



INTERNATIONAL COUNCIL FOR SCIENCE

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Report of ICSU's CSPR  
Panel for Review of  
Committee on Science  
and Technology  
in Developing Countries  
(COSTED)

April 2002

## ICSU

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## Preface

Recognising an increasing need for ICSU to take a strategic approach to the issues of science in and for developing countries, and responding to the resolution of the 26<sup>th</sup> General Assembly of ICSU, the Committee on Scientific Planning and Review (CSPR) decided to conduct a special in-depth review of the Committee on Science and Technology in Developing Countries (COSTED).

To ensure fairness and transparency in the review process, the CSPR set up an independent Review Panel of experts, selected to give a well balanced mix of geographical and disciplinary backgrounds. In addition to six outside experts, Professor Eric Odada, Member of the CSPR, was asked to serve on the Panel as liaison with the CSPR. Professor Malin Åkerblom was appointed as Co-chair, together with Professor Odada. The Panel's mandate was to examine critically the current process and performance, as well as the organisational structure, of COSTED vis-à-vis the mandate stipulated in its Constitution, and make suggestions for ICSU to strengthen its capability in the enhancement of science and technology in developing countries.

The Review Panel's report was submitted to the CSPR in April 2002, after six months' of Panel's intensive deliberations. On behalf of the CSPR, I wish to acknowledge the achievements of the Panel and thank all of the individual Panel members for their enthusiasm and willingness to help this process. I also wish to acknowledge the help of all the people, who shared their experiences and thoughts with the Panel, and also those who provided assistance. I believe that this report will provide a solid base for our further discussions on ICSU's strategies for capacity building in science and technology in developing countries. The CSPR will review the report and make recommendations to the Executive Board and the 27<sup>th</sup> General Assembly to be held in Rio de Janeiro, September 2002.

JOSÉ G. TUNDISI

Chairman  
Committee on Scientific Planning and Review

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## Executive Summary

This report on COSTED has been prepared by the independent Review Panel established by the Committee on Scientific Planning and Review of ICSU. Its terms of reference are to review the performance of COSTED, its financial and human resources, and its added value to the organisations with which it has collaborated. In the light of its findings, the Panel is to make suggestions for a new vision and mandate for COSTED and to consider future options for ICSU to fulfil its own mandate to support science and technology in developing countries.

The Panel undertook its work, including two meetings of the Panel, site visits to COSTED Secretariats, interviews with members of the COSTED Executive Committee, Regional Secretaries and others, between October 2001-April 2002. The focus of its review was the period 1998-2001.

COSTED was established in 1966 as a special scientific committee of ICSU to promote science and technology as an essential tool for the development of developing countries. In 1983, the Government of India offered to host a Central Secretariat and there are now seven Regional Secretariats. In 1994 COSTED was merged with another ICSU body – the International Biosciences Network (IBN). COSTED's constitution was amended in 1995 to reflect the new structure. COSTED has been reviewed in 1981 and 1984-85 but this is the first review to take place in 16 years.

The Panel reviewed the functions and resources of the formal bodies of COSTED – the Executive Committee, the Central Secretariat, the Regional Secretariats and the Members. It found that the Executive Committee has not been setting the strategic directions for COSTED, nor has it served as an effective advisory body or link to ICSU and its Unions and subsidiary bodies. Its oversight role with respect to the Regional Secretariats and the feedback that it provided to them was limited. It has not been able to meet annually although the budget and program cycle for COSTED is on a yearly

basis. The Executive Committee is also dominated by membership from the industrialised countries, and members from the least developed countries are particularly lacking.

The Central Secretariat is well supported by the Government of India. It is co-located with the Regional Secretariat for Asia and also provides support to some national capacity building programs. The distinctions between these national, regional and international functions is sometimes hard to decipher – in terms of human and financial resources and activities – and this led to perceptions that the Central Secretariat role is less international in vision and staffing than might be desired. The Central Secretariat/Regional Secretariat for Asia operates efficiently as an administrative unit and has served COSTED well in many respects.

The Regional Secretariats have seen their core funding from ICSU cut to 5,000 USD in 2001. Without the support of their host institutions, they are unable to function efficiently. Most are run entirely on a part time volunteer basis, with virtually no funds for communications or travel. What little funds they have are dedicated to supporting capacity building activities in the regions such as training workshops and travel grants for scientists to attend meetings. The Regional Advisory Groups mandated in the COSTED Constitution are unable to meet and perform their functions. Strategic planning, advice to ICSU and inter-regional collaboration are all hampered by woeful lack of financial and human resources.

The Central Secretariat has worked to increase the number of National Members of COSTED but in 15 years, they have only increased from 18 to 30 members. These pay an annual fee on a scale basis starting at 500 USD but even this amount deters the least developed countries from contributing. Thus some of COSTED's key stakeholders tend to be the least represented among the members and the Executive Committee.



The Panel found that COSTED has the ability to reach and bring together scientists from a wide range of developing countries and to articulate developing country perspectives on many issues of importance to ICSU and to UNESCO. It has also conducted some valuable collaborative studies, such as that of the mobility of professionals in Asia and on Intellectual Property Rights.

However, over the years COSTED appears to have been marginalised within ICSU and with respect to many of the Unions and National Members. If COSTED has not provided ICSU with the advice it needed, it is also because ICSU and its subsidiary bodies did not seek advice from COSTED – the very body that it established for those purposes.

