development, approved in 2003, prioritises research as an important feature of development cooperation:

Research contributes to knowledge-driven development. Sweden should support the development of research and the utilisation of research findings in developing countries. Support should also continue to be given to Swedish development research and to the establishment of a resource base for development cooperation in Sweden.

Research is essential for the major components emphasised in the Swedish policy, such as democracy and good governance, respect for human rights, and equality between men and women. These three areas are not only conditions for sound research but are also subjects of research. Research is just as vital to the pursuit of sustainable development as outlined by the policy: it provides knowledge, tools and insights for sustainable use of natural resources, protection of the environment, economic growth, and social development and social security.

Countries are responsible for their own development plans and agenda setting, including that for research. Yet, much of the research undertaken in developing countries stems from externally proposed research cooperation. Here is how one of the Nicaraguan researchers experienced the novelty of the Swedish approach:

"We suddenly understood that the programme was ours and not a Swedish university programme, and that priorities and decisions could be made by the Nicaraguan universities. This had a tremendous impact. One can almost say that there have been two different cooperation programmes, one before and one after we fully realised the nature of the support."

THE SAREC MODEL

Successful development of research requires a long-term perspective. It can often take many years for countries with weak research structures to build research capacity and an active research community. It also takes time to establish international networks engaged in research around common themes.

Sida provides long-term support both in relation to partner countries and in relation to thematic research organisations, each being allocated about 30% of available funds. Another 30% goes to regional research networks and special research programmes with shorter timeframes. About 10% goes to grants for Swedish development research.

Supporting research in low-income countries has been a series of learning exercises leading to the current support model, which focuses on research development aligned with institutional strategies. Institutions are identified on the basis of country development cooperation strategies, together with surveys analysing the research landscape.

In countries with limited research, the idea is to support one or a few research universities, which are regarded as the 'hub' for research development in the country. They will eventually be capable of graduating researchers who can take on research and teaching at other institutions of higher education in an expanding system.

In order to upgrade academic staff, a sandwich model for research training has been used, in which the PhD candidate does most of the research work at home and some in Sweden. Normally, the thesis is part of a collaborative research project where Swedish researchers come to visit and also act as supervisors. Research themes are set by the partners in a dialogue that also often involves the institution and national stakeholders in society.

The general experience is that the research

orientation in a 'sandwich thesis' moves much closer to national priorities and needs than in research training abroad.

Over time, as a critical mass of researchers have graduated, institutions have engaged in local master's and doctoral research training, sometimes using Swedish colleagues as co-supervisors or advisors.

The combined support for research infrastructure – including laboratories, libraries and ICT connectivity – in parallel with the research training has created conditions for continued research after graduation, as well as conditions for receiving guest researchers. With an attractive research environment for trained researchers, academic mobility may occur without the risk of one-sided brain drain.

Sida aims to align its research support with policies and strategies for research at the national and university levels. This is not always easy to accomplish. In some cases such strategies do not exist, in part because the long-term benefits of research have not been recognised or because the conditions for making use of research are not in place.

REGIONAL RESEARCH COOPERATION

Regional and international research programmes establish links with national research in low-income countries and draw upon relevant research globally. Sida supports these programmes as a way to enrich national research through exchange of ideas/peer support and enable interaction and collaboration among national level research groups. Sida-supported regional research networks address pertinent issues of common concern, many very relevant to the MDG issues.

Regional research networks play an important role in enhancing research capacity and producing research results. They may:

- Serve as focal points for research cooperation

- Mobilise researchers for specific research tasks
- Act as research councils in the region
- Enable comparative analyses and joint undertakings to address shared problems
- Provide a platform for joint advocacy.

Sida prefers to support new initiatives in established organisations or networks with broad financial bases, rather than contribute to creating new structures.

Regional research networks also have the capacity to articulate Southern perspectives in international research and debate and to promote research cooperation on themes of common interest. They link up professionals, institutions or governments to solve problems of a cross-border nature and they offer advantages of scale in the form of critical mass and cost-effectiveness. They may support national education programmes by offering high quality and relevant specialisation. This type of cooperation may be used by poor countries, especially in areas requiring high investments in technology and operating costs, such as faculties of engineering and technology.

Yet regional research networks face many challenges. Among them:

- Fragile organisational basis
- Lack of stable membership
- Difficulty in raising funds

Despite these obstacles, Sida believes that some of these organisations may develop into sustainable platforms for regional research cooperation. Ownership and governance structures need to be clarified, as well as a commitment for funding that reduces the total dependence on external support.

INTERNATIONAL RESEARCH PROGRAMMES

Sida supports international research programmes that may be linked to the UN system or in other ways have a broad-based

constituency. These organisations follow their respective fields of research, provide oversight on ongoing research, and identify under-researched knowledge gaps and channel support to address such issues.

International research programmes contribute to supporting conditions for poor people to improve their lives, to promoting fair and equitable global development, to integrating researchers from weak research environments into international research efforts, and to engaging institutions rather than individuals.

Their research has clear links to the MDGs, such as the WHO research programmes on child health, sexual and reproductive health and tropical disease, the international agricultural research on food security and environment and the UNRISD and WIDER research on social and economic development.

As our healthcare examples later in this book show, it may take 10-20 years or more of demanding research to develop medicines and also establish reliable delivery methods tuned to the healthcare infrastructures in developing countries.

Sida normally contributes with core funding for an agreed research agenda. We engage in dialogues but respect the need for these programmes to maintain focus and continuity in their research orientation over longer periods of time. Funding for capacity strengthening through international organisations will, however, be earmarked for poor countries.

SWEDISH RESEARCH FOR DEVELOPMENT

In line with the Swedish policy for global development, Sida also provides support to Swedish development research and to the establishment of a resource base for development cooperation in Sweden. About 10% of Sida research funds go directly to Swedish development research.

Battling poverty is so complex that it requires knowledge-based analysis of social

and economic development. Swedish researchers can contribute to furthering that body of knowledge by aligning themselves more closely with the problems and challenges faced by developing countries.

Interest in research on development-related issues and collaboration with low-income countries is growing. By providing opportunities for Swedish researchers to pursue research in this area, Sida contributes to new findings, and enhances global development and capacity building.

At Swedish universities, this support is catalytic in that it stimulates greater international awareness, influences curricula, and broadens the international perspective of the institutions.

SWEDISH RESEARCH LINKS

Swedish Research Links is a comparatively new programme to which Swedish and developing country researchers may submit joint applications. Proposals are peer-reviewed and grants allocated for joint visits and work. The main objective of this programme is to promote relations between Swedish researchers and researchers in more resource-strong, low-income countries that reinforce high quality, relevant research knowledge and technical exchange on issues of common interest. The idea is to create a bridge between an 'aid relation' and regular research cooperation. The programme is currently limited to South Africa, North Africa, the Middle East and Asia. It is hoped to stimulate Swedish efforts towards academic internationalisation and add the dimension of collaboration with developing countries.





Economic modelling for pro-poor policies

IN 'DESIGNING Africa's Poverty Strategies: Creating the Capacity for Policy Simulation,' a project carried out by the World Institute for Development Economics Research (WIDER) of the United Nations University, some African governments now have a virtual policy advisor at their disposal.

Through Sida funding, the project enables four African countries – Botswana, Cameroon, Nigeria and Uganda – to do economic modelling to help their governments design pro-poor policies. The microsimulation models make it possible to look at the impact of policy changes on individuals and households. It allows the users of the models to look at alternative scenarios to arrive at one which would provide the greatest benefit in terms of poverty reduction.

WIDER has trained researchers in each country to conduct the modelling. It also created an interactive website to help policymakers better understand the poverty, distribution and budgetary impacts of their policy choices, and the address is

www.wider.unu.edu/africa_web/.

"In any complicated policy package, there are always winners and losers," explains Anthony Shorrocks, executive director of WIDER. "Without a model of this sort, it is difficult to have a deep understanding of the net impact of these policies."

Part of the toolkit

The models are already being actively used in the participating countries. In Nigeria, the model and its potential for designing MDG-related policies has already received substantial attention from policymakers. In 2005, the government commissioned the team that developed the Nigerian microsimulation model, the National Centre for Economic Management and Administration (NCEMA) to develop an oil-related policy module to assess alternative scenarios regarding the poverty and distribution impact of possible increases in the budget due to the rising oil revenue. NCEMA plans to fully integrate the models into its training workshops and research activities from 2006 onwards.

Botswana has developed its first microsimulation model to assist in reforming its social security system and to improve the progressiveness of the VAT programme. In Cameroon, the Ministry of Finance will use the model to simulate the impact of future tax policies, while Uganda will use it to ensure that changes in its VAT and income tax rules help reduce poverty.

The project has been so successful that Sida decided to fund a second phase of the project in 2006, to provide training for six additional African country teams. The new project includes training in both microsimulation and macroeconomic modelling.

"This is quite path-breaking," says Shorrocks. "It is the first time that publicly accessible and user-friendly microsimulation models have been available to African researchers and policymakers. We believe that it could change the way in which policymakers devise poverty reduction strategies and become a standard method for assessing the impact of policies on the poor."

**MILLENNIUM
DEVELOPMENT GOAL 1:
Eradicate extreme poverty
and hunger**

Helping eradicate poverty and hunger is not primarily about donating money or providing food. It is also about developing resources and empowering people. It is about enhancing knowledge in an era of globalisation. This often requires specific research and analytical capabilities that take time to build up in low-income countries, but which tend to ensure that any solutions put in place will be sustainable from many perspectives – technically, economically, environmentally and socially.

All of the research cooperation supported by Sida contributes to this Millennium Development Goal. Some of the research Sida supports makes a very direct contribution to raising standards of living, and addressing hunger and food supplies. Other research initiatives contribute indirectly by tackling the broad range of issues covered by all the other Millennium Development Goals.

**OTHER SIDA CONTRIBUTIONS
The Council for the Development of
Social Science Research in Africa
(CODESRIA)**

CODESRIA was established in 1973 as an independent Pan-African research organisation, and has received core funding from SAREC since 1975. It works broadly in the social sciences, history, public affairs and education, creating thematic research networks for scientific exchange that cut across linguistic and regional boundaries.

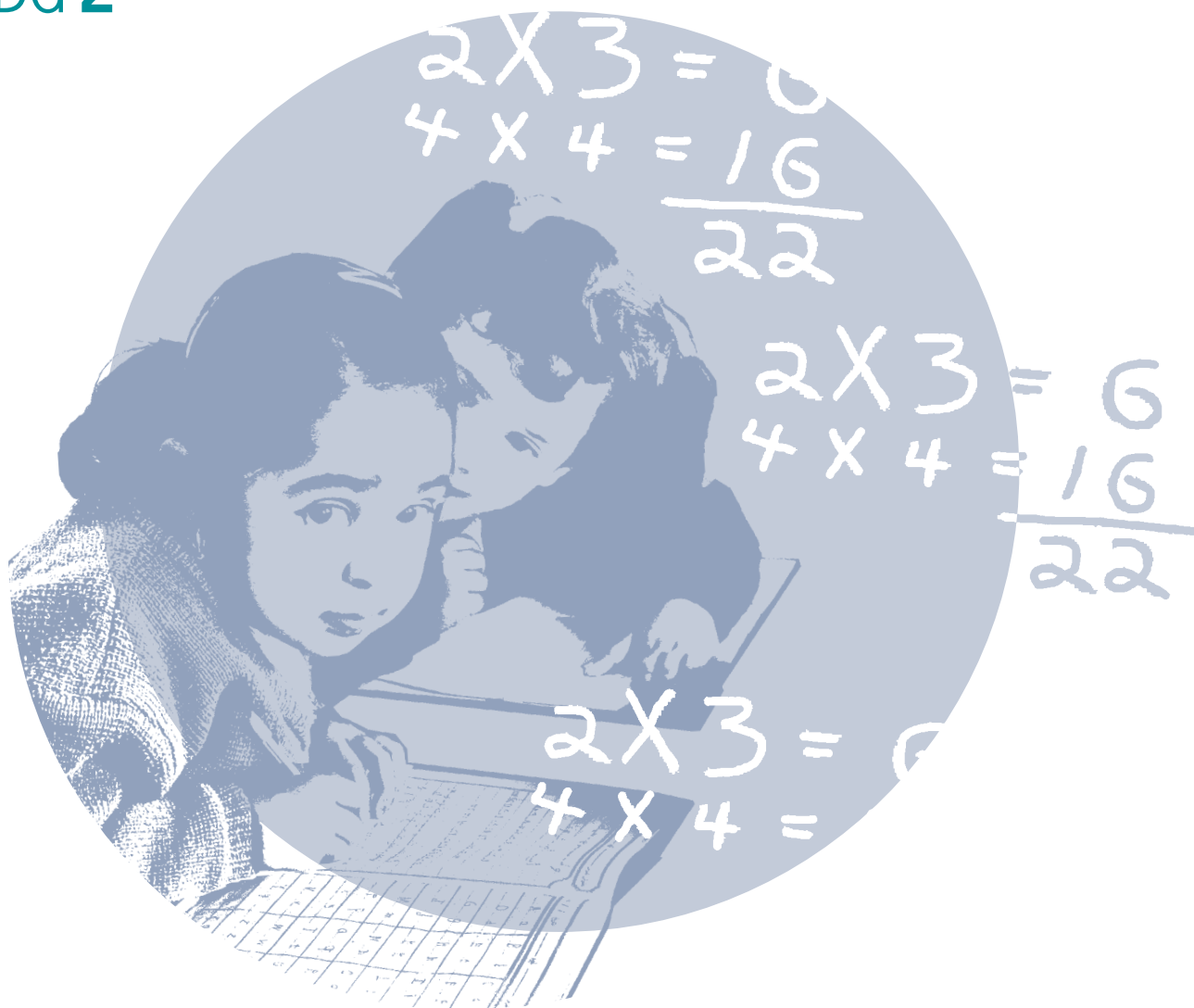
Its research on peace, conflict and security, and good governance – the lack of which is a major obstacle to development – helps to create an environment favourable to fighting poverty. CODESRIA is also engaged in extensive research capacity building on the continent through its research methodology workshops and summer institutes on issues relevant to African development. The core funding provided by Sida has enabled CODESRIA to grow into a very influential research network on the continent and beyond, as evidenced by its 11th General Assembly in December 2005 on the effects of globalisation. The meeting treated the challenges of making the process more inclusive, representative and equitable, and attracted more than 500 researchers from Africa and elsewhere – a clear testimony to its influence.

