

# Forging Links





## Research Cooperation 2003

# Forging Links



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# Forging links

Underdevelopment and poverty are to be addressed by all possible ways and means. This is the explicit message of the bill: *Shared Responsibility: Sweden's New Policy for Global Development* adopted by the Swedish Government in 2003. The policy aims at permanent change in international relations.

This commitment to a coherent and consistent approach applies to all areas of Swedish politics, trade, agriculture, environment, security, migration and economic policy. Aid is but one of the measures envisaged. The specific goal for development co-operation is “to contribute to an environment supportive of poor people’s efforts to improve their quality of life”. One strategic measure is to strengthen the capacity for qualified analyses in some of the poorest countries. Countries need research for local analyses, to direct change and to evaluate the impact of internal and external efforts towards reducing poverty.

In this account of research co-operation in 2003, we have chosen to look into the past. We want to illustrate the many links necessary to develop, sustain and make use of research. Research is essentially international, but no country benefits from its findings without local scientists capable of following and interacting with the wider research community.

Sweden has a long tradition of supporting research *on and for* development, e.g. through international research programmes. Equally important are the efforts to support research *in and by* developing countries themselves. The returns of research investments may be difficult to assess and demonstrate in the short run.

We hope readers will appreciate the impact of Sweden’s approach of targeting its support to the improvement of local conditions for research, focussing on capacity for university research. This has contributed to the growing of budding local research communities, increasingly capable of sharing and contributing to the “global public goods” of commonly owned knowledge.

Early Swedish support gave rise to small islands of capable researchers. As research groups developed, the support shifted from sporadic project funding to more systematic support for institutional capacity development. Problem formulation and priority setting are now developed in the country itself and the research does not have to fall within specific Sida priorities. Gender issues are being addressed in the dialogue. Special support has been directed to research management, including mechanisms for evaluating and selecting research proposals.

The basic philosophy has been that research capacity, in a broad sense, is better supported in an open manner than in a directive approach. The fact that a few cases of corruption were reported in 2003 has not altered this assumption, even if it has meant a temporary restraint in allocating open funds while directing efforts to strengthening administra-

tive control and support functions. Sida continues to direct resources to the cumbersome building up of institutions for analytical capacity, essential to the mission of creating conditions for development.

This approach has stimulated interesting links between disciplines, particularly when a thematic focus has been identified. In Bolivia, the focus on the Aymara region has resulted in the near completion of an Aymara dictionary, building on contributions from anthropology, history, archaeology and habitat studies, as well linguistics. Co-operation in biotechnology has identified patentable processes for dealing with heavy metal pollution in the same region. In Burkina Faso, the focus on dry ecosystems has led to findings of interest to the Sahelian region, and in Uganda the focus on the Lake Victoria region has facilitated multidisciplinary problem formulation and research efforts.

Locally defined research has natural links with society. Health surveillance sites in Vietnam and Ethiopia, health research in Nicaragua and social studies in Sri Lanka have monitored and assessed the impact of various poverty reduction strategies. Post conflict studies in Rwanda are also likely to have immediate use. Opportunities for innovations based on links between local research and



production are being explored in the new collaboration between engineering faculties in Mozambique, Tanzania and Uganda.

Many of the thematic research programmes link together researchers in regions or sub-regions in efforts of common concern, like the East African research on marine sciences, promoting appropriate coastal management, the African forestry research network, or the network forging policy makers together with natural scientists in energy policy studies. A series of Sida-funded Asian networks join researchers together in the fields of environment technology, energy scenarios and environmental economics.

In some cases, regional co-operation has been created to enhance research capacity, like Bio Earn, the biotechnology programme in Eastern Af-

rica, and Netropica, the programme for tropical disease research in Central America. Both initiatives have been very successful thanks to committed co-ordination in the region and by Swedish advisors. These programmes go through different phases of initial support for Master's level degrees, followed by PhD studies. The Netropica initiative has evolved into co-operation among the trained scientists, who now plan to organise their own research training programmes.

Social science, due to its controversial nature in times of oppression, reflects a long tradition of regional co-operation. Today social science networks provide a Southern perspective to development analysis. Sida looks into ways of strengthening a platform for such interaction, facilitating exchanges and comparative analyses between these networks.

Two exciting events during 2003 were the general assemblies of the Latin American research network CLACSO and the African network CODESRIA. On both occasions representatives from African, Asian and Latin American social science organisations engaged in lively debates based on their different perspectives vis-à-vis central development themes.

All major international research programmes are dependent on their links with scientists world-wide. However, interaction with poor countries suffers from a lack of capacity for research. The problem is not only that poor countries benefit less, but also that international research lacks the situated perspective from these countries. Therefore, special efforts are being made to enhance their participation in these programmes.



Sida-supported biomedical research for the prevention of HIV/AIDS stands out as particularly successful in this context, and findings from Tanzania have made significant contributions to understanding the pandemic. A series of international programmes supporting basic sciences in developing countries, e.g. the Third World Academy for Sciences, the International Sciences Programmes and the International Foundation for Sciences, have also decided to direct their efforts to enhancing research environments in the least developed countries.

Sida support for malaria research is an interesting example of the forging of links. In 2003, important steps were taken to co-ordinate the research on malaria. Swedish scientists were entrusted with the task of co-ordinating the Multilateral Initiative for Malaria. Continued support for

WHO/TDR focussed on malaria, and the network of demographic surveillance sites, INDEPTH, introduced a platform for malaria intervention studies. Support was also given to the European Malaria Vaccine Initiative for vaccine trials in Burkina Faso, and malaria research figured highly among the bilateral support applications. Thus, the whole chain of support levels interact to address the prevention and cure of this serious health threat.

Inequalities prevail in research co-operation, with the stronger partner often taking a leading role, but we see encouraging examples of change. Archaeology, for example, is an area where external views have dominated. Highly qualified African archaeologists, trained in a long-term regional support programme, have now created the African Association for Ar-

chaeological Research to co-ordinate research efforts. The successful conclusion of *Flora of Ethiopia and Eritrea*, presented at an international botany conference in Addis Ababa in 2003, is another example. This tremendous work, co-ordinated by qualified Ethiopian scientists who were initially trained in Swedish research co-operation, has engaged botanists from all over the world for some 20 years.

In conclusion strategic and long-term efforts in supporting capacity may contribute to change inequalities in research. Eventually, the forging of links continues in research co-operation of true mutual interest.

Stockholm, June 2004

*Berit Olsson*

Director, Department for Research Cooperation, SAREC

# Sida research co-operation

## Mandate

Research co-operation was introduced in 1975 as part of the general Swedish development co-operation. In 1995, the Swedish Agency for Research Co-operation with Developing Countries, SAREC, became a department within Sida. Its mandate is to:

- Support developing countries in their efforts to establish a research community, train researchers and develop methods for planning and indicating priorities for research, as well as allocating resources for such tasks.
- Contribute financial and scientific resources to support the production of new knowledge and utilisation of research findings of importance for development.
- Support scientific co-operation between researchers in Sweden and developing countries and encourage the participation of Swedish researchers in development-oriented research and research co-operation.

## Modalities

### Bilateral support

The main avenue for strengthening research capacity is under the umbrella of bilateral research co-operation with partner countries.

In countries with limited research, Sida normally focuses on support to research universities that have a central position in the national system for research and education. In countries with established research capabilities, Swedish support may be directed towards producing new knowledge in line with thematic research priorities and towards maintaining links with Swedish research.

### Thematic research programmes

Sida may also support *regional research networks* formed to enhance national capacity and/or address thematic research priorities. Sida contributes to the core funding of some well-established and recognised *regional organisations* and supports *international research programmes* that address issues of high relevance for poverty reduction and development. Activities in 2003, presented by sector, were:

- Natural resources and environmental sciences
- Natural sciences and technology
- Social sciences and humanities
- Health research

### Swedish development research

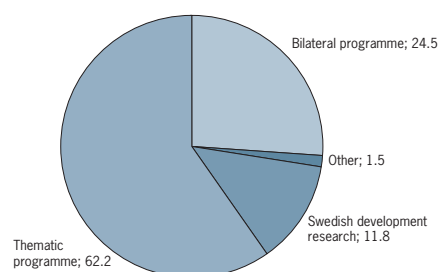
Around 10 percent of Sida research funds go directly to Swedish development research. Grants are allocated to project proposals which are sub-

mitted and subjected to peer review once a year. The primary objective of this support is to maintain a Swedish resource basis for development issues and to contribute to international understanding at Swedish universities.

## 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 visits and joint work. The main objective of this programme is to promote relations.

**Sida disbursements 2003 by programme**  
percentage of total SEK 743 million



# Promoting national research and research training

Alleviating poverty and furthering development are major challenges for the citizens and decision-makers of every nation, and locally generated knowledge is essential in addressing these issues. In this connection, Swedish development co-operation has identified the need to strengthen national universities, as they are the most important focal points for research training and for the production and dissemination of scientific knowledge.

However, low-income countries rarely can afford to prioritise scientific research. Sweden is one of few donor countries that supports the development of local research capacities, which comprise a range of activities, including training Ph.D. students in research projects, building laboratories and modern library facilities, setting up local research funds and mechanisms for allocating prior-

ity among research proposals and promoting dialogue on reform of universities and national research systems.

The aim of the support is to reach a situation where universities have achieved credibility for managing governmental funds for basic research facilities and are able to attract external funding from the private sector, foreign donors and foundations.

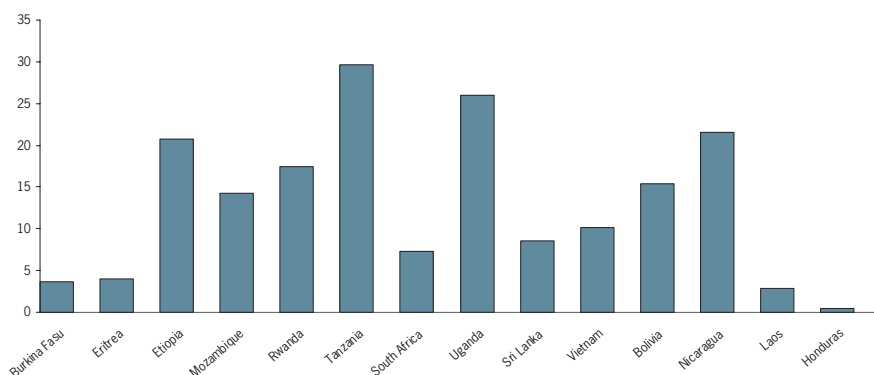
In 2003 Sida supported the building of research capacity in twelve countries. In most of these countries university reform was already underway. Experiences show that good governance is a concept that also applies when conducting research. The collaborating countries that have inaugurated a transparent and accountable management structure at their universities are also the ones that are most successful in research and research training. The ability to establish good governance

at the university level is very much dependent as a rule on the general situation for democracy in the country, but there are examples of universities that act as forerunners in the democratisation processes.