One of the greatest challenges for COSTED has been the lack of financial and human resources needed to run its programs and its administrative structures, except in Chennai. It has experienced declining funding in the last three years and been unable to secure either ICSU competitive funds or adequate external funds to replace its core funding.

Despite this, the Panel found everywhere dedicated and enthusiastic Scientific and Regional Secretaries who did their best under very difficult circumstances. It concluded that ICSU needs to have stronger links with developing countries and that science and technology are still vital pillars for sustainable development, but that the organisational model of COSTED – which is now 36 years old – needs revisiting.

The Panel therefore proposes that the organisational structure of COSTED would be replaced by:

- A Policy Committee on Science and Technology for Development; and
- ICSU (not COSTED) Regional Offices.

The proposed Policy Committee would be a standing committee reporting to the Executive Board of ICSU with staff support from the ICSU Secretariat in Paris. It would not have any oversight role for the Regional Offices but the heads of those offices would be *ex officio* members of the committee. It would have a majority of members from developing countries and would be charged to provide advice to ICSU on its work relating to science and technology for development and in developing countries. It would be able to carry out studies and reviews as needed.

The ICSU Regional Offices would be established for Africa, Asia, Latin America and the Arab Region (four in all). They would serve as regional focal points for all ICSU activities and those of the Unions and other bodies of ICSU. They would provide support to scientific networks in the region and liaison with other organisations such as the regional offices of UNESCO. They would signal an important increase in the presence and commitment of ICSU to serve developing countries.

It is the view of the Panel that the Regional Offices should be hosted by strong institutions which can provide infrastructure and other support to them. The Regional Directors should be recruited from the regions through open competitions that are not restricted to the nationals of the host countries.

Most importantly, ICSU must be prepared to commit sufficient core funds to the Regional Offices that 1-2 professional staff can be hired (at regional level salaries) and a critical mass of activities, including regional consultations, can take place. ICSU must also be prepared to widen its own vision and receptivity to more input from developing countries and from its own Regional Offices.

COSTED has served ICSU and the international scientific community well, but with declining impact, for 36 years. It has evolved over that time and made some important achievements. The Panel recommends that it is thanked for its work and formally ended as a body by the next General Assembly of ICSU in 2002. At the same time, consideration should be given to the new proposals made by the Review Panel for expanding the reach and relevance of ICSU to the needs of developing countries.

# 1. Introduction

COSTED was established in 1966 as a special scientific committee of ICSU to promote science and technology as an essential tool for the development of developing countries, by a resolution of the 11<sup>th</sup> General Assembly of ICSU held in Bombay, India. Six years later, the 14<sup>th</sup> General Assembly recommended that an Executive Committee be established to oversee the work of the COSTED office in India.

A review of COSTED's activities in 1981 led to a decision to decentralise the programs of COSTED and additional Regional Offices were established in Kenya, Nigeria, and Trinidad and Tobago. In 1986, a Regional Office was added for Latin America. In 1983, the Government of India entered into an agreement with ICSU to provide a building and financial support to a Central Secretariat in Chennai. The Executive Committee was enlarged from the original eight members to include a Scientific Secretary from the Central Secretariat and the Regional Secretaries in 1988.

In 1994, COSTED was merged with another ICSU body, the International Biosciences Networks (IBN) which was a joint initiative of ICSU and UNESCO. The idea was that COSTED-IBN would become an umbrella organisation for IBN and other scientific networks. This brought the IBN Secretariats into the COSTED structure. There are today seven Regional Secretariats (Appendix 3). The partnership was originally called COSTED-IBN but from 1997, it has been known simply as COSTED. Countries were invited to join COSTED as Members and some 30 countries pay an annual subscription to do so. In addition, there are some 34 ICSU bodies that are Corresponding Members.

Thus the various elements of COSTED – the Central and Regional Secretariats of COSTED and IBN, the Executive Committee, the scientific networks, and the Members - have been put in place over a thirty year period. Although two earlier reviews of COSTED have taken place (in 1981 and 1984-86), this is the first review of COSTED that is able to examine

all the components of its present structure and organisation, and the first to take place since the merger with IBN in 1994. Indeed, the planned review of COSTED in 1995, which would have been part of the normal 6-year review cycle for ICSU activities, was postponed because the new situation created by the COSTED-IBN merger.

This review has been called for by the 26<sup>th</sup> ICSU General Assembly held in Cairo in 1999, as one of the first to be undertaken by the new Committee on Scientific Planning and Review (CSPR). The Review Panel for COSTED reports to the CSPR, which has been asked to report back to the 27<sup>th</sup> General Assembly to be held in September 2002.

## 1.1. Terms of Reference of the Review Panel

The review of COSTED is based on the Procedures for the Review of ICSU Interdisciplinary Bodies, Joint Programmes and Scientific Associates, which was adopted by the CSPR in May 2000. The Procedures provide Guidelines for the review of interdisciplinary ICSU bodies that include the following questions:

- Taking into account the evolution of the scientific background and of the international context, should the terms of reference of the body be kept in its present form? If not, how should they be amended? Does the body still have its “raison d'être”?
- To what extent does the body achieve the goals assigned to it? What suggestions could be made to improve its results? Does it make good use of its financial resources? On the grounds of a dramatic lack of efficiency, should we envisage terminating a particular body?
- How close to the scientific community at large is the body? Could we improve the synergy between its action and that of other relevant ICSU bodies or members? Could we suggest changes in its internal structure and way of operating?

As this is the first review of an interdisciplinary body to be conducted under the CSPR, it is hoped that it serves as a pilot review and model for future reviews.