**The Consultative Group on International
Agricultural Research (CGIAR)**

Sida has supported agricultural research within CGIAR for 30 years. CGIAR is a strategic alliance of countries, international and regional organisations, and private foundations supporting 15 centres in agricultural research. The alliance mobilises agricultural sciences to reduce poverty, foster human well-being, promote agricultural growth and protect the environment. A reference group representing Swedish universities was formed in 2005, which guides Sida's on-going support.

**The East African Regional Programme
and Research Network for Biotechnology,
Biosafety and Biotechnology Policy
Development (BIO-EARN)**

A network involving Eastern African, Swedish and other European research institutions, BIO-EARN was initiated in 1998 to promote research cooperation and strengthen research capacity at universities and research institutes in Ethiopia, Kenya, Uganda and Tanzania. Through biotechnology, the programme's aims include increased crop yields, improved varieties of cassava and sweet potato, sustainable treatment of wastewater and the generation of bioenergy and other products for the chemical industry from biomass waste.



Access to education: a basic right

THROUGH EDUCATION, children, youth and adults can achieve a better quality of life and break the cycle of poverty. Yet according to the United Nations Educational, Scientific and Cultural Organisation (UNESCO), 875 million of the world's citizens remain illiterate. One out of five children aged 6-11 in developing countries – an estimated 113 million – is not in school; 60 percent of these are girls. In South Asia and sub-Saharan Africa, less than three out of four pupils reach grade 5. Worldwide, one woman in four cannot read.

Such sobering statistics have given rise to the worldwide Education for All (EFA) movement, led by

UNESCO, which seeks to achieve free and compulsory education of good quality for all by 2015, expand adult literacy by 50 percent and achieve gender equality in education.

Does higher education have a role to play in achieving these goals? The International Association of Universities (IAU) launched a project in 2005, supported by Sida, to find some answers.

During the three-year project, the IAU, the UNESCO-affiliated worldwide association of higher education institutions, will investigate, learn more about and disseminate examples of good practice and successful methods by which inter-university links and research cooper-

ation between institutions in industrialised and developing countries can contribute to the achievement of the Education for All goals.

The aim is to gain an understanding of the multiple ways, including through research for policy, planning and pedagogical improvements, that this can be achieved. By increasing the awareness of higher education institutions about the EFA programme, the project will also better prepare the higher education community to the possible changes that might have to be addressed relatively rapidly to cope with the impact of improved educational achievement levels of a growing part of the population.

$$\begin{array}{r} 8+2=10 \\ 3+3=5 \\ \hline 15 \end{array}$$

“There are many direct and indirect ways that universities and research organisations can contribute to the provision of basic education and literacy. These include teacher education, research, curriculum development, and introduction of ICT to learning, as well as by contributing to informed policy-making and strategic planning” says Eva Egron-Polak, Secretary General and Executive Director of the IAU. “We also have to take into account the impact of successfully reaching the EFA goals, as the capacity to absorb more secondary school graduates is not there in many countries.”

“There are many ways that universities and research organisations can contribute to the provision of basic education and literacy.”

“I am personally convinced that higher education does play a major role in Education for All,” she adds. “This project gives us a chance to find evidence, raise awareness, and to eventually form a collaborative network to mobilise and offer support that will help higher education institutions and the broader education community to meet some of the challenges of the EFA programme.”

MILLENNIUM DEVELOPMENT GOAL 2: Achieve universal primary education

Education is a basic human right, and enhances both individuals’ and society’s chance for healthy development. It can end generational cycles of poverty and disease and provide the means for sustainable development. The right to education also addresses inequalities that are deep-rooted and often gender-based. Such inequalities exclude millions of children, particularly girls, from school or condemn them to educational experiences of very poor quality.

Sida’s research cooperation is directed to a large extent to strengthening institutions of higher education and their knowledge base. Much of the social science research supported is directly related to pedagogical issues – primary education, teacher training, e-learning, professional development. However, viewed holistically, all components within the education sector play essential roles, including universities, whose active participation and contribution are key to the implementation of the right to education at the local and the global level.

Sida works with a range of local, national and international partners to realise the education and gender equality goals established in the MDGs and the Education for All movement to bring about essential structural changes needed to achieve social justice and equity for all.

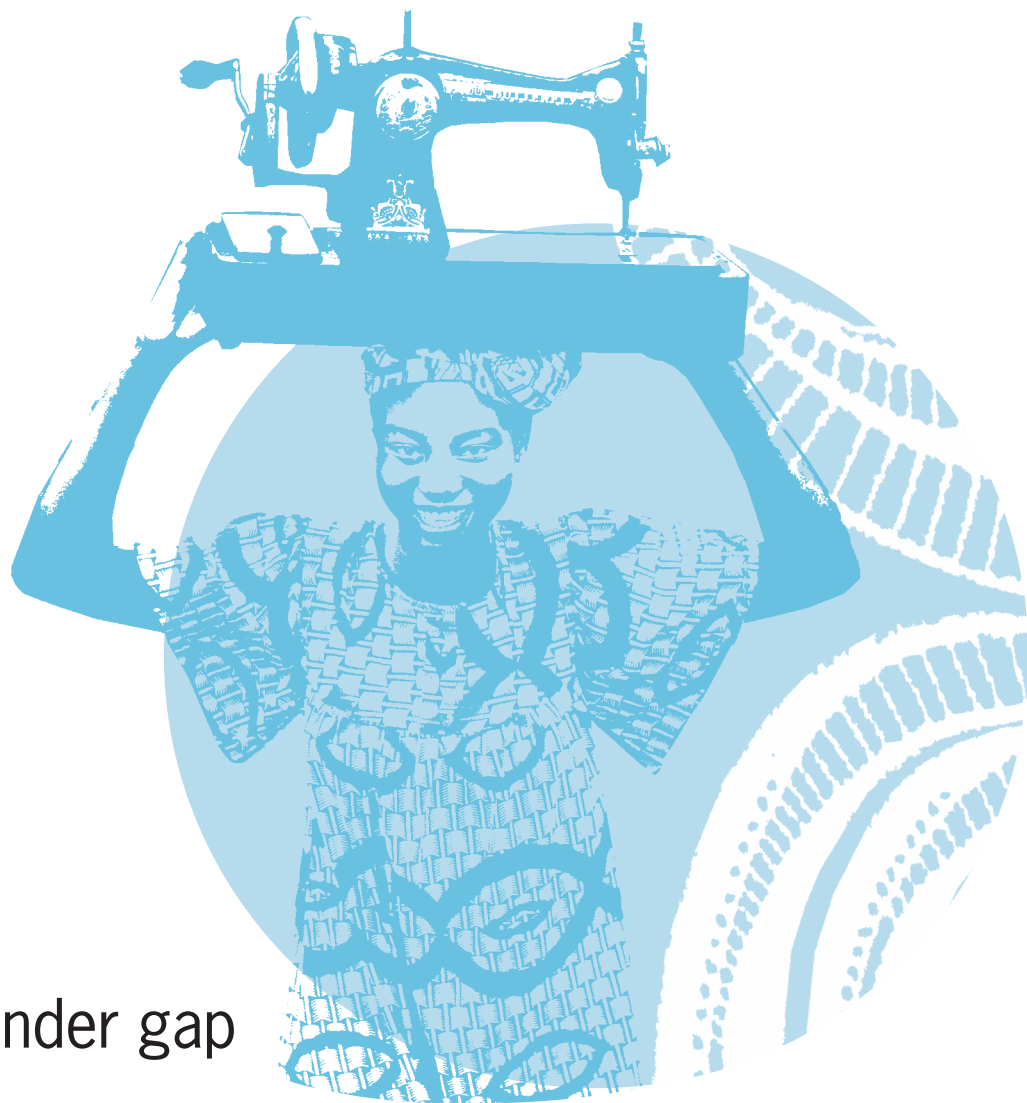
ADDRESSING GENDER INEQUALITY AT PRIMARY SCHOOL LEVEL

Through Sida-supported African gender research provided to organisations such as The Council for the development of Social Science Research in Africa (CODESRIA) and the Organisation for Social Research in Eastern and Southern Africa (OSSREA), awareness has been raised among African institutions and policymakers about gender inequities in education, including primary education. Research has pointed out, for instance, “the dismal rate of female access to primary, secondary and tertiary education as well as discrimination affecting females in schools, universities, and other tertiary institutions.”

Research has shown that sub-Saharan Africa has the lowest enrolment rates in the world at all levels of education for both males and females, with females’ rates being lower than that of males. The research has examined the way in which the impact of family, communal and societal norms constrain female access and success within education. For instance, a survey in Uganda showed that many parents are reluctant to support their daughters’ education because they believe that the daughters’ future families would benefit most from their education. In the context of the feminisation of poverty, such gender-focused knowledge is extremely important in highlighting problems that can prompt action towards positive change.

The Gender Dimension Programme at the University of Dar es Salaam in Tanzania, long supported by Sida, has stimulated the formation of a Student Gender Club, currently with 2000 members (for more on the programme’s impact, see MDG3). Since 2003, the members of the club annually visit about 90 primary and secondary schools in Tanzania to talk to the students about university life and particularly the opportunities for women. This eye-opening outreach programme goes both ways: the primary and secondary students learn about new possibilities for their lives, while the university students see first-hand the challenges faced by students in rural parts of Tanzania. Overcrowding and teacher shortages mean that those who finish secondary school and apply for university entrance must persevere against great odds. By bringing university students together with younger students, it is hoped that more young people in Tanzania will be inspired to scale that mountain.

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Bridging the gender gap

PROFESSOR FENELLA Mukangara, director of the Gender Dimension Programme at the University of Dar es Salaam in Tanzania, never quite expected to be where she is today.

Before 1997, when the programme was established, gender issues were barely on the university's radar screen. By 2005, issues of gender equality were being mainstreamed into the university's curricula, policies and practices. A policy against sexual harassment was approved in 2005. Senior women faculty actively mentor junior female staffers to build leadership capacity. And a 2000-member-strong Student Gender Club supports the process of gender equity among the student body through monthly forums, events held on International Women's Day and other programmes, such as visiting primary and secondary schools in Tanzania (see MDG2).

However, the programme's first

priority is to make it possible for the field of gender research to thrive at the University of Dar es Salaam. Some 30 academic staffers explore a variety of gender-related issues. In 2005 they started a research project looking at leadership capacity among women academics, and what conditions need to be in place to encourage the promotion of younger women to senior positions. This in turn has led to capacity building and training.

Today, Mukangara sees gender studies as a well established field of research at the university, expanding to new areas each year. For example, a recent study examined the socio-economic implications of HIV/AIDS, pointing out many gender-related issues, such as the incidence of girls and women who contracted the disease through rape or sexual abuse.

"By uncovering these issues in research it becomes much easier for students and university staff to talk

about the cultural aspects of HIV/AIDS and the role they play in prevention," says Mukangara.

Framing the issues

While there is still much more to be done to achieve an ideal gender balance at the university, Mukangara says she can look back with satisfaction at what has been achieved so far.

"Sida helped us a lot in framing the issues," says Mukangara. "We began by reviewing university policies through a gender perspective with an eye to promoting equality in enrolment, treatment and retention of female students and faculty. We also began to widely disseminate information on gender quality. This led to developing a curriculum with a gender basis."

Off to a good start

As a result, she says, today there are policies that enable more women to enter traditionally male-

dominated science and engineering programmes at the university. This has been achieved by establishing a pre-entry programme for young women who have completed their secondary school education. They receive eight weeks of highly specialised training that gives the participants a better foundation to gain university entrance. In 2004, just 7% of female applicants qualified for the programme; by 2005, that number was 21%.

The support provided to the successful entrants by the Gender Dimension Programme does not end there. Mukangara works with the science and engineering faculty to ensure that these women receive an enabling environment to succeed, including counselling if necessary. Many of these young women, she says, may face pressure from home to contribute to family income, or assume traditional female roles in the home. Some have overcome great odds to get as far as they have, she says.

More advocacy needed

By 2005, Mukangara's programme had achieved a place among high-level decision-makers at the university, and she now reports to the vice chancellor, which she says, shows that the programme has received a certain level of maturity and acceptance. She is now pushing a strategy to continue advocating for gender equity even though some in the administration felt that more gender advocacy was unnecessary.

"We have to ensure a level of accountability for the institution to make sure that the gender objectives are realised. In terms of policies, we are not there yet," she says.

Mukangara says she is particularly proud that the Student Gender Club has many active male members.

"At the end of the day, we need to reach all of us, men and women, to address these issues," she says. "We compete at very different levels, under very different conditions. When a young girl goes into the classroom in a typical rural public school in Tanzania, she may have

done a morning's worth of chores while a boy goes directly from a full breakfast to his classroom."

"The institution of higher education plays a very important role in shaping our world," she continues. "It provides our future leader; it is our students who will go out and make the decisions that guide our country in the future. Often we leave women out of this process, sometimes by design, other times due to lack of awareness of the role they can and should play in the country's development. If we can contribute in some way to raising women's role in society, then I will feel I have done my job."

MILLENNIUM DEVELOPMENT GOAL 3: Promote gender equality and empower women

Sida's support for gender research in many countries, including Tanzania, dates back to the mid-80s, with project-based support to a large number of researchers, often linked to advocacy organisations. Support was later channelled to universities and to regional research organisations for further capacity building and for mainstreaming of gender into all fields of research and education.