Another conclusion drawn in 2003 and which has been slowly emerging is that the financial aspects of research management have been severely underestimated by both the universities and the donors. The process of carrying out research management and the administration of funds in an effective and transparent manner is more complex than previously understood. Far too little resources have been set aside to deal with these matters. Lack of harmonisation between different funding agencies, their reporting requirements and the administrative systems at the universities create a workload that is counterproductive to research endeavours.

There have been examples where researchers, trained in collaboration with Sweden and with well-established research environments at their home universities, have been approached by major research funders for participation in international, high-prestige projects, only to be hampered by insufficient managerial capacity in the final stage. Donors and universities must work together to find remedies to such problems.

**Bilateral programme disbursements by country** Total bilateral disbursements SEK 182 million



# Burkina Faso

Multi-ethnic Burkina Faso is a land-locked country primarily dependent on self-subsistence agriculture. Owing to a very dry climate, the country faces great challenges in terms of food security, land degradation and natural resource management.

In September 2001, Sida launched a bilateral co-operation programme with the overall aim of alleviating

poverty by strengthening the research capacity of the country's institutes of higher education. Issues that the Burkinian and Swedish researchers agreed to focus on were the relationship between land degradation and poverty; the environmental problems of dry areas, the continuous degradation of the Sahelian ecosystems; unsustainable management practices and their effects on food security; animal husbandry; migratory movements; and the environment.

So far, research on these topical issues has unravelled different management aspects of soil fertility, forest regeneration and production and the potential for commercial development of forest products. Hopefully, the findings will lead to improvements in the situation for rural communities and to better





management of the remaining natural resources in the country, through recommendations to users regarding better conservation and restoration techniques.

In the field of animal husbandry, which involves fod-

der resources, poultry farming and dairy production, the goal is to improve production so as to strengthen the economic situation of rural households but also to attain self-sufficiency for the country, especially in dairy products. This research also seeks to un-

derstand the nutritive value of available natural resources for the feeding of milkers. The establishment of a cartography of the composition of pastures and their mineral and trace elements is desirable, as well as the identification of the responsible agents and epidemiology of the diseases that strike milkers.

Sida commitment for current agreement period 2001–2003: SEK 24.5 million

**Disbursed 2003: SEK 3.7 million**

*Burkinabée 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

UMU – Umeå University, Umeå

UU – Uppsala University, Uppsala

# Ethiopia

Over the past several years, Sida has supported research in Ethiopia in the fields of biology, medicine and technology. Recently other areas have also been included, such as social science and environmental economy. Most of the research programmes are conducted in co-operation with Swedish universities and researchers.

The key objectives of the Sida-supported research are to build up a national capacity to generate and apply appropriate technologies for the realisation of Ethiopia's socio-economic objectives and to rationally

conserve and utilise its natural resources and human capital.

An important long-term project is the Butajira Rural Health Programme (BRHP), for which a registry of data concerning the births, deaths, marriage and migration of over 100,000 people has been compiled since early 1987. The purpose of the registry is to obtain a picture of the health situation in the region over a longer period of time.

Data from the project and evaluative information on mortality in Butajira show that the situation has

improved since the mid-80s. But the results also show a number of setbacks due to drought and epidemics. The picture could change due to the HIV epidemic, which reached Ethiopia later than the surrounding East African countries. Such long-term changes can only be seen in long-term surveys.

The work has thus far resulted in six PhD theses. The theses have improved the knowledge within such areas as women's and children's health, air pollution from open fires, violence against women and mental disorders.

Sida commitment for current agreement period 2002–2004: SEK 103 million

**Disbursed 2003: SEK 20.7 million**

*Supported areas:*

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

*Ethiopian institutions*

AAU – Addis Ababa University, Addis Ababa

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 Programs, 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



*Flora of Ethiopia and Eritrea* is the result of an international joint project led by Ethiopians. The project was made possible through Swedish financing and the successful co-operation between Ethiopia and Sweden, in which Uppsala University has played a key role. The project was started 23 years ago and has resulted, in addition to the flora, in new and advanced local knowledge and an institution of systematic botany in Addis Ababa. In the future, this knowledge could be used in ecological studies and biotechnological applications.

# Mozambique

When Sida began its support to the Eduardo Mondlane University, UEM, in Maputo in 1978 there was hardly any indigenous research capacity at the university. Of about 80 teaching staff at the time, 75 were expatriate and 5 were Mozambican; none of the latter had a research degree. Today UEM has an academic staff of 604 full-time employees, of which 547 are Mozambicans.

Sida's long-term support has helped build up a considerable research capacity at UEM, with about 55 Mozambicans now working to acquire their doctorate degrees. Sida has helped equip the university's research laboratories and libraries. A number of external evaluations have confirmed that Sida's support to UEM is a crucial factor in the crea-

tion of an emerging research university and the development of a national research capacity.

At present Sida grants support to nine faculties, mainly concentrated to the faculties of science, engineering, the arts and veterinary sciences, but also to the Informatics Centre and the Historical Archive.

The most successful support goes to the Department of Biology at UEM, initiated in 1984 upon a request from the Mozambican government. These were hard times in Mozambique, with the raging of a civil war and refugees accumulating along the coast. Few Mozambicans were trained to manage the increased pressure on the resources of the sea and the Government was acutely aware of the urgent need of a national re-

search capacity to obtain the necessary knowledge for dealing with the situation. Swedish support was used to build up the infrastructure at the marine biological station on the island of Inhaca, 30 km offshore from Maputo. The station is to date the only field station available to the university. Today the station is run by competent Mozambican staff, and at the Department of Biology there is a small but well educated "critical mass" of Mozambican researchers and teachers. Sida's new role is mainly to promote the marine programme in its efforts to develop and establish the first Mozambican Master of Science curriculum in Aquatic Biology and Coastal Ecosystems, which is planned to start in 2005.

Sida commitment for current agreement period 2001–2003: SEK 79.1 million

## **Disbursed 2003: SEK 14.2 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, Göteborg

KI – Karolinska Institutet, Stockholm

Kristineberg Marine Biological Station, Fiskebäckskil

KTH – Royal Institute of Technology, Stockholm

LTH – Lund University of Technology, Lund

LU – Lund University, Lund

SLU – Swedish University of Agricultural Sciences, Uppsala

UU – Uppsala University, Uppsala

University of Northumbria, Newcastle upon Tyne

University of Natal, Durban

University of Pretoria

Witwatersrand University, Witwatersrand



The Mozambican coastline is almost 3,000 km long and the fundamental role of its marine resources as a source of protein for the population, as well as their importance to the national economy through exports, has made it easy to attract students to the subject of marine biology.

The station is to date the only field station available to the university and it is extremely satisfying to find that more than 100 undergraduate degrees, 10 international MSc and 5 PhD degrees have been obtained by Mozambicans based on their research at the station.

# Rwanda

Against the background of Rwandan history, the reconciliation process and the end of the transition period in 2004, peace and conflict research was given top priority by the National University of Rwanda (NUR) in discussions with Sida. Research themes discussed in the PhD proposals included root causes of conflicts, justice, good governance and democratisation.

A major issue for NUR is the educational situation at the university. A good deal of the curriculum, the teaching and learning methods and the examination and assessment systems are outdated and expensive. Sida believes that research in training methods, ICT teaching, curriculum development and distant education is

necessary. There is also a great need to equip NUR teachers with modern, relevant and effective pedagogical methods.

The Sida allocation will be used for research training within the areas of peace and conflict and democratisation.

Three PhD programmes concerning the educational situation were started in 2003 and joint research collaboration with Linköping University is scheduled to begin in 2004.

In the context of severe environmental threats to the natural resources of Rwanda, six PhD programmes have been proposed. These programmes concern environmental scarcity in Rwanda, the impact of human activities on the Nyungwe

Forest Reserve, rural settlement planning in Rwanda and wetland management within the context of ecological agriculture.

A basic need in research is a functional library. The NUR library consists of one main library and nine faculty libraries, all facing many problems: outdated books and a lack of funds to subscribe to journals, only four trained librarians and users of the library without experience of how to use search tools and online resources. To handle these problems Sida is supporting a co-operative project between NUR and Makerere University in Uganda, where the appropriate training can be offered.

Sida commitment for current agreement period 2003–2005: SEK 78 million

**Disbursed 2003: SEK 17.4 million**

*Supported areas:*

Democracy and Human Rights, Human Resource Development and Economic Reforms

*Rwandan institutions:*

NUR – National University of Rwanda

*Collaborating partners:*

Linköping university, Linköping, Sweden

Blekinge Institute of Technology, Blekinge, Sweden





At the Faculty of Commerce and Management at UDSM, a research programme is investigating how business networks can influence small and medium enterprise (SME) performance in Tanzania. During 2003 two licentiate degrees were successfully defended within the programme. In addition, one of the programme's studies, on the role of networks in the internationalisation of small handicraft businesses, won the best paper award at the 4th International Conference of the Academy of African Business and Development. Within the collaboration a "supervisors' course" has been given, with much success. During the coming agreement period this course will be expanded and adapted for incorporation into the core course curriculum of the university.

# Tanzania

Research co-operation between Sweden and Tanzania began in 1976. It currently comprises 21 programmes at the University of Dar es Salaam (UDSM) and the Muhimbili College of Health Sciences (MUCHS). The support is directed towards three main areas: reform and management, research capacity strengthening, and research collaboration, the latter involving Swedish universities. The major part of the support goes to research collaboration and research training activities.

At the University College of Lands and Architectural Studies four PhD theses during the year addressed the field of urbanisation, with the following topics: "Compulsory acquisition of land for urban development", "Water and sanitation systems", "Informal settlements in Dar es

Salaam" and "Urban food markets".

From the Institute of Resource Assessment, a PhD thesis examining "Food insecurity and coping strategies in semiarid areas" was presented within the Man-Land Interrelations in Semiarid Tanzania programme. In addition, the programme is finalising a monograph that is a synthesis of research findings gathered over the programme's 16 years.

From MUCHS, a PhD thesis from the "Malaria" programme, entitled "Exploring malaria case management of under-five children in households and public primary health care facilities in Kibaha district, Tanzania", was presented. The study compared different aspects of malaria case management before and after a policy change in Tanzania. During

the study's conduct of household surveys it was observed that major changes in drug stocking, self-treatment and care seeking had taken place. It was thus concluded that both households and primary health care facilities need to be included in multi-faceted interventions for improved malaria care. A second PhD thesis, coming from within the "HIV/AIDS" programme and entitled "HIV-1 infection in Tanzania: HIV antibody testing strategies and lymphocyte subset determinations", was also defended during the year.

Preparations for a new agreement period, due to start on 1 July 2004 and run for four years, have been initiated. Within the new agreement a new programme in the area of statistics will be incorporated.