The full terms of reference for the COSTED Review are given in Appendix 1. In general, they are that the Review Panel should document and analyse the current process, performance and the organisational and operational structure of COSTED vis-à-vis its mandate and constitution. The scope of the review is to cover the past seven years since the merger with International Bioscience Networks in 1993, while the focus will be primarily on COSTED's performance during the past three years. In the light of its findings, the Panel is to make recommendations on new vision, mandate and organisation for the future.

Specifically, the Panel is to:

- Review the performance of COSTED in terms of its stated objectives, its constitution, and the mandate given to it by ICSU;
- Review the financial and human resources, and the organisational structure of COSTED for achieving its objectives, including the impact of the merger with IBN;
- Review how COSTED has collaborated with other organisations, and added value to their work and met their expectations, within:
  - Developing countries,
  - ICSU and its associated bodies,
  - UNESCO and other key bodies;
- In the light of its findings, the Panel is to:
  - Review the objectives and mandate of COSTED and make suggestions for a new vision and mandate for COSTED;
  - Consider future options for ICSU to fulfil its own mandate to support science and technology in developing countries and to strengthen the 'voice' of the scientific communities in developing countries within ICSU and its programmes.

The Review Panel is composed of independent experts with one representative from the CSPR. The membership of the Panel is given in Appendix 2.

## 1.2. Approach and Workplan

The review and conclusions of the Panel are based on:

- Analysis of documents, such as annual reports, occasional reports and publications;
- Analysis of responses from COSTED Central and Regional Secretariats to the questionnaire prepared by the CSPR;
- Interviews of selected ICSU and non-ICSU bodies, which have collaborated with COSTED, such as COSTED National Members and Corresponding Members;
- Site visits/contacts by Panel members to the Central Secretariat in India and the Regional Secretariats, which are located in Mexico/Argentina, Ghana, Senegal, South Africa, Jordan, and Thailand.

The Panel held two meetings at ICSU headquarters in Paris: October 19-21, 2001 and January 21-23, 2002. The Panel also worked through electronic communications as much as possible. At the initial meeting, the Panel agreed on the criteria and terms of reference for the review and allocated tasks to Panel members in terms of visits to the different Secretariats and interviews with key individuals.

At its second meeting, the Panel discussed the findings of the individual site visits, interviews and analysis of the documentation and agreed on its collective findings and recommendations. The Panel allocated the tasks of writing first drafts of sections of the report and established a timetable for the writing and review of the report.

Site visits were made by Panel members to the Central Secretariat (Chennai); African Biosciences Network (Dakar); Asia-Oceania Network for Biological Sciences - AONBS (Bangkok) and the Latin American Secretariat (Mexico City).

Interviews in person or by phone were held with:

- COSTED Executive Committee members
- Scientific Secretary and members of the Central Secretariat staff

- Regional Secretaries and members of their staff
- ICSU Secretariat staff members.

In addition, National Members of COSTED were invited to send their views and comments to the Panel.

The draft report was shared in March 2002 with the COSTED Executive Committee Officers, the Indian National Science Academy (INSA), and UNESCO to invite their comments. Taking into account comments from COSTED Officers, INSA, UNESCO and others, the Panel finalised the report and presented it to the CSPR on April 5.

The CSPR will carefully consider the Panel's recommendations, in particular those concerning possible changes to the future structure and function of COSTED. The full financial and other implications of the Panel's recommendations may also require a more detailed examination than the Panel has been able to give it. The final recommendations of the CSPR will be developed at its next meeting in June 2002 so that the Executive Board will be able to consider them and prepare the formal proposals in preparation for the General Assembly in September 2002.

### 1.3. Acknowledgements

The Panel is all too aware of the additional burden such reviews make on the time of people who are already over-committed. It therefore wishes to acknowledge the interest and help of all the people who shared their experience and ideas with us and who spent time with Panel members on sites visits, in giving interviews, and in sending written reports. We would especially like to thank the Scientific Secretary and the Regional Secretaries for their valuable insights and experience, and the members of the Executive Committee who spoke with us. The Panel would also like to thank the Executive Directors of ICSU (Dr. Larry Kohler and his successor, Prof. Thomas Rosswall) and members of the ICSU Secretariat that provided the support for our meetings. In particular, the Panel wishes to thank Sachiko Ishizaka, Science Programme Officer for ICSU for her excellent support to the Panel Review process.

## 2. COSTED: context and history

### 2.1. ICSU's role in relation to Science and Technology in developing countries

Until 1966, ICSU's role with regard to science and technology in developing countries was not formally articulated. Participation in international science, especially in the activities of the Unions and Committees, was largely restricted to scientists from the developed countries. In 1966, ICSU formally acknowledged this position and decided to play a role in bringing more scientists from the developing countries into its activities. At its 11<sup>th</sup> General Assembly held in Bombay, India that year, a decision was taken to establish the Committee on Science and Technology in Developing Countries (COSTED) as a Special Scientific Committee of ICSU.

COSTED was charged with the primary mission of promoting science and technology in developing countries and thus facilitating the participation of developing country scientists and scientific institutions in the international activities of ICSU. It was clearly understood that science and technology form the basis for solving many of the problems of the developing world and that COSTED could identify and promote ways and means of achieving such solutions.

### 2.2. COSTED links with ICSU and ICSU bodies

To effectively fulfil its mission, COSTED had to have good working relations with ICSU and ICSU bodies. These links have not been easy to forge especially links with the Unions. With ICSU, relations have been almost consistently good. This was achieved through the leadership of COSTED by scientists who played leadership roles also in ICSU. Later on, the Chairman of COSTED was made a member of the ICSU Executive Board and helped to bring the voice of the developing world to the central organ of ICSU and vice versa.