Several specific research projects relate directly to this MDG. For instance, by addressing gender disparities in natural resource management, it is possible to gain untapped productivity. Women could achieve more in food production, provision and utilisation if researchers, extension agents and policymakers addressed barriers such as insecure land tenure, exclusion from seed and technology development, neglect by extension services and lack of access to inputs such as credits and fertilisers.

Women's and gender studies develop knowledge that challenges women's subordinate positions in society, empower women as producers of knowledge and link gender to social change.

BRINGING GENDER RESEARCHERS TOGETHER

In general, gender is mainstreamed to a large extent in the bilateral research cooperation and also integrated as a component in regional research cooperation and thematic programmes. Sida is currently looking at new ways to support gender research. As long as inequality persists, the need for capacity building for gender research will be paramount. Often, it's a matter of raising the right questions. Once that happens, it is possible to raise the attention of policymakers and bring about positive change in society.

In cooperation with the United Nations Research Institute for Social Development (UNRISD) Sida arranged an international seminar in October 2005 on the theme 'Gender Equality: Striving for Justice in an Unequal World'. The UNRISD report presented at the conference addressed a number of key issues facing the world 10 years after the Fourth World Conference on Women in Beijing, including whether liberalisation and deregulation are the route to gender equality, the role of women in democratisation struggles, and the impact of conflict on women.

UNRISD's research has shown that equality between men and women has positive effects on economic growth, social security and democratisation. Other findings indicate that a deliberate combination of social policies and economic policies in developing countries protects vulnerable groups and reduces poverty.

In 2005, an evaluation of Sida-supported African Gender Research showed that, through its support for gender research to organisations such as CODESRIA and OSSREA, Sida has significantly developed training, networking, capacity building and publishing within gender research. The survey, however, pointed out that gender continues to occupy a relatively small niche within the broader scope of Sida-supported social science research and recommended that Sida specify attention to gender as a criterion for funding both small and large-scale research projects and networks at the national, regional and international levels.





Zinc research saving children in Bangladesh

DIARRHOEA IS A leading cause of child mortality and morbidity in developing countries, responsible for about two million child deaths every year. But the solution for dealing with this disease may lie in the administration of a simple micronutrient supplement – zinc.

Diarrhoea is caused by a number of viruses and bacteria that are transmitted easily through contaminated water and food where there is inadequate hygiene. Researchers know that the main causes of severe diarrhoea globally are Rotavirus, Enterotoxigenic *E. coli* (ETEC) and *Shigella*. However, there are also many infections that remain unidentified due to the lack of diagnostic resources in developing countries.

Diarrhoea is one of many health problems exacerbated by malnutrition, vitamin and mineral deficiency. Zinc is an essential micronutrient found in a number of food sources, but particularly in high protein foods, the foods least accessible to poor people in developing countries. Zinc deficiency makes individuals more susceptible to diarrhoea and

any remaining trace of zinc, and other nutrients in the diet, are further lost through the illness. This can lead to a recurrent illness cycle that eventually results in death.

Children under five are particularly vulnerable to diarrhoea but the positive effect of zinc supplementation, and its potential for reducing child morbidity and mortality is well known.

ICDDR,B, Centre for Health and Population Research, Bangladesh, is located in one of the poorest and most densely populated countries in the world. The centre has long been at the forefront of research organisations studying the effectiveness and benefits of zinc treatment in children.

Sida has supported the zinc research at ICDDR,B for many years, providing funding for development research and facilitating cooperation between researchers in Sweden and Bangladesh. Sida has also provided core support so that the organisation could develop its own research agenda.

Initial research conducted at the centre helped build an evidence base

for the promotion of zinc treatment in child health. A number of high profile studies on young children demonstrated consistently positive results in illness severity, recovery time and recurrent episodes. The breadth of these studies and the results have made a significant contribution to global knowledge about zinc treatment and undoubtedly influenced policies such as the WHO/UNICEF recommendation for zinc supplementation in the management of diarrhoeal disease.

Because of the successful Sida-supported clinical trials of zinc at the centre, and with substantial financial support from the Bill & Melinda Gates Foundation, the SUZY Project (Scaling Up Zinc for Young children with diarrhoea) was launched in 2003 by ICDDR,B, aiming to make dispersible zinc tablets available for the entire under-5 population of Bangladesh. The ultimate goal of the project was to reduce under-5 mortality in Bangladesh by as many as 75,000 children a year.

To ensure success, it was essential to plan and conduct additional studies; to explore the format of a

suitable zinc formulation and affordable production; to explore public perceptions of diarrhoea, current treatment methods and cost, and knowledge of zinc; and to explore marketing messages and distribution.

For ease of distribution, cost and ease of dosage, the decision was reached to promote the dispersible tablet formulation packaged in a 10-tablet blister pack. This quickly dissolves to a vanilla flavoured syrup with just a few drops of water.

In July 2005, ICDDR,B signed a contract with the French pharmaceutical company Nutriset for the patent license to produce zinc in Bangladesh and a contract was signed with the Dhaka pharmaceutical company ACME to manufacture the tablets locally. The transfer of the technology to produce the tablets is scheduled for summer 2006, with national roll-out of the ACME product, 'Baby Zinc' scheduled for the autumn.

The final, and perhaps most difficult, step towards implementation is the research and planning for promotion and distribution. A committee of marketing specialists, scientists and public health professionals are working together to create appropriate marketing messages for both the general public and healthcare providers.

The zinc research project is a great example of the potential results that can be achieved by taking a relatively simple idea, applying carefully planned research and working tirelessly on scaleable implementation. Because of their focused approach, ICDDR,B's dream of making zinc available for all under-5s in Bangladesh is becoming reality.

Based on the research, it is estimated that on a global scale, zinc treatment for the management of childhood diarrhoea could save the lives of 400,000 children every year. That would be a very significant contribution towards MDG4. Not only significant, but with a global level of commitment equal to that demonstrated at ICDDR,B, achievable.

HELPING MOTHERS PROTECT THEIR CHILDREN FROM HIV

An estimated 700,000 children are infected with HIV each year. The main cause is infection from the mother, either during pregnancy, delivery or breastfeeding. Up to 20 percent of infants born to HIV-positive mothers are infected after birth.

Breastfeeding in normal circumstances provides infants with the highest possible nutrition and protection against disease through the mother's antibodies. However, because of the potential of HIV transmission, HIV-positive mothers in the developed world are advised against breastfeeding and use infant formula instead.

This is not realistic in the developing world, where HIV-positive mothers may not have access to alternative feeding formulations. Apart from that, breastfeeding is so culturally founded, and HIV so stigmatised, that to do otherwise could lead to exclusion of the mother from society.

Sida has funded various studies into post-natal HIV transmission in Tanzania, a country with around an 8 percent HIV prevalence rate in adults. These studies are part of the TANSWED bilateral programme.

Making progressive success

In 2002, the Lancet published the first results of the Sida-supported WHO/UNAIDS PETRA study, in which mothers and their infants received a short-term treatment combination of two antiretroviral drugs. The study found that transmission of the disease was reduced by up to 60 percent in infants up to six weeks of age.

The study also found, however, that after 18 months the transmission rate was comparable with a control group receiving no treatment. Although the results were disappointing, they still marked valid progress in understanding the link between breast milk and HIV transmission.

In follow-up research by TANSWED, the MITRA study, HIV-positive mothers received the combination of two antiretrovirals from week 36 of pregnancy until one week after birth. The infants received the combination of two antiretrovirals for one week after birth. This was followed by prophylactic treatment for the remainder of the breastfeeding period, a maximum of six months.

HIV infection in infants at six months was significantly less at 5% compared with 12% in the original PETRA study.

A new TANSWED study called MITRA Plus is now ongoing in Tanzania to continue these evaluations. In this study, the HIV-infected mothers will receive continued antiretroviral treatment for six months, and mothers with AIDS will receive longer-term treatment.

A bilateral collaboration

TANSWED is a part of Sida's bilateral research cooperation with Tanzania, which has been running for 18 years. The programme involves many Tanzanian institutions led by Muhimbili University College of Health Sciences and has eight principal investigators in Tanzania. There are four Swedish collaborators from the Swedish Institute for Infectious Disease Control and Karolinska Institutet in Stockholm. Researchers are mainly Tanzanian and six have completed their PhD training to date. The programme is a highly successful collaboration.

Because of TANSWED and the PETRA and MITRA studies, the world has gained a greater understanding of HIV, its transmission to infants through breast milk and the importance of antiretroviral drugs for protection against mother-child transmission.

MILLENNIUM DEVELOPMENT GOAL 4: Reduce child mortality

Nearly 11 million children under the age of five die every year. That's around 30,000 children every day, with the majority of deaths occurring in developing countries.

Just five diseases account for over half the deaths: pneumonia, diarrhoea, malaria, measles and AIDS. And yet access to preventative measures and treatments remains blocked for many.

Key factors contributing to the child mortality statistic include malnutrition and lack of obstetric and perinatal care.

Child mortality is undisputedly and directly linked to poverty. It is in the very poorest countries that child mortality is highest, and evidence suggests that countries with improving economies have a falling mortality rate.

Sida supports research aimed at decreasing child mortality through many channels. In many cases Sida contributes with core support to research agendas developed by international and regional research institutions who are often best placed to set their own research priorities. While Sida cannot claim ownership of individual research findings, we have often contributed in many ways to their emergence.

Sida is responsive to research proposals, but is not responsible for setting research agendas, since we regard local ownership and agenda-setting as an important component of sustainability.



Preventing unsafe abortion

UNSAFE ABORTION is defined as a procedure for terminating an unwanted pregnancy by someone lacking the necessary skills or in an environment with inappropriate medical standards.

Around 19 million unsafe abortions are conducted globally every

“Unsafe abortions account for around 13% of all maternal deaths globally.”

year. Almost all of these abortions occur in developing countries and it is estimated that unsafe abortions account for around 13% of all maternal deaths globally.

In many developing countries abortion is still only legally permitted in situations where the life of the mother is at risk. However, because of factors including gender imbalance, social and cultural taboos and lack of access to family planning advice and contraception, the level of unwanted pregnancies is high.

Pregnancies are unwanted for different reasons. Age, relationship

status, financial circumstances, lack of or failure of contraception, rape or incest are all common reasons that could lead a woman to take the decision to terminate a pregnancy.

When abortion is restricted and stigmatised, women often resort to abortion inducing self-harm or seek an illegal abortion by a non-professional. Whatever the method, the result can be catastrophic, leading to partial evacuation of a pregnancy, severe internal trauma and infection. As many as 50% of women who survive unsafe abortion will require, but not necessarily seek, medical attention and this can result in permanent disability.

Fighting unsafe abortion

WHO's global strategy on reproductive health, adopted by the 57th World Health Assembly in May 2004 states 'As a preventable cause of maternal mortality and morbidity, unsafe abortion must be dealt with as part of the MDG on improving maternal health and other development goals and targets'.

The WHO Department of Reproductive Health and Research

(RHR) addresses the prevention of unsafe abortion through four main areas of work: collecting evidence of unsafe abortion and practices; developing safe techniques and interventions for safe abortion; disseminating results in the form of tools and guidelines; and helping countries develop programmes and policies for preventing unsafe abortion and post-abortion care.

Sida supports research into maternal health via many channels but particularly through support to the RHR's Special Programme of Research, Development and Research Training (HRP), which Sweden has supported since 1972. A small but important aspect of this programme deals with research into safe abortions. Some of this recent work is highlighted here.

Safe surgical abortion study

Just because a country permits termination of an early pregnancy, this doesn't mean that the health services infrastructure is there to support this. There is often a lack of appropriate medical facilities and not enough skilled practitioners. This

means that it is not always trained physicians that carry out termination procedures, but other health workers such as nurses and midwives.

An HRP-supported study in Vietnam and South Africa compared the quality of medical care and complications in abortions performed during the first trimester by physicians or other trained health-care providers such as nurses and midwives. The method used was manual vacuum aspiration, or MVA.

The study found comparable results in both groups, suggesting that with appropriate training and facilities these mid-level healthcare providers can perform first trimester MVAs as safely as physicians.

Medical abortion

Medical abortion is an effective alternative to MVA abortion in the first trimester. For over thirty years, HRP has made a considerable contribution to research which led to the current recommended regime for medical abortion: a combination of oral and vaginal medication (mifepristone/misoprostol) over a two-day period that results in a complete abortion in over 96% of cases.

Because of the relatively low cost involved, the fact that the drugs can be administered with minimal supervision and the elimination of the need for the medical facilities associated with surgical abortion, this medical treatment is appropriate for women in developing countries. HRP continues to support research to develop improved regimens.

First and second trimester drug trials

One recent trial, conducted at 11 centres in six countries, tested a simpler treatment using only one of the drugs. The overall result showed that misoprostol alone is not as effective as the mifepristone/misoprostol combined regimen.

681 women in seven countries who had requested legal termination of their pregnancies between 14-20 weeks' gestation were the subject of another misoprostol-only trial. The trial found that vaginal administration was most effective.

Moldova strategic assessment

In 2005, HRP provided financial and technical assistance to a strategic assessment in the Republic of Moldova. Abortion has been available legally in Moldova since 1955. Since then, the abortion rate has gradually declined but the quality of abortion care remains low and there is a high level of maternal mortality related to unsafe abortion.

The strategic assessment looked at ways to improve the accessibility and quality of contraception and abortion services; lower the number of unwanted pregnancies and abortions; and decrease abortion-related death and injuries.

A team of interviewers spoke to almost 600 people, including hospital directors, service providers, students and teachers about the status of abortion and contraception in the country. The results of the assessment and recommendations will be published and disseminated in 2006.

MILLENNIUM DEVELOPMENT GOAL 5: Improve maternal health

Over 500,000 women die every year in pregnancy and childbirth and an estimated 10 million women suffer injury, infection and disability as a result.

Hypertensive disorders, protracted labour and post-partum complications are exacerbated by poverty, gender inequality and cultural attitudes. Specific problems include malnutrition, sexually transmitted diseases including HIV/AIDS, female genital mutilation and unsafe abortion, underpinned by a lack of professional health care.