Sida commitment for current agreement period 2001–2003: SEK 116 million.

## **Disbursed 2003: SEK 27,8 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, Göteborg  
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, Stockholm  
UmU – Umeå University, Umeå  
UU – Uppsala University, Uppsala



In 2003 the Faculty of Medicine at Makerere University and Karolinska Institutet signed a historic agreement to award joint PhD degrees. The negotiations behind this, which required intensive dialogue between the two parties, resulted in satisfaction all round. The precedent is being closely studied by a number of other universities.

The picture shows the signing of the agreement by the Vice Chancellor of Makerere University, Prof. Ssebawufu and The President of Karolinska Institutet, Hans Wigzell.

# Uganda

To strengthen and develop the country's capacity for research and research training, Sida supports the "Lake Victoria and other water sources" programme in Uganda. Directed by Makerere University, the programme involves four faculties and the co-ordinating office of the School of Postgraduate Studies.

The specific research at each faculty focuses on issues of great pertinence to Uganda's Poverty Eradication Action Plan (PEAP). The Faculty of Agriculture research is studying a growing urban problem, "Utilisation of Urban Market Crop Waste in Crop/Livestock Production Systems in the Lake Victoria Crescent Region". The Faculty of Medicine programme "Uganda's health related to Lake Victoria and other water resources" concentrates on malaria, reproductive health and HIV/AIDS as well as non-communicable diseases. The Faculty of Social Science is devoting its efforts to "Consolidating

peace and development in the Lake Victoria Region and its environs: The national and local responses to transformation from turmoil to a more sustained development process", while the Faculty of Technology programme is about "Sustainable technological development in the Lake Victoria Region (Uganda)". Sida also supports a programme aimed at substantially strengthening local and regional collaborative research activities at the Faculties of Engineering in eastern Africa (Uganda, Tanzania and Mozambique).

A demographic surveillance site, which will be a centre for many kinds of research, is also under development in the district of Iganga/Mayuge.

There is also an aim to establish research co-operation between senior research scientists at Makerere University and Swedish universities. Institutional development is focused on enhancing the Makerere research environment, for which funds are being

provided for interdisciplinary courses for PhD students, the establishment of functioning laboratory structures for the biomedical sciences and Geographic Information Systems (GIS). In addition research administration, information communication and technology (ICT) and bibliographic support are being provided.

In 2003 the numbers of PhD students enrolled in the programme were four in agriculture, 21 in medicine, three in the social sciences and eight in technology. The programme also provides research funds for an additional 18 PhD students through the School of Postgraduate Studies' competitive university funds.

Four interdisciplinary research courses were planned and implemented this year in collaboration with Swedish scientists: Statistics and Computer Application in Research, Advanced Research Methods, Philosophy of Methods and Advanced Gender Research Methodology.

Sida Commitment for current agreement period 2002–2004: SEK 104 million

## **Disbursed 2003: SEK 26.0 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, Göteborg

KI – Karolinska Institutet, Stockholm

KTH – Royal Institute of Technology, Stockholm

Luth – Luleå University, Luleå

SLU – Swedish University of Agricultural Sciences, Uppsala

UU – Uppsala University

BU – Borås University



Bolivian researchers studying heavy metal pollution originating from the mining industry in the basin of Lake Poopó have found that micro-organisms isolated from the salt lakes of the Andean High Plateau reduce sulphate to sulphide. That can be used to prevent the leaching of heavy metals into the environment. The researchers have also found interesting results from compounds extracted from plants, some of which are new structures with good antioxidising capacity.

The greenish body of water to the south-east is Lake Poopó.  
Lake Poopó is a salt water lake, with no outlet to the sea.

Picture by NASA

# Bolivia

Bolivia has a long academic tradition dating back to universities founded some two to three centuries ago. A large number of public and private universities offer undergraduate education. During the last few years, some Masters courses have been set up, but, with a few exceptions, the capacity and skills for doctoral training is still lacking. At the universities, research environments are weak and the educational policies do not sufficiently encourage lecturers and students to embark on research.

The Sida-supported research programme aims at contributing to a change in this situation, successively leading to a strengthening of the indigenous capacity and competence for research and local research training. During the last few years, there has been a growing public debate in Bolivia on the need to modernise the higher education system. The autonomous public universities are making efforts to implement research and research-promoting policies and to establish functional research manage-

ment systems. Sida's co-operation with Bolivia focuses on support for these policy efforts and the strengthening the research capacity at the country's two largest public universities, Universidad Mayor de San Andrés (UMSA) in La Paz and Universidad Mayor de San Simón (UMSS) in Cochabamba. The staff development programme, which started in September 2000 in collaboration with two Swedish and several Latin American universities, has successively enrolled a total of 43 university lecturers in PhD training. Most of them are expected to defend their theses in 2005–2007. Modern research facilities are being installed at their departments, and active research teams have been formed by lecturers and students.

In the area of social science and the humanities, several papers have been published on the history and archaeology of the Bolivian High Plateau and the tropical Chapare. Knowledge in the Aymara region has been enhanced substantially. In addi-

tion to studies on environmental degradation and mitigation, research on housing, language and history has been undertaken, and a large quantity of interview records, video tapes and photos has been collected. One major achievement is the advances towards a comprehensive encyclopaedia of the Aymara language.

In the meantime, chemists are studying indigenous plants in the country, following availability criteria and ancestral information. A large number of species has been selected for comprehensive chemical analyses and studies of photoprotection mechanisms and antioxidising capacity.

Still another project aims to produce biogas from local raw materials, including llama dung. A viable method could provide inexpensive energy for a population now lacking electricity and wood fuel. A project in chemical engineering is working to develop processes for the bioconversion of lignocellulosic resources on the Altiplano for industrial production of value-added goods.

Sida commitment for current agreement period 2000–2003: SEK 57 million

## Disbursed 2003: SEK 16 million

### Supported areas:

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

### Collaborating Institutions

LU – Lund University, Lund

UU – Uppsala University, Uppsala

FLACSO – Latin American Faculty of Social Sciences (network), Peru

### Bolivian Institutions

UMSA – San Andrés University, La Paz

UMSS – San Simón University, Cochabamba

Vice Ministry for Higher Education, Science and Technology, La Paz

CEBEM – Bolivian Center of Multidisciplinary Studies, La Paz

CERES – Center of Studies of Economic and Social Reality, Cochabamba

# Honduras

Systems of higher education and research in Honduras need strengthening and modernisation. This was the conclusion of a Sida-commissioned study, called “Higher Education and Research in Honduras”, which served as the basis for an in-depth preparation for research co-operation between Honduras and Sweden, initiated in 2002.

The national university in Honduras, UNAH, is primarily responsible for the management and co-ordination of higher education. UNAH

has recently initiated a reform process requiring support and a legal framework approved by the country’s congress. Sida’s strategy views the university reform as essential to its support and contribution to the implementation of research co-operation.

During 2003 Sida engaged in various activities to support the reform process and raise the issue to the national and international levels. To this end, Sida contributed to activities aimed at increasing awareness of the reform and to establishing

links between UNAH and the International Association of Universities (IAU).

UNAH submitted research projects in the areas of health, social sciences and natural sciences/technology, covering subjects that are in line with the national priorities. These projects were evaluated by Sida, and the principal heads of the selected projects established preliminary contact with Swedish universities.



# Nicaragua

When Swedish research co-operation with Nicaragua was first established in the early eighties the aim was to create research capacity in the areas defined as high priority by the Nicaraguan government. Today there are small, well-established research groups at the public universities. The generation of upgraded academics capable of lecturing at different levels has had a positive effect on the quality of the courses in various professional disciplines and in the creation of graduate programmes. This has generated groups of highly motivated researchers and trained technicians. Most of the groups maintain links with Swedish researchers and an in-

creasing number are becoming involved in regional projects. A number of students are expected to complete their PhD theses in the near future.

By identifying common needs among the universities in Nicaragua it has been possible to solve problems. Individual themes for research are highly relevant, with strong links to society. The universities are continuously improving their routines for the management of external funds and for the administrative development necessary for supporting research activities. The modernisation of laboratories, libraries, communications and institutional facilities for supporting scientific activities is another positive

outcome of the co-operation.

These achievements at the public universities must be seen in the context of Nicaraguan universities continuously struggling with poor or non-existing national budgets for research, limited laboratory facilities and a small number of relatively isolated research groups. It is within this context that the National Council of Universities (CNU) plays a crucial role in drawing up a national policy for higher education and research in Nicaragua. A necessary condition for the successful and sustainable development of higher education in Nicaragua is that this process is strongly supported by the government.

Sida commitment for current agreement period 2001–2003: SEK 70 million

## **Disbursed 2003: SEK 21.3 million**

### *Supported areas:*

Agriculture, Health, Engineering and Environmental Sciences

### *Nicaraguan Institutions*

UNA – National University of Agriculture, Managua

UNAN-Léon – National Autonomous University of Nicaragua, Léon

UNAN-Managua – National Autonomous University of Nicaragua, Managua

UNI – National University of Engineering, Managua

### *Collaborating Institutions*

HS – Huddinge University Hospital, Huddinge

KI – Karolinska Institutet, Stockholm

KTH – Royal Institute of Technology, Stockholm

LU – Lund University, Lund

SLU – Swedish University of Agricultural Sciences, Uppsala

SMI – Swedish Institute for Infectious Disease Control, Stockholm

UmU – Umeå University, Umeå



The impact of some projects is clearly reflected in the importance given to them by the ministries. One example is the Ministry of Health and the epidemiological data generated by UNAN-Léon investigations. Many of the diagnoses of infectious diseases in Nicaragua, along with the detection of pesticide skin contamination and upgraded laboratory and epidemiological techniques carried out at UNAN-Léon, are unique and therefore constitute a very valuable asset to the country as a whole.

# Laos

Research co-operation between Laos and Sweden started in 2003. Five of the ten faculties at the National University of Laos (NUOL) were included in the initial co-operation phase: forestry, science, social science, education and agriculture. The main objective of the research co-operation is to build the research capacity at NUOL. At present the educational level is comparatively low. Among the NUOL teaching staff of 920 people, there are currently 4% with a PhD degree and 17% with a Master's. This percentage is expected to rise soon, as many teachers are currently involved in training programmes. Ten staff members are expected to

start their PhD training in 2004, in co-operation with either the Swedish University for Agricultural Sciences or the University of Umeå. Curriculum development and regional MSc training are also important parts of the co-operative plan. Parallel to the research and training, support is also being directed at strengthening the financial management capacity at NUOL and information and communication technology (ICT) infrastructure and management.

NUOL is a fairly young university. It was established in 1995 through a merger of several colleges and institutes. NUOL now has 22,000 students, which is a dramatic increase

since the start. Two new branches were established in 2003: one in Champassak in the south and one in Luang Prabang in the north. NUOL can presently offer two kinds of degrees: Higher Diploma and Bachelor's degree, but there are advanced plans for offering a Master's degree within the near future. This rather quick development at NUOL has put a lot of pressure and demands on its human resources.

