

S A R E C

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The Ownership and Cultivation of Knowledge

The rationale for Swedish support to universities in developing countries



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SWEDISH AGENCY FOR RESEARCH COOPERATION
WITH DEVELOPING COUNTRIES



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0. Summary

The report outlines a rationale for increased support to universities within Swedish development cooperation. It is presented by SAREC and SIDA in response to the instruction from the Swedish government to "suggest how Swedish support to the universities in the developing countries, particularly the poorest African countries, should best be shaped".

This summary gives an account of some general conclusions on the causes of the crisis in the universities, on preconditions for, and aims and direction of, constructive support and on the focus and orientation of university support within Swedish development cooperation.

0.1 University crisis

The development of skills and knowledge are an absolute prerequisite for national development. The central role of the universities in this respect is undisputed. However, in many African countries, universities have not been able to shoulder this responsibility. The crisis in African universities, currently also hit by the severe economic recession, is characterised by a series of vicious circles:

- A large-scale expansion of the higher education sector coupled with dwindling resources has led to a serious qualitative crisis in both higher education and research.
- Poor capacity for research and postgraduate education contributes to a low standard of academic teaching and consequently poor recruitment to research. A weak academic culture fails to support a tradition of knowledge and the production of ideas.
- A lack of national research resources helps produce intellectual and financial dependence on external sources for research development. Some pockets of good research are developed but no internal research tradition.
- Poor capacity for management and administration often leads to projects being managed externally, which further undermines the capacity of the institution.

0.2 Preconditions for constructive support

There are no simple solutions to this complex situation. Misguided development assistance may help to deepen the crisis rather than resolve it.

- A proper analysis is necessary, and united efforts should concentrate on breaking the vicious circles which dilute resources, undermine research, and deepen intellectual and financial dependency.

- Some problems require internal solutions; in other cases internal action is required for external assistance to be constructive.

0.2.1 The policy environment

An explicit national commitment is necessary. Each country needs at least one university that can produce essential analytical competence and research. The responsibility for advanced education and production of ideas should not be left to external donors and donor contributions cannot cover up for an extreme thinning of resources. Instead of diluting resources on several weak institutions, one university may be complemented with other types of professional schools.

The state must safeguard the resources needed, secure an independent intellectual development and academic freedom. The state must also safeguard an equitable recruitment for a democratic development. This requires a suitable policy environment. In countries with very weak resources, autonomy from the state and dependence on other sponsors may weaken university development.

0.2.2 Financial strategy

University investments may bring important financial returns. The objective is to develop a high quality university that may produce qualified academic staff to substitute expensive foreign teachers, offer an alternative to high cost overseas training, and reduce the dependency on costly foreign experts, expenses which heavily tap public resources.

Opportunities for immediate financial gains, savings, income from services, commissioned work and external assistance, may be explored. However, it is important that short term saving and income opportunities do not prejudice or undermine the overriding objective.

0.2.3 University planning and policy

Support for universities will not be constructive unless the universities themselves can take responsibility for the planning and coordination of their resources. Support for such planning and other aspects of management capacity is one of the key areas identified for Swedish assistance to universities.

The university must develop and implement policies for admission, staffing and development, and a policy for accepting external scholarships, grants and assignments, as well as a policy for salaries and additional income for its staff. A balance must be struck between "capacity utilisation" and "capacity building".

A strategic plan for university development may facilitate negotiations with donors and the coordination of their input. Universities may also present comprehensive annual reports and a reliable auditing system and utilise these as the basis for reporting to different donors.

0.3 The role of Swedish support

SAREC's and SIDA's current support to research and higher education in the poorest developing countries is often aimed at faculties or individual researchers in different universities. The current crisis in the universities puts the realization of these projects at risk. Support to the universities and to their development as an institution as a whole will therefore be considered, partly to enable them to retain and recruit qualified academic staff.

0.3.1 Purpose

The purpose of Swedish support is to:

- provide increased opportunities for African university debate,
- strengthen universities as intellectual centres and their role in higher research, research training and research, functions which are mutually dependent on each other, and
- strengthen the universities in their important role for independent debate and analysis in support of democratic development.

0.3.2 University debate

SAREC and SIDA will participate in the debate on university reform and share their experiences of support.

- Among donors, forms of support that may strengthen the universities' capacity for planning and coordination of their resources will be promoted. A responsibility to balance an interest in utilising university capacity against the long term objective of university development will also be promoted.
- Emphasis will be placed on support for developing opportunities in Africa for university debate and support for African university organisations to carry out studies and seminars etc.

0.3.3 University support

The major part of the assistance will, however, involve support to universities in some developing countries where there are agreements for Swedish development cooperation. This support should be strategic, contribute to the long term development of the universities, and increase the prospects of the universities taking full responsibility for management, administration and operations.

The following key areas for support have been identified: institutional capacity, academic capacity and university based postgraduate programmes and regional collaboration.

- Support for institutional capacity includes support for planning and administrative development and for strategic basic resources for

procurement, maintenance etc. In situations of extreme need, flexible contributions for the realisation of a strategic plan may also be considered.

- In support of academic capacity, a combination of funds to develop a basis for research and targeted support for research development will be allocated. Essential core functions are: a functioning library, flexible funds for scientific contacts, funds for staff development, and funds for research. Support to such flexible funds requires the development of appropriate structures for peer review and allocation, in itself important for academic growth.

In addition to support for a broad basis for research, Swedish funds may be utilised for support to research training and qualified research. Home-based research training within collaborative projects involving external supervision will be promoted. Support to faculty programmes for research development involving support to research groups and a planned acquisition of scientific equipment will also be considered.

- The development of postgraduate programmes will be promoted through support for selected faculties, possibly also involving external collaboration. Qualified research environments may attract students from other countries in the region. Such university based "centres of excellence" may obtain support for regional courses. Regional scholarships and grants can enable guest researchers and students to participate. Networks of researchers may also receive special support for exchange of information and regional collaboration.

0.3.4 The role of Swedish agencies.

SAREC and SIDA will collaborate in providing support for university development. SAREC will focus on support for research and research development, and support for some basic functions and planning. SIDA will be responsible for support for undergraduate education as part of general support for the development of a sector.

1. Background

1.1 Purpose

The overall aim of Swedish development assistance is to support developing countries in their efforts to improve the living standard of their populations. The Swedish aid shall promote economic growth, economic and social equality, economic and political independence, development of democracy in society, and a sustainable use of natural resources, with protection of the environment.

In response to recent evaluations of the impact of development assistance there is a shift from project based support to policy based assistance. This involves the strengthening of the capacity of national institutions to shoulder the responsibility for policy formulation, planning and implementation and also for evaluation and follow up.

The role of national universities in support of such development has received increasing attention. SAREC, the Swedish Agency for Research Cooperation with Developing Countries and SIDA, the Swedish International Development Authority, in August 1992 presented a report to the Swedish government suggesting increased support to universities, particularly in the poorest African countries.

The purpose of this document is to summarise the rationale for Swedish support to universities in developing countries and to outline some principles guiding the shape of such support.

1.2 Introduction

Despite all development efforts, the gap between rich countries and a group of poor countries, mainly in Africa, has widened increasingly during the last ten years. This has led to a reappraisal of the aims and forms of traditional development assistance. There is now an increasing emphasis on the developing countries' own responsibility for the planning and utilisation of the resources at their disposal. This requires internal institutions which are both functional and competent and also the development of internal, advanced strategic and analytical skills. Within international development cooperation, greater emphasis is currently being placed on efforts to strengthen these skills, known as "capacity building".

In this context, interest has focused in part on the universities and their role in the development of competence, knowledge, and analytical skills, thus drawing attention to the critical situation in the African universities. The financial crisis, which has worsened during the 1980's, has meant that these universities have had tighter financial frameworks, have found it increasingly difficult to pay competitive wages and increasingly difficult to maintain essential functions. A debate on the crisis in the universities has been set in motion, and issues under discussion include the need for increased resources and also the need to reform the aims and organisation of the universities.

Within the Swedish development assistance, it is mainly SAREC which has given support to the universities. Support for the development of research capacity and research environments in different faculties has been complemented with support for certain basic functions. SIDA has more recently developed an interest in higher education and internal capacity for analysis, planning and evaluation, in connection with a shift in support for projects towards policy based assistance. SIDA has allocated budgetary support for some universities in extreme need and projects to strengthen the universities have been initiated within SIDA's support to different sectors. However, the crisis in the universities may jeopardize the realisation of various development projects.

This report aims to illustrate the need for support for the universities in the poorest African countries and propose a suitable orientation and shape of such support within Swedish development cooperation. An important point of departure is the understanding that indigenous competence and capacity for analyses and research is of fundamental importance for the national development and independence, and that the universities have an important role to play in this context.

By way of introduction, the report examines the situation of the universities and the causes of their crisis. It highlights the connection between the acute crisis of resources and the student capacity of the universities as well as the connection between the qualitative crisis and the perception of the universities' mission and functions. The effects on university development of an over-dependence on external cooperation and development assistance are also discussed.