Almost all maternal injuries and deaths could be avoided if women in developing countries had access to family planning and appropriate professional care, including emergency medical intervention.

Through support for both bilateral and thematic research, from social and gender studies through to specific health studies, Sida is playing a broad role in attacking the uphill challenge of reducing maternal mortality.

WHO GLOBAL SURVEY FOR MATERNAL AND PERINATAL HEALTH

The first phase of a Global Survey for Maternal and Perinatal Health, conducted by the World Health Organisation (WHO), was completed in 2005. The survey is underway in 54 randomly selected countries, from across 14 world sub-regions, including developed as well as developing countries. The aim of the study is to create a reliable database of information on maternal and perinatal healthcare services and outcomes. This information is essential in the planning, delivery and evaluation of healthcare and services at local, national and international levels.

An important feature of the survey is that it will identify gaps between available knowledge on effective practices and interventions and their actual utilisation in the field.

The first results published for Latin America suggested that increased use of Caesarean section may not be associated with improved perinatal health. Comparative analyses of data from Latin America and Africa are currently being conducted.

In developing countries the availability, accuracy and reliability of this kind of data is rare. The Global Survey has shown that it is possible to collect good quality data in low resource settings. The initial findings will be analysed in 2006 with a view to implementing the study in Asia in 2007.

WHO CALCIUM TRIALS IN PREGNANCY

Pre-eclampsia, a hypertensive disorder that can occur during pregnancy and after childbirth, affects 5 to 8 percent of pregnancies and is a leading cause of maternal and perinatal mortality worldwide. Previous studies have suggested a possible relationship between calcium deficiency and the disease.

In 2005 WHO published the results of a randomised multi-centre trial of calcium supplementation among low-calcium intake women. 8325 pregnant women who had never given birth were recruited at antenatal clinics in Argentina, Egypt, India, Peru, South Africa, Vietnam and England. Half received calcium supplementation and half a placebo.

While the trial failed to demonstrate a significant reduction of pre-eclampsia it did demonstrate statistically significant reduction in a series of other outcomes; serious complications associated with pre-eclampsia were reduced by 25 percent and early preterm delivery was significantly reduced in younger women.

These results were reflected in the significant reduction of severe maternal morbidity and mortality rates and neonatal mortality rate, and that is a positive step towards both MDG 4 and 5.



Improving health through global collaboration

FOLLOWING many years of Sida-supported research into a potential HIV vaccine, researchers may be on the brink of a breakthrough. A candidate vaccine (HIV DNA plasmids) has been developed by the Swedish Institute for Infectious Disease Control (SMI), and laboratory tests have shown that it can promote a significant immune reaction to HIV.

DNA vaccines contain synthetic HIV genes which are inserted into pieces of DNA called plasmids. The HIV genes then produce proteins that mimic the proteins of real HIV. The candidate vaccine developed in Sweden has been specially formulated to fight the HIV types found in East Africa. The vaccine may not prevent transmission of HIV, but should limit the development of the virus in the event of transmission, which means that vaccinated individuals who become infected will remain healthier for longer periods.

Phase I clinical trials commenced in Stockholm in 2005 with a group of 40 healthy human volunteers. These trials tested the vaccine for safety and any possible side effects.

The outcome of the trial was good with the volunteers showing excellent tolerance to the plasmids. In 2006, the same participants will receive a boost with modified vaccinia Ankara (MVA, or weakened vaccinia virus) containing HIV DNA.

If this successful course continues, the vaccine will start further Phase I/II trials in Tanzania in late 2006, using an existing cohort of policemen in Dar es Salaam. This cohort exists through Sida's TANSWED programme and it is because of this that the trials can be established in Tanzania so quickly.

Much more than a medical problem

But understanding biological and medical processes and putting new treatments in place will not be sufficient to turn the tide of the HIV/AIDS pandemic. Social issues with local relevance are equally important. For example, many teenagers have grown up with HIV/AIDS around them, so that they take it for granted, as an object for cynicism or jokes. It no longer seems threatening. Sida has begun supporting

African action-based research on youth, in an attempt to overcome youth cynicism with regard to this killer disease.

In fact, many Sida research projects in the social sciences are directed towards HIV/AIDS. Within five years there will be PhDs in some critical areas, thanks to Sida bilateral support for doctoral students in Uganda, Burkina Faso and Mozambique, among other countries.

One of several regional organisations that Sida supports in the battle against HIV/AIDS is the Organisation for Social Science Research in Eastern and Southern Africa (OSSREA). Their current specialised research (2003-2006) assesses the economic, social and gender impacts of HIV/AIDS as well as existing response mechanisms, and leads to recommendations of viable policy options in eight selected countries: Botswana, Ethiopia, Kenya, South Africa, Tanzania, Uganda, Zambia and Zimbabwe.

OSSREA organised workshops in 2005 in Ethiopia, Kenya, South Africa and Zimbabwe in which re-

searchers presented their findings to concerned organisations, policymakers, practitioners and researchers. Their 2005 Conference on International Aid, Trade and Development in Africa reaffirmed that “HIV/AIDS intervention strategies must be broadened to include men for more comprehensive impact – instead

“Previously, international organisations working with HIV/AIDS have relied mainly on Western perspectives. Now it is Africans writing their own story.”

of focusing on women alone – and that HIV/AIDS policies needed to be mainstreamed into broad policy options for maximum impact.”

“Through Sida we are able for the first time to embark on a large effort that comprises 32 individual research projects,” says Alfred Nhema, Executive Secretary of OS-SREA. “Our researchers are given the opportunity to focus on the aspects of HIV/AIDS that they think are the most relevant to Africa, and to a large extent, they will be looking at the social aspects. Previously, international organisations working with HIV/AIDS have relied mainly on Western perspectives. Now it is Africans writing their own story.”

Demography against disease

Developing countries need to build up the capacity to diagnose diseases and understand their epidemiology, and Sida has funded such efforts in many countries. However, one of the great difficulties faced by health workers in Africa is the lack of reliable population-based health and demographic information.

INDEPTH, a network of health and demographic surveillance sites that receives Sida funding, conducts continuous, longitudinal, demographic monitoring of over 2 million people at household level. The stud-

ies includes a focus on HIV/AIDS and malaria, including how the diseases are affected by migration and urbanisation.

INDEPTH has 37 demographic surveillance sites in 18 different countries, of which 26 sites are in Africa, one in Nicaragua and the remainder in Asia. The network enables optimum capacity building through training and workshops, and cross-site sharing of expertise, best-practice and data. By pooling data across the network all members are able to benefit from a more robust data platform.

In early 2005, INDEPTH and the University of the Witwatersrand in Johannesburg, South Africa launched an MSc course in Population-based Field Epidemiology. INDEPTH aims to use this programme to develop research capacity and scientific leadership at demographic surveillance sites.

MILLENNIUM DEVELOPMENT GOAL 6: Combat HIV/AIDS, malaria and other diseases

Sida has supported research on HIV/AIDS and related sexually transmittable diseases since 1989. Sida is increasing support in this area and maintains HIV/AIDS as a strategic issue in all development cooperation. The research support is broad and long-term, involving work in medicine and social science, expressed through bilateral, regional and international funding.

Over 24 million people globally live with HIV. Sub-Saharan Africa is the worst-affected region, with 64% of the global HIV population, which explains the African focus of many of the funded research networks.

But HIV/AIDS can divert our attention from other deserving research and clinical areas of global importance, such as tropical diseases, including malaria and cholera, and a number of so-called ‘neglected diseases’ that lead to death and lack of working capacity. These diseases also take many decades to understand and are resistant to quick clinical treatments. Moreover, having one disease often increases susceptibility to others.

TROPICAL DISEASE BREAKTHROUGHS

Sida’s support to international health research has led to important results. For example, researchers at the International Vaccine Institute (IVI) have shown that cholera vaccines that are swallowed not only protect the persons who have taken the vaccine but also their unvaccinated neighbours, because vaccination reduces the circulation of the microorganism causing cholera. And a study in Mozambique has shown that the WC/rBS cholera vaccine provided effective protection against cholera, even in a population where 20-30% were infected with HIV.

Another welcome effect of increasing research capacity is the potential for building ties between universities and industry. The Centre for Infectious Diseases at the University of Nicaragua-León (CITET) obtained a contract in competition with other research groups in the region with Glaxo-Wellcome, the pharmaceutical company. This three-year project will work on developing new vaccines. The research capacity created at CITET is a direct result of the Sida cooperation.

Sida supports the Tropical Disease Programme at WHO, which announced several breakthroughs in 2005. One was validating simple syphilis diagnostics to prevent children from being born with congenital syphilis. Another was an assessment tool to detect Loa loa leading to an improvement in the control of onchocerciasis, the disease also known as river blindness. This test identifies populations where it is safe to use ivermectin, so distribution is now being re-established in many areas.

In addition, a major international consortium under WHO has sequenced the genome of the three parasites responsible for African sleeping sickness, Chagas disease (Central and South America) and leishmaniasis (kala azar). These different diseases are carried by different insect vectors, but the genetic similarities of the pathogens outweigh their differences.

“This common core of 6,200 genes is extremely important because it may provide targets for a new generation of drugs that might fight all three parasites, which threaten millions of people worldwide,” says Najib El-Sayed, a molecular biologist at The Institute for Genomic Research (TIGR) in Rockville, Maryland, USA. “At the moment, there are no vaccines and only a few inadequate drugs to fight these devastating and neglected diseases.”



Building the capacity to exploit Bolivia's natural resources

FOR JORGE Q. LEYTÓN, the opportunity to be part of the bilateral research cooperation in Bolivia was like a dream come true. After obtaining his master's degree at San Simón University in Cochabamba, Bolivia, he arrived at Lund University in Sweden in 2001 to begin what would turn out to be a rich exchange of knowledge and skills.

"I had always wanted to pursue a PhD but it would not have been possible in Bolivia as the field of biotechnology barely existed in my country when I finished my master's degree in 2000," says Leytón. "We did not have the facilities, the equipment or knowledge to do the research I wanted to do."

Today, it's a different story

Leytón obtained his doctoral degree in 2005 and immediately began pursuing post-doctoral studies while supervising master's degree students in Bolivia. The Centre of Biotechnology at San Simón University that had only one small laboratory in 2000 now has several large laboratories with all the necessary equipment and materials to carry out advanced research.

This has resulted in the Centre forming new research areas such as process fermentation, enzyme technology, molecular biology and cloning and expression of genes. Expertise in all these areas is useful in setting up projects involving

processes for the food industry, pharmaceuticals, chemicals, and even for environmental remediation.

Seizing untapped potential

Leytón was one of three PhD students trained in the first phase of the Sida supported cooperation between 2000-2003. During 2002-2006, four new students are being trained in technologies that will complement the skills of the first group of students. This includes anaerobic digestion and converting biomass into biogas.

"Before the support from Sida, we thought our research within biotechnology would have to stop," says Leytón. "That would have been

a serious loss to Bolivia, because the sustainable exploitation of certain valuable resources is a potential source of income and can help our country deal more effectively with poverty.”

“The sustainable exploitation of certain valuable resources is a potential source of income and can help our country deal more effectively with poverty.”

Win-win situation

Leytón has won the admiration of his supervisor, Professor Bo Mattiasson of the Department of Biotechnology at Lund University, who adds that in general the calibre of students from Bolivia is very high.

“Jorge has not only worked hard to obtain his own degree but has been dedicated to building research capacity in his own country by supervising the work of many students in Bolivia,” says Mattiasson. “Here in Sweden, we benefit by being exposed to the rich biodiversity in South America. Many of these microorganisms found in Bolivia represent exciting possibilities. We attract many ambitious and dedicated Swedish students to our department for this very reason. It’s a win-win situation for both sides of the cooperation.”

Based on the sandwich model, Leytón spent time in both Bolivia and Sweden. In Bolivia he conducted field work and analyses using the new laboratory facilities, making visits to Sweden for quality control, supervisory advice and write-up.

Leytón’s current research concerns the halophile, a salt-loving microorganism found in the high saline environment of the Andean region, the poorest part of the country. He and his colleagues in Bolivia discovered a halophile, *Halomonas boliviensis*, that could potentially be used in biopolyester production. This has

attracted the interest of Bolivian local institutions, such as the municipality of Cochabamba, which sees the relevance of producing organic fertilisers and bioplastics from organic waste. This is one of many microorganisms being studied under the cooperation for biotechnological transformation.

Incentive to protect biodiversity

Other Bolivian researchers are looking at developing biologically derived pharmaceutical products. This could provide substantial economic incentive to protect biodiversity and provide biologically rich countries with an opportunity for sustainable development. The need for research capacity in Bolivia to achieve these aims is evident: Bolivia is the least botanically investigated country in South America and many areas of the country remain completely unexplored. The country’s rich biodiversity is not adequately utilised in spite of the extreme poverty.

The two universities in Bolivia are developing sustainable and economically productive opportunities in rural areas by evaluating its vegetal resources to help improve the quality of life of poor rural families. So far, many interesting natural products have been studied and the results published in international journals and in the Bolivian Journal of Chemistry.

Natural treatment of wastewater

IIDEPROQ, the Chemical Process Institute at San Andrés University in La Paz, is also part of the Sida research cooperation. Its researchers are working with biogas production, with the dual aim of developing technology for distributed local biogas production on the Altiplano as well as providing technology for treatment of the large amount of untreated wastewater from the meat industry in La Paz that flows into the city’s main river. They have found that anaerobic digestion can decrease the environmental burden caused by the meat industry and at the same time produce methane. This solution is of great interest to

other developing countries as well.

Today IIDEPROQ has acquired the competence, experience and experimental facilities to be able to contribute to the solution of an important environmental problem in the city of La Paz.

