

INTERNATIONAL  
CONFERENCE on

DONOR SUPPORT to  
DEVELOPMENT-  
ORIENTED RESEARCH in  
the BASIC SCIENCES

15-16 June 1995  
Uppsala, Sweden

DECLARATIONS  
AND RECOMMENDATIONS FOR ACTION



UPPSALA UNIVERSITY



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International Conference on Donor Support  
to Development-Oriented Research in the Basic Sciences

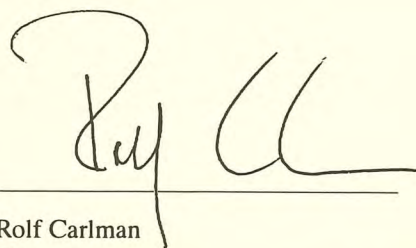
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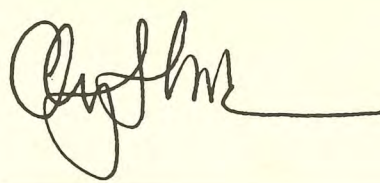
The Declaration and Recommendations for Action presented on the following pages are the result of an International Conference on Donor Support to Development-Oriented Research in the Basic Sciences held in Uppsala, Sweden, on 15-16 June 1995. The conference, which was organized by the Swedish Agency for Research Cooperation with Developing Countries (SAREC)\* and Uppsala University, brought together representatives of recipient institutions, donor agencies, foundations, science academies and organizations promoting basic sciences in the Third World.

SAREC's sponsorship of this conference is a reflection of the importance that the agency attaches to research and education in the basic sciences. Uppsala University has long been actively engaged in research cooperation with Third World countries, especially through its International Science Programs.

The conference proceedings and information about specific programmes mentioned in this document can be obtained from the International Science Programs, which served as the conference secretariat.



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\* As a consequence of the reorganization of Swedish aid administration, SAREC is, as of 1 July 1995, the Department for Research Cooperation within the Swedish International Development Cooperation Agency (Sida).



Declaration of the International Conference  
on Donor Support  
to Development-Oriented Research in the Basic Sciences

Uppsala, Sweden, 1995

The basic sciences--biology, chemistry, mathematics and physics--provide a fundamental understanding of natural phenomena and the processes by which natural resources are transformed.

In the Third World, development-oriented research and higher education in the basic sciences have received but a negligible share of total available resources from domestic and foreign sources. One unforeseen consequence of this situation has been that the indigenous base for education and technology has remained precariously weak. Another has been that the scientific communities of the recipient nations have had a limited influence on the kind of research being carried out within their own countries.

It was concluded at the International Conference on Donor Support to Development-Oriented Research in the Basic Sciences--held at Uppsala University, Sweden, 15-16 June 1995--that

- a foundation in the basic sciences is essential for all research in the applied sciences and for long-term development,
- adequate funding for the basic sciences from domestic support and external aid programmes is necessary to ensure that such a foundation exists for appropriate technology and specific fields of applied research and that quality is maintained at all levels of education,
- support to development-oriented research in the Third World should include emphasis on the basic sciences,
- a strategy for support to the basic sciences should be articulated by each developing country and its national institutions and should be geared to solving specific development problems in that country and
- research questions within the basic sciences must be chosen judiciously with the future development needs of the specific country in mind.

This last point may imply directing resources toward a limited number of research topics within the basic sciences. Such topics are likely to be of a multidisciplinary character.



## Recommendations for Action

There was broad consensus among the conference participants that the following measures need urgent attention for the promotion of the basic sciences within the framework of research cooperation with developing countries and/or development assistance to those countries.

### 1. Capacity building in the basic sciences

National development requires research and educational capacity in the basic sciences. Various strategies exist for building a cadre of researchers in these disciplines. In cases where no cadre of this sort yet exists, such as in the least developed countries, national governments must make a long-term commitment, with the help of donors, to give direct support to research and higher education in the basic sciences. In situations where such a cadre already exists, continued support for capacity building can appropriately be channeled through problem-driven research.

### 2. Support for research and higher education in the basic sciences

Donor support to applied projects should include grants to research and higher education in the basic sciences, whenever this is appropriate and requested by recipient institutions and countries. For example, support for capacity building in molecular biology could be included in funding for a health related project, and support for capacity building in chemistry and physics could be included in funding for an environmental project.

Whenever possible, donors are encouraged to support the development of home-based research and education capacity in the basic sciences in Third World countries. Strategies for the transfer of project ownership to these countries are essential to this process. One example of a successful effort to build domestic research capacity is the M.Sc. programme at Addis Ababa University in Ethiopia.

In some countries, qualified researchers are not engaging in research because of inadequate salaries, poor employment conditions and lack of incentives for active research. National authorities and external donors should jointly investigate alternative solutions to this problem with the goal of reconciling different approaches.

Donors are also encouraged to increase their support through existing and well functioning science programmes oriented toward developing countries, such as the International Centre for Theoretical Physics, the International Foundation for Science, the International Science Programs and the Third World Academy of Sciences.



### 3. Increased coordination and cooperation

At a time of shrinking aid budgets throughout the world, it cannot be expected that research assistance budgets will remain unaffected. Donors are therefore urged to improve coordination among themselves and specifically to seek synergies between the various projects they support.

One way to encourage better coordination among donor agencies is through the establishment of national and institutional research strategies in the recipient countries. The efforts of Eduardo Mondlane University in Mozambique to facilitate donor coordination provide an example in this regard.

Donors interested in supporting basic sciences are encouraged to make active use of on-line communication, for example, through the facility called Bellanet. The conference calls upon UNESCO, through the Third World Academy of Sciences, to take the lead in promoting such communication.

Cooperation among developing countries regarding the basic sciences should also be increased, for example through mechanisms such as the establishment and support of regionally organized post-graduate training programmes and South-South training and research programmes.

The conference also urges close attention to the importance of realizing synergies between programmes providing long-term institutional support in the basic sciences with those providing short-term grants to individual scientists.

### 4. Improved access to information

Access to information is essential to the development of research and higher education in the basic sciences in the Third World, but resources available for the development of libraries are limited. Modern technologies that complement printed literature resources and increase information access, such as CD-ROM systems and e-mail connections, should be high on donors' agendas of support to universities and other research institutions in developing countries.

In planning their support for library facilities and information technologies to support research, donors are encouraged to communicate and cooperate with programmes and organizations experienced in these areas.

### 5. Better statistical information regarding support for basic sciences

Detailed and reliable information is urgently needed regarding support to research and higher education in developing countries, including in the basic sciences. Current donor assistance statistics are generally

insufficient and seldom broken down to specify support to the basic sciences. The conference calls upon the Development Assistance Committee of the OECD and UNESCO to initiate measures for solving this problem.

#### 6. Rehabilitation of African universities

A major rehabilitation of research and teaching infrastructure is critically needed in most of the African universities as a prerequisite to the development of capacity in science and technology. Support for particular research and education activities is not sufficient for this purpose; capital assistance is also required to finance the rebuilding of facilities and major equipment purchases. Both donors and national authorities are urged to engage in serious dialogue to secure the necessary support for the required rehabilitation.



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