The analysis indicates that good development assistance to universities is not simply a question of resources; it is also extremely important to reinforce an internal capacity to be in charge of the resources for an independent academic development. "The ownership and cultivation of knowledge" is therefore the theme of this report, which ends with a proposal for increased Swedish commitment to support for universities in poor African countries.

1.3 Definitions and points of departure

This report deals mainly with development assistance to African universities. The need to develop other forms of post-secondary education is touched upon in connection with the discussion of a policy for higher education but is not analyzed in detail. The situation in research outwith the universities is also discussed but it is primarily the situation in the universities and their role in research which is the subject of deeper analysis. The conclusions reached and the suggestions made apply mainly to support for universities in the poorest African countries but they may also be applicable to support for universities in other countries.

The following points of departure guide the interest in support for universities:

- The role of the universities in the development of research both within and outwith the universities, i.e their role in national research, research recruitment and research training.
- The need for a national resource base to enable enquiries and policy analysis to be carried out both at the universities and at ministries and related institutes.
- The need for well-educated people to fill key posts, partly to replace external advisers and consultants.
- The need for an independent intellectual environment for analysis and debate.
- The need to reinforce the institutional capacity of the universities for the above.

2. The situation in the universities

It is generally agreed that the situation for most universities in Africa south of the Sahara is critical. The manifestations of the crisis have been graphically described in a series of reports. This chapter gives a simplified description of the universities' crises of resources, quality and administration. This is followed by a discussion of the role of the universities and how their development has been influenced by the industrialised world. Finally, some sets of problems maintaining the crisis in the universities are summarised. It should be pointed out that the actual situation varies from country to country and that the universities do not all have all the problems described below.

2.1 The crisis in the universities

2.1.1 Crisis of resources

The most conspicuous indicator of the crisis in the universities is the lack of resources; lack of text books, libraries and teaching materials, run-down teaching rooms and laboratories, overcrowded student residences and poor material conditions for the students, low wages and inadequate benefits for teachers and staff - all manifestations of the underfunding of the universities.

What then is the cause of this lack of resources? One important factor is of course the financial crisis. Most countries have managed to set aside a relatively constant portion of state expenditure for education and higher education has laid claim to a relatively large share of this budget. The real value of this sum has however been eroded over the years, which has meant a considerable reduction in the universities' grants. External support for higher education represents approximately a third of total development assistance to education as a whole. During the last years it has mainly financed external teachers and scholarships for studies abroad.

Another cause of the drastic reduction in the universities' resources per student is, however, the substantial increase in the number of students¹ This increase followed the ambitions expressed at an African summit meeting on education in Addis Abeba in 1961. Quantitative aims were formulated jointly with UNESCO for the building up of the education system from primary school to university. The universities then expanded rapidly in the newly independent states and graduated internal well-educated civil servants for a number of functions. It is calculated that between 1960 and 1983 the university-educated population in Africa south of the Sahara increased from approximately 1,200 to more than 70,000².

¹ In certain countries the level of resources per student per year is estimated to have fallen from ca.\$15,000 to ca.\$1,200 between 1970 and 1988.

² The proportion of university graduates in 1963 was one per 168,000 inhabitants, in 1983 one per 5,800. However, the figures vary considerably from country to country.

The demand for education has subsequently continued to increase as secondary schooling has been expanded. The early ambition to educate according to the needs of society was replaced by the ambition to make higher education available as a right to all who qualified. At the same time, work opportunities in the public sector have declined, and in several countries there is now a rising level of graduate unemployment. A university degree is, however, seen as a desirable ticket to a well-paid job, and the growing middle-class population expect their children to have access to higher education.

These pressures have meant that many governments have requested the universities to increase their intake far in excess of their capacity. At the same time, new universities have been established. Until 1960 there were only 6 universities in Africa south of the Sahara. Today almost all countries have at least one university - in Nigeria there are about 30 - and there are estimated to be more than 100 in total. Student numbers during the same period have increased from about 20,000 to over 500,000³.

The crisis in expenditure is aggravated by the fact that most universities have been built campus-style, where the community provides all services and covers all expenses for both teachers and pupils, from housing and food to clinics, clubs and sports facilities. This of course increases the number of employees per student. The teacher/student ratio alone is twice that of the industrial countries. This is partly due to the fact that the universities also pay teachers who are in the process of being trained abroad and partly to the fact that the universities often teach a large number of different subjects to a relatively small number of students. There is in addition a large body of non-teaching staff.

2.1.2 Crisis of quality

Increases in the universities's grants have not kept pace with this great expansion. This has meant that resources for running costs and research have been reduced to a minimum, while student numbers continue to rise. Consequently working conditions at the African universities are becoming steadily worse. Both the quality of teaching and the necessary conditions for research have deteriorated considerably.

The emphasis on quantity throughout the educational system has led to serious qualitative deficiencies. Higher education is accepting students who often lack the necessary qualities for advanced studies. Inadequate maintenance of buildings, laboratories and libraries and inadequate maintenance and development of student residences make studying conditions difficult. The result is a high drop-out rate and a decreasing level of efficiency in undergraduate education⁴. The national

³ Here it should be remembered that in 1983 the number of university students per 100,000 head of population in Africa was only 150. This is considerably lower than the corresponding figures for Asia (650) and Latin America (1250). In the Scandinavian countries by comparison, there are 2,000-2,500 students per 100,000 head of population and in Canada and USA ca. 5,000.

⁴ In Cameroon, the cost of educating a graduate is estimated at more than \$100,000, since there is a high drop-out rate and the total number of years studied per degree is 8-12 years.

universities are less and less able to offer an alternative to external education, and there is instead increasing interest in private universities.

Despite the considerable expansion, only a few countries have managed to achieve an equitable recruitment to the universities from the different sectors of society. There is a predominance of male students from the urban middle-class population. This inequity has tended to be reinforced by the effects of various reforms; for example, the introduction of entrance exams, intended to ensure that the students have a good educational grounding, has meant that prospects for women and students from rural areas have worsened. This reflects in part the situation in the secondary schools. The lack of student residences also discriminates against students from rural areas. The current plans to introduce fees may also have a negative effect on the opportunities for women and disadvantaged groups generally.

Another problem is the balance in terms of subjects studied. The early ambition to educate civil servants for the newly independent state produced a bias towards the social sciences. There is now an increasing demand for skills in subjects such as science and technology. Too few people are being educated and the quality of teaching is uneven. The development of these areas of study, which require considerable financial resources and functioning equipment and laboratories, have also been hard hit by the crisis of resources. There are also areas where it is particularly difficult to get qualified teaching staff.

One crucial issue is that of teachers' salaries. Salary levels have been gradually eroded, leading to resignations or an indirect reduction in teaching capacity due to teachers applying themselves to other assignments - these may at best be within their specialist area, but may also be within other activities like farming. Increased job opportunities in the private sector, and in particular offers of well-paid assignments from development agencies, make it difficult for the universities to retain and recruit staff.

At the same time, the conditions for research are undermined, leading in turn to a decline in the quality of the education. In many places there are pockets of very interesting and useful research. However, these research environments can sometimes be isolated islands completely dependent on external support and cooperation. Neighbouring departments may have no research resources at all and do not make attractive environments for qualified academics.

The development of research in general is severely hampered by the crisis in the universities. Research in the universities is being undermined by a lack of time and resources. Potential researchers work on assignments which only in exceptional cases contribute to the development of an academic environment. There is often not even time for the supervision of dissertations and a coming generation of researchers does not develop. Research institutes too are affected by this lack of academic environment and remain dependent on external recruiting or external postgraduate training for its recruitment of scientific staff. More and more research institutes now want to launch their own graduate programmes, a development which further undermines the role of the universities.

2.1.3 Crisis of management

The universities' ability to plan and manage their affairs is of course made more difficult by tight and often unpredictable financial frameworks. The major part of the operating budget goes on salaries and leaves very little for other purposes. Development assistance from various donors is therefore an important extra contribution. This is, however, a very unreliable factor in the universities' planning and administration. The direction and extent of the support is decided by the donor in each case and is often subject to certain conditions.

The administrative sectors of the universities spend much time complying with all the different agreement and accounting procedures and meeting with all the negotiating and evaluating delegations. Much of the external support is given in kind. Teachers are recruited and sent out by the development agencies and the administration of educational scholarships is handled in the donor country.

In addition, the donors often establish special structures for the administration of support projects for the universities in developing countries. One reason for this is of course the universities' limited ability to deal with procurement and customs procedures and the difficulties involved in dealing with payments abroad. At the same time these extra administrative structures mean that there is little opportunity for the universities' own capacity to be developed. Instead, they become dependent on the services of the development agencies.