Jorge Miguel Veizaga R., a researcher at the Latin American Faculty for Social Sciences (FLAC-SO), says that the Sida supported research cooperation allows those in Bolivia to update their research skills, improve their standards and form a network with an international research community. They also share the knowledge they have gained with undergraduate students in the country. It is vital that this support is long term, he adds.

“Given the difficulties of carrying out research in developing countries, cooperation is very important,” he says. “Research capacities don’t appear spontaneously. On the contrary, they depend on relatively slow evolution processes. In that way, they become self sustaining over time.”

MILLENNIUM DEVELOPMENT GOAL 7: Ensure environmental sustainability

The reduction and ultimate eradication of global poverty is linked inextricably to sustainable systems for agriculture and natural resource use. Of the estimated 1.2 billion people who subsist on less than US\$ 1 per day, nearly three-quarters live in rural areas and support themselves mainly through use of natural resources including agriculture.

Population growth, the expansion of land-based activities such as tourism, and increased pollution from industry and agriculture is taking its toll on sensitive ecosystems on land and in coastal areas.

Sida supports research across three continents in natural resources and environmental sciences as well as social sciences to build capacity for sustainable agricultural production systems and to adapt to the social and economic context of developing sustainable environments.



Finding sustainable livelihoods for resource-poor farmers

DUCKS SCAVENGING for insects in a Vietnamese rice field may seem nothing out of the ordinary. But this traditional practice is not as common as it once was, as rice farmers have become dependent on the use of chemical insecticides to do the job that ducks did quite well for centuries.

This was a problem identified by a researcher, Bui Xuan Men, with the regional research network for livestock-based sustainable agriculture in the Lower Mekong Basin (MEKARN), focusing on the significance of livestock to sustainable rural development. Its aim is to help resource-poor farmers generate more income and more food, including livestock products, through integrated farming systems that provide food security and reduce poverty.

Bui Xuan Men's research showed that ducks and fish not only destroyed most of the common species of weed, insect and golden snail pests that had been plaguing the farmers, but also that rice yields were only slightly decreased. By eliminating fertilisers, the farmers saved money. The environment benefited, since pesticides no longer polluted groundwater, drinking water and fish ponds. Total net incomes from the integrated duck-fish-rice systems

were between 55% and 144% higher than the conventional rice systems.

Integrating livestock with farming

This example of research may not seem revolutionary, but it can mean a world of difference to smallholder farmers – 80% of the population in Laos and Cambodia and 60% in Vietnam. These farmers are under pressure to adopt the chemical fertiliser systems used by large-scale conventional production systems. Instead, the research demonstrates in very practical ways how livestock can be integrated with farming to the benefit of sustainable livelihoods, for instance through the recycling of livestock or agricultural waste.

Since the livestock network was founded in 2001, 13 PhDs and around 30 master's degrees have been completed.

Continuity and expansion

"The key success factors have been continuity and expansion," says Professor Brian Ogle of the Department of Animal Nutrition and Management at the Swedish University of Agricultural Sciences and the International Coordinator of Mekong Basin Animal Research. "What started out as a bilateral re-

search cooperation between Sweden and Vietnam expanded to a regional network in which Vietnamese senior scientists now act as mentors and teach and supervise many of the students in Laos and Cambodia."

Their work is making a real difference. For example, in Vietnam, low-cost tubular biogas technology developed by researchers in the Mekong Basin has been adopted by more than 9,000 farmers. A system to replace cereal grain with sugarcane juice in pig production benefits more than 1,000 families.

"When you talk about capacity building, it is a really long process."

The livestock research network's success has been possible, he adds, through the long-term support provided by Sida.

"When you talk about capacity building, it is a really long process," Ogle says. "Not all donors recognise that. It takes several years to get a project up and running and Sida gives us the time to develop the work properly."

NEW HOPE FOR THREATENED LAKE

The area around Lake Victoria in East Africa is rich in natural resources and has good potential for economic growth. This is threatened, however, by unsustainable use of the lake. Nearly 40 million people from nine countries depend on the lake for their livelihood.

Rapid population growth and increasing urbanisation have resulted in shanty towns whose sewage flows directly into the lake. Existing treatment plants are inadequate. Poor drinking water leads to diseases such as diarrhoea and typhus. With shrinking margins, farmers are forced to use unsuitable land areas, for example wetlands, for growing crops. The result is lost biodiversity.

When forests are felled, soil erosion increases, which results in more nutrients entering the lake. Fertilisers and insecticides add to the problem, as does industrial discharge of untreated wastewater. Soil erosion and discharges from households and industry lead to eutrophication, which results in uncontrolled growth of weeds, which are a serious obstacle to fishing. Smaller catches lead to unsustainable methods, such as the use of poisons, illegal nets and overfishing.

Breaking this vicious cycle is the aim of the Lake Victoria Research Initiative, created in 2000 and coordinated at the Inter University Council for East Africa. Researchers from universities in Tanzania, Kenya and Uganda are working to better understand the problems, their interrelation, and to provide practical solutions. Sida's support for the project is long term.

In 2005, researchers delved into many issues, including the increasing presence of mercury and lead in the lake. They measured mercury levels in aquatic organisms such as fish and plants and interviewed the local population to better understand the socio-economic impact of this problem.

Lessons learned from Sida's support to Baltic Sea Cooperation have been of use in the Lake Victoria initiative. Although very different, the Baltic project also involved thematic research with many aspects – physical, chemical, biological, economic and social – with the aim of developing practical methods to solve problems related to poor living conditions and degradation of the natural environment. The goal is to maintain wetlands, watercourses and land in a sustainable way.

PUTTING ENVIRONMENTAL TECHNOLOGY TO WORK IN ASIA

Removing zinc from the wastewater produced by Asia's growing rayon industry has been a challenge. The industry's treatment process today is based on precipitation that generates solid waste and poses a disposal problem. At the Asian Regional Research Programme on Environmental Technology (ARRPET), researchers hit upon an environmentally viable solution. They employ a biological sulphate reduction process, followed by zinc removal by precipitation as zinc sulphate. This new technology is now being used on a pilot scale.

This is just one example of how environmental technology can play a role in addressing Asia's environmental problems and also create a thriving new industry in environmental technology. ARPET was formed to address environmental degradation in Asia, particularly in the areas of wastewater, solid waste management, and air pollution. It involves 25 national research institutes in eight Asian countries. It aims to boost research capacity, conduct research in relevant areas, and work with policymakers to promote environmentally friendly technologies. Over 80 papers have been disseminated since the programme began in 2001. Phase II of the programme was launched in 2005, with results from the first phase being carried out in pilot scale.

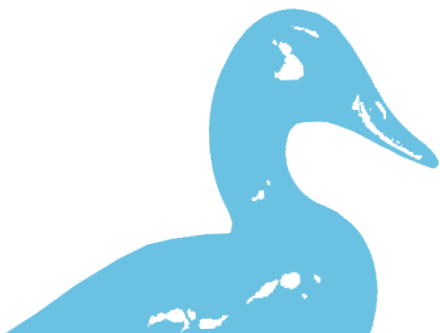
Another pilot project deals with the problem of marine shrimp farm effluent, which poses a threat to this important Asian industry if untreated. The technology developed under ARPET utilises a photobioreactor employing photosynthesis by algae for removal of ammonia as well as for increasing dissolved oxygen levels.

"Many of the environmental issues in our region have not been addressed satisfactorily over the past 10 to 20 years, and these technologies will certainly help many Asian industries," says Prof. Ajit Annachhatre of the Environmental Engineering and Management School of Environment, Resources and Development at the Asian Institute of Technology and coordinator of ARPET.

"Besides generating technologies that are environmentally sound, we also have a component of policy-related aspects to our research, so that governments in the respective countries can make use of our recommendations, in terms of technology and policy goals," says Annachhatre.

"It is our ambition that ARPET will play an important role in addressing serious environmental issues for the long-term benefit of the region's development."

"Governments can make use of our recommendations, in terms of technology and policy goals."





A brighter economic future through partnership

BUILDING A STRONGER economy, a healthier population and a peaceful continent are the key determinants of Africa's future. So it is no accident that the Organisation for Social Science Research in Eastern and Southern Africa (OSSREA), a leading social sciences research organisation, has been focused on poverty, health and instability since it was established in 1980.

"When you look at Africa's problems, they are very easy to solve," says Alfred Nhema, executive secretary of OSSREA. "But there are no shortcuts to progress. Africa must do what the developed world has done, which is to take the kind of actions that will address the problems we face. We believe that part of OSSREA's role is to sensitise policymakers to look at these critical

issues. Otherwise, Africa will not be able to join the international community and lessen our dependency on foreign aid."

Putting aid and trade on the agenda

"International Aid, Trade and Development in Africa: The Search for a New Development Paradigm" was the theme of OSSREA's 8th Congress and International Conference held in 2005 in Addis Abba, Ethiopia. It drew 200 participants from within and outside Africa, including policymakers, social scientists, researchers, and regional and non-governmental organisations.

The major aim of the conference was to examine the imperative issues of aid, trade and development. Among the 68 papers presented, a key finding was the need to restruc-

ture the African state to make it capable of providing leadership for development. The participants discussed how to encourage the regions to integrate and to participate in the global economy. It reinforced OSSREA's commitment to focus on international trade and development, as this is an under-researched area.

Policymakers draw lessons

Such knowledge will prove invaluable to Africa's ultimate aim to reduce poverty, says Nhema, by giving policymakers greater capacity to negotiate in forums such as the World Trade Organisation.

"Our philosophy is that scholars should just not just talk to each other, but to policymakers as well," he says, adding that OSSREA's research is often used by organisations

such as the New Partnership for Africa's Development (NEPAD) as background material in preparation for international forums.

"In fact, in 2005, government researchers were involved for the first time in OSSREA's research into poverty reduction strategies.

"When you look at Africa's problems, they are very easy to solve."

It was a way to combine our scholars' latest research with an honest assessment of what is being done on the ground."

OSSREA has liaison offices in 21 countries. It awards research grants, holds training programmes and conducts specialised research projects, representing some 5,000 to 10,000 scholars in the region.

Strength in numbers

The African Economic Research Consortium (AERC) was established in 1988 as a not-for-profit organisation devoted to capacity building in policy-relevant economic research in sub-Saharan Africa. Its biannual research workshops have become the largest gatherings of professional economists in sub-Saharan Africa. It has received Sida funding for more than a decade.

In 2005, AERC's workshops examined two critical issues. The first centred on the relationship between international migration and economic development. Researchers, academics, policymaker and economists debated whether international migration was simply a case of brain drain or a source of technical know-how and substantial income from abroad. The session provided insights into how to manage this trend to the benefit of Africa and Africans.

The second workshop examined the role of services in the economic development in Africa. The service sector has the potential to make an enormous contribution to economic development; lack of, or ineffi-

cient services, can similarly hinder progress. In sub-Saharan Africa, where economic development has stagnated, the role of the service sector is neither well understood nor adequately studied. Participants discussed the constraints on the sector's contribution to the development process and suggestions for policies and strategies that would enhance its role.

Both OSSREA and AERC have gained momentum through the constant exchange of ideas and knowledge that stimulates debate and ultimately, potential solutions to difficult problems.

"While our individual economies are small, through regional integration of our research, we come from a position of strength," says Nhema.

MILLENNIUM DEVELOPMENT GOAL 8: Develop a global partnership for development

The regional and international organisations that Sida supports are engaged in work that contributes to developing a rule-based, predictable and non-discriminatory financial system, and pledging a commitment to good governance, development and poverty reduction.

Sida's research support has been instrumental in helping to establish and maintain regional networks that create both South-South and South-North dialogues focused on poverty reduction – and lead to regionally integrated research.

Another element of Goal 8 is to make available the benefits of new technologies – especially information and communications technologies (ICT). Sida's research cooperation has supported ICT initiatives at partner country universities since 1998, helping make supporting technology available to researchers, students and administrators. As a result, Sida's ICT secretariat has been able to show how ICT can also contribute to areas including trading, agriculture, fishing and healthcare. Results were published in 2005 as a Sida booklet, *ICTs for Poverty Alleviation*.

PLANTING THE SEEDS TO TACKLE POVERTY

Harnessing innovation to reduce poverty and raise standards of living is the goal of the Innovation Systems and Clusters Programme in Eastern Africa, which aims to fast-track economic development in the region.

Supported by Sida, the programme involves the University of Dar es Salaam in Tanzania, Makerere University in Uganda, and Eduardo Mondlane University in Mozambique. The seed of the idea was planted in 2003 and in 2005, with Sida's support, intensive training courses were held in Tanzania and Uganda. The result was 15 pilot projects established in both countries, with first results expected during 2006.

Cluster initiatives are organised efforts to increase growth and competitiveness, involving firms, governments and the research community.

Metalwork firms in the town of Morogoro, Tanzania are excited about this new initiative. For the first time, they are identifying common needs and sharing premises and labour. The hope is that this will lead to greater efficiency, meet the demands of a larger market, and also attract government loans and other assistance.

The same concept is being tried in the other pilots, which aim to build strong small- to medium-sized enterprises in areas including tourism, food processing, basketry, fashion design, seed cultivation, and biofuel.

"Africa lags behind in innovation studies as much as it does in technological innovations," says Prof. Burton L.M. Mwamila of the College of Engineering at the University of Dar es Salaam. "We start by doing research and identifying gaps in the systems of innovation, but the ultimate goal is to create innovative firms. In a globalised world, you have to produce quality to be competitive. And the best way to get there is to involve all the major players: academics are responsible for knowledge, private firms build businesses and generate wealth, and governments provide the framework."

Prof. Mwamila believes the cluster initiatives could serve as a model for strengthening SMEs in Tanzania and other developing countries.

"Then the country can produce more products, find new markets, generate more wealth and thus deal more effectively with the problems of poverty that we are seeing today," he says.

The pursuit of peace is a South-South challenge

FEW ISSUES ARE as critical to sustainable development as peace and stability. Yet peace, fostered by democracy, has proven elusive for many parts of the developing world as countries contend with civil war, repressive regimes, and infringements of human rights. Despite the daunting challenges posed by conflict and social instability, these issues are not sufficiently studied and debated by researchers and policy-makers in the South.