The initial phase was limited to two years to allow for preparations for training (e.g. improving English proficiency) and for further planning of activities.

Sida commitment for current agreement period: 2003–2004: SEK 16.0 million, ICT support 9.5 million

## **Disbursed 2003: SEK 2.9 million**

### *Supported areas:*

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

### *Lao institutions at the NUOL – the National University of Laos:*

FOSS – Faculty of Social Sciences

FOE – Faculty of Education

FOS – Faculty of Science

FOF – Faculty of Forestry

FOA – Faculty of Agriculture

### *Collaborating Institutions:*

SLU – Swedish University of Agricultural Sciences, Uppsala and Umeå

UMU – Umeå University

KTH – Royal Institute of Technology



Increasing the research capacity in Laos is important for finding ways and means to combat poverty. Raising human capacity and generating knowledge relevant to local conditions is one means of stimulating local enterprise initiatives.



# Sri Lanka

Research co-operation with Sri Lanka began in 1976. The greater part of this co-operation has been research training and research projects, supplemented with support to research funds, access to scientific information, and infrastructures for ICT at and among universities. Since 1997 previous concentration on science and technology has been successfully concluded and the co-operation has gradually shifted to the social sciences, with regional development and the social reconstruction of a war-torn society as focus areas.

Sida's research committee decided on continued support in January 2003. Signing of the agreement however was delayed, so the actual period will be from October 2003–September 2007. The main objectives are to conclude ongoing PhD training and extend ICT investments to Jaffna University.

In recent years, Sri Lanka has had no clear direction in terms of research policy and funding. Rather, a dismantling of existing structures and a downgrading of universities has become apparent. Apart from a lack of university reform, a major drawback has been weak research management at the universities. Higher education lacks relevance to growing industries, and unemployment among the academically educated is high. If no signs are seen in the political will to change this situation, Sweden will finalise its research co-operation during the coming agreement period.

The results of research training and research projects have on the whole been good and have raised Sri Lanka's capacity to conduct research on an international level. In the field of social science research, policies of poverty alleviation and regional development have been evaluated and

three books on the topic have been published. The latest publication covers rural-urban interface in Sri Lanka, including the role of rural periodic markets. It was found that the location of such market places and the means of transportation to them were inadequate for meeting the needs of both urban consumers and rural producers. However, the current mode of operation is more beneficial to the urban consumer, while the cost of marketing is carried by the rural producer. Regional planners need to restructure the system to better serve the needs of the rural population. This is related to the need to integrate small town development policies and strategies for urbanisation with a broader conceptualisation of rural development and poverty alleviation.

Sida commitment for current agreement period 2000–2002: SEK 63 million

## Disbursed 2003: SEK 8.6 million

### Supported areas:

Archeology, Biotechnology (Medicine, Chemistry), Biochemical Pest Control, Electrical Engineering, Library, Marine Biology, Regional Development/Poverty Alleviation, University Staff Development, ICT & Post-graduate Studies in ICT

### Sri Lankan Institutions

NARA – National Aquatic Resources Agency, Colombo  
NSF – National Science Foundation, Colombo

UGC – University Grants Commission, Colombo  
UoC – University of Colombo, Colombo  
UoJ – University of Jaffna, Jaffna  
UoK – University of Kelaniya, Kelaniya  
UoP – University of Peradeniya, Peradeniya  
UoR – University of Ruhuna, Matara  
UoSJ – University of Sri Jayawardenepura, Sri Jayawardenepura

### Collaborating Institutions

CTH – Chalmers University of Technology, Göteborg

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



A demographic surveillance site, FilaBavi, collects data and baseline information about 11,000 households-comprising some 55,000 inhabitants in the Bavi district of Vietnam. The field laboratory has been supported by Sida/SAREC since 1997. The data are used as the basis for broader tropical studies, and many studies covering a large span of research areas have been carried out to date, some of which have already resulted in PhD theses. Research on gender and tuberculosis has even affected national policy. During 2003 the focus was on health care utilisation, health effects of migration, mental health, mortality patterns, domestic violence against women and non-communicable diseases. Findings from these studies have been presented to community representatives and the Health Policy Unit of the Ministry of Health.

# Vietnam

Over the last decade Vietnam has made considerable progress in moving from a planned to a market economy. This has led to increased foreign investment, rapid economic growth and one of the best records of any low-income country in reducing poverty. The overall goals of Vietnam's "Ten Year Socio-Economic Strategy 2001–2010" are to lay the foundations for a modern-oriented industrialised country by 2020. The strategy's emphasis is on poverty reduction, and the Comprehensive Poverty Reduction and Growth Strategy (CPRGS) has strong backing and reflects the country's determination to tailor such strategies to its specific needs, approaches and priorities.

The Sida-supported research programme up to now has been planned in three-year agreement periods between Sida and the Ministry of

Science and Technology (MOST). The funds have been used for research collaboration in the health, natural sciences, agricultural/forestry and social science sectors. Support has also been given to infrastructure (laboratories, libraries and information technology).

Examples of research and activities carried out in 2003 include studies of national innovation systems, which led to recommendations to the "Vietnam Science and Technology Strategy up to the Year 2010", adopted by the Prime Minister in December, 2003. MOST has also been in contact with several Swedish research councils to learn how to set up better research management systems. In addition, marine scientists used GIS methodology to map environmental risks and sensitive zones along the Vietnamese coastline. The re-

searchers organised training courses and seminars for the provincial authorities and developed plans and strategies for integrated coastal management, based on the maps and related studies.

Sida support to research collaboration in Vietnam has been going on for 25 years. The main aim has been to strengthen research capacity by helping to create conducive research environments, providing research education and assisting with methods for planning, setting priorities and allocating funds for research. Eventually there will be a number of dynamic research groups and viable research environments capable of conducting research and training PhD students without Swedish bilateral support.

Sida commitment for current agreement period: 2000–2003: SEK 54.3 million, ICT Support SEK 20 million

## **Disbursed 2003: SEK 10.2 million**

### *Supported areas:*

Agriculture, Health, Biotechnology, Oceanography, Social Sciences, Technology and ICT (Information & Communication Technology)

### *Collaborating Institutions*

ISP – International Science Programs, 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, Stockholm

SU – Stockholm University, Stockholm

UmU – Umeå University, Umeå

UU – Uppsala University, Uppsala

CMC – Coastal Management Centre, Manila

### *Vietnamese Institutions*

CLST – Central Library for Science and Technology, Hanoi

CTU – Can Tho University, Can Tho

Huế University, Huế

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, Hanoi

Agricultural Genetics Institute, Hanoi

The need for critical research was underlined at the CLACSO general assembly, Havana 2003.



# Thematic Research

International research findings and knowledge development belong to global public goods, in theory accessible to all. In practice however there are serious constraints, preventing poor countries from benefiting from the flow of information. Earlier sections of this report have described efforts to strengthen local research capacity, a necessary condition for linking up with international knowledge. A further problem is the orientation of international research, most of which is conducted and governed by interests in the North. It has been estimated that a maximum of 10% of global research efforts are directed to problems primarily affecting poor regions, where in fact 80% of the population lives.

During the year 2003, around 60% of Sida funds for research were allocated to research programmes

committed to fill this gap. Major international research programmes linked to the World Health Organisation (WHO) and the Consultative Group of International Agricultural Research (CGIAR) are primarily concerned with knowledge of central importance to poor people and their development efforts. They work to keep abreast with existing knowledge, identify urgent gaps and promote research in these fields. A growing concern is the decreasing level of core contributions that allow such organisations to implement an agreed research agenda. Many sponsors choose to reserve their fund for special tasks, which contributes to a fragmentation of research efforts.

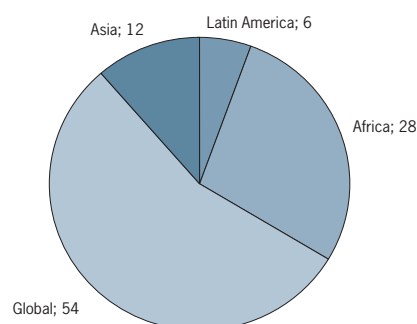
The funding situation may be even more precarious for regional research networks, where there are other problems contributing to fragmentation. A few well established networks, like the African Economic Research Consortium (AERC) and the Council for the Development of Social Science Research in Africa (CODESRIA) can count on a range of sponsors. Many others however suffer from a lack of broad-based financial support. Sida supports several regional research networks created by committed people who are forging regional co-operation and

addressing urgent problems, like the consequences of HIV/AIDS, the management of coastal zones and policies for energy provision in Africa. In Asia, networks have been created for conflict studies, alternate energy scenarios and farming systems research, while in Central America, regional co-operation has been set up to strengthen research in social science, tropical diseases and disaster management. All of these initiatives build on local contributions and have produced thought-provoking comparative analyses, which are shared within the region. Most of them shoulder the double ambition of contributing to strengthening collaborating national institutions while also filling the void of research councils that allocate funds to defined research topics.

Sida will look into the feasibility of consolidating some of these efforts into regular regional research councils, capable of allocating grants based on qualified peer review. Ideally, such bodies could receive funding from several sources.

However, care must be taken not to destroy the fragile research communities and networks that manage to formulate and implement research priorities thanks to protected funding.

**Thematic programmes disbursements by continent**  
percentage of disbursements SEK 464 million





# Natural Sciences & Technology

As the scientific and technological gap between the industrialised and low-income countries is widening, capacity building is the focus for Sida's support in the area of natural sciences and technology.

Support for basic sciences, i.e. mathematics, physics, chemistry and biology strengthens the essential basis for research in agricultural, engineering and health sciences and is a necessary condition for innovation.

## Basic sciences

For many years Sida has supported the development of basic sciences in bilateral research co-operation programmes. Faculty staff has been involved in a "sandwich" mode of research training towards a PhD, which means that they are active at both their home university and a university in Sweden. In this way, they never lose their close relation with the home institution but continue working there during and after graduation. In several low-income countries, support has made it possible for universities to establish their own MSc courses and PhD training, and the fact that the PhD candidates work in their home countries increases the likelihood of locally defined research. The training carried out in Swedish and other counterpart institutions creates long-term linkages between researchers and institutions, for the benefit of all countries involved.

In addition to bilateral co-operation, Sida supports international programmes offering grants and research co-operation to researchers active at their home institutions in developing countries. Organisations like ISP, ICTP, TWAS and TWOWS provide links to high-level international networks of scientists. The combined impact of these efforts has helped a number of PhDs and MScs

from low-income countries to graduate each year. While many mid-income countries, with researchers that have participated in these programmes, have been able to establish their own research structures for conducting and financing research, scientists from low-income countries have become less able to compete for grants. In the new agreements, signed in 2003, Sida support to these programmes is earmarked for the training of candidates from the poorest countries.