2.2 The role of the universities in African countries

To be able to discuss the qualitative crisis in the universities in any meaningful way, we need to look at the mission of the universities and the functions they are expected to fulfil. Most African countries have ambitious plans for their universities. They are to be responsible for educating a qualified workforce, for research which is significant to the development and culture of the country, for the dissemination of information about scientific advances and for social analysis and debate. Unfortunately, despite these ambitions, many universities are devoted almost solely to undergraduate education.

2.2.1 Undergraduate education

The priority task of educating an internal cadre of teachers and civil servants was successfully accomplished in many countries after independence. The universities were based on European models and it was assumed that analytical skills and a research tradition would gradually be developed as qualified academics were appointed. This was also the case during the 60's, the "golden era" of some small high quality African universities. However, during the 70's the role of the universities was reappraised. Fundamental social needs were prioritised. The mobilisation and participation of the most disadvantaged groups and the expansion of areas such as primary schooling, adult education and primary health care, were put first. The universities were to have an active role in the actual work of mobilisation and development. A new expression - "the development university" - was coined.

The value of these efforts is scarcely in doubt. One negative consequence, however, was that advanced higher education came to be seen as elitist. The role of the universities in the development of strategic knowledge was less emphasised. Interest in research training and other postgraduate education was often dismissed as "diploma disease". Admissions to undergraduate education increased but at the expense of advanced academic development.

2.2.2 Research

The role of the universities in the development of research thus became reduced as did their ability to conduct postgraduate programmes and to develop a resource base. The research that was seen as relevant should provide solutions to immediate problems and above all contribute to policy analysis and development plans. Such applied research was seen as the responsibility of institutes which are also responsible for service functions, e.g. institutes for educational planning, stations for agricultural research and extension and central laboratories. Special research institutes have also been established through donor initiatives, as in the case of a series of demographic institutes. These institutes will, however, be dependent on external researchers and/or externally trained scientific staff as long as there is a lack of national research training.

2.2.3 Social analysis and debate

The involvement of the universities in African countries in a wider social debate has been marked. It has been said that while universities in the industrialized countries often stand for conservatism and continuity, the universities in the developing countries often stand for revolt and change. For example, a series of riots and several changes of regime have been sparked off by criticism from teachers and students in the universities. Several of the open conflicts between state and university originate in the students' dissatisfaction with their day to day conditions; others are openly critical of society. There are, of course, several reasons for the state authority's inability to deal with the crisis in the universities. One cannot, however, rule out the possibility that grant allocation of the universities in many countries is affected by their use of "academic freedom".

2.2.4 The role of the universities in Western countries

It may be of interest to take a brief look at the development of the universities in the Western countries, not least because these have been the model for the African universities. In the industrialized world too, higher education has undergone a considerable expansion. An ever-increasing degree of specialisation in society has led to a demand for a highly-educated workforce. Some countries have at an early stage emphasised the role of the universities in research development (e.g. Britain and Sweden), while other countries have come to develop separate institutions for higher education and for research (e.g. France and Spain). In all Western countries, however, toughening international competition has brought about stronger links between industry and the universities. University research is often considered to be more progressive and more flexible than research in the established research institutes.

The role of the universities in recruiting for research and research training is undisputed. Many countries are now implementing higher education reforms. The need for interdisciplinary skills and closer interplay between higher education and research are some of the main ideas in the ongoing work of reform in Swedish higher education. A similar restructuring process is in progress in many Western countries.

In certain countries, e.g. in Britain and the United States, the move is towards a differentiation of the system. By investing in mass education in pure teaching institutions, resources for research can be concentrated on universities with a good quality record. This process revives the concept of the classical university as a forcing-house for thoughts and ideas, even if aspirations towards competitive advantage and economic growth rather than a learned ideal is the rationale

Summing up, it is clear that the role of the universities has altered over the years with emphasis on different functions. There is no simple and clearcut model to be recommended for the developing countries. However, there is a need in all countries for universities as intellectual centres engaged in both research and higher education and with these functions as mutually dependent on each other.

2.3 External cooperation and dependence

The development of universities in Africa south of the Sahara has been characterised by strong external influence and financial and intellectual dependence. The universities in Europe have developed from highly autonomous associations of scholars to more outward-looking institutions for higher education and research. Also, in the market-oriented society of today, these universities have managed to assert their importance for intellectual development and in-depth analysis. The African universities however have had little opportunity to become independent intellectual centres.

2.3.1 From core support to support for selected projects

During the years of colonialism, several universities were founded as branches of European universities, e.g. the regional University of East Africa was founded as a part of the University of London. French universities had a similar system of sponsorship in West African countries. Foreign teaching staff were engaged and the standard of education was in several cases comparable to that of European universities. The regional structure, however, proved shortlived, and during the 1960's, national universities were founded in many African countries. The universities, together with the expanded secondary and primary schools, constituted the education system which was to develop the independent state.

During the early years, many universities had external core support from donors who also financed foreign teaching staff, institutional cooperation and scholarships for education in the donor country⁵. During the 70's, when several batches of

⁵ The Rockefeller Foundation, for example, contributed over \$7 million between 1961 and 1973 to the Universities of Makerere, Nairobi and Dar es Salaam.

students had gained their degrees and many had also had postgraduate education in Europe and the United States, interest in core support to African universities waned. The foreign donors wanted instead to invest in mass education at the primary level and the universities' share of the donor support decreased. In connection with this, the foreign teachers, usually senior and highly qualified, were replaced by young and inexperienced staff.

Instead of allocating core support to the universities, the donors chose to support specific projects. The role of research was to solve problems of immediate relevance to the crisis situation in Africa (food, energy, water, population, etc). Support was directed towards different institutes as part of a more comprehensive programme of development assistance. A series of regional institutes, research programmes and networks was established. This trend coincided with the emphasis on "the development university" in Africa and contributed to the reduced role of the universities in research. *Project support also meant that there was an external definition of which areas warranted support.*

2.3.2 Dependence and the "brain drain"

Because development assistance to an increasing extent was tied to specific projects, the newly educated university teachers had less opportunity to develop their own academic tradition. National grants for university research were either extremely small or non-existent. This weakened both the basis of the intellectual exchange which creates ideas for research and the conditions for a peer review system for assessment and distribution of grants. The researchers had the choice either of accepting that their ideas, plans and proposals had to be approved by external judges, or participating in the projects laid down by the donors. This "contract mode" for research discourages independent thinking. The shifting interest areas of the donors and lack of long-term commitment have further reduced opportunities for African academics to produce creative research environments and to lay the foundations of a national research tradition.

Most of the support of the old colonial powers for higher education after independence was in the form of scholarships and foreign teaching staff for the universities. Although more and more undergraduate education was undertaken internally, a more or less permanent culture of external education has been established at postgraduate level. The lack of an indigenous academic culture and lack of the means of conducting independent research together with deteriorating financial conditions have contributed to an extensive "brain drain". Almost half (at least 70,000) of those who received their education at African universities are now employed in other countries.

The dependence on external universities for research training, the lack of national research grants and the fact that grants for "donor projects" are more easily obtainable has also led to the feeling of intellectual dependence which characterises many African universities. The international exchange of thoughts and ideas, crucial to a university, may be jeopardized if the exchange is too one-sided. This is also true for research cooperation which requires an internal base.

Institutions in the industrialised countries accumulate experience, and it is these institutions that have an overview of the situation in the developing countries. The

institutions of the industrialised countries are also able to keep up with the shifting trends and preferences of the grant-givers. On the other hand, the academics in the universities and researchers at the research institutes in the developing countries may feel like perpetual trainees who never have the chance to take the initiative in research or to assume responsibility.

2.4 Concluding summary

The crisis in the universities may be characterised by a series of vicious circles. A large scale expansion combined with diminishing funds have led to an extreme thinning of resources and a serious qualitative crisis in higher education. Standards are further impaired because the teaching staff get neither the time nor the resources for research. The academic environment is being eroded and is further undermined by an increasing "contract mode" for research, and by the decreasing real wages of the teaching staff.

The isolated pockets of research which still exist are wholly dependent on external financing. In the absence of internal funds for research, there is no system of peer review or internal academic tradition being developed. The researchers become wholly dependent on external policy for the financing, selection and assessment of research projects, and also on external contacts for academic exchange. While individual researchers and research groups may exist, an indigenous research tradition is unlikely to develop.

A poor capacity for coordinating and handling resources and external tied and earmarked contributions have brought about external administration structures and external management, which further undermine the institution's own capacity to plan the use of its resources and its opportunities to implement policy decisions.

3. International debate and new initiatives

3.1 The World Bank's assessment of the universities

The problems of the universities have in recent years come to the attention of a number of donors. UNESCO, which until the beginning of the 1980's was leading the international debate on education in the developing countries, has played a more minor role since the withdrawal of American support. The World Bank has become the prime mover in formulating the problems and conducting debates in the area. The Bank's studies and policy documents have indicated qualitative crises throughout the education system in African countries. The World Bank, which in the mid 1980's questioned the need for universities in poor developing African countries, met with strong criticism at a conference of African university leaders in Harare in 1987. This led to policy being modified but World Bank's views on the role of the universities are still viewed with some suspicion.

