

## BASIC SCIENCE

# Hopefully a Major Breakthrough

**J.S. Nilsson, President of the Wallenberg Foundation and of IUPAP, reports that the outcome of the International Conference on Donor Support to Development-Oriented Research in Basic Sciences showed that international donor agencies have recognized the need for basic sciences in the Third World.**

It has been a common opinion among many donor agencies that support for research in the basic sciences, namely mathematics, physics, chemistry, and biology, is possibly superfluous and at best of low priority. Hence, little attention and virtually no funds have been given to university research in these fields insofar as the Third World is concerned.

The *International Conference on Donor Support to Development-Oriented Research in Basic Sciences* [1] was held on 15-16 June 1995 in Uppsala in order to rectify this unsatisfactory situation. A unique feature of the meeting was that it brought together not only representatives from the more familiar research-based agencies such as UNESCO, the International Council for Scientific Unions (ICSU), the International Centre for Theoretical Physics (ICTP), the Third-World Academy of Sciences (TWAS) but also officials from the World Bank, the European Commission and several donor agencies and ministries for foreign affairs from both the North and the South. There were some 50 participants in all at the event, which was jointly organized by Uppsala University and SAREC, the Swedish Agency for Research Cooperation with Developing Countries.

An introductory overview of "The Status of Basic Sciences in Africa" by Berhanu Abegaz from the University of Botswana painted a rather bleak picture of the current situation, which is characterized by inadequate facilities and grossly underpaid teachers. A critical review by Jacques Gaillard, a senior scientist in the

Institut Français de Recherche Scientifique pour le Développement en Coopération, entitled "Donor Models for Strengthening Research Capacity in Developing Countries" then summarised the successes and failures in the different approaches to capacity building in research and training. In covering most of the current activities in Third World countries, he concluded that we have learnt over and over again that there is "no substitute for strengthening national research capacity building" to provide a strong internal base for collaborative research and technical development.

These introductory talks were followed by a series of position papers from various donor organizations summarizing their present views of the situation and thoughts about the future. Michel Petit spoke for the World Bank; B. Ntim clarified UNESCO's position on behalf of the Assistant Director-General for Science at UNESCO; and Kenneth Prewitt argued the case of the Rockefeller Foundation. Supplemented by reports from donor agencies based in The Netherlands, Norway and Denmark, the stage was set for a general discussion in which the representatives from the South expressed their views, as seen from the other end.

The discussions were frank but at the same time thoughtful and constructive, reflecting a common ambition to join hands to alleviate the current difficulties. The main conclusions, summarised in a recently published *Declaration and Recommendations for Action* [2] were:

- A foundation in the basic sciences is essential for all research in applied sciences and for long-term development;
- Adequate funding for the basic sciences

Grants programmes for basic science in the third-world adopt different approaches depending on the balance between basic and applied research and between individual and group support.

- AFS: Asian Fisheries Society, Manila
- CBFR: Capacity Building in Forestry Research organized by the African Academy of Sciences – a TWAS body supported by SAREC
- ICTP: International Centre for Theoretical Physics, Trieste
- ISP: International Science Program, Uppsala
- IFS: International Foundation for Science, Stockholm
- TWAS: Third World Academy of Sciences, Trieste.

from domestic support and external aid programmes is necessary to ensure that such a foundation exists for appropriate technology and for 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;
- Research in the basic sciences must be chosen judiciously, with the development needs of the specific country in mind.

There was a broad consensus that certain measures aimed at promoting basic sciences needed urgent attention. The *Recommendations for Action* which were formulated focused on:

- Capacity building in the basic sciences: national development requires research and educational capacity in the basic sciences. If no cadre of researchers exists then governments, helped by donor agencies, should give direct support to research and higher education. If a suitable cadre exists then continued support for capacity building should be channelled through problem-driven research.
- Support for research and higher education in the basic sciences: donor support for applied projects should include grants to research and higher education in the basic sciences, *i.e.*, it should be a supplement to other aid programmes. For example, a health related project may be supplemented by funding for research and training in molecular biology.
- Increased coordination and cooperation.
- Improved access to information for scientists in the Third World by implementing modern information technology.
- Better statistics regarding support for basic sciences in the Third World.
- Rehabilitation of African universities.

The conference marked a major breakthrough for the basic sciences as far as donor attitudes are concerned. All participants were unanimous in the support of the *Declaration and Recommendations for Action*. It now behoves them to prove that they have more to offer than a well intentioned declaration.

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

[1] Background Documents (April 1995).

[2] *Declaration & Recommendations for Action* Published by Uppsala University & SAREC. Available from L. Hasselgren, Director, IPPS, Dag Hammarskjöldsgåtg. 31, S-752 37 Uppsala (fax: +46-18-18 34 95).