## Engineering sciences

In the area of engineering sciences, many low-income countries have difficulties providing university level education, let alone research.

In 2003, Sida earmarked funds for regional co-operation as part of the bilateral support for engineering in Mozambique, Tanzania and Uganda. The funds are expected to stimulate co-operation in training and research and the capacity to identify innovation. The model for supporting regional interaction forges links between researchers and colleagues in the region and "forces" the institutions to be active partners. In the long run it may also lead to a division of labour and investments in experimental facilities between the institutions, which in turn may facilitate the

creation of centres of excellence in low-income countries.

## Biotechnology capacity building

A large part of the national economies of countries like Ethiopia, Kenya, Tanzania and Uganda is based on the export of raw materials, especially the export of unprocessed genetic resources. Over the last decade, integration of biotechnology into research and development programmes has been initiated, especially in the field of agricultural research. Enhanced knowledge and skills will increase the possibility of changing the prevailing export situation and creating new job opportunities and better living standards.

An example of efforts to spark off such a development was the establishment of the East African Regional Programme and Research Network for Biotechnology (BioEARN) in 1999. The network, co-ordinated by the Stockholm Environment Institute (SEI) and a regional co-ordinator, is engaged in scientific and policy aspects of biotechnology. Through MSc and PhD programmes, infrastructure support and networking, the programme is strengthening the biotechnological capacity and competence of eleven East African R&D institutions. Twenty PhD candidates are expected to defend their doctoral theses

within the next two years. This expertise will increase the involved East African institutions' ability to use science-based, agricultural, industrial and environmental biotechnology, including recombinant DNA techniques. Research activities within the network address various subjects, among them the cloning of starch-branching enzymes in cassava that will make it possible for future production of the plant to have an altered starch composition; the characterisation of grey leaf fungus disease in maize, facilitating diagnostics and the future breeding of disease-resistant maize; micro-organisms from hot springs around Lake Bogoria in Kenya with potential value in industrial processes; and biological treatment of selected waste water types, facilitating improved treatment of industrial and municipal waste water. Internationally recognised and interesting findings have been produced. In conjunction with these research projects, BioEARN has arranged several workshops on the national and regional levels, to build up capacity and create awareness in the fields of biosafety, intellectual property rights and biotechnology policy.

### **Asian environment research**

The Asian Regional Research Programme on Environmental Technology (ARRPET) supports Asian institutions in strengthening their capacities to solve regional and local environmental problems. Twenty national research institutions in eight countries participate in this network, co-ordinated by the Asian Institute of Technology (AIT) in Bangkok. The research programmes comprise four target areas, one of which is waste water treatment and management. Studies of shrimp farming showed that the nutrient-rich effluent

could be used in cultivating fish, aquatic plants and weeds. Other research conducted in 2003 addressed solid waste disposal practices and landfill technology for efficient and effective solid waste management in Asia and the improvement of air quality at various urban sites in Asian countries during both wet and dry season.

The Asian Regional Research Programme in Energy, Environment and Climate (ARRPEEC) is another Sida-supported regional network conducting environmental research in Asia. Twenty-two national research institutes, co-ordinated by the Asian Institute of Technology, are involved. Four research projects in progress in 2003 dealt with biomass, small and medium scale industries, the power sector and the transport sector. Also in 2003, participating national institutes carried out detailed characterisation of the most important biomass energy technologies in their own countries, ranking the obstacles to implementation of such technologies and measures to overcome them. Studies on technology transfer were initiated. Workshops on bioenergy technologies were arranged in several countries to strengthen the knowledge of renewable energy technologies and the awareness of environmental protection. An impact on national policy was achieved in some countries, e.g. in the Philippines, where the government is now studying the ability of renewable energy to contribute to the country's energy supply. A 30 MW co-generation plant using bagasse as a fuel is currently under planning.

Awareness of greenhouse gas emission and its mitigation in small- and medium-size industry is on the rise. Emission estimations have been made and obstacles that inhibit the

promotion of energy-efficient and environmentally sound technologies in industry have been studied in China, India, Philippines, Sri Lanka and Vietnam. The project network operating in the five countries disseminates research findings to government agencies, industry associations, research institutes, universities and NGOs.

Studies of the implementation of clean production mechanisms in the power industry and the subsequent dissemination of findings have led to interesting changes in China, India and Sri Lanka, including the adoption of clean coal technologies, fuel switching and the use of renewable sources of energy. In Sri Lanka, ARRPEEC researchers were included on the national level in decision-making on energy and environmental issues.

The use of certain cleaner and more energy-efficient fuels in urban transport and their impact on air quality was studied in Beijing, Jakarta, Delhi and several other large cities in Asia. Findings were disseminated in workshops and via publications and contacts with various stakeholders related to the transport sector.

### **Energy supply in sub-Saharan Africa**

Energy supply is a key factor in economic and social development, but too little attention is given to the needs of rural households, farmers and small businesses. Rural households in sub-Saharan Africa still derive most of their energy from biomass sources. Lack of modern energy supplies in rural areas constrains efforts to alleviate poverty and improve living standards. In a new book, *Renewables and Energy for Rural Development in Sub-Saharan Africa*, pub-

lished by the African Energy Policy Research Network (AFREPREN), this situation is addressed. For the five countries discussed – Botswana,

Eritrea, Ethiopia, Zambia and Zimbabwe – the volume presents a set of policy options that, if implemented, would result in increased dissemina-

tion and use of renewables and improved energy services in rural sub-Saharan Africa.

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### **Collaborating Institutions**

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#### *Basic Sciences:*

International Science Programs, ISP, Uppsala, Sweden

Third World Academy of Sciences, TWAS, Trieste, Italy

International Centre for Theoretical Physics, ICTP, Trieste, Italy

Third World Organisation for Women in Science, TWOWS, Trieste, Italy

#### *Biotechnology, Biosafety and Biopolicy in East Africa (BIOEARN):*

Ugandan National Council for Science and Technology, UNCST, Kampala, Uganda

Stockholm Environment Institute, SEI, Stockholm, Sweden

#### *Energy, Climate and Environment:*

African Energy Policy Research Network, AFREPREN, Nairobi, Kenya


Food Woodstove Dissemination, FWD, Kilimani, Kenya

Asian Institute of Technology, AIT, Klongluang Pathumthani, Thailand

Asian Regional Research Programme in Energy, Environment and Climate (ARRPEEC), administered by AIT

Renewable Energy Technologies in Asia (RETS in Asia), administered by AIT

Asian Regional Research Programme on Environmental Technology (ARRPET), administered by AIT



In 2003 the United Nations Research Institute for Social Development (UNRISD) celebrated its fortieth anniversary. The mandate of UNRISD, established as an autonomous institution within the United Nations system, is to analyse the evolution of social relations, social institutions and social welfare around the world.

Thandika Mkandawire, who is a Swedish national, is the 6th director of UNRISD. He was given the post in 1997 by the Secretary-General of the United Nations. From 1986 through 1996, Thandika was Executive Secretary of the Council for the Development of Social Science Research in Africa (CODESRIA), another organisation with strong and long-withstanding links to Sweden and Sida.

One of the cornerstones of UNRISD's current work is a large new research programme on social policy in a development context, to which Sida's Department for Research Co-operation (SAREC) is making a substantial commitment. The purpose of the effort is to encourage genuine inter-disciplinary debate on how different approaches to social policy can affect government capacity in promoting high-quality economic growth, strengthening democratic institutions and improving social welfare.

# Social Sciences & Humanities

Over the past few decades, the role of social sciences and the humanities has assumed growing importance. As evidenced by the World Summit for Social Development in Copenhagen in 1995, the following Copenhagen +5 in Geneva 2000 and especially the adoption of the Millennium Development Goals (MDG), there is a growing need for social science and humanities research to lay the foundation for more knowledge-based international and national policy-making in an effort to achieve social goals.

During almost 30 years of Sida/SAREC research co-operation, research in the social sciences and humanities in developing countries has made substantial progress. There has been tremendous growth not only in the number of researchers and research organisations but also in the academic skills of researchers.

Today, many of the Sida-supported research networks co-operate with UN bodies or other global networks/initiatives on an equal and highly respected basis. Within this context, the first steps were taken in 2003 to establish a network of the major social science research organisations in Asia, Latin America and Africa currently supported by Sida/SAREC. The idea is to create a platform from which researchers from the South could benefit from increased research co-operation, and from which the researchers could raise a “Southern” voice in the contemporary international debate. This is an attempt to not only respond to the debate but to also play an active role in influencing it.

Over the years multi-disciplinarity has become increasingly important in providing new answers and insights into highly complex, multi-faceted issues of development. One example of the increased need and the new possibilities opened by the multi-

disciplinary approaches was the International Symposium on Urban Landscape Dynamics and Resource Use held in Uppsala in 2003. At this symposium researchers presented reports showing how a multidisciplinary approach had led to thought-provoking results. For example, through the mapping of levels and places of settlement through history it has been shown possible to detect climate change during various eras. Another interesting finding of these inter-continental research collaborations is that large trade networks involving the Indian Ocean, the Red Sea and the Mediterranean were interconnected as far back as in the first millennium BC. Ethnology and linguistic studies also indicate that the sea and rivers were not seen as obstacles but as opportunities for transport and trade.

The aim of the initiative was to contribute to the current debate on global dealings with human-environment interactions, e.g. long-term perspectives on the resilience and vulnerability of tropical urban systems and resource use strategies. However multi-disciplinarity creates new challenges for researchers within the still relatively weak research environments.

## **Social Sciences in Africa**

National support for the social sciences has been weak in many countries in Africa. Regional organisations have played an auxiliary role by supporting research on social, political and economic subjects of key concern for the continent. The Sida-supported networks fund research activities by junior and senior researchers, most of them active at African universities. Research priorities are set by the networks and their researchers, and a substantial amount of the funds is allocated through open grants.

The Council for the Development of Social Science Research in Africa (CODESRIA) is a pan-African research organisation which celebrated its 30th anniversary in 2003. It is recognised not only as the pioneer African social science research organisation but also as the apex non-governmental centre of social knowledge production on the continent. CODESRIA facilitates multi-disciplinary research, promotes research-based publishing, contributes to capacity amongst African researchers through a strong training programme, promotes the principles of academic freedom and creates multiple fora for the exchange of views and information amongst African social science researchers.

During 2003 CODESRIA held both a more major conference and some sub-regional conferences. The major conference, which was held in Dakar on the theme “Intellectuals, Nationalism and the Pan-African Ideal”, included discussions of: Interrogating African Intellectuals on Nationalism and Pan-Africanism; Fourth Generation African Scholarship: Knowledge, Identity and Pan-Africanism; and State, Politics and Emerging Actors: Children, Students and the Youth in the Nationalist and Pan-African Projects.