The World Bank criticises the universities for poor levels of efficiency and misguided aims. The financial crisis has led to austerity programmes involving cutbacks within public administration, which has been the most important source of employment for university graduates. In many countries, there is an increasing graduate unemployment, while at the same time there is a glaring shortage of trained engineers, scientists and agronomists etc, who are now needed to increase the country's production and create growth. The Bank has also commented on the absurd situation in which over 100,000 foreign experts are still working in African countries at an annual cost of over four billion US dollars.

The universities are now being criticised for being far too costly in comparison with other forms of education in the country and for training too many social scientists and too few engineers and scientists. They are also criticised for the poor quality of the teaching and for not contributing relevant research to aid the country's development.

It is easy to understand the frustration amongst Africans who have had only limited influence on the design of the university system and who are now being held responsible for its failings. The donors' sudden interest in "capacity building" in part has meant a renewed interest in support for universities. On the other hand it has also meant that donors have a great need of internal skills for their projects, policy reviews and strategy documents. The universities have difficulty in retaining their teachers when donors are outbidding each other in competition for the most qualified staff.

The World Bank is now finalizing a comprehensive piece of work on a policy for support to higher education which is to be finalised in 1993. It is expected to be of major significance for the aims and direction of both national and external support to universities. UNESCO has also begun to work on policy in the area and is planning a major conference in 1993.

3.2 Current donor initiatives

Reference was made earlier to the renewed interest amongst donors in capacity building. The term may be said to sum up the increased emphasis on the need to strengthen national institutions, skills in analysis and decision-making, accountability and responsibility. Donors have realised that academic undergraduate education alone is not enough to enable the large numbers of external experts to be replaced by internal staff. Postgraduate education including research training is needed to meet the need for advanced skills.

The World Bank has been a prime mover behind the creation of an African Capacity Building Fund (ACBF), which has united a number of donors in the aim of promoting administrative and financial capacity. An ACBF Secretariat has been established in Harare. A first major undertaking involves giving support to the African Economic Research Consortium (AERC), another donor initiative which seeks to strengthen and coordinate economic research and capacity for postgraduate education at universities in the region. AERC also has extensive Swedish support.

Bilateral donors, who have also become aware of the important role of the universities and the deepening crisis, are keen to invest in capacity development at universities in the developing countries and are seeking to develop a policy and suitable forms of support. The Netherlands, which has supported university cooperation via NUFFIC and provided universities in the developing countries with teaching staff, are now adopting another model. The Dutch believe that the strong emphasis on cooperation with Dutch universities may cause dependence and want instead to concentrate on other forms of support to institutions in developing countries. However, NORAD and DANIDA who have just developed forms of university support allocate their grants to applications from universities in Norway and Denmark.

During the 70's and 80's, most donors, including the Nordic countries, were sceptical about support to research which was not thought a matter of immediate concern. This does not mean, however, that research and higher education have been prohibited in traditional development assistance. Like SIDA, many development agencies have financed education and research as a part of more comprehensive projects or programmes. Certain countries, e.g. France and Britain, have set aside a large portion of their total development budgets for higher education, mainly through scholarships for studies in the donor country or support in the form of external teaching staff; only a small portion of the budget has been put towards direct support for the development of institutions in the developing countries.

With only a few exceptions, there is little experience amongst the donors of discussions on research and university politics. This is reflected in the current debate on support to universities. The World Bank's emphasis on financial analysis and financial incentives is hardly surprising, but is disquieting in view of the major influence that the Bank's conditions tend to have. As a consequence, much of the discussion on universities in the developing countries has centred on financial aspects.

The internal development of the universities, however, is not only affected by financial circumstances. There is a need to enter much more deeply into the academic debate which is currently discussing how creative environments are developed and can become attractive and how "the good institution" can evolve. Analysis of strategies for academic development, different models for higher education, the financing of research and research recruitment needs to be developed and discussed.

Those donors who have experience of support for research and competence building should therefore take greater responsibility for analyzing and sharing their experiences and participating in the debate on universities. Of the North American donors, the IDRC in Canada has had most experience of research support, together with the Ford and Rockefeller Foundations, which gave extensive support to university development in the 1960's and 1970's.

Sweden is the only country in Europe with a special agency for research issues within development cooperation. SAREC's early experiences of support for research projects led in the 1980's to a more systematic concentration on support for the development of research capacity in the cooperating countries. Efforts in recent years to strengthen creative research environments and postgraduate programmes in the developing countries have highlighted the need for a more unified support for universities as a basis for national research development.

An interesting forum for debate on support for universities in developing countries has been developed through the "Task Force of Donors to African Education". This initiative arose in 1989 as an informal group for mutual consultation between donors. SAREC and SIDA have participated in the working group on higher education. The group has involved representatives of African universities, including the "Association of African Universities", AAU, in discussions and studies. Recommendations from the working group have to a certain extent influenced donor policy on support to universities and have led to an increased readiness for support coordinated at the country level.

4. Preconditions for good development assistance

What, then are the requirements for effective assistance to universities and how should it be designed? There is a multitude of reports describing the crisis and problems of the universities. While much efforts are devoted to descriptions of the manifestations of the crisis, there are few good analyses of the causes of the problems and few suggestions as to how they might be addressed. It is, however, clear that there is no simple solution to the complex problems. On the contrary, misdirected development assistance may help to deepen the crisis rather than resolve it.

Some problems are best suited for internal solutions and internal action is required for external support to be constructive. It is unlikely that individual projects are capable of breaking the vicious circles outlined earlier. Instead, there must be action at several levels simultaneously. When discussing support to a certain university and the possible form of that support, one should also consider whether the policy environment is supportive.

Efforts must be aimed at increasing the recipient's opportunities to take responsibility at different levels. The effectiveness of development assistance will depend on the policy on the national level, the policy of the institution and on the policy of donors.

4.1 Policy on the national level

The role of the state has been much discussed in relation to the liberalisation strategies implemented in many African countries. However it is generally agreed that the state must safeguard investments of key importance. The provision of a minimum of higher education and research are such essential needs pertaining to the public domain. The universities in African countries are, almost without exception, state financed and are regarded as national development projects. Clear national responsibility is therefore one of the first conditions for good development assistance. The donors' willingness to assist the university must be matched by a national commitment and should not lead to the state grant being reduced or diverted.

4.1.1 Policy for higher education and research

If external support is to be meaningful, it must be planned in relation to a national policy. Such a policy should define the system of higher education and research, the institutions that should be a part of it and the mission and functions of the different types of institutions. Underlying the policy must be a realistic plan for the financing of the system.

This is a delicate task and there is no ready model to recommend. In general, however, certain choices must be made between quantity and quality. We assume

in this discussion that it is essential for every nation⁶ to have at least one well-developed university⁷ with capacity for research and higher education in central areas. This presupposes that a minimum of resources can be mobilised for strategically important investments. It is less meaningful to give support for quality improvement in universities in countries which choose to spread scarce resources thinly over several weak institutions.

Various strategies can be employed to release national resources to cover such expenses as salaries, running costs and research at the university. A moderate expansion of the universities' undergraduate education system is, for example, easier to accomplish if alternative educational channels, like polytechniques and other professional schools, have been developed. A diversification of this sort in the higher education system may also correspond to a need for vocational skills in certain areas.

4.1.2 Autonomy and academic freedom

The responsibility of the state to safeguard funds for national universities does not imply that the state is suitable to manage university affairs. Several universities in Africa have, despite their formal status, a relatively high degree of academic autonomy, i.e. the right to select teaching staff and students, the right to decide the content of their educational courses and standards for examinations. It is, however, less common for the universities to be able to exercise the right to decide conditions of appointment and how grants should be distributed in other respects. The salaries of the teaching staff are often linked to conditions for other state officials, and the operational budget may be minimal.

The importance of university autonomy has been much debated. The extent to which they are able to be flexible and innovative may depend on the degree of self-government. At a higher level of self-government the role of the state would become that of supervision rather than control, and the universities are expected to demonstrate a clear accountability. Completely autonomous universities are advocated by those who believe that the supply of education should be governed by the demand in a market.

Others question the appropriateness of completely market-led universities, particularly in countries where those that constitute the market are very poor. For the universities in such countries, autonomy from the state might instead lead to dependence on donors and external policies. A certain degree of state influence is thought necessary to ensure the provision of education within all sectors, to prevent too great a decentralisation diluting scarce resources or to counteract racial discrimination. Autonomy can only be appropriate when mechanisms are in place to safeguard qualities like equity and an independent university development.

⁶ With the possible exception of very small nations

⁷ One university in this context means one university system. In Tanzania, for example, the Faculty of Agriculture is organised as an independent university. In Mozambique the Faculty of Education is at the independent teacher training college.