In more recent times, the Executive Director of ICSU and one member of the Executive Board have been members of

the COSTED Executive Committee. These arrangements were designed to ensure strong links between ICSU and COSTED, but at least in recent years, it does not seem to have been very effective. Some of the strongest links between the two bodies have occurred during periods when ICSU has been involved in projects or other activities with UN bodies. The need for the involvement of a wide range of developing countries has made such co-operation very necessary and has brought out the best in ICSU-COSTED relations.

There have been no direct mechanisms for fostering closer co-operation with the Unions and other ICSU bodies. However, when an ICSU body and COSTED have both become aware of an activity in which they have a common interest, the collaboration has been advantageous to both sides. But this kind of opportunity depends on a reasonable and timely two-way flow of information between COSTED and the ICSU bodies. Such information flow has not been easy to realise and to sustain. Similarly, where there has been a continuing overlap of interests, such as there was between COSTED and the erstwhile Committee on the Teaching of Science (CTS), strong links were maintained. Generally, links between COSTED and other ICSU committees has been fair.

### 2.3. COSTED links with UNESCO

For many years, an official from the Science Sector, represented UNESCO on the COSTED Executive Committee. This representative reported to the Assistant Director-General for Science and ensured that there was adequate information on COSTED and relevant UNESCO activities available to the two organisations. UNESCO was then the only partner of ICSU on COSTED. Currently, UNESCO is only one of six external organisations represented on the COSTED Executive Committee. The strong link with UNESCO that existed earlier seems to have been weakened by the presence of the others, although there may be other factors at play.

On the operational level, UNESCO has been a co-sponsor of ICSU's IBN for many years. It has also provided a yearly subvention for ICSU, some of which has been specifically allocated to COSTED and to the merged COSTED-IBN. Some of the Regional Secretariats of COSTED have also been able to collaborate with the UNESCO Regional Offices on joint activities.

## 2.4. History and key milestones

In 1966, COSTED was a committee headed by a President, Professor P. M. S. Blackett (UK). It was to undertake an analysis of problems of developing countries and identify ways and means of using science and technology in resolving them.

In 1973, an eight-member Executive Board was constituted by the Executive Board of ICSU to oversee the activities of COSTED as follow-up to a recommendation of the 14<sup>th</sup> General Assembly. Its President was Professor S. Bhagavantham (Bangalore, India), supported by a Secretary chosen by the President. COSTED missions were sent to study problems of interest to developing countries, particularly Indonesia, Malaysia, Thailand and some East African countries. The Committee also explored the possibility of making travel grants to scientists from developing countries to attend international scientific meetings. Finally, a number of activities were agreed upon. It was a rather long list. This were reviewed in 1978 and a smaller number of areas of activity were selected for special focus:

- Science Education
- Science Communication
- Survey, Evaluation and Utilisation of Natural Resources
- Emerging Technologies
- Manpower Training.

In addition, efforts were to be made to:

1. Promote participation of developing country scientists in international scientific events and help in the organisation of scientific meetings and seminars in developing countries;

2. Identify academic difficulties of the scientific community in developing countries and seek national and international help towards their solution;

3. Identify mechanisms to link science education, scientific research, and training with national development; and

4. Undertake experimental programs to identify more effective means of applying science and technology to development.

In 1981, the COSTED Executive Board was expanded to 10 members, including the President and a Scientific Secretary. Professor Y. Nayudamma (Chennai, India) was appointed President. COSTED activities were reviewed again. It was decided to decentralise COSTED programs. Regional Secretariats were established in Kenya, Nigeria and Trinidad, and a Latin American Secretariat was set up in 1986 in Santiago, Chile.

COSTED established contact with 40 developing countries through their National Science Academies and invited them to be members of COSTED. Members were expected to recommend activities to be considered by COSTED. Membership was not necessarily tied to membership of ICSU and there was no membership fee. There was the hope that those members of COSTED who were not members of ICSU would be gradually introduced to ICSU activities and be attracted its membership.

A very significant milestone in the evolution of COSTED was the decision of the Government of India in 1983 to fund the Central Secretariat in Chennai, India. This was eventually to lead to the provision of a substantial Secretariat building with supporting staff and facilities in Chennai.

In 1986, COSTED National Membership fees were introduced. 18 countries joined and paid annual membership fees in three categories. In addition, COSTED had close working relationship with 65 other countries.

At the 16<sup>th</sup> COSTED Executive Board meeting in Paris, February-March 1986, Sir John Kendrew (now designated *Chairman* rather than President) introduced the report of the Study Group on ICSU Activities Related to Developing Countries that was chaired by Prof. Herlofson. He pointed out that the group was very appreciative of COSTED, particularly in the Asian region and the beginnings of a solid foundation in Africa and Latin America. It was reported that

the Board members appreciated the large amount of work accomplished with the limited resources available to it. It was decided to increase the number of Regional Secretariats to five, in addition to the Central Secretariat in Chennai.

In September 1986, the recommendations of the Herlofson Study Group were considered by the 17<sup>th</sup> Executive Board. The Board decided to focus COSTED activities on:

- a) Scientific Research Workshops and Seminars in Developing Countries
- b) Research Grants to Scientists in Developing Countries
- c) Visiting Lectureships and Travel Fellowships
- d) Science Education and Training in Developing Countries
- e) Technology Application and Training
- f) Scientific Instrumentation: Repair, Maintenance and Development of Scientific Equipment
- g) Science Communication and Organisation.