It was therefore timely that in 2005 the Africa/Asia/Latin American Scholarly Collaborative Program held a conference on the theme, “Democracy and Domestic Politics: Perspectives from Africa, Asia and Latin America.” Researchers from three continents converged to grapple with such pressing issues as state-building, elections and the politics of participatory democracy, and opposition, civil society and democratic space.

But perhaps just as significant as the theme of the conference is the fact that such a program exists in the first place. What began in 2000 as the seed of an idea among some regional research organisations blossomed in 2005 into a formal programme in which scholars located thousands of miles away

from each other began literally putting their heads together to come up with answers to some very difficult problems.

Combined brainpower

Members include leading social sciences research networks in Africa, Asia, and Latin America, including: The Latin American Council for Social Sciences (CLACSO), the Council for the Development of Social Science Research in Africa (CODESRIA), the Organisation for Social Science Research in Eastern and Southern Africa (OSSREA), the African Association of Political Sciences (AAPS), the Asian Political and International Studies Association (APISA) and the Southeast Asian Conflict Studies Network (SEACSN).

They will hold comparative international conferences and summer institutes that will explore democracy, social movements and governance; rethinking development; and international hegemony (the predominant influence of a state, region or group, over others).

It has been an exciting journey for many of the participants.

“How could we in Africa ever have met with researchers in Latin America and Asia without this

programme?” asks Alfred Nhema, executive secretary of OSSREA. “It is amazing when you discover you have common problems, that your colleagues in other continents are also running in circles. First you laugh about it, and then you discuss common ground and potential solutions.”

“The spirit of cooperation needs to be fed in order to grow,” adds Dr. Gladys Lechini, coordinator of the South-South Program at CLACSO. “The scholars of each region look inwards and try to solve problems without cooperation, until they realise that the same problems occur throughout the South. Only a few institutions and governments are supporting our South-South collaboration efforts. The Swedes are fully aware of our situation and disadvantages and are strongly helping us.”

Sida was involved in the creation of the program and is committed to its support. As both intra-state and inter-state conflicts and disputes are likely to persist in the developing world, peace and conflict studies will remain a field of research of considerable relevance. The Africa/Asia/Latin American Scholarly Collaborative Program will add to this body of knowledge in the form of joint collaborative research, joint training and exchange of experiences.



“The scholars of each region look inwards and try to solve problems without cooperation, until they realise that the same problems occur throughout the South.”

Understanding culture and identity

Research on cultural issues such as anthropology, history, archaeology and linguistics are vital to development, given the complexity of the problems that make poverty pervasive. Two brief examples:

The African Archaeological Network (AAN), which came into being with Sida's support, is of great importance for strengthening the region's history and cultural identity. It focuses on tropical urbanism, socio-environmental interactions and climate change in Africa and South Asia, studying sensitive or severely impacted human landscapes, with a focus on sustainability. Among other things it has shown that trade links between South Asia and Africa are some 1000 years older than originally believed.

Researchers at San Andrés University in La Paz, Bolivia have produced an encyclopaedia for the more than three million indigenous people in the country who speak Aymara. The encyclopaedia provides the Aymara people with a greater opportunity to use their language and to strengthen their culture. It also gives them the strength to assert their identity within Bolivian society.

RESEARCH – BROADER THAN THE MDGs

The Millennium Development Goals do not cover every aspect of poverty. For example, they do not directly refer to issues such as peace and conflict, nor do they refer to the self-esteem and cultural identity that are vital to marginalised groups. But these are equally imperative in fighting poverty.

Sida has a long tradition of supporting research within the social sciences and humanities, disciplines that have strategic roles in the development debate. Even when social sciences faced major political difficulties in many countries, Sida continued its support, largely through regional institutions, to which researchers could apply for research funds and publish their findings, which were sometimes regarded as controversial.

Conflict is multidimensional, and the complexity of conflict management, resolution and prevention is enhanced by South-South collaboration. Sida's support in this area – and the ambition to reduce poverty – extend beyond the current challenges of the Millennium Development Goals.

OCCUPATIONAL HEALTH IN NICARAGUA

As a result of Sida's bilateral research programme in Nicaragua, the Occupational and Environmental Health PhD programme at UNAN-León university opened a clinic in León specialising in work-related health problems. This is unique, as health issues relating to work are not normally recognised or diagnosed in Nicaragua.

Through the clinic the researchers were able to build the first national occupational health database. As the project developed, the study gained profile and the research team became nationally recognised as experts in this previously unexplored field.

The team acted as experts in the commission to draft an occupational health law, which is currently before parliament, and they have forged links with the Nicaraguan Federation of Workers Unions (CST), where they are addressing working conditions and running successful training programmes on ergonomics, occupational health, risk assessment and international law.

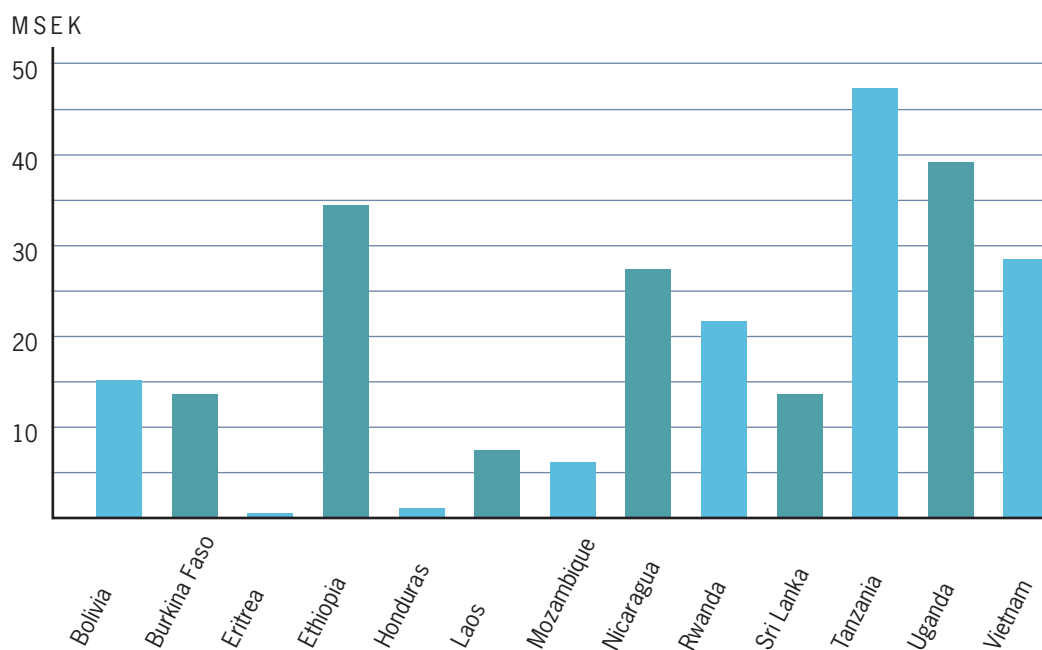
Most recently, UNAN-León and CST joined forces to create a Trust to promote work-related health issues (Promoción Social y Laboral de los Trabajadores, PROSTRAP).

Sida's support to research cooperation in Nicaragua began in 1980. The Swedish partner institutions in the bilateral cooperation with UNAN-León are the Department of Health Sciences and the National Institute for Working Life. There are currently four PhD students in the programme studying occupational exposure to pesticides, industrial occupational health and labour market and mental health.



Bilateral Research Cooperation

Bilateral programme disbursements 2005 by country:



Total bilateral disbursements SEK 259.2 million

MOZAMBIQUE

Over a 27-year period (1978-2005) Sida provided Eduardo Mondlane University through various channels with an amount close to SEK 250 million. Sida's objectives in the long term are to support the development of national research capacity through relevant research and to support the build-up of local graduate research programmes. Development of a research university is considered as a starting point for building a national research system. The support has contributed to the establishment of a Ministry for Science and Technology in 2005 and its strategy for research development.

Sida commitment for current agreement period 2001–2005: SEK 79.1 million
agreed with UEM and SEK 3 million for 2005-2006 agreed with the Ministry of Science and Technology
Disbursed 2005: SEK 6.6 million

Supported areas

Anthropology, Archaeology, Biotechnology, Chemistry, Engineering, Geology, History, Informatics, Law, Linguistics, Mathematics, Marine Biology, Marine Science, Medicine, Veterinary Medicine, Physics

Mozambican institutions

INIVE National Veterinary Research Institute, Maputo
UEM Eduardo Mondlane University, Maputo

Collaborating institutions

CTH Chalmers University of Technology, Göteborg
GU Göteborg University
KI Karolinska Institutet, Stockholm
– Kristineberg Marine Biological Station, Fiskebäckskil
KTH Royal Institute of Technology, Stockholm
LTH Lund University of Technology
LU Lund University
SLU Swedish University of Agricultural Sciences, Uppsala
UU Uppsala University
– University of Northumbria, Newcastle upon Tyne
– University of Natal, Durban

HONDURAS

Research cooperation was able to commence on July 1, 2005 after almost three years of negotiations concerning Sida's need for reforms to be in place, with the Honduran government and the National University of Honduras. Following the recently started university reform, Sida decided to initiate a programme focusing on capacity building for research and research management. The cooperation also includes support to ICT infrastructure at the national university.

Sida commitment for current agreement period July 2005 – June 2008: SEK 39.5 million
Disbursed 2005: SEK 1.6 million

Honduran institutions

UNAH Universidad Nacional Autónoma de Honduras

Collaborating institutions

SMI The Swedish Institute for Infectious Disease Control, Stockholm
UU Uppsala University

ETHIOPIA

The purpose of Sida support has been to strengthen the national research coordination, to strengthen Addis Ababa University (AAU) and Alemaya University (AU) as post-graduate institutions, and strengthen the Armauer-Hansen Research Institute (AHRI) as a national medical research centre. Further, it aims to continue the ongoing process of building capacity at university and faculty level focusing on PhD training of staff on a sandwich basis in collaboration with Swedish universities. The current expansion of higher education in Ethiopia has created somewhat different conditions for research and research training as compared to the earlier programme periods. In 2005 preparations started for future support to a university reform programme.

Sida commitment for current agreement period 2002–2005: SEK 103 million
Disbursed 2005: SEK 34.8 million

Supported areas

Agriculture, Biology, Environmental Economics, Health,
Natural Products Chemistry, Solar Energy, Water Resources

Ethiopian institutions

AAU	Addis Ababa University
AHRI	Armauer Hansen Research Institute, Addis Ababa
AU	Alemaya University, Dire Dawa
ESTC	Ethiopian Science and Technology Commission, Addis Ababa

Collaborating institutions

GU	Göteborg University
ISP	International Science Programme, Uppsala
KI	Karolinska Institutet, Stockholm
KTH	Royal Institute of Technology, Stockholm
SLU	Swedish University of Agricultural Sciences, Uppsala and Alnarp
SU	Stockholm University
UmU	Umeå University
UU	Uppsala University

RWANDA

Research cooperation with Rwanda started in 2003 with a focus on research capacity building for post-conflict management. This included research on the reconciliation process, but also forward looking research on environmental issues and on capacity building for ICT in line with the Rwandan government's aim to reshape Rwanda into a knowledge society. Preparation for a new agreement includes efforts to identify opportunities for research and research training in natural science and technology.

Sida commitment for current agreement period 2003–2005: SEK 7 million
The agreement was extended to also cover 2006
Disbursed 2005: SEK 22.1 million

Supported areas

Information and Communication Technology (ICT), Environment, Conflict Resolution, Democracy and Human Rights, Human Resource Development, Economic Reforms

Rwandan institutions

NUR	National University of Rwanda, Butare
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Collaborating institutions

- Linköping University, Sweden
- Blekinge Institute of Technology, Sweden

SRI LANKA

Research cooperation with Sri Lanka dates back to 1976 and has been oriented to PhD training and research in various projects. The main institutional capacity building effort has been the support to a national ICT network for the universities. The current agreement period aims at finalising PhD studies and to extend the ICT network to the University of Jaffna in the conflict-ridden northern part of the country.

Sida commitment for current agreement period 2003–2007: SEK 84 million

Disbursed 2005: SEK 13.8 million

Supported areas

Archaeology, Biotechnology, Biochemical Pest Control, Electrical Engineering, Health, Library, Marine Biology, Regional Development/Poverty Alleviation, Social Sciences, University Staff Development and ICT

Sri Lankan institutions

NARA	National Aquatic Resources Agency, Colombo
NSF	National Science Foundation, Colombo
UoC	University of Colombo
UoJ	University of Jaffna
UoK	University of Kelaniya
UoP	University of Peradeniya
UoR	University of Ruhuna, Matara
UoSJ	University of Sri Jayawardenepura

Collaborating institutions

CTH	Chalmers University of Technology, Göteborg
GU	Göteborg University
ISP	International Science Programme, Uppsala
KU	Kalmar University
KTH	Royal Institute of Technology, Stockholm
SLU	Swedish University of Agricultural Sciences, Uppsala
SU	Stockholm University
UU	Uppsala University
INASP	The International Network for the Availability of Scientific Publications, London

BURKINA FASO

Research cooperation with Burkina Faso started in 2000 with the aim of strengthening research capacity related to natural resource management and poverty reduction.

A second agreement came into operation in 2004. The focus of cooperation is on PhD training, but the agreement also includes capacity building for research management and ICT infrastructures for the national research institute and the two universities.

Sida commitment for current agreement period 2004–2008: SEK 66 million

Disbursed 2005: SEK 14.3 million

Burkinabè institutions

OU	University of Ouagadougou
UPB	Polytechnic University of Bobo-Dioulasso
CNRST	Central National Research Institute, Ouagadougou

Collaborating institutions

SLU	Swedish University of Agricultural Sciences, Uppsala and Umeå
UU	Uppsala University

NICARAGUA

The aim of Swedish research cooperation in Nicaragua is mainly to strengthen the development of research at four central universities with a long-term perspective. Research and postgraduate studies contribute to establish the expertise and analytical capacity necessary for the country's development. Support for the development of university research also contributes to the reform of the country's higher education system.