Against this background it would be inappropriate for donors to make self-government a precondition for development assistance to universities. On the other hand, academic freedom should be an express prerequisite for development support for higher education and research. The right to freely seek the truth and follow one's conviction in teaching and research without fear of reprisal ought to be guaranteed whatever the degree of financial control.

4.1.3 Financing universities

National policy determines the level of public funds as well as possibilities for additional income for the universities. Investment in the quality of higher education and research may bring about major economic returns in the medium to long term perspective. A high quality university may produce qualified academic staff to substitute the expensive foreign teaching staff, offer an alternative to high cost overseas training and reduce the dependency on costly foreign experts, expenses heavily tapping public resources.

It is important that short term saving and income opportunities do not prejudice or undermine this overriding objective. Nevertheless, the possibilities for supplementary income for universities have been given a lot of thought. In some countries, any additional income goes directly to the state. In other cases the universities themselves may make use of such income to reinforce their budgets. The possible sources are student fees, income from services and donations.

The question of student fees is complicated and controversial. Different ways of sharing the costs have been discussed, including tuition fees and/or fees for living expenses. This assumes the introduction of systems to award study loans or scholarships to those in need. The arguments in favour of cost sharing are, however, not only financial. They are put forward as an issue of equality, on the basis that it is unfair that groups which are already privileged should receive free education. On the other hand, the only way to ensure that neglected groups such as women and students from different regions are at all fairly represented is to provide full coverage of costs. The quality of equity is important, not only in terms of fairness, but more importantly to enhance democratic representation among the national leadership and other educated groups.

Another argument in favour of sharing the costs of studies is a qualitative one. Fee-paying students can make demands on teaching standards and are anxious to achieve their degree quickly. It has also been claimed that students paying full fees are able to choose between different institutions, thus encouraging the development of private institutions. The issue of private universities is, however, also a controversial one.

Income from services and donations are less related to policy at the national level than to that of the institution and will be commented under 4.2. A general mechanism to bring in resources for national universities will however be mentioned in this context; a restrained policy in respect of scholarships for studies abroad⁸. The

⁸ In Cameroon, costs for the 6,000 students studying in France are estimated at about \$30,000 per student per year. Only about half return when they have completed their studies and all in all this amounts to considerable "development assistance" from Cameroon to France.

grants for these scholarships could usefully be invested in internal postgraduate programmes⁹. These must however be of good quality if they are to be able to hold their own.

4.1.4 Private universities

To date, only about 5,000 of the more than 500,000 students in higher education in Africa attend private institutions. Most of the around 30 such institutions are funded by religious foundations. Others are purely commercial. The uncertainty in relation to the former is due mainly to fear of waves of fundamentalism and ideological sectarianism. Criticism of the commercial colleges is mainly centred on the fact that they cover only the lucrative areas such as management and computing, while at the same time enjoying the benefits of the investments of the national universities in, for example, libraries and teacher training.

Many countries are still doubtful about private universities and see it as their duty to safeguard the ability of the public universities to contribute to national unity and take responsibility for the needs of society as a whole.

4.1.5 Accountability and quality control

Academic accountability is related to quality of higher education and research. The assessment of quality should be mentioned in this context. Various types of performance indicators to assess the academic worth and effectiveness of universities are being tested in various Western countries¹⁰. It has been suggested that these could also be used in the developing countries as instruments for accreditation of universities and for deciding on grants to universities.

Academic quality should be an important aim for development assistance to universities. The realisation that quality is a complex concept and is to a certain extent specific to every situation should, however, invite caution, particularly as the value of certain indicators has not yet been assessed. For example, the number of graduates does not indicate much about the academic quality. Their performance in jobs or suitability for graduate studies may be added for quality assessment. Other qualities, such as regional representation and relative numbers of males and females are also important.

⁹ A large portion of the development assistance to higher education from donors such as Britain and France is however in the form of external scholarships and can scarcely be made use of for national projects. Many universities in, for example, Britain are entirely dependent on foreign fee-paying students, who represent about a third of all students in the country.

¹⁰ In Britain, a ranking list of the universities was recently made public and gave rise to a heated debate.

4.2 Policy of the institution

4.2.1 Integrated planning

Support for universities will not be constructive unless the universities themselves can take responsibility for the planning and coordination of their resources¹¹. Disappointing experiences of central planning in some countries have led to a distrust of planning in general. However, there must be an integrated overview of available resources and development alternatives before external support can be properly utilised. The level of institutional responsibility is naturally linked to the degree of influence that the university has over the resources put at their disposal by the state, donors and other sponsors.

In the spring of 1991, Eduardo Mondlane University, UEM, in Mozambique invited all its donors to an integrated presentation of the university's problems. In its presentation ("Present and Perspectives, 1991"), it was able to show that only a third of the budget can be planned by UEM, while two thirds correspond to contributions from various donors for teaching staff and other tied contributions. UEM now wants to invite donors to annual reviews in order to facilitate communication with and between the donors and to be able to coordinate support. It is hoped that this may help them to obtain additional support for those areas not already covered by donors. UEM also hopes to obtain support for studies and receive advice in planning, but wants to retain the responsibility for decision-making and coordination itself.

4.2.2 Policy, strategies and realistic ambitions

The institutional responsibility of the universities requires amongst other things the ability to draw up and put into practice an admissions policy which corresponds to overall aims and qualitative requirements, a staffing plan and a plan for staff development and a policy for accepting external scholarships, grants and assignments, as well as a policy for "topping up" salaries for instance in connection with external assignments.

The universities have sometimes been actively encouraged to offer evening classes and summer courses, sell consultancy services and accept research commissions as a way of increasing their income. Experiences of this have, however, been mixed. The benefit to the university may be dubious; the costs in terms of academic manpower may be high and the income low. Most universities have problems in controlling assignments agreed with individual staff instead of university mechanisms. The benefits of external income must also be weighed against possible academic gains and losses.

¹¹ There are many examples of mismanagement of a country's educational resources. Tanzania, for example, has an "overcapacity" for postgraduate education within several areas while at the same time scholarships for external education in these areas are being distributed. This may be due to individual interests? but may also be due to a lack of confidence in the quality of internal education. On the whole, however, it ought to be more profitable to invest in external teaching resources or institutional collaboration in order to raise standards at the internal institution than to pay high fees to the foreign universities.

The possibilities of donations from alumnae and others are marginal in the poor African countries. Donations from industry and donor agencies are more often than not tied to conditions or earmarked for certain purposes.

It is generally important that the universities set themselves realistic aims and draw up strategies to achieve these aims. A wealth of experience is accessible through exchanges with institutions in the region. The vigorous debate currently taking place in conjunction with the work on university reform in Western countries can also be of use. As donors, we can help by placing our entire range of experiences at the recipients' disposal rather than simply presenting a blue print solution. The tight budgetary framework is a great test of the universities' powers of resolve and they must find solutions appropriate to their own culture and circumstances.

4.3 The responsibility of the donors

4.3.1 Coordination

Donor coordination is often referred to as important. However few donors are prepared to let their support be coordinated by the receiving institution. One important conclusion that UEM has drawn from its attempt at integrated planning is that failure is not due only to the shortcomings of the institution. The donors are often restricted by their mandate and areas of interest. A reluctance to provide flexible support also reflects the need for the universities to gain confidence for their the capacity to manage and account for funds. Mozambique's initiative to gather national and external sponsors in a joint "meeting of donors" for discussion of the annual report and plans is an interesting example.

4.3.2 Donor policy

SAREC and SIDA believe it is important for donors to discuss the situation in African universities, to analyze the causes of the crisis and share the experiences of possible donor strategies. We ought to know how our support fits into a planned development, or at least be sure that it does not cause major distortions¹² (10). There are many examples of prosperous, sometimes over-resourced, university departments existing alongside languishing departments which have virtually nothing.

Donors could make a useful contributions by starting to negotiate support in relation to a overall plan for university development. They should be able to see how their development projects fit into a particular context, e.g. a staff development plan, and how the projects affect other development plans. This does not mean that any plan is automatically accepted, but it is easier to conduct a dialogue and put forward points of view if one exists.

¹² An extreme case of misdirected support is that of the Faculty of Economics at the University of Mozambique, which received external support for curricular development, external scholarships for postgraduate teacher training and support to enable them to extend invitations to external lecturers. With the addition of other scholarships and a series of external commissions, mostly from the same donor, the faculty has been depopulated, leaving only one full-time teacher, a very inexperienced head of faculty.

The policy for support to higher education and research should be "quality before quantity". Donors who want to promote universities should refrain from supporting the establishment of new universities and colleges currently taking place in certain countries despite the lack of a reasonable level of internal financing. Contributions to new institutes which cause resources to be spread thinly and undermine the role of the universities in research and research training should be avoided.

At the national level, donors should note the possibility of linking educational assistance given to authorities and institutes to the internal educational institution instead of financing external training. Opportunities for developing postgraduate programmes at national universities could be developed through institutional cooperation.