Currently, the organisational structure consists of the Executive Committee, the Central Secretariat and the Regional Secretariats. The COSTED Plenary is advisory to the Executive Committee. The role and performance of these bodies is examined in section 3.

## 2.5. COSTED Constitution

The first constitution of COSTED was drafted by COSTED members and approved by the ICSU Executive Board in 1987. It was amended in 1995 to incorporate new thinking on the role of COSTED and to reflect the merger of COSTED and IBN. The merger resulted in the addition of the existing IBN Regional Secretariats to the COSTED Secretariats, with the Central Secretariat assuming responsibility for the IBN as well. Representation on the Executive Board included UNESCO, the Third World Academy of Science (TWAS), the International Foundation for Science (IFS), Indian National Science Academy (INSA), the Executive Board of ICSU and the Executive Director of ICSU. A vigorous expansion of activities ensued. The European Commission funded two projects amounting to US\$104,000. National Membership increased to 20 in that year and continued to increase to 30 by the year 2000.

Following the amendments to the Constitution, the objectives remain essentially the same but for the inclusion of UNESCO as a co-sponsor and that COSTED should act as an advisor to UNESCO in addition to ICSU. (II.2. Constitution May 1995)

However, under functions, the word “advice” has been replaced by “guidance” implying a more pro-active role for COSTED in ICSU. Further, instead of “understanding activities”, the revised constitution expects COSTED to “encourage *the design* of programmes to strengthen and increase capacities in developing countries”. The indicative list of areas and strategies for COSTED activities in the 1992 version has been replaced by a general statement encouraging COSTED to identify and formulate projects to address specific problems in the present constitution. (III.4.e.1995).

The revised constitution spells out more clearly the role of the Central Secretariat, the Regional Secretariats, the Chair and Vice-Chair. It also refers explicitly to networking and vests the Central Secretariat with the responsibility of providing advice to ICSU and UNESCO, based on the decisions of the COSTED Executive Committee decisions. Two other changes are noted:

- The role of plenary in the old constitution has been restricted in the new constitution;
- Item IX.27 “COSTED shall abide by the statutes and rules of procedures of ICSU” is missing in the new constitution.

Overall, the revised constitution is broader in scope and has allowed COSTED to undertake more diverse functions. With the change in the Constitution, the original objectives were amended, highlighting and emphasising COSTED’s advisory role to ICSU. However, the operational mandate lagged behind the new focus in the objectives clearly stated in the 1995 Constitution. The full text of the Constitution is given in Appendix 4.

### 3. Panel's findings on COSTED

The Panel reviewed the activities of COSTED's main organs – the Executive Committee, the Central Secretariat, and the Regional Secretariats – in the context of COSTED's constitution and its financial and human resources with focus on the years 1998 - 2000. What it found was a mismatch between the expectations of what COSTED could deliver and the resources available to it. In addition, the Panel was asked to examine the impact of the merger between COSTED and IBN and to consider how far COSTED had fulfilled its advisory role. These two questions are addressed at the end of this section, together with a summary of the Panel's findings on the strengths and weaknesses of COSTED.

#### 3.1. Executive Committee

The Constitution states that the Executive Committee is responsible for 'promoting the objectives and functions of COSTED-IBN'. It also says that the 'Central Secretariat shall be responsible ... for assisting the Executive Committee in the implementation of the plans and activities of COSTED-IBN as decided by the Executive Committee'.

The Panel found that the Executive Committee has not been setting the strategic directions for COSTED or been significantly involved – at least in recent years – in either short or long-term planning. For various reasons it has not functioned as an Executive Committee, but rather as a discussion forum, receiving reports from the Secretariats but little engaged in substantive discussions on science and technology for development. It has not provided the Secretariats with the feedback needed, nor provided the oversight expected by ICSU except in the routine matters of reviewing annual reports and financial statements.

The Executive Committee has been hampered in carrying out its mandate for several reasons:

- The Executive Committee is too large to carry out a steering role efficiently. Presently the Executive Committee has eighteen members, the seven regional secretaries included, and there is provision for up to twenty-one members.
- Executive Committee meetings, which are required to be held *at least* every 18 months, are needed more frequently but are limited by financial constraints. The meetings are thus out of phase with the activity planning and reporting of the Secretariats, which are on an annual basis.
- Most of the time at the Executive Committee meetings has been devoted to presentations of annual reports (also given in a written form) and to discussions on organisational matters, funding and memberships. In general, little time has been given to planning and to strategic discussions.
- The COSTED budget is too small for encouraging real strategic planning: there are not even enough funds to run minimal regional offices.

At each Executive Committee meeting there has been presentation of upcoming activities for the next 12-18 months and advice given on specific actions and input to ICSU and UNESCO. But members of the Executive Committee have been frustrated by the lack of funds and apparent lack of interest in COSTED's advice in the last few years. Some have felt that COSTED was increasingly marginalised within ICSU.

While the general objective of COSTED is to act as an advisory group to ICSU and UNESCO, it is clear that COSTED has rarely been able to perform this function to a point where it could have an impact.

Equally importantly, there have been few instances where ICSU or UNESCO has sought advice from COSTED in recent years. Here the Executive Committee might have played a



more active and bridging role in support of the Central and Regional Secretariats. This role might have been stronger if the Executive Committee members had been representatives of ICSU bodies and Unions. The Panel also noted that, except through some of the Regional Secretaries, the least developed countries are not represented in the Executive Committee, and, not counting those from the secretariats, the majority of Executive Committee members are presently from industrialised countries.