Sida commitment for current agreement period July 2004 – June 2008: SEK 100 million
Disbursed 2005: SEK 27.1 million

Supported areas

Agriculture, Health, Engineering and Environmental Sciences

Nicaraguan institutions

UNA	National University of Agriculture, Managua
UNAN-León	National Autonomous University of Nicaragua, León
UNAN-Managua	National Autonomous University of Nicaragua, Managua
UNI	National University of Engineering, Managua

Collaborating institutions

HS	Karolinska University Hospital, Huddinge
KI	Karolinska Institutet, Stockholm
KTH	Royal Institute of Technology, Stockholm
LU	Lund University
SLU	Swedish University of Agricultural Sciences, Uppsala
SMI	Swedish Institute for Infectious Disease Control, Stockholm

LAOS

The objective of Swedish research cooperation with Laos is to assist the country in attaining human development and building up research capacity at the national university. This capacity will enable the university to create a basis for research and postgraduate studies, and to pursue programmes of higher education of good quality. Given the low percentage of staff with a higher degree, research training for lecturers is of utmost importance for improving the quality of academic education in Laos.

Sida commitment for current agreement period 2003–2005: SEK 16 million
Disbursed 2005: SEK 7.5 million

Supported areas

Social Sciences, Education, Agriculture, Forestry, Physics, Chemistry, Biology, Mathematics and ICT

Lao institutions

NUOL	The National University of Laos
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Collaborating institutions

SLU	Swedish University of Agricultural Sciences, Uppsala and Umeå
UMU	Umeå University
KTH	Royal Institute of Technology, Stockholm

ERITREA

Research cooperation was interrupted in 2001 when the Government of Sweden decided to not enter any new agreements with Eritrea. Some research students were still under training and Sida decided to support the completion of their degree work at the Swedish host institution. This training programme was finalised in 2005.

Sida commitment for the period 2002-2005: SEK 7.2 million

Disbursed 2005: SEK 0.62 million

Collaborating institutions

KTH Royal Institute of Technology, Stockholm
UU Uppsala University

VIETNAM

Research cooperation with Vietnam under the current agreement focuses on three research programmes: biotechnology, health and rural development and environment. The organisation of research projects into programmes aims at increasing the capacity for research management in Vietnam. A research grant scheme established at the Ministry for Science and Technology has provided an opportunity to introduce academic peer review in the Vietnamese research system.

Sida commitment for current agreement period 2004–2007: SEK 100 million

Disbursed 2005: SEK 28 million

Supported areas

Health, Biotechnology, Rural Development including Environment

Vietnamese institutions

CLST Central Library for Science and Technology, Hanoi
CTU Can Tho University
– Hué University
– University of Agriculture and Forestry, Ho Chi Minh
– Institute of Material Sciences, Hanoi
– Institute of Oceanography, Nha Trang
– Institute of Oceanology, Haiphong
MOST Ministry of Science and Technology, Hanoi
NCSSH National Centre for Social Sciences and Humanities, Hanoi
NIAH National Institute for Animal Husbandry, Hanoi
NISTPASS The National Institute for Science and Technology
 Policy and Strategy Studies, Hanoi
RCFTI Research Centre for Forest Tree Improvement, Hanoi
– Hanoi Medical School
– Agricultural Genetics Institute, Hanoi

Collaborating institutions

ISP International Science Programme, Uppsala
KI Karolinska Institutet, Stockholm
KTH Royal Institute of Technology, Stockholm
Skogforsk The Forestry Research Institute, Uppsala
SLU Swedish University of Agricultural Sciences, Uppsala
SSE Stockholm School of Economics
SU Stockholm University
UmU Umeå University
UU Uppsala University

BOLIVIA

Research cooperation with Bolivia started in 2000 with the endeavour to increase research capacity through PhD training and strengthening of research infrastructure at two selected universities. In addition the Vice Ministry for Higher Education received funds for a study programme on the situation for research and higher education in Bolivia. Research projects were organised in programmes focusing on development issues in two regions of the country, one in a former mining area in the highlands and another in the coca-cultivating areas in an Andean valley. The first group of PhD students graduated in 2005, when an evaluation of the programme was also conducted.

Sida commitment for current agreement period 2003-2006: SEK 31.3 million

Disbursed 2005: SEK 16 million

Supported areas

Biotechnology, Chemistry, Food Science, Water Resources, Engineering, Regional Planning, Social Economics, History, Anthropology, Archaeology, Linguistics (Aymara)

Bolivian institutions

UMSA	San Andrés University, La Paz
UMSS	San Simón University, Cochabamba
–	Vice Ministry for Higher Education, Science and Technology, La Paz

Collaborating institutions

LU	Lund University
UU	Uppsala University
FLACSO	Latin American Faculty of Social Sciences (network), Peru

TANZANIA

The focus of the research cooperation is to support the build-up of the University of Dar es Salaam (UDSM), as a credible and authoritative research institution according to the Strategic Plan of the UDSM. The modalities are research and research training, programmes for scholarships, research courses, library, ICT and faculty support, that are beneficial for researchers throughout the university, and not only limited to specific training projects.

Sida commitment for current agreement period 2004–2007: SEK 188 million

Disbursed 2005: SEK 47.3 million

Supported areas

Architecture, Education, Energy and Engineering (Electricity, Electrotechnology, New Materials), Health (HIV/AIDS, Malaria, Reproductive Health), Information and Communication Technology, Languages, Law, Natural Resources and Environment (Agropesticides, Coastal Zone, Drylands), Social and Economic Development, Institutional Support

Tanzanian institutions

UDSM	University of Dar es Salaam
UCLAS	University College of Lands and Agricultural Studies
MUCHS	Muhimbili University College of Health Sciences

Collaborating institutions

GU	Göteborg University
KI	Karolinska Institutet, Stockholm
KTH	Royal Institute of Technology, Stockholm
SMI	Swedish Institute for Infectious Disease Control, Stockholm
–	Swedish Environmental Research Group, Stockholm
SU	Stockholm University
UmU	Umeå University
UU	Uppsala University

UGANDA

The overall goal of the Sida research support to Uganda is to assist the country in its endeavour to promote research for attainment of new knowledge. Makerere University has been identified as the most appropriate institution for this support. The specific goal is to concentrate on support that enhances an environment conducive for research and research training, particularly the development of local postgraduate research training, under the slogan 'To support the supervisor to supervise'. Organisation of the research support around a theme, 'Lake Victoria and other water resources', provide the opportunity for information sharing between faculties/units as well as providing enhanced potential for cross-disciplinary research.

Sida commitment for current agreement period 2005–2009: SEK 181 million
Disbursed 2005: SEK 39.5 million

Supported areas

Agriculture (Environment), Health (HIV/AIDS, Malaria, Mental Health, Reproductive Health, Pharmacology), ICT, Technology (Architecture, Energy, Engineering, Environment), Social Sciences (Gender, HIV/AIDS, Political Science, Sociology), Epidemiology, Library Science

Ugandan institutions

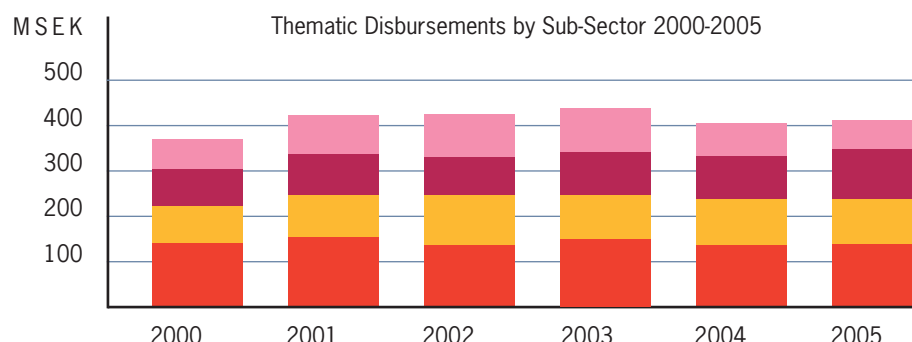
– Makerere University, Kampala

Collaborating institutions

GU	Göteborg University
KI	Karolinska Institutet, Stockholm
KTH	Royal Institute of Technology, Stockholm
LTU	Luleå University
SLU	Swedish University of Agricultural Sciences, Uppsala
UU	Uppsala University
BU	Borås University

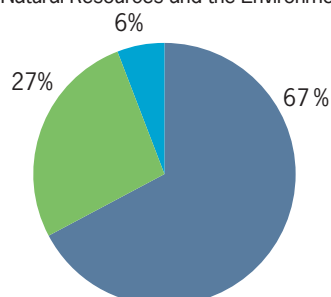
Thematic Research Programmes

This section does not include bilateral cooperation partners.

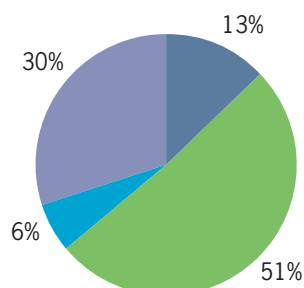


DISBURSEMENTS BY REGION 2005

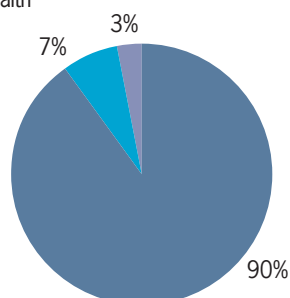
Natural Resources and the Environment



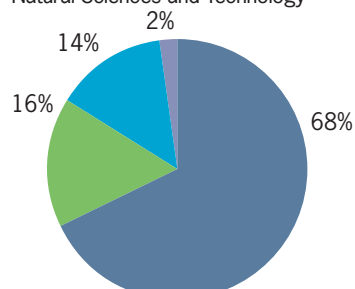
Social Sciences and Humanities



Health



Natural Sciences and Technology



NATURAL SCIENCES & TECHNOLOGY

Collaborating institutions

BASIC SCIENCES

ISP	International Science Programme, Uppsala, Sweden
TWAS	Third World Academy of Sciences, Trieste, Italy
ICTP	International Centre for Theoretical Physics, Trieste, Italy
TWOWS	Third World Organisation for Women in Science, Trieste, Italy

BIOTECHNOLOGY

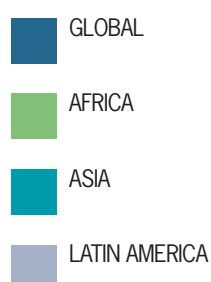
BIOEARN	Biotechnology, Biosafety and Biopolicy in East Africa
UNCST	Ugandan National Council for Science and Technology, Kampala, Uganda
SEI	Stockholm Environment Institute, Stockholm, Sweden

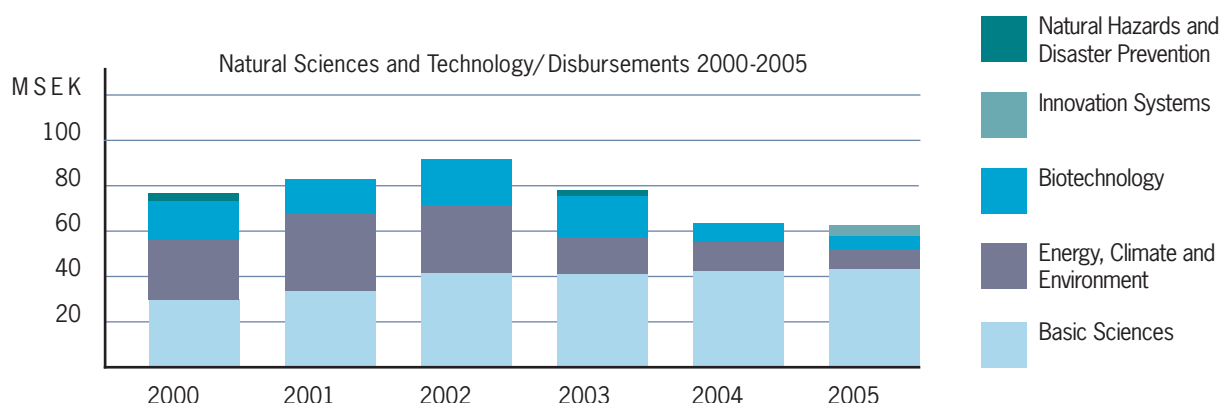
ENERGY, CLIMATE AND ENVIRONMENT

AFREPREN	African Energy Policy Research Network, Nairobi, Kenya
FWD	Food Woodstove Dissemination, Kilimani, Kenya
AIT	Asian Institute of Technology, Klongluang Pathumthani, Thailand

INNOVATION SYSTEMS

UDSM	University of Dar es Salaam, Tanzania
-	Vinnova, Sweden
CTH	Chalmers University of Technology, Göteborg, Sweden