After pointing to these ingredients of a donor policy, it appears necessary to underline that constructive support should support the policy of the institution rather than superimposing an external set of ideas. Most donors now realise that their support may contribute to a "cycle of dependence". It may be possible to work out a code of conduct for support to, and use of the capacity of, the universities.

Donors who want to support the development of the universities should reconsider their habit of calling on university staff for individual assignments and should instead make use of the consultancy and service structures that the universities are attempting to build up. In a similar way, grants for research and research training should also be tailored to the plans of the institution. The donors should be prepared to set aside a portion of the grant for institutional overheads, particularly in the case of commissions.

4.4 Conclusions

Meaningful development cooperation cannot be orchestrated from outside. National responsibility and institutional responsibility are necessary prerequisites. Institutions should be able to be in charge of coordination of national resources and support from different donors. Part of the problem is, however, that these conditions do not exist or exist only partially. The policy dialogue is important and a suitable policy environment necessary for strategic investments in universities. Efforts to strengthen universities must also be complemented by efforts to strengthen their capacity for academic and financial management and their possibilities to coordinate support. The attitude of the donors and their policy for university support are also of crucial importance to opportunities for integrated university development.

5. Strategic support to universities

The crisis in the African universities is not merely a financial one. The financial crisis has of course contributed to the problems but perhaps most of all has made them visible. External support requires the understanding of the nature of the problems and the mechanisms that maintain the crisis. Development assistance is not simply to make resources available - even if there are situations when flexible support can be strategically important; it is to support a process which can break the vicious circles which lead to the depletion of resources and intellectual and financial dependence, factors which together undermine opportunities for the universities to coordinate and plan the use of their resources.

5.1 Three key areas

The thinking behind the idea of strategic support to universities is that the needs in some areas are particularly urgent and cannot be met by the provision of ordinary resources. Strategic support should help to bring about lasting changes which should remain in place even when the support is no longer there. Support for so-called "gap filling" and budgetary support is strategic only during a period of transition, until such time as a plan is in existence or there is an expectation that skills and resources can be provided. In other situations, budgetary support and staff development assistance may lead to increased dependence.

Support in three key areas may be of strategic importance for the breaking of the vicious circles described earlier. The first two can be summed up in the concepts of *institutional capacity* and *academic capacity*; however, the issue is not merely capacity but also institutional and academic culture. The third is *regional cooperation*.

5.1.1 Support for institutional capacity

In order to be able to coordinate resources, take decisions itself and implement its own projects, a university needs a suitable form of management and a suitable decision-making structure, and also a capacity to hold enquiries and to handle policy development and planning. In addition to these management functions, there is also a need for administrative skills to deal with such aspects as financial administration and reporting, procurement and maintenance of equipment. Development cooperation should aim to strengthen these functions.

Institutional capacity also includes strategic basis resources. Basic resources of vital significance are access to funds for such things as travel and regional scholarships and funds for research training and research. The development of libraries and systems for organising scientific information are amongst the key issues for university development. In addition to library support for procurement and subscriptions there is an urgent need to support training and skills development. In order to ensure the supply of educational literature and to help disseminate the results of research it is also essential to support publishing possibilities.

Complementary budgetary support may be considered if there is a complete absence of flexible resources. Support of this sort may be necessary during a period of transition for the worst hit countries in Africa. A university cannot develop planning ability when there are no resources to plan with - but on the other hand, it receives no development assistance if it is unable to produce credible plans. Assistance purely for running costs, such as textbooks and teaching aids, financing of studies and funds for the payment of salaries, brings with it the risk of dependence and should only be contemplated in cases where there is an extreme shortage of resources. Support for the financing of external teaching staff may, however, be strategic if support is at the same time given to internal teachers to enable them to gain academic qualifications.

5.1.2 Support for academic capacity

The development of an academic culture is above all a matter of developing research. Research capacity is one prerequisite for the development of capacity in academic teaching. Here too the problem is of the "chicken and egg" variety. Poor teaching leads to poor recruitment to research which leads to poor research which leads to poor teaching....

Support for the development of faculty programmes for research is probably the single most important form of support to advanced higher education. A research environment which can be responsible for research training and possibly its own postgraduate programmes will also attract teaching staff who are stimulated by a creative environment. In this way the trend of "doing research for the highest-bidding donor" may be reversed. Education at undergraduate level also gains a new dimension when research work is taking place in the same surroundings. Analysis and an enquiring frame of mind will gain prominence, along with the search for truth, the hallmark of academic education. International contacts are developed and the environment becomes an attractive one for visiting teachers.

One prerequisite for the development of a research tradition is the existence of both permanent resources for research (faculty grants) and the possibility for researchers of seeking grants for projects. This will reinforce structures and forms for assessing and distributing grants. Donors can contribute support to flexible funds for this purpose. However, it is important that the institutions also set aside some of their own resources for research so that they may be able to develop research independently of the interest areas of the donors.

Strategic support to research development is based on the principle of a broad base and the possibility to focus resources on particularly successful research environments. There should be broad-based recruitment to research training and more selective support to advanced research. Support for research training in a faculty should be long-term and should ideally embrace a group of students so that a critical mass of graduate researchers can gradually be formed. In most cases, the best alternative is a sandwich model for training based on a collaborative project with short external visits for courses etc. The collaborating institution is responsible for supervision and for giving support to build up a research environment, so that long-term research cooperation can be established.

Support for external supervision is only necessary when there is no qualified tutor in the faculty. As soon as a group of advanced researchers has been formed, donors should concentrate support on national research training. Thus initial support for an external doctoral degree should consequently be followed up with support for research cooperation and possibly internal research degrees. Some groups of researchers may become so strong that they attract students from other countries in the region. The development of such "centres of excellence" at universities should be encouraged.

Many analysts now agree that African universities must "bring home" research training and other postgraduate education in order to escape from the inferiority and dependence syndrome. Only when a university has its own Masters students and doctoral candidates can it create a vigorous "self-perpetuating" research environment. This is important not only for recruitment to research but also for the realisation of research projects. Different types of scientific breakthrough may come from research teams that involve candidates for research training in much of the work.

5.1.3 Support for regional cooperation

Networks operated by the developing countries can be very significant factors in the development of cooperation between universities. The idea of giving support to "centres of excellence" for research and postgraduate education is being discussed by donors as a way of optimising resources. Such centres can, however, not be "designated" or created by donors without massive external support. Advanced research environments can, on the other hand, develop out of an academic environment in a university.

Contributions to open travel funds and grants for regional scholarships can enable guest researchers and students to join the more interesting institutions for shorter or longer periods and to participate in other countries' postgraduate programmes. In this way, more attractive environments can be developed into regional centres for research training and courses.

Regional cooperation is also necessary to encourage a debate in Africa on the situation in the universities. In recent years, the donors have spent a lot of time and energy investigating the situation in the universities and working out a policy for support. There is now a considerable body of collective knowledge and analysis of factors contributing to the crisis. Unfortunately, this information is mainly in the hands of the major donors. Many of the studies have been carried out by African experts, but the assignments and problem areas to be covered have as a rule been defined by the donors. The need for support to enable African university organisations to improve their means of defining problems, gathering facts, and analyzing and discussing higher education and research is therefore an urgent one.

5.2 Conclusions

Development assistance should cover areas of strategic importance for university development; only in extreme cases should contributions be made towards running costs. The development of institutional and academic capacity is crucial. Competent management

allows integrated planning of national and external resources. A creative research environment leads to better teaching and an academic culture. Support for the development of postgraduate programmes is an important element in the development of an attractive research environment and can be a basis for regional cooperation.

6. Swedish experience of support for African universities

6.1 SAREC's experience

SAREC can now look back on the experience of about 17 years of research assistance. Support has been given to advanced research into important development problems, and also to the development of national research in developing countries. SAREC has thereby gained extensive experience of support to universities, particularly in countries with a weak research base, where about 80 per cent of the support goes to projects in universities (Table 1). SAREC has, however, only limited experience of direct support to higher education.

At the time of its establishment, SAREC had few models to work from in its efforts to support research in poor developing countries. SAREC's early support for research cooperation led to a series of reports but not necessarily to the development of independent research at institutions in the developing countries. During the 80's, a systematic concentration on the development of research capacity has been a characteristic of all development efforts, making possible an evaluation of the results of various methods of support.

SAREC has never had a comprehensive scholarship programme, since this increases the risk of a "brain drain" and education of doubtful relevance. Instead, the SAREC model has aimed at domestic research training often based on a sandwich arrangement within the framework of cooperative projects with Swedish researchers (Table 2). These projects have also included support for equipment, for the education of ancillary staff and for the participation of a group rather than of an individual doctoral student.

SAREC's positive experience of research support also in countries in severe economic crisis may be thought surprising in view of the ever-worsening conditions for the universities and the researchers. The fact that it has been possible to develop a number of projects which have given interesting results may perhaps illustrate the attraction of opportunities for research and creative development. At the same time, it has very often been easier for the researcher in developing countries to build relationships with cooperating external institutions than to build relationships within his/her own academic environment, and individual development projects have in many cases not brought about the hoped for development of academic culture.