### 3.2. Central Secretariat

The COSTED Central Secretariat is situated in Chennai, India. The Secretariat also has the role of the Regional Secretariat for South Asia, and gives services to India on matters related to COSTED functions. The location in India is a result of a generous commitment by the Indian Government made in 1983 and continued to today.

The secretariat has a building on the grounds of CLRI, the Central Leather Research Institute, since 1983. The Indian contribution to COSTED is substantial. India covers most of the basic facilities for administration – salaries, housing including maintenance and running costs, communication and local transport. In addition, the Indian government and other organisations give grants not only for national but also for regional and international activities.

There are presently sixteen people working at the Chennai office, including administrative staff, drivers, cleaners and helpers/building maintainer. The scientific staff comprises the COSTED Scientific Secretary who works half time and on honorary basis, and two full time principal scientific officers, all holding PhDs. Two members of the staff are responsible for the computer facilities. The staff is well qualified, and all seem to be much dedicated and proud of their work. Most of the staff was engaged between 1982-1994; the Scientific Secretary joined in 1996.

The present well-kept building of 560 m<sup>2</sup>, which replaced an older one in 1995, includes a well-equipped auditorium for 70 persons, a library, and a dedicated computer room. The building is also a donation from the Indian government.

### CENTRAL FUNCTIONS

According to the COSTED Constitution, the Central Secretariat should assist the Regional Secretariats in setting scientific priorities, and facilitate linkages between the Secretariats, and between them and ongoing international programmes of interest to developing countries. It should co-ordinate fund-raising, and organise multi-regional activities when appropriate. Its duties also include co-ordinating administration and finances, and organising the Executive Committee meetings (Paris 1998, Cairo including Plenary meeting 1999, and Guangzhou, China 2001).

In practice, it has been difficult for the Central Secretariat to fully carry out its international role, except for administrative matters. The Regional Secretariats have operated autonomously, taking into account their specific regional needs and possibilities. Also, when arranging activities in regions outside Asia, the Central Secretariat has, for practical and financial reasons, co-operated with local or international scientific bodies, rather than with the Regional Secretariats of COSTED. The regular contacts between the Central Secretariat and the Regional Secretariats have mainly concerned administrative/financial matters and announcements from ICSU and the COSTED Central Secretariat. However, lately the Central Secretariat has organised specific Regional Secretaries Meetings to discuss matters of common interest and priority setting (Chennai 1998, and Paris 2000).

### CENTRAL ACTIVITIES

The COSTED website gives information on past and future events from 2000, seminars, workshops and training courses, fellowship programs. This is an impressive list, taking into account the small core funding. Most of the events presented have involved the Central Secretariat, often in co-operation with other agencies. In some cases, the Central Secretariat has played a major organising role and the co-operating partner has mainly contributed with funding. In other cases the Central Secretariat has played a minor role. In addition, the scientific staff of the Central Secretariat has been invited to several countries to give presentations at meetings and take part in round-table discussions. None of the international activities has involved the active participation of Regional Secretariats outside Asia.

The Central Secretariat has been active at an international level especially in issues concerning intellectual property rights (IPR), and has on several occasions collaborated with TWAS. It has organised several meetings in the developing world (Cairo 1998, Caribbean 1998, and Nepal 1999) to create awareness of the recent IPR issues. COSTED has represented ICSU jointly with CODATA in international forums on IPR organised by WIPO.

A monthly electronic news service on IPR is issued from the Central Secretariat and is available to all COSTED members and other institutions on request. This is a good initiative, and should continue. A Global Advisory Initiative System for IPR is being set up in collaboration with TWAS. It should have been presented as a framework at the TWAS General Conference in Delhi, October 2001, which was postponed. This is a critical and important ICSU activity and collaboration and communication with ICSU and the relevant ICSU Committees and unions should be strengthened for synergism.

The Central Secretariat took an active part in the UNESCO/ICSU World Conference on Science, Budapest 1999, including arranging a seminar on "Science in response to basic human needs" at the invitation of TWAS. It hosted a STAP international workshop on integrating S&T in GEF, Global Environment Facility (Chennai 1999), and catalysed and facilitated LUCC (Land use land cover changes studies) regional expert meetings in Chennai 1996, Mozambique 1997, and Goa, India 1999. Some activities have aimed at global coverage, but when funds obtained were not sufficient, the activities were carried out in India or in the region, to serve as pilot studies. There has been a range of relevant regional activities (see 3.3).

COSTED-Chennai publishes extensively; so-called Occasional Papers, reports, manuals, proceedings and policy papers. Some books are published for COSTED by international publishers. All titles are available on the website, and the publications are also disseminated through secretariats and COSTED members. In some cases the scientific quality of the publications has been questioned, and peer review procedures should be followed in future. However, the publications deal with issues very relevant for developing countries, and from developing countries' perspectives. A closer co-operation with ICSU Unions and bodies would strengthen the

scientific quality of the publications while retaining their relevance to the needs of developing countries.

A user-friendly and informative website (<http://www.costed-icsu.org>) was set up for COSTED in 2001. It includes a Calendar of Events, list of COSTED publications, information on travel fellowship schemes including application forms, etc. Some information on the regional secretariats does not mirror reality, but on the whole the information is adequate.

In conclusion, the Central Secretariat has efficiently fulfilled its central administrative functions. It has been successfully active also outside its own region in increasing awareness among the scientific community on some important issues, such as IPR. However, this has been achieved without active participation of the Regional Secretariats (except the one also based at Chennai with the Central Secretariat).