Other African research networks supported by Sida are the Union for African Population Studies (UAPS), the African Association of Political Science (AAPS) and the Organisation for Social Science Research in Eastern and Southern Africa (OSSREA).

The activities of the African Economic Research Consortium (AERC) focus on formal training within a Master's programme and a new PhD programme. The first phase of one of the thematic research projects, “Poverty, Income Distribution and Labour Market Issues in sub-Saharan Africa”, was completed during 2003.

### **Social Sciences in Latin America**

Consejo Latinoamericano de Ciencias Sociales (CLACSO) plays a major role in enhancing social sciences research, a role it has had for nearly 30 years. It is a pan-Latin American organisation that supports regional research co-operation among the more established researchers. In 2003 CLACSO held its XXI General Assembly in Cuba, a meeting that generated a great deal of interest in the region and attracted the active participation of Cuban president Fidel Castro. A major theme was the new global hegemony. The discussions concerned new alternatives to global de-

velopment and social movements.

Facultad Latinoamericana de Ciencias Sociales (FLACSO) is a faculty with a strong emphasis on building the national capacity for researchers in Latin America. Sida supports three of its academic units in Central America: Costa Rica, El Salvador and Guatemala. Each of these has a thematic focus linked to the situation in the particular country. Guatemala, for example, with its large Indian population, focuses on ethnicity and development.

### **Social Sciences in Asia**

Sida's regional support to the social sciences in Asia focuses on three critical issues: political science, peace and conflict studies, and environmental economics. As there are already strong research environments in many countries Sida seeks to support opportunities for networking, comparative studies and dialogue around sensitive issues.

The Southeast Asian Conflict Studies Network (SEACSN) completed the first phase of its activities with a conference in Malaysia in early January 2004. In a book edited and published by SEACSN in 2003, dealing with the management and resolution of inter-state conflicts in Southeast Asia, some of the authors argue that a rethinking of strategies and mechanisms for conflict management and resolution is necessary, given the changed nature of some of the ongoing inter-state conflicts in the Southeast Asian region.

Environmental economics is a discipline of increasing importance, as there is a rising focus on sustainable development in view of the many environmental problems facing Asia and the great dependence on natural resources of many countries and regions. The Economy and Environ-

ment Program in Southeast Asia, EEPSEA, celebrated its 10th anniversary in 2003, with SANDEE, the South Asian Network for Development and Environmental Economics, still a relatively new network covering South Asia.

EEPSEA has proved to be highly successful and is serving as a role model for environmental economics organisations throughout the developing world. Representatives from Africa, South Asia and Latin America were invited to EEPSEA's anniversary meeting to exchange experiences. EEPSEA-funded researchers have also been successful in influencing policy-makers. One example is the first Marine Protected Area in Vietnam, which was established after a research report showed the benefits and costs of protecting the area and proposed measures for protection. Another example is a research report on policies for reducing deforestation in Sri Lanka, which was critical of the current system of timber permits as it discourages investment in tree plantations. After discussions of the research findings with government officials, the permit system for some tree species was eliminated.

### **International**

Sida's support to international research, aimed at generating new research findings of interest to developing countries, is granted primarily to actively involved researchers. Co-operation with international organisations is also intended to increase exposure to the findings of researchers and research organisations in the South. An important role in this regard is played by UNRISD, and another important UN research organisation with which SAREC entered an agreement in 2003 is WIDER.

In 2003, a special programme for co-operation on democracy/human rights research between researchers in Sweden and researchers in Africa, Asia, the West Bank and the Gaza Strip was completed. The programme was highlighted by a re-

search conference in Göteborg in Sweden in 2003. The collaborative projects dealt with issues of democratisation in Southeast Asia, social capital in India and South Africa, and the linkage between education and democracy with cases from Africa and

the Balkans. Other research areas were democracy and human rights in Nigeria and democracy in the Middle East with particular reference to the Palestinian context.

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#### **Collaborating institutions:**

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##### *Social Sciences:*

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

##### *Economy:*

African Economic Research Consortium, AERC, Nairobi, Kenya  
 The Beijer Institute of Ecological Economics, Stockholm, Sweden  
 Economy and Environment Program for Southeast Asia, EEPSEA, Singapore  
 Environmental Economics Unit, Göteborg University, Göteborg, Sweden  
 South Asian Network for Development and Environmental Economics, SANDEE, Kathmandu, Nepal

##### *Democracy and Human Rights Programme:*

Birzeit University, Birzeit, West Bank  
 Jawaharlal Nehru University, New Delhi, India  
 Utkal University, Bhubaneswar, Orissa, India  
 University of Witwatersrand, Johannesburg, South Africa  
 Centre for Research and Documentation, Kano, Nigeria  
 Institute for Free Flow of Information, Jakarta, Indonesia  
 Institutt for Statsvitenskap, Oslo University, Oslo, Norway  
 Centre for East & Southeast Asian Studies, GESEAS, Göteborg University, Göteborg, Sweden  
 Peace & Development Research Institute, PADRIGU, Göteborg University, Göteborg, Sweden  
 Department of Political Science, Stockholm University, Stockholm, Sweden  
 Department of Peace & Conflict Research, Uppsala University, Uppsala, Sweden  
 Department of Government, Uppsala University, Uppsala, Sweden  
 Cambodian Researchers for Development, CRD, Phnom Penh, Cambodia  
 Institute for Malaysian and International Studies, IKMAS, National University of Malaysia, Bangi, Malaysia  
 Research and Education for Peace Unit, University of Science of Malaysia, REPUSM, Penang, Malaysia  
 The Centre and Programme for Southeast Asian Studies, Indonesian Institute of the Sciences, PSEAS/LIPI, Jakarta, Indonesia  
 Department of Sociology, Uppsala University, Uppsala, Sweden

##### *Archaeology Programme:*

Department of History, Archaeology Unit, University of Dar es Salaam, Tanzania (Pan African Association, PAA)  
 Department of Archaeology and Ancient History, Uppsala University, Uppsala, Sweden

##### *Gender Research:*

Institute of Southern Africa Studies, ISAS, University of Lesotho, Roma, Lesotho



# Health Research

Strengthening the national capacity for health research, including research on health systems, remains the long-term ambition for Sida-funded research co-operation. In addition, Sida supports research aimed at the prevention and mitigation of serious infectious and parasitic diseases, with top priority being given to HIV/AIDS and efforts to combat malaria. Another important field is research to improve maternal and child health, including nutrition. These areas are supported through bilateral, regional and international research programmes.

National support for health research is directed at strengthening research institutions, primarily universities. Included in the activities are research training, equipment, management and access to scientific information, with a focus on locally defined research needs. An important ambition is to encourage local problem formulation and build national research capacity. As researchers from poor countries where diseases are prevalent need to be able to participate in and gain from new research findings, Sida strives to link health research needs in low-income countries to the international research agenda.

## **Capacity building through regional co-operation**

During the year universities in Central America were involved in a long-term academic and scientific collaboration with the Karolinska International Research Training Program. An important achievement of the collaboration was the strengthening of local and regional MSc and PhD programmes. A sandwich model helped alleviate the “brain drain” and so far, none of the students from previously supported graduate programmes have emigrated. The programme has evolved into the Network for Research and Training in Tropical Diseases in Central

America, NeTropica. The Swedish partners are now more collaborators than tutors. In joint studies of the basic public health problems in the region former graduates from various countries have exerted strong leadership in developing new tools for diagnostic and control of infectious diseases. Several of the scientists maintain strong links with local and regional health programmes and steps have now been taken to establish a regional PhD programme.

## **Health research and policy**

While mainly supporting capacity building at a national level, Sida also backs global initiatives aimed at enhancing national health research capacities. The Global Forum for Health Research (GFHR), the Council on Health Research for Development (COHRED) and the Alliance for Health Policy and Systems Research (AHP SR) represent organisations sharing this objective. The GFHR was founded to help correct the uneven distribution of resources that go to research on the problems of low-income countries. Even today only a small percentage of the world’s health research funding is directed to the diseases that account for 90 percent of the global disease burden.

With many developing countries lacking national demographic registers, a demographic surveillance system (DSS) may fill the void and provide the opportunity for research where longitudinal baseline data are available. Sida has supported several such DSSes within the framework of its bilateral and thematic programmes in Guinea Bissau, Ethiopia, Bangladesh, Nicaragua, Vietnam and, more recently, Uganda. Thirty-one DSS field sites in 17 developing countries currently make up an international network, called INDEPTH. In 2003 INDEPTH launched the *Health Intervention Trials Platform*, initially focussing on four poverty-related diseases: malaria, HIV/AIDS, TB and rotavirus. Another set of activities was the expansion of health equity studies, which analyse how interventions should be designed to reach the poor and disadvantaged groups.

## **HIV/AIDS research**

Sida’s support to HIV/AIDS research is a good example of the important link between national and international research. Recent findings from Tanzania have shown, in contrast to an earlier hypothesis, that HIV-1 infected patients in sub-Saharan Africa display similar immunological deterioration rates and times from the onset of HIV-1 infection to

clinical AIDS as has been observed in subjects in Europe and North America.

Preventing mother-to-child transmission of HIV/AIDS has been given high priority in Sida-funded research. Follow-up studies of breast-feeding mothers have demonstrated that a blood cell count in late pregnancy, the so called CD4 lymphocyte count, gives a better prediction of survival rate than the complicated analyses of viral load. This method has been used to identify high-risk groups for treatment.

The Sida-supported programme for HIV/AIDS research has made important contributions to vaccine research, including help in developing vaccines especially suited to the African situation. The special HIV/AIDS programme also extends to social science research, which is crucial in the light of the social and economic impact of HIV/AIDS in Africa in particular. In 2003, Sida supported four African social science research networks with projects in four main areas: patient welfare and rights in relation to HIV/AIDS, the socio-economic impact of HIV/AIDS and responses, reversing the HIV/AIDS pandemic among youth, and the demographic, social and economic determinants and consequences of the HIV/AIDS pandemic in Africa.

### **Malaria research**

Important steps were taken in 2003 to advance research efforts in the prevention of malaria. Swedish researchers shouldered the challenging task of housing the secretariat of the Multilateral Initiative on Malaria, MIM, which is aimed at intensifying efforts to combat malaria. MIM works in close collaboration with the WHO Roll Back Malaria initiative

and WHO's Tropical Disease Research programme, as well as with the U.S. National Institute of Health, the Global Fund, the European Union's European and Developing Countries Clinical Trials Programme (EDCTP) and the European Malaria Vaccine Initiative.

The MIM secretariat, jointly supported by the Swedish Research Council, the Swedish Foundation for Strategic Research and Sida, facilitates the mobilisation of researchers from different disciplines. Swedish malaria researchers participate actively in international, regional and bilateral research co-operation programmes, in part funded through Sida's support to Swedish development research.