Table 1. SAREC's support to cooperating countries with poor research structures in the financial year 1991/92 (thousands/SEK)

Country	University	Research Institute
Nicaragua	9,500	2,000
Sri Lanka	3,000	4,000
Vietnam	4,000	4,000
Ethiopia	17,200	800
Mozambique	9,000	2,000
Tanzania	14,000	4,000
Botswana	5,000	
Zimbabwe	7,400	1,200
TOTALT	69,100	18,000

Table 2. SAREC's development efforts in cooperating countries with poor research structures showing type of contribution

Country	Projects/programmes		Postgraduate programmes		Inst support
	With Swedish coop.	Other	With Swedish coop.	Other	
NIC	12	2			1
VIE	11	2			2
SRI	4	3			3
ETH	11	4	3	2	3
MOZ	10	5			4
TAN	11			1	1
BOT	2	1	2		4
ZIM	10	1	1		3
TOTAL	71	18	6	3	21

(The above is based on figures on development efforts given in the most recent board memorandum)

Experiences of institutional cooperation have recently been set out in a report which points out pitfalls and errors but which also gives guidance as to how good cooperation can be organised (Bhagavan 1992). The danger of domination by the Swedish institution and the danger of dependence within this sponsorship arrangement are common problems. One model that has been tested in Mozambique requires prospective candidates for research training to themselves make contact with the Swedish institutions, agree terms of cooperation and draw up a contract. In this way, both the responsibility and the initiative are with the researcher from the developing country. The model is now also being tested in other programmes of cooperation between countries.

Opportunities for researchers from developing countries to participate on their own terms are also being promoted within SAREC's regional programmes in Africa. Unlike a series of networks which are first defined externally and which then set out to "recruit members", these programmes are based on active research work which also receives bilateral support¹³. This avoids a situation which is solely "supply driven". SAREC's model for regional programmes can be extended to cover several areas of major importance and thereby help to ensure that different research projects together form a critical mass able to produce exciting developments in knowledge and hold its own in an international context.

SAREC's experience of support for national Masters and doctoral programmes in African countries is limited to a few programmes in Ethiopia, Tanzania, Botswana and Kenya. In an international perspective, however, this experience of "domestic" graduate programmes is significant, particularly as the support has been developed in varying circumstances and on the basis of different models. Comparisons can be made between the experiences of support for graduate programmes within educational research in Botswana, biotechnology in Zimbabwe, land conservation in Kenya and various models for Masters education in biomedicine and other areas in Ethiopia. By comparing the costs, the effects on institutions and recruitment to doctoral studies it is possible to devise better and better ways of organising development projects within these programmes. The programmes can also be developed into a regional resource.

Experience has shown that such support gives a decisive "lift" both to research development and to the quality of undergraduate education. An Ethiopian survey in 1989 concludes: "wherever postgraduate programmes have been initiated, R & D achievements made a qualitative and quantitative jump."

SAREC's support to the universities' institutional base for research development such as support to libraries, general research funds, travel funds or funds for the maintenance of scientific equipment, has in some countries been quite extensive (Table 2). SAREC has had positive experience of this type of support which is often the universities' only flexible external resource. In many cases it has helped to

¹³ There is experience of this sort within such widely differing areas as marine biology, archaeology and reproductive health. In these programmes, a Swedish institution coordinates courses and seminars. The networks of researchers who receive support within the programme for sociological research in Africa (PASS) and the women's programme (and who are not cooperating with Swedish institutions) also of course work on the basis that researchers participate on their own terms.

bring about an improvement in the universities' administrative capacity. In certain cases, however, SAREC have resorted to external mechanisms for procurement and dealing with various transactions. SAREC is now more actively trying to strengthen research administration in these countries too.

All in all, SAREC has had relatively extensive experience of support to universities in African countries, even if the support has consisted of a series of partial contributions to specific projects and programmes. In some countries, e.g. Botswana, Ethiopia and Mozambique, SAREC's combined development projects have formed the biggest single programme of support to research at universities and have led to the development of structures for planning and research administration. It is, however, only recently that the critical situation of the universities has attracted serious attention, leading to an awareness that research support must to a greater extent be planned in an institutional context.

6.2 SIDA's experience

In recent years, SIDA has given varying amounts of support to higher education and research in the developing countries. The two main tendencies of this support could be said to be:

- focused support, shaped according to the needs of sectoral development projects
- general budgetary support to certain universities

6.2.1 Sectoral support

Work in this area is based on needs in the sectors receiving development assistance from SIDA. Since the shortage of trained staff sometimes makes development impossible within certain projects financed by SIDA, these programmes have been broadened to include support to higher education and research.

SIDA is currently supporting about fifteen education and research projects in ten countries, most of them in Africa. As can be seen in Table 3, support is given particularly within the areas of agriculture and the environment, education and administration. Within the area of agriculture and the environment, SIDA has singled out research as a key factor in producing development. Support is given mainly to independent research institutions but also to universities.

SIDA does not have a unified policy on support to higher education and research. The international debate is followed via SIDA's teaching division. This division also aims to systematize the experiences of different agencies and follow policy development in the field.

SIDA's support may include the reinforcement of individual university departments (economics, Dar es Salaam university), or the development of certain educational courses at PhD, Masters or undergraduate level within different areas. Support may also be provided purely for research. The main aim of this is to build up departments which train qualified staff both for immediate employment in the

job market and for further research within strategically important, sector-specific development areas.

Table 3. SIDA's support to higher education and research in developing countries 1991-92.

1. Sectoral support:

COUNTRY	Research Inst.	University	Area SEK/mill.	Budget
ANGOLA	1		Fishery research	9.5
GUINEA BISSAU	1		Masters training Education	1.0
INDIA	1		Forestry research and training	2.0
KENYA	1		Agricultural rch.	1.4
MOZAMBIQUE	3		Masters training in educ. planning Teaching research Masters training in economics	9.0
NICARAGUA	1		Training/research in pest control	2.0
TANZANIA	1	1	Training/research in land conservation Masters/doctorate in economics	3.8
TUNISIA	1		Research in land conservation	5.0
VIETNAM	1		Forestry research	2.0
ZAMBIA	1	2	Seed research Masters training in surveying and electrotechnology	36.4
Total				72.1

2. Budgetary support

MOZAMBIQUE	Universidade Eduardo Mondlane	13.0
TANZANIA	University of Dar es Salaam	1.5
ZAMBIA	University of Zambia	3.3
Total		17.8
GRAND TOTAL		89.9

This form of development assistance is totally dominated by the educational element - the strengthening of the institution. Most emphasis has been given to the task of developing the capabilities of internal teachers and providing them with further training. Support to higher education and research is generally given in the form of long-term institutional cooperation between an institution in a developing country and a university department in Sweden.

Experience has shown that it is absolutely essential to insist that initiative and responsibility for departmental development be firmly established at the recipient university. Education and research must be based, and should mainly take place, at the home institution. Sandwich courses, where a student's time is divided between his/her own institution and the supporting institution in the industrialized countries, have proved a stimulating possibility.

6.2.2 General budgetary support

There are several points of departure for budgetary support to universities. As a result of the demands of the structural adjustment programme for reduced state expenditure, including expenditure on the universities, there is a great danger that these points will be invalidated. The universities also need support to be able to act as centres for free and critical thinking; the existence of such "breathing spaces" are crucial to the democratic development recently initiated in a number of states.

For the past couple of years, SIDA has given budgetary support to the universities in Dar es Salaam, Lusaka and Maputo. This support is intended as a means of providing university management with increased opportunities to improve the general exterior and inner environment and thereby to create general conditions conducive to teaching and research. It is also intended to give the management scope to allocate extra resources to subject areas that they particularly want to reinforce. The general budgetary support may be distributed in a flexible way, possibly on procurement, repairs, scholarships and salaries.

Experience of general budgetary support is as yet limited. The Universidade Eduardo Mondlane in Mozambique has established a long-term development plan which forms the basis of SIDA's budgetary support. Accounting routines are currently being drawn up to satisfy both the internal planning and follow-up systems and various donors, making it possible to achieve major administrative rationalisation. This budgetary support is followed up by SAREC. It is hoped that other donors too may, in the long run, concentrate their resources on this more open form of development effort. Swedish development cooperation's increased stress on the development of knowledge and of institutions has meant increasing support from SIDA for higher education and research within the framework of sectoral development cooperation. The general budgetary support meets an acute need in those countries with least resources. It should to a greater extent be planned in conjunction with a comprehensive analysis of the needs of the universities.

7. Swedish support to universities in developing countries

As indicated in chapter 6, Swedish support to universities in the developing countries has mainly been indirect in that support has been given to different sectors within the universities. Overall experience shows that there is a need to consider the universities' development as a whole and that there should be greater emphasis on support for universities in Swedish development cooperation. This is particularly true for the poorest African countries. The overall aim should be to strengthen the role of the universities in higher education, research training and research and as independent intellectual centres.

