

## Research co-operation Tanzania-Sweden

Research cooperation between Sweden and Tanzania started in 1976 and has gone through phases of support to research councils, to individual research projects and lately concentrated on university support.

Since 1995, Research Cooperation is an integrated part of the Development Cooperation between Sweden and Tanzania. The focus is on capacity building at the University of Dar es Salaam, UDSM, which encompasses the Muhimbili University College for Health Sciences, MUCHS and the University College for Lands and Architectural Studies, UCLAS. Another form of cooperation is Tanzanian involvement in Sida-funded Regional Research Programmes. These programmes cover areas such as Marine Sciences, Bio-safety, and Archaeology.

The Swedish research cooperation is directed to the strengthening of research capacity. Support in the form of faculty funds enable faculty members to carry out limited research projects. However, the main part of the Swedish contribution goes to cooperative research projects at UDSM, MUCHS and UCLAS involving Swedish universities. Most projects include sandwich-based research training, where the candidates, usually young staff of research institutes or university faculties, are linked to Swedish institutions for supervision while spending most of their time at the home institutions. The total number of students in Ph.D training is 42 in the year 2000.

## **Research and Higher Education in Tanzania**

**Policies, reform and structures for research and higher education.** New policies and attempts to carry through reforms within higher education and research began in the 1990's. Ministry of Science, Technology and Higher Education MoSTHE presented in 1996 strategies for research in Science and Technology.

In this strategy, research in the field of science and technology is getting priority as an important tool for the development of the country. Technical skills, implementation and commercialised results of the research are seen as examples of progress. Increased participation of women within science and technology is another aim. The Tanzanian Commission for Science and Technology, COSTECH, is an important co-ordinating organisation for implementation of the strategy. Apart from being an advisor within different areas of Science and Technology, COSTECH acts as a research council. COSTECH has the responsibility for co-ordination of research activities throughout the country.

The Ministry stresses the need to rationalise and co-ordinate the budget and the different options for higher education. The system for tertiary education is fragmented and includes around 140 institutions. Two national universities, the University of Dar es Salaam, UDSM, and Sokoine University of Agriculture, SUA, are the only ones reaching the international definition of a university, and that are doing research. The national Open University of Tanzania is responsible for distance learning at tertiary level. The number of private institutions in higher education are increasing. To deal with matters of accreditation and quality control the Council for Higher Education was recently established.

Reform activities initiated at UDSM in 1992, have led to cuttings in the administration, and a strive to modernising the academic structures. Current achievements include the setting up of a Directorate for Research and Publications in charge of research agenda formulation and structures for research dissemination. The reform programme has

shown authorities and others concerned, that the state universities are capable of doing advanced research and education.

**Research programmes.** The largest research programme concerns HIV/AIDS and deals with prevention and transmission between mother and child. Field methods for rapid diagnosis have received international attention. Encouraging results from the Kagera region, where HIV/AIDS was first reported in Tanzania, show a diminishing number of HIV-infected persons.

Another major programme concerns the sustainable use of marine resources. Seaweed cultivation is growing to a major industry in Zanzibar with the Institute of Marine Sciences, IMS as the focal point. The IMS also engages in development of fish farming and in analysis of environmental impacts of tourism and other economic activities in the coastal areas. The program is conducted in collaboration with the Stockholm University and has developed from training of masters students to involve a larger proportion of Ph.D.-students.

A Ph.D.-programme on small and medium sized enterprises was set up in 1998 by the Faculty of Commerce and Management and Umeå Business School. The programme will give special attention to the role of female entrepreneurs. A research and Ph.D.-programme on urban problems was established as a cooperation between University College of Lands and Architectural Studies and the Royal Institute of Technology, KTH, Stockholm, 1998.

Research in Electrical Engineering at UDSM aims at improvements of the power distributions system and adaptations of electrical machinery to Tanzanian conditions. The program involves research training and it is conducted in collaboration with KTH and with TANESCO. Another project in Engineering is research on Bio-composite materials, using waste products from food industry for building materials.

The Faculty of Science conducts research on pesticides and alternative methods for pest control in a recently established laboratory. Other research programs at the Faculty are: Geochemical mapping providing a basis for mineral prospection; Methods for cultivation of edible mushrooms; Mathematical modelling of beach erosion; and Capacity building i physics including solar energy applications.

**Funding of research and higher education.** The university is dependent on external funding and foreign donors. The reform activities have resulted in a more focused support from an increasing number of donors. While other likeminded donors fund higher education and its infrastructure, the Sida support is directed exclusively towards research, research infrastructures and training for research.

## The Sida support for 1997–2000 is 111 Mkr SEK The support for 1999 is 36, 75 Mkr SEK

Tanzanian Institutions

UDSM - University of Dar es Salaam

UCLAS – University College of Lands and Architectural Studies, Dar es Salaam

MUCHS - Muhimbili University College of Health Sciences, Dar es Salaam

Collaborating Institutions

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



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