A decision was also taken to continue supporting the European Malaria Vaccine Initiative, EMVI, formed to speed up the development of vaccines and to facilitate clinical trials. At the end of 2003, EMVI's portfolio consisted of 8 candidate molecules in various stages of development. Following safe Phase 1 clinical trials in Europe, a Phase 1 clinical trial with African adults in Burkina Faso is now in progress, in collaboration with the African Malaria Network Trust.

A new anti-malaria combination called "Lapdap" was developed in 2003 by WHO's Tropical Disease Research programme (TDR), together with partners in the UK, where it was approved. The focus on developing genetically modified mosquitoes without the ability to transmit the malaria parasite has also called attention to the need to address ethical, legal and social concerns before this organism can be released.

### **Reproductive health and child health**

In recent years the high level of ill health and mortality in connection with pregnancy and child birth has been given considerable attention. Sexually transmitted diseases are a major health problem among both men and women. Sida has helped finance the WHO Human Reproductive Programme (HRP) as well as other initiatives, like the Centre for Health and Population Research (ICDDR,B). A study investigating how arsenic-contaminated water influences the health of pregnant mothers and the foetus has been initiated. Arsenic-contaminated water is known to cause a variety of diseases and is also suspected of causing miscarriages and foetal deformities. Using the health and demographic surveillance system at ICDDR,B, a food and micro-nutrient supplementation trial was performed in a large group of people. The early phase of the study shows that it is possible to reduce the risk for miscarriage and foetal deformities.

Children are extremely vulnerable to poverty-related diseases. Diarrhoea and respiratory infections, combined with malnutrition, still comprise the largest direct cause of child mortality. Simple and inexpensive treatment methods exist but more research into preventive measures and their application in primary healthcare is needed. For this reason, Sida supports the research activities within the WHO Child and Adolescence Health programme. For instance, WHO has been helping conduct a study on how increased duration of exclusive breastfeeding can influence on children's development. The results show that exclusive breast-feeding for six months reduces the risks of stunted growth and diarrhoea.

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## Collaborating Institutions

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### *Health research and policy:*

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

### *Child health:*

Child and Adolescent Health and Development, World Health Organization, Geneva, Switzerland

### *Sexual and reproductive health:*

UNDP/UNFPA/WHO/World Bank Special Programme on Research, Development and Research Training in Human Reproduction, World Health Organization, Geneva, Switzerland  
East, Central and Southern African Organisation for Obstetrics and Gynaecology, ECSAOG

### *Tropical and other infectious diseases:*

UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases, World Health Organization, Geneva, Switzerland  
Mekelle University College, Mekelle, Ethiopia  
International Centre for Diarrhoeal Disease Research, ICDDR,B, Dhaka, Bangladesh  
Department of Medical Microbiology and Immunology, Göteborg University, Göteborg, Sweden  
Department of Immunology, Microbiology, Pathology and Infectious Diseases, Karolinska Institutet, Stockholm, Sweden  
Vaccines and Biologicals, World Health Organization, Geneva, Switzerland  
European Malaria Vaccine Initiative, EMVI, Copenhagen, Denmark  
International Vaccine Institute (IVI), Seoul, Korea

### *HIV/AIDS and related sexually transmitted diseases:*

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

### *Research training and networking in biomedicine in Central America:*

Fundación para el Desarrollo Económico y Social de Centroamérica, FUNDESCA, Panamá, Panamá  
The Karolinska International Research and Training Committee, KIRT, Karolinska Institutet, Stockholm, Sweden  
Network for Research and Training in Parasitic Diseases at the Southern Cone of Latin America, RTPD, Porto Alegre, Brazil  
Regional programme for environmental and health research in Central America:  
Central American Institute for Studies on Toxic Substances, Heredia, Costa Rica  
Department for Systems Ecology, Stockholm University, Stockholm, Sweden

### *Other:*

Non Communicable Disease Surveillance, World Health Organization, Geneva, Switzerland  
Research, Policy and Co-operation, World Health Organization, Geneva, Switzerland  
International Network of Field Sites with continuous Demographic Evaluation of Populations and their Health in Developing Countries, INDEPTH, Accra, Ghana



Maize is an important food crop in sub-Saharan Africa, but it is attacked by a number of stemborers, causing losses up to 40%. ICIPE's answer to this problem lies in applying the infochemicals used by stemborers to locate their host plants for egg-laying and in avoiding plants that favour their feeding and reproduction. ICIPE has developed a so called push-pull strategy, which means that a preferred host plant, e.g. Sudan grass or napier grass, is planted as a border around the maize to provide a "pull" to the borers to lay eggs in the bordering crop. It then provides a "pull" for natural enemies (usually small parasitic wasps) to attack the borer larvae deep inside the stem. A third crop, e.g. Desmodium, that repels the borers is planted between the maize rows to provide a strong "push". As an added value Desmodium was also found to suppress the parasitic striga weed (the pink flowers).

# Environmental Sciences & Natural Resources

Sida support to “Environmental and Natural Resource Sciences” is directed towards new knowledge that can contribute to environmentally friendly and sustainable growth, which is important to the goal of reducing poverty. The support goes to bilateral, regional and international co-operation programmes as well as to Swedish development research.

Developing countries face enormous challenges. They have to cope with the environmental burden of the activities of the developed world and manage the trade opportunities and risks of globalisation. At the same time, they have to fight poverty by using their natural resources in a sustainable way. This requires knowledge and analytical capacity. It is not enough to have technical access to international research findings; to find, evaluate and choose information, countries need to have their own active research. This is not only a question of choosing the right technologies, it is also about experimenting and testing which knowledge is best suited to local conditions and can or will be accepted by those who use it. It is also about the capacity of local researchers to evaluate the right questions and choose good hypotheses to test.

Support for local research institutions and research training capacity at national universities are important elements of Swedish research co-operation. However, sustained research efforts require access to research grants, ideally provided by national research councils. As few of the poorest countries have appropriate technical and financial resources, it is interesting to note that some of the Sida-supported regional research

programmes are moving towards research council functions.

## **Lake Victoria Research Initiative**

The Lake Victoria Research Initiative, VicRes, has been established as part of the Swedish comprehensive support to the Lake Victoria region. Co-ordinated by the Inter University Council for East Africa (IUCEA), VicRes acts as a research council with the aim of encouraging regional and multidisciplinary research that will offer practical solutions to poverty and environmental degradation in the Lake Victoria basin.

The long-term objectives are four-fold: capacity building at the organisational level; capacity building for individual researchers and groups; generating new knowledge for the benefit of the people living in the region and beyond; and the forging of other Sida-supported research programmes in the region into a complementary and/or synergistic system.

Proposals for research may address biological, chemical, physical or socio-economic aspects important to the conservation, production and sustainable utilisation of various resources.

Research is conducted in thematic areas by regional teams. In this way the international body of research is enriched by African perspectives,

which in turn contributes to illuminate global questions. In a longer perspective this could also have an effect on the international research agenda. In 2003, VicRes's first year, the theme of “wetlands” attracted some 100 applications. Thirteen teams were formed, involving 55 investigators in the region. The research covers a range of disciplines from pollution, fish farming and medicinal plants to gender and socio-economic issues.

## **Forestry Research**

Another Sida-supported regional research network is housed and co-ordinated at the African Academy of Sciences (AAS). To encourage collaboration across the borders – between the countries and disciplines in forestry, covering the main spectrum of tropical eco-zones – a pan-African network has been formed. AFORNET, the African Forestry Research Network, is essentially a funding mechanism allocating grants for joint research in forestry, with the two-fold objective of mobilising researchers for common objectives and enhancing African capacity in forestry research.

## **Marine and coastal science**

The Western Indian Ocean Marine Science Association (WIOMSA)

co-ordinates a marine science programme designed to support research of broad regional importance and relevance to science and society.

One of the recent milestones achieved by WIOMSA is the initiation of a competitive research grant scheme. This has promoted multi-disciplinary research in the natural and social sciences, with practical applications in a number of different areas, including the valuation of mangrove-associated fisheries and seagrass ecosystems, the management of coral reefs and aquaculture, and the impact of eco-tourism on dolphins.

Through support for scientific symposiums, workshops, a professional journal and selected book publications, the programme has also had major significance for the dissemination of marine science findings and the international visibility of coastal and marine issues in the WIO region. For example the Third WIOMSA Scientific Symposium, held in Mozambique in October 2003, was attended by 150 participants from most of the countries in the region and a number of countries in Europe. The proceeding *Advances in Marine Science in Eastern Africa: Multidisciplinary Research for Improved Management of Resources* is to be published in international journals.

### **Farming systems in South East Asia**

Following the positive experience of research and training co-operation between the Nong Lam University in Ho Chi Minh City and the Swedish University for Agricultural Sciences, a regional research training network was formed. The programme involves 13 universities and research institutes in Vietnam, Cambodia, Laos and Thailand. The research

focuses on the role of livestock in agricultural production systems for smallholders, e.g. the recycling of livestock or agricultural waste and various aspects of the use of local fodder species.

Research results are presented at technical workshops and at the regional annual workshop (and in its proceedings). MSc level courses have been arranged in Laos, Thailand and Vietnam. Useful research findings for developing sustainable agriculture in the Mekong region have been generated on systems for scavenging poultry, buffaloes in integrated farming systems, tree foliage for goats, forage for pigs and low-cost methods for recycling of livestock waste through biodigesters and water plants.

### **International Research**

The Consultative Group for International Agricultural Research, CGIAR

The CGIAR is the most important of the international research organisations in the field of natural resources. Its 15 specialised institutes maintain an overview of international research in their respective field and identify and conduct research in neglected research areas of key relevance to poverty reduction.

During 2003, steps were taken towards a reform to engage research networks outside the institutes, the so called challenge programmes. One aim of this evolutionary process is to open the CGIAR to other actors, such as national agricultural research systems, advanced research institutes and the private sector.

A new science council, with the mandate of overseeing scientific orientation and quality, was set up in 2003. A policy issue of central importance is related to the property rights of plant genetic resources. This is an area where developing

countries need to develop a capacity to defend their rights and interests.

### **International Centre for Insect Physiology and Ecology, ICIPE**

While the CGIAR system is primarily geared to the development of new knowledge, ICIPE and its research agenda are engaged in systematic research training in collaboration with African universities. The scope of research and training activities covers e.g. the development of tools and strategies for controlling and managing plant pests and disease vectors; biodiversity; bioprospecting for botanicals for human, animal and plant health products; and the study of socio-economic aspects of arthropod-related development issues. In addition to research activities, ICIPE plays an important regional role in its PhD level research training in collaboration with African universities.

### **International Foundation for Science, IFS**

IFS was established as a grant allocation mechanism for active researchers at developing-country institutions, thereby to some degree compensating for the lack of a national research council. Support is given to projects in areas such as agriculture, forestry, natural products, water and aquatic resources and research on the sustainable utilisation and conservation of natural ecosystems.