SOCIAL SCIENCES AND HUMANITIES

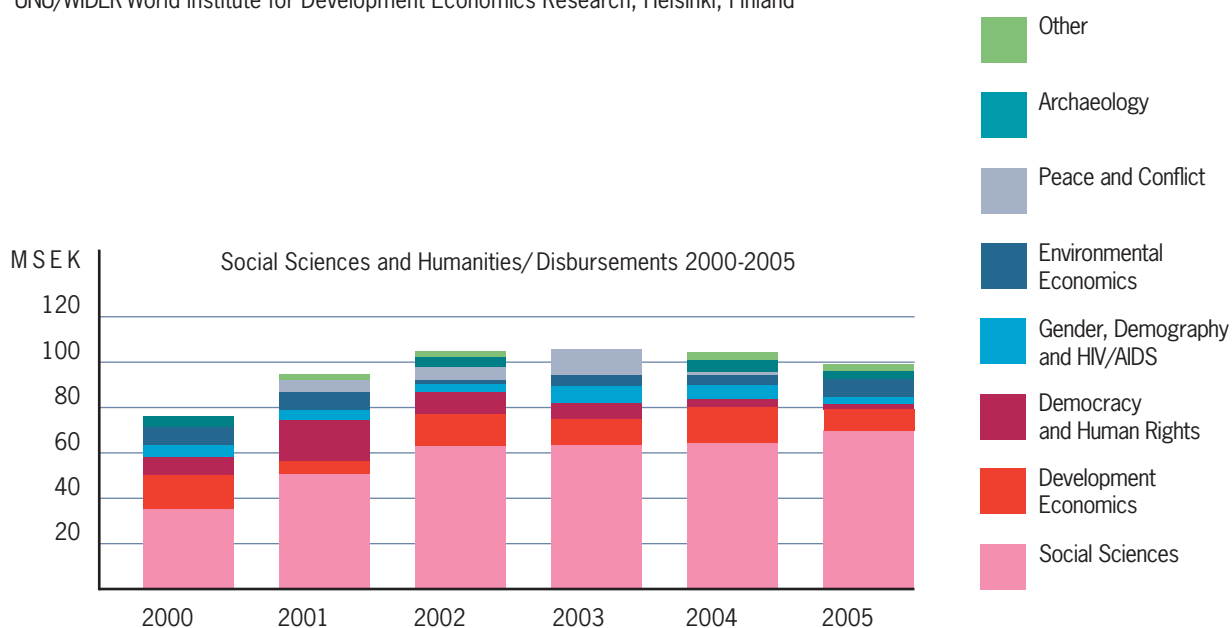
Collaborating institutions

SOCIAL SCIENCES

UNRISD	United Nations Research Institute for Social Development, Geneva, Switzerland
CODESRIA	Council for Development of Social Science Research in Africa, Dakar, Senegal
OSSREA	Organisation for Social Science Research in Eastern and Southern Africa, Addis Ababa, Ethiopia
AAPS	African Association of Political Science, Pretoria, South Africa
CLACSO	Consejo Latinoamericano de Ciencias Sociales, Buenos Aires, Argentina
FLACSO	Facultad Latinoamericana de Ciencias Sociales, San José, Costa Rica
FLACSO	Facultad Latinoamericana de Ciencias Sociales, Guatemala City, Guatemala
FLACSO	Facultad Latinoamericana de Ciencias Sociales, San Salvador, El Salvador
APISA	Asian Political and International Studies Association, Kuala Lumpur, Malaysia
-	Latinobarómetro, Santiago, Chile

DEVELOPMENT ECONOMICS

AERC	African Economic Research Consortium, Nairobi, Kenya
UNU/WIDER	World Institute for Development Economics Research, Helsinki, Finland



ENVIRONMENTAL ECONOMICS

- The Beijer Institute of Ecological Economics, Stockholm, Sweden
- EEPSEA Economy and Environment Program for Southeast Asia, Singapore
- SANDEE South Asian Network for Development and Environmental Economics, Kathmandu, Nepal
- LACEEP Latin American and Caribbean Environmental Economics Program,
- CATIE Centro Agronómico Tropical de Investigación y Enseñanza, San Jose, Costa Rica
- CEEPA Center for Environmental Economics and Policy in Africa, University of Pretoria, South Africa

ARCHAEOLOGY

- UDSM African Archaeology Network, Dar es Salaam, Tanzania
- UU Department of Archaeology and Ancient History, Uppsala University, Uppsala, Sweden

GENDER, DEMOGRAPHY AND HIV/AIDS

- UAPS Union for African Population Studies, Dakar, Senegal
- SOMANET Social Science and Medicine Africa Network, Nairobi, Kenya
- CODESRIA Council for Development of Social Science Research in Africa, Dakar, Senegal
- OSSREA Organisation for Social Science Research in Eastern and Southern Africa, Addis Ababa, Ethiopia

SWEDISH MULTIDISCIPLINARY NETWORKS

- GADNET Gender and Development Network, Centre for Global Gender Studies, Göteborg University, Göteborg, Sweden
- SASNET Swedish South Asian Network, Lund University, Lund, Sweden

HEALTH

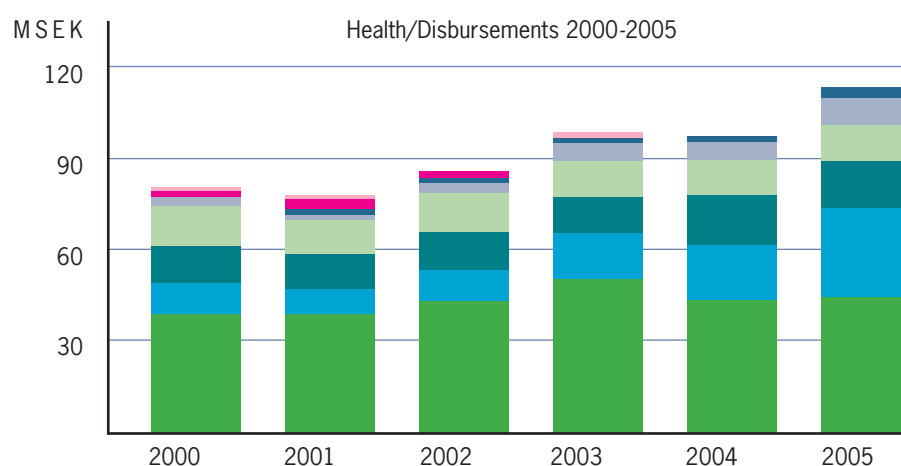
Collaborating institutions

HEALTH RESEARCH AND POLICY

- Global Forum for Health Research, Geneva, Switzerland
- COHRED Council on Health Research for Development, Geneva, Switzerland
- AHPSR Alliance for Health Policy and Systems Research, Geneva, Switzerland

WORLD HEALTH ORGANISATION

- RPC Research Policy and Cooperation, WHO, Geneva, Switzerland
- CAH Child and Adolescent Health and Development, WHO, Geneva, Switzerland
- UNDP/UNFPA/WHO/World Bank Special Programme on Research, Development and Research Training in Human Reproduction, WHO, Geneva, Switzerland



- UNDP/World Bank/WHO/UNICEF Special Programme for Research and Training in Tropical Diseases, WHO, Geneva, Switzerland
- Vaccines and Biologicals, WHO, Geneva, Switzerland
 - Non Communicable Disease Surveillance, WHO, Geneva, Switzerland

TROPICAL AND OTHER INFECTIOUS DISEASES

- ICDDR,B Centre for Health and Population Research, Dhaka, Bangladesh
- GU Department of Medical Microbiology and Immunology, Göteborg University, Göteborg, Sweden
- KI Department of Immunology, Microbiology, Pathology and Infectious Diseases, Karolinska Institutet, Stockholm, Sweden
- EMVI European Malaria Vaccine Initiative, Copenhagen, Denmark
- IVI International Vaccine Institute, Seoul, Korea
- MIM Multilateral Initiative on Malaria, Stockholm, Sweden
- FUNDESCA Fundación para el Desarrollo Económico y Social de Centroamérica, Panamá
- KIRT The Karolinska International Research and Training Committee, Karolinska Institutet, Stockholm, Sweden
- Network for Research and Training of Tropical Diseases, Heredia, Costa Rica
- RTPD Network for Research and Training in Parasitic Diseases at the Southern Cone of Latin America, Porto Alegre, Brazil

HIV/AIDS AND RELATED SEXUALLY TRANSMITTED DISEASES

- National Public Health Laboratory Bissau, Bissau, Guinea-Bissau
- MUCHS Muhimbili University College of Health Sciences, Dar es Salaam, Tanzania
- GU Department of Medical Microbiology and Immunology, Göteborg University, Göteborg, Sweden
- SMI Swedish Institute for Infectious Disease Control, Stockholm, Sweden
- KI Microbiology and Tumour Biology Centre, Karolinska Institutet, Stockholm, Sweden
- IAVI International Aids Vaccine Initiative, New York, USA
- LU Department of Medical Microbiology, Dermatology and Infection, Lund University, Lund, Sweden

OCCUPATIONAL MEDICINE

- Central American Institute for Studies on Toxic Substances, Heredia, Costa Rica
- SU Department for Systems Ecology, Stockholm University, Stockholm, Sweden

OTHER

- INDEPTH International Network of Field Sites with continuous Demographic Evaluation of Populations and their Health in Developing Countries, Accra, Ghana

NATURAL RESOURCES AND THE ENVIRONMENT

Collaborating institutions

MARINE SCIENCE

- WIOMSA Western Indian Ocean Marine Science Association, Zanzibar, Tanzania
- COMREC Coastal Management Research Centre, Södertörn University College, Stockholm, Sweden
- CORDIO Coral Reef Degradation in the Indian Ocean, Kalmar University, Kalmar, Sweden
- UDSM University of Dar es Salaam, Institute of Marine Science, Zanzibar, Tanzania
- NARA National Aquatic Resources Agency, Colombo, Sri Lanka
- GU Göteborg University, Göteborg, Sweden
- SU Stockholm University, Stockholm, Sweden
- UoR University of Ruhuna, Matura, Sri Lanka

FORESTRY AND DRYLAND

RPSUD	African Research Programme on Sustainable Use of Dryland Biodiversity, Nairobi, Kenya
PINEP	Pastoral Information Network Project, Department of Range Management, University of Nairobi, Kenya
EPOS	Research Programme for Environmental Policy and Society, Linköping University, Linköping, Sweden
AFORNET	African Forestry Research Network, African Academy of Science, Nairobi, Kenya

LAKE VICTORIA

VicRes	Lake Victoria Research Initiative, Inter-University Council for East Africa, Kampala, Uganda
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ANIMAL HUSBANDRY

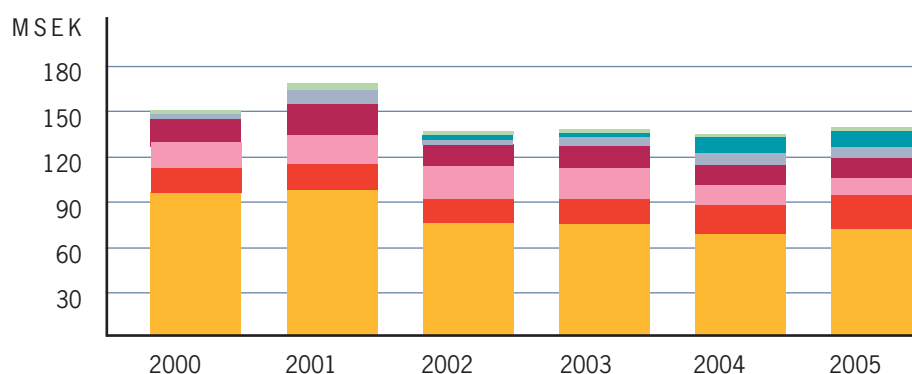
–	Regional Farming Systems in Asia, Ho Chi Minh, Vietnam
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AGRICULTURE AND AGRO-POLICY

CGIAR	Consultative Group for International Agricultural Research
CIP	International Potato Center, Lima, Peru
ICIPE	International Centre of Insect Physiology and Ecology, Nairobi, Kenya
IFPRI	International Food Policy Research Institute, Washington, USA
IRRI	International Rice Research Institute, Manila, Philippines
CIMMYT	International Maize and Wheat Improvement Center, Mexico City, Mexico
IITA	International Institute of Tropical Agriculture, Ibadan, Nigeria
CIAT	International Center for Tropical Agriculture, Cali, Colombia
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics, Andhra Pradesh, India
ICARDA	International Center for Agricultural Research in the Dry Areas, Aleppo, Syria
ILRI	International Livestock Research Institute, Nairobi, Kenya
IPGRI	International Plant Genetic Resources Institute, Rome, Italy
WARDA	West Africa Rice Development Association, Bouaké, Ivory Coast
ICRAF	Worldagroforestry Research Centre, Nairobi, Kenya
CIFOR	Center for International Forestry Research, Jakarta, Indonesia
–	World Fish Centre, Penang, Malaysia
IWMI	International Water Management Institute, Colombo, Sri Lanka
ACTS	African Centre for Technology Studies, Nairobi, Kenya

INTERNATIONAL FOUNDATION FOR SCIENCE

IFS	International Foundation for Science, Stockholm, Sweden
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Sida Studies 2005

The Sida Studies series offers a selection of the reports and studies recently commissioned by different departments at Sida. They reflect issues of relevance to Sida's policies and practices, but each report expresses the views and findings of its writer(s).

The following publications were made available in 2005.
Further information can be obtained through www.sida.se.

Sida Studies no 13

Transforming Conflicts and Building Peace –
Experience and Ideas of Swedish Civil Society Organisations

Author: Anna Åkerlund

Published: 2005. Art no. sida4706en

ISBN 91-586-8316-X

Åkerlund presents ideas, facts and experience gained in a 1999-2001 study of Swedish CSO programmes in areas of crisis and conflict around the world and the ways in which those involved in development cooperation can work actively and deliberately for peace.

Sida Studies no 14

Wealth of the Poor – Eliminating Poverty through Market and
Private Sector Development

Author: Claes Lindahl

Published: 2005. Art no. SIDA4308en

ISBN 91-586-8318-6

Lindahl shows how development cooperation can be influential in unleashing the creativity and enterprise of the poor. Successful pro-poor market and private sector development includes equitable distribution, gender equality, human rights, and environmental considerations.

Sida Studies no 15

The Employment Nexus Between Growth and Poverty

Author: S.R. Osmani

Published: 2005. Art no. SIDA4773en

ISBN 91-586-8326-7

For poverty to fall in response to economic growth depends on the creation of productive employment opportunities. In this study from Armenia, Uzbekistan, Vietnam, Indonesia and Bangladesh, Osmani shows that employment is the critical nexus between growth and poverty.

Halving poverty by 2015 is one of the greatest challenges of our time, requiring cooperation and sustainability. The partner countries are responsible for their own development. Sida provides resources and develops knowledge and expertise, making the world a richer place.



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