This general ambition may include different types of support. Any action which increases opportunities for the developing countries to hold a debate on the universities in Africa should be encouraged. It is the donors who have an overview of the situation and access to data and commission reports. It is also the donors who define the problem areas for debate and organise meetings and discussions. Support should be given to the African university organisations and their efforts to carry out studies and hold meetings. In addition to the Association of African Universities, AAU, regional fora for debate should also be given support. One important topic for such debate is donors' policies and support models.

The Swedish agencies may contribute by sharing their experiences both in the developing countries and amongst the donors. Our support for the University of Mozambique's attempts to coordinate their external contributions through discussions at an annual meeting of donors may, for example, provide useful lessons. Experiences of different ways of promoting capacity building may also be of interest.

The major part of the assistance should, however, involve support to universities in some developing countries. This support should be strategic, contribute to the long-term development of the universities and increase the universities' prospects of taking full responsibility for management, administration and operations. It should be stressed that the support that is suggested below does not, in the first instance, involve doing something completely new; it is rather a matter of ensuring that support for activities at universities are planned within the context of an existing institution.

7.1 Cooperating countries

The following overview indicates which countries in Africa are currently covered by Swedish development programmes.

Programme support or more comprehensive cooperation = x
 Individual programmes = 0

	ANG	BOT	ERI	ETH	KEN	MOZ	NAM	TAN	ZAM	ZIM	UGA
SIDA	x	x	?	x	x	x	x	x	x	x	x
SAREC		x		x	()	x	()	x	()	x	()

Comprehensive university support should be prioritised in countries where both SIDA and SAREC are active. We suggest in the first instance Ethiopia, Mozambique and Tanzania and secondly Eritrea, Uganda and Zambia. Individual faculties in other countries may also receive support.

7.2 Targeted institutions

Support to universities should be planned in relation to an overall policy for higher education and research and an understanding of the roles that different institutions should have. A policy of this sort does not always exist in the recipient country. A policy dialogue should therefore precede the choice of institution for external support. This applies mainly to situations where more comprehensive institutional support is planned. However, it is also important in the case of support to individual projects to know what the national policy for the institution is¹⁴.

In the involved countries, support should be focused on one national university¹⁵. A policy which involves inadequate resources being spread thinly over several universities should be resisted. Donors should aim for quality rather than quantity and may encourage the principle of diversification, i.e. a system of complementing research universities with different alternative forms of professional schools.

7.3 Type of contribution

Support for the development of administration and research should be key areas for Swedish support to universities together with support for strategic core resources. Table 4 gives an overview of the different types of support which can be combined to form a unified programme of support to universities. However, an analysis

¹⁴ For example, a national plan might be aiming at a differentiated system, where research resources are to be focused on one university while other colleges are to concentrate on teaching. A donor who supports research and research training at the smaller colleges only succeeds in distorting the plans.

¹⁵ Sometimes consisting of separate colleges for certain subject areas, such as education, as in Mozambique, or for agrarian subjects, as in Tanzania and Ethiopia.

should be carried out in each individual case, and the donor should consult with the university to identify strategic needs.

The universities should also be given opportunities to consult with each other, and any opportunity for collaboration should be made use of. This sort of interchange can be organised at different levels: for university management, administration, or for different faculties and subject areas.

Table 4. Overview of support for university development

ADMINISTRATION		CORE RESOURCES	RESEARCH DEVELOPMENT		
Management	Operations		Capacity Building	Research	Excellence
Policy Planning Coord. of donors	Finances Purchasing Maintenance	Libraries Travel fund Research funds Regional scholarship Educational scholarships	Research training Equipment Research cooperation	Research projects National research training	Research programs Regional research training
<i>Form of support:</i>					
<i>Dialogue Conference & consult funds Consultation with donors</i>	<i>Capacity building</i>	<i>Budgetary support</i>	<i>Cooperative projects</i>	<i>Grants Cooperation</i>	<i>Grants</i>

7.3.1 Support for administration

Support for administration can be given in different ways. During negotiations, donors should emphasize the desirability of a strategic plan, and also the advantages of a unified system of reporting to the donors by means of an annual university report which can reflect institutional development. The development of administrative capacity for handling finances and procurement can be supported by means of training projects and by providing opportunities to share experiences with other universities. The Masters course for university administrators organised as a correspondence course by the Open University in Britain and including short visits to the UK, may, for example, be an interesting possibility.

The maintenance of equipment is another area which is often neglected. A pilot scheme carried out by the IPS (International Foundation for Science), has in some countries initiated an inventory of equipment and ability to provide services. A

We should aim to increase opportunities for universities and faculties to conduct enquiries and analyses themselves and also to draw up plans for institutional cooperation. It is also useful if the universities can engage experts to carry out studies and for these experts to report in the first instance to the university. Many donors, including SAREC and SIDA, are themselves used to commissioning studies as a basis for their planning of assistance programmes. It is therefore important to stress that the university is perhaps a country's most qualified institution. Development assistance should improve their decision-making skills and minimise the risk of dependence. The World Bank's assessment of the viability of a sizeable loan to the university in Mozambique is a good example. The bank set out what it needed in terms of information and analysis, and the university itself carried out a series of studies. In this way, the assessment itself was an important element of the development effort.

7.3.7 The ethics of development cooperation

A discussion of Swedish support to universities is incomplete without a discussion of how the university's resources should be employed. The capacity for research and education has in many cases been considerably weakened by the fact that the donors compete for the use of the universities' services. The need for a sort of code of conduct for the purchase of such services has been mentioned previously. Here it should be added that also research and consultancy assignments for Swedish or other external parties may make demands on teaching capacity when cooperation with local counterparts is encouraged.

Generally, specifically defined development efforts, such as SIDA's support to education as part of various sector programmes and SAREC's support to special research areas, should also be planned so that, as far as possible, they strengthen national universities and are in line with the long-term plans of the institution. Educational projects, in, for example, institutes and ministries should be planned in such a way as to make the most of opportunities to strengthen the university in question.

7.4 Concluding summary

Swedish development assistance to universities in Africa should be aimed at capacity building in areas of strategic importance - capacity for administration and research - and also at promoting a strong management function. Competent administration makes possible the unified planning of national and external development efforts. An active research environment leads to better teaching. Support for the development of national postgraduate programmes is an important factor in the evolvement of an attractive research environment and a regional resource. Opportunities for regional collaboration can be promoted by giving support to several universities in the region simultaneously. Development efforts should be designed so as to minimise the risk of dependence and to aid the development of the universities' initiative and decision-making ability. Development efforts which make demands in various ways on the universities' resources should be planned with regard to the university's capacity and plans for development.

8. Collaboration between SAREC and SIDA

Within the Swedish development assistance SIDA has supported academic undergraduate education and in a few cases research necessary for the realisation of development projects within country programmes. SAREC's research assistance programme has been discussed from other angles and has primarily aimed at long-term research development. The development of SIDA's country programme has, for various reasons, brought about an increased number of projects and also budget support in the field of higher education. At the same time, SAREC has given increased emphasis in recent years to research training and support to research infrastructure.

The current proposal to further increase support for universities will mean that the work of both authorities is to an increasing extent coinciding. This leads both to increased demands and greater opportunities for collaboration.

Against this background, SIDA and SAREC's intention is to work jointly in giving support to universities in a number of countries and to assess and analyze the results of this support on a continuous basis. SAREC and SIDA also aim to participate in the international debate and to develop a Swedish policy in this area. In addition, the agencies aim to develop forms of consultation and collaboration for support to universities. Concrete support projects will be organised in line with the following principles which define how responsibilities will be divided:

- SAREC will be responsible for general university support. This involves both an overall analysis of the situation in the universities and also projects which support work and functions common to the various departments in a university or faculty. SIDA may give similar support during a period of transition or in special circumstances.
- SAREC will be responsible as before for projects which are primarily intended as support for research and the development of research capacity. SIDA will be responsible for projects which are primarily intended as support for academic undergraduate education as a part of the support for the development of a sector or programme.
- A long term development of academic undergraduate education presupposes the development of research. Similarly, the building up of research capacity assumes the existence of a functioning higher education system. Support for higher education and research should therefore be planned and prepared through close consultation between SIDA and SAREC and should aim to organise joint projects for faculty development.

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Abbreviations

AAU	Association of African Universities. Ghana
ACBF	African Capacity Building Fund. Zimbabwe
AERC	African Economic Research Consortium. Kenya
IDRC	International Development Research Centre. Kanada
IFS	International Foundation for Science. Stockholm
NUFFIC	Netherland's Universities Foundation for International Cooperation. Holland
UEM	Universidade Eduardo Mondlane. Moçambique
UNESCO	United Nations Educational, Scientific and Cultural Organization. Paris