Over the years IFS has had a significant influence in countries with emerging scientific communities. Since beginning to fund activities in 1972 it has supported more than 3,200 scientists in more than 100 developing countries. Some of these countries now have well functioning research councils and strong research communities. Since 2003, applicants

from poor developing countries have been given priority and IFS grants and support efforts are directed to researchers from less developed coun-

tries. IFS's world-wide network of well established scientists can now serve as an important pool of advisors.

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**Collaborating institutions:**

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*Regional marine research programmes:*

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

*Dryland projects:*

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

*International agricultural research, food security and genetic resources:*

Consultative Group for International Agricultural Research, CGIAR:

- International Potato Center, CIP, Lima, Peru
- International Centre of Insect Physiology and Ecology, ICIPE, Nairobi, Kenya
- International Food Policy Research Institute, IFPRI, Washington, USA
- International Rice Research Institute, IRRI, Manila Philippines
- International Maize and Wheat Improvement Center, CIMMYT, Mexico City, Mexico
- International Institute of Tropical Agriculture, IITA, Ibadan, Nigeria
- International Center for Tropical Agriculture, CIAT, Cali, Colombia
- International Crops Research Institute for the Semi-Arid Tropics, ICRISAT, Andhra Pradesh, India
- International Center for Agricultural Research in the Dry Areas, ICARDA, Aleppo, Syria
- International Livestock Research Institute, ILRI, Nairobi, Kenya
- International Plant Genetic Resources Institute, IPGRI, Rome, Italy
- West Africa Rice Development Association, WARDA, Bouak, Ivory Coast
- International Centre for Research in Agroforestry, ICRAF, Nairobi, Kenya
- Center for International Forestry Research, CIFOR, Jakarta, Indonesia
- International Center for Living Aquatic Resources Management, Inc., ICLARM, Makati City, Philippines
- International Irrigation Management Institute, IMWI, Colombo, Sri Lanka

African Centre for Technology Studies, ACTS, Nairobi, Kenya

International Foundation for Science, IFS, Stockholm, Sweden

Lake Victoria Research Initiative – VicRes, Inter-University Council for East Africa, IUCEA, Kampala Uganda

National Biodiversity Institute of Costa Rica, INBio, Costa Rica

National Botanical Institute of South Africa, Cape Town, South Africa

National Herbarium and Botanic Gardens of Malawi, Malawi

Regional Farming Systems in Asia, Ho Chi Minh, Vietnam

# Swedish Development Research

Approximately 10 per cent of Sida's appropriation for research co-operation is allocated to development research in Sweden. The figure for 2003 was SEK 100 million.

Sida has a special responsibility for stimulating interest in development issues among Swedish research institutes. The Sida Development Research Council provides grants for research projects and support to Ph.D. students, post-doctorate researchers or guest lecturers. Proposals are evaluated by scientific advisory groups. The support is mainly given to research themes defined by the academic community, but Sida also invites applications for specific themes of particular interest to Swedish development co-operation.

Funding is divided into five areas: natural resources and the environment; health research; science, technology and industrialisation; economic, social and political dimensions of development; and the humanities, education and culture. Project applications related to environmental problems can be found in most of these areas.

In 2003, Sida received 454 funding applications for projects dealing with development issues, of which it accepted 125.

In the field of natural resources and the environment, issues related to marine sciences dominate. Other subjects include the way tenure farming and other socio-economic conditions affect the use of natural resources and food distribution.

In health, studies of tropical diseases dominate. Other focus areas include research into mental health, HIV, reproductive health, mother/child health and nutrition.

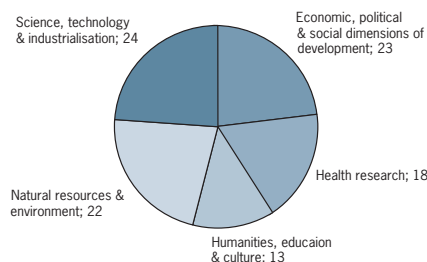
The major themes in science, technology and industrialisation are water, energy, urban issues and pollution and industrialisation in developing countries.

With regard to the economic, social and political dimensions of development, political science and economics are the main focus areas. Sida-supported Swedish economic research covers a wide range of issues, including micro-finance, globalisation,

regional integration, national production systems and the effects of HIV/AIDS on economic performance. Poverty alleviation and equity issues are essential components of most studies.

In the humanities, education and culture, the main areas are anthropology and archaeology. Related to this are studies in human geography and analyses of the history of cultural landscapes. In similar fashion, language studies contribute to knowledge about mental landscapes.

**The research grants distributed by research area**  
percentage of 2003 total allocation, SEK 88 million



# Swedish Research Links

With the aim to encourage cooperation between Swedish researchers and researchers in South Africa, the MENA region (Middle East and Northern Africa) and Asia a special programme, Swedish Research Links, has been launched. Joint applications for funding of collaborative activities can be submitted annually.

## South Africa

The first research link programme, the South African-Swedish Research Partnership Programme, was initiated in early 2000 and solicited its fifth round of proposals in 2003.

Out of 47 joint applications for three-year grants, 19 were approved

for the period 2004–2006. The awarded applications covered all disciplines, with an emphasis on natural sciences and technology.

The reviewing process took place both in South Africa, through the National Research Foundation's (NRF) advisory panel, and in Sweden, through Swedish research councils FORMAS (the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning) and Vetenskapsrådet.

55 joint projects are currently in operation and 39 universities in South Africa and Sweden are involved in the partnership programme. Sida commitment for current agreement period, 2001–2004: SEK 30 million.

## Middle East and Northern Africa – MENA

The MENA-Swedish Research Partnership Programme solicited its second round of proposals in May 2003. The submitted joint applications for three-year grants represented all disciplines, but the majority concerned

medicine and most applicants came from Iran.

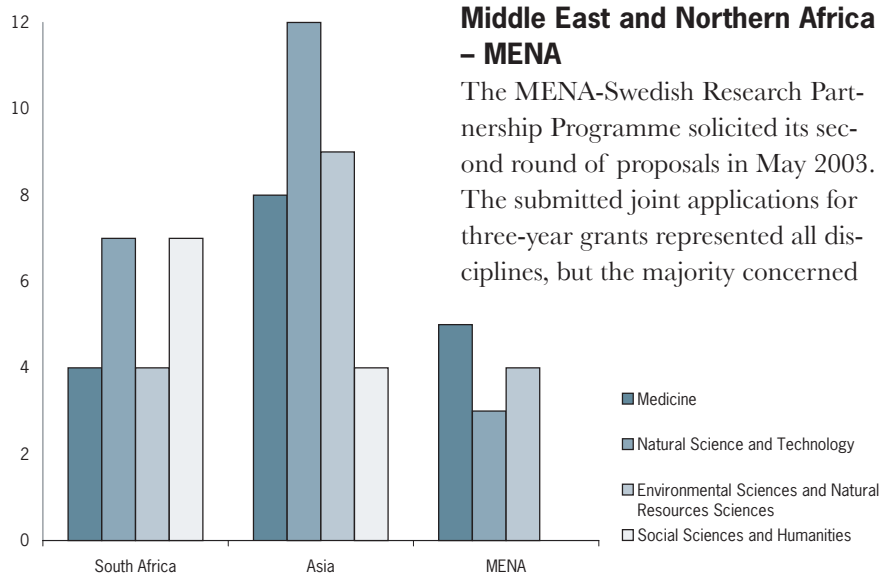
The reviewing process also engaged researchers from the MENA region and took place both at the Swedish Institute in Alexandria and in Sweden. Out of 17 applications, 12 were approved for 2003–2005.

Allocations for the first year (2003) amounted to SEK 3.6 million.

## Asia

The Asian-Swedish Research Partnership Programme solicited its second round of proposals in 2003. The majority of submitted applications were in natural sciences, technology and environment. Out of 46 joint applications, four concerned inter-regional collaborations. The counterparts came mainly from China, India, Vietnam and Bangladesh.

The reviewing process was carried out by a Swedish advisory panel and 33 applications were approved for 2003–2005. Allocations for the first year (2003) amounted to SEK 6.5 million.



# Members

## of the Sida Research Committee 2003

Professor Mårten Carlsson, Chairman  
Division of Horticultural Economics  
Swedish University of Agricultural Sciences Alnarp

Professor Barbara Ekblom  
Institution of Entomology  
Swedish University of Agricultural Sciences  
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Professor Ian Bryceson  
Centre for International Environment  
and Development Studies, NORAGRIC  
Ås, Norway

Professor Göte Hansson  
Department of Economics  
Lund University  
Lund

Professor Lotta Mellander  
Institute for the Health of Women and Children/Department of Paediatrics  
Gothenburg University  
Gothenburg

Professor Bo Sundqvist  
Rector  
Uppsala University  
Uppsala

Professor Lena Trojer  
Blekinge Institute of Technology  
Department of Human Work Science and Media Technology  
Blekinge

Professor Aud Talle  
Institutt og museum for antropologi, IMA  
Etnografisk museum  
Oslo, Norway

Professor Hans Wigzell  
Microbiology and Tumor Biology Center  
Karolinska Institutet  
Stockholm

Göran Holmqvist, Director, Latin America Department, Sida

Berit Olsson, Director, Department for Research Cooperation, SAREC, Sida

# Staff 2003

## Sida, Department for Research Cooperation, SAREC

Berit Olsson	Director
Jimmy Gunnarsson	Financial officer
Maria Wibom-Willén	Secretary to the Director and the Sida Research Committee

Karin Ringberg	Controller
Johannes Borgegård	Information officer

### *Division for University Support and National Research Development*

Tomas Kjellqvist	Head of Division
Hannah Akuffo	Acting Head of Division, Senior research advisor, Uganda, health research

Renée Ankarfjärd	Research advisor, Laos, natural resources
Maria-Teresa Bejarano	Research advisor, Honduras, health research
Håkan Berg	Research advisor, Nicaragua, natural resources: marine sciences

Christina de Carvalho	Research advisor Tanzania, health research
Anders Clarhäll	Research advisor, Sri Lanka, natural sciences and technology

Måns Felleson	Research advisor, Ethiopia, social sciences
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Solveig Freudenthal	Research advisor, Vietnam, health research
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Kwame Gbesemete	Research advisor, Burkina Faso, social sciences
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Zinaida Iritz	Research advisor, Mozambique, natural sciences and technology
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Lotta Jacobsen	Programme administrator
Majja Lindroos	Senior research advisor, Bolivia, natural sciences and technology

Tussi Lovén	Registrar
Håkan Marstorp	Research advisor, Ethiopia, natural resources

Irene Opira	Registrar
Viveka Persson	Research advisor, health research
Ingrid Rifflet	Programme administrator

Beate-Marie Strömsnes	Programme administrator
Esther Tewolde-Berhan	Programme administrator
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### *Division for Thematic Programmes*

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*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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