The Central Secretariat has had difficulties in reaching outside the Asian region with other activities that could have a wider interest, due to practical and financial constraints. At the same time, the Regional Secretariats have had inadequate resources to be active partners in COSTED's international programs. In order for ICSU to have successful global outreach, the Regional Secretariats also need to be strengthened. The Panel also found that the Central Secretariat has no effective mechanism to provide advice to ICSU or UNESCO.

### 3.3. Regional Secretariats

There are seven Regional Secretariats for COSTED, located in Mexico City, Dakar (Senegal), Pretoria (South Africa), Accra (Ghana), Irbid (Jordan), Chennai (India) and Bangkok (Thailand). The secretariats are operating autonomously. Each regional secretariat has its own priorities and functions as perceived by the regions. This is logical and may be acceptable in view of the diversity of the developing countries, and the diversity of the regions themselves.

#### RESOURCES

The annual core funding from ICSU to each regional secretariat was 10,000 USD in 1998 and has gradually decreased to 5,000 USD in 2001. This money is used for the scientific acti-

vities, but it also has to be used to cover part of some Secretaries' travel to meetings of the Executive Committee and Regional Secretaries. All Regional Secretaries are appointed on an honorary basis; all but the Asian Regional Secretary are employed full time in universities or research institutes.

The Asian Regional Secretariat has the advantage of being located at the Central secretariat in Chennai, and can make use of all its facilities. The other Regional Secretariats are hosted by universities or research institutes, a National Academy or Research Council. The host institution provides office space and often access to office equipment and some secretarial and administrative support. In general there is no paid staff allocated directly to COSTED activities except in Chennai, and in AONBS in Thailand where three part-time people are handling the daily activities, paid for by the host institution.

The Panel has found that the Regional Secretariats are totally under-financed and understaffed to respond to the broad mandate of COSTED. It is due to the dedication, perseverance and resilience of the Regional Secretaries that there has been some degree of success in the past regarding COSTED's role in developing countries. To be effective, it would be necessary for the Regional Secretariats to have one or two paid staff, with a minimum of a research post-graduate degree in the sciences as well as an interest in science communication, as is the case in Chennai. Having the Regional Secretary who is relatively highly placed in regional scientific circles would be also desirable in order to be effective in promoting scientific collaboration and in influencing science policy in the region.

#### REGIONAL ADVISORY BODIES

All Regional Secretariats should have a regional advisory body, according to the COSTED Constitution. The Panel found that due to lack of funds these bodies in most regions have met only once in the mid 90's, but with declining budgets, it has been too costly to hold regular meetings of the regional advisory groups. Some Regional Secretariats continue to consult the advisory groups through e-mail in regions where functioning e-mail systems exist. In other cases, the Regional Secretary has informal collegial contacts with some of the advisory group members, who act as information

channels rather than advisors or sounding boards. Several Regional Secretariats report that they still follow the priorities put forward in the first meetings of their advisory groups. The Asian Secretariat has a forum for advice in FASAS, Federation of Asian Scientific Academies and Societies, whose formation in 1986 was catalysed by COSTED. In the end, priorities for activities seem to be based mainly on the secretaries' general knowledge of needs, coming from their long experience and many informal contacts rather than through any formal regional consultation process.

#### ACTIVITIES

The Central Secretariat in Chennai has lately organised Special Regional Secretaries Meetings to discuss matters of common interest and priority setting (Chennai 1998, Paris 2000). The Chennai meeting gave priority to:

- The establishment of a Pan-COSTED Biodiversity Network on Natural Products
- Expanding activities on IPR issues to Caribbean and African regions;
- Fostering mobility of S&T personnel;
- Science media development in small states.

These are all relevant activities, and are all in line with the Central Secretariat activities. Thus, the Biodiversity Network was the subject of a meeting in London in 1999 organised by Central Secretariat, and is looking for funding. The Central Secretariat also co-organised a meeting on IPR in the Caribbean in 1998, and invited African scientists to that meeting. The last of the four priorities has so far been promoted only in the Asian region.

In the Paris meeting there were discussions on regional and global needs, priorities, and functions. It was stated that "the challenge lies in understanding the heterogeneous nature of the developing countries' issues and accepting in the multi-cultural, multi-economic and multi-national dimensions of the COSTED's mandate". Three core programmes were identified as central to COSTED activities:

- Capacity building in science and technology;
- Promoting mobility of scientists;
- Promoting regional thematic networks.

Some regional secretariats have expressed a wish that the regional programmes join forces to address some common issues, which would have led to greater visibility and facilitated fund raising. However, so far there have been little inter-regional activities as follow-up to the Paris meeting, which seems to be due to several factors:

- The limited human resources at the regional secretariats to take part in planning and fundraising for such activities;
- Such activities are probably best structured differently in different regions to meet regional needs, and thus global activities are less prioritised;
- COSTED is waiting for the outcome of the COSTED review.

#### *Asian Secretariat, Chennai*

The Chennai Secretariat arranged about 15 regional meetings, workshops and training courses in 1998-2000. Most of these were carried out in India. The Chennai office has good meeting facilities and experienced staff, and it is natural to take advantage of this. It was found that as usual the participants were predominantly from the hosting country. Therefore other countries could be encouraged to organise more of the regional activities to spread the regional outreach of COSTED beyond India. Some activities were largely national, serving India, with funding from international organisations and/or Indian organisations or the Indian Government. One of the continuing challenges for the Panel was to delineate the distinctions between the international, regional and national functions of the Secretariat at Chennai.

Regional activities covered several relevant areas, such as science communication and public understanding, technical needs of small enterprises, low-cost instrumentation for environmental monitoring, and IPR. Other important areas concerned forest fires, remote sensing, and land use in coastal regions. These latter activities would have benefited scientifically from close co-operation with other ICSU bodies. The Regional Secretariat co-ordinated a study on mobility of scientists, a study that was undertaken by six Asian countries. The Chennai secretariat also handles travel fellowship programmes. There is no doubt that the activities of the Chennai office are of benefit both to India and to the rest of the Asian region.

#### *AONBS Secretariat, Thailand*

AONBS was established in 1995 at BIOTEC, Thailand, following a regional planning meeting organised by COSTED. BIOTEC is a national research centre with a staff of 300 people, half of them researchers, and is focused on the development and application of biotechnology. In addition, they conduct policy studies on the impact of biotechnology and provide scholarships and technician training.

The Director of BIOTEC is the AONBS Secretary. BIOTEC provides office facilities and part-time staff support through its three employees in the International Division. The AONBS/BIOTEC arranges training, workshops, and gives travel grants. Three issues per year of the BIOTEC monthly Newsletter are designated as AONBS Special issues and are published in English and distributed within the region and to other COSTED Regional Offices. In 2001, a new program was initiated, providing grants to young researchers from the poorest countries in the region to visit research centres in different parts of Thailand. It is hoped to expand this activity in the future.

Even without AONBS many of the present activities would still be implemented, but without the rationale of the AONBS regional network, there would probably be less support available to non-Thai scientists, especially young scientists.

#### *Arab Region Secretariat, Jordan*

The COSTED-Arab region includes countries in Arab North Africa, Egypt, Jordan, Syria, Iraq, Yemen, Lebanon and Palestine. There are no programmes in the Gulf States. Its most important role is in facilitating contacts between the countries in the region. Unfortunately the geopolitical problems in the region impede security and thus the free flow of scientists to different countries, and finding a place for an all-countries meeting can be difficult. The main direction of the programme is not to focus on individuals but to contribute to a number of workshops and meetings, in any scientific discipline and in science policy. The Regional Secretariat serves as a centre for communication and helps in soliciting support from other organisations for the events it supports.

A future strategy is to give emphasis to a successful Summer School, a scientific NGO for the Arab States with workshops that rotate topics and locations. It is a key for networking in the region.

### *West and Central Africa Secretariat, Ghana*

The Regional Secretariat is trying to vitalise WANNPRES, a West-African network on natural products research, and has secured external funding for a restarting workshop in 2002. It has also arranged a 5-day training workshop on web page design and internet use. The secretariat has organised several meetings to discuss issues related to IPR in the context of research on natural products, especially those with medicinal value, involving traditional medical practitioners, researchers, governments and pharmaceutical companies. In addition it occasionally provides travel grants and support to conferences.

### *South and East Africa Secretariat, South Africa*

This Regional Secretariat has recently funded organisations rather than individuals. It is focussing on optimal utilisation and management of capacity rather than building capacity only. Funds have been made available to cover the costs of proceedings of meetings/conferences/workshops and for their wider dissemination. It has also gone in as a partner with other funding agencies in an effort to increase its impact.

### *ABN Secretariat, Senegal*

The ABN was created in 1981 as a result of an IBN-symposium in Ghana the same year on the state of biology in Africa. It was a joint undertaking by UNESCO and ICSU with the aim to encourage and provide support to biosciences research and training in Africa, and gathered over 1,000 researchers from more than 30 Sub-Saharan countries to workshops and conferences, training courses, and research projects.

In 1983 UNDP provided a 3-year grant of 300,000 USD, and in 1987 a 5-year grant of 2 million USD. It would be interesting to undertake a follow-up study on the research and individuals awarded these ABN grants. Since the mid 90's the Regional Secretariat has tried to launch three new large projects, within and outside ICSU, but COSTED has not been able to promote them. ABN is now relying on the COSTED money, with little of network activities.

Present activities are still all in biosciences, with the priority to break the isolation among African scientists. Hence support goes to travel grants within the region, support to training courses, scientific meetings and associations, and to publications. One example is the young West-African Botanists Association whose launching was supported in 1997,

and gets support for its bi-annual Annals of Botany. Since the support goes to capacity building, in small amounts, it is rather difficult to tell the impact of the grants.

### *Latin America Secretariat, Mexico*

The secretariat originates from RELAB (Latin American Biology Network), which started in 1975 as an IBN within UNESCO to produce an integration of the biological sciences in Latin America through co-operation and training of young scientists. After the merger of COSTED and IBN, the secretariat initiated other Latin American regional scientific networks using the model of RELAB.

They are the following: RELAB; RELAFI (Latin American Physics Network); RELACQ (Latin American Chemical Science Network); RELAMA (Latin American Mathematics Network); RELAA (Latin American Astronomy Network); RELACT (Latin American Earth Sciences Network). The network co-ordinators are from different countries within the region. A committee (Co-ordinating Committee of Latin American Science Networks, CCRCLA) co-ordinates these networks under the responsibility of the Regional COSTED Secretariat, who makes the links with ICSU and the subsidiary bodies. In some cases, the co-ordinators help to support and organise regional activities.

These networks are very different in structure and mode of operation, reflecting the priorities as perceived by each community. Activities have been varied, but at least three of them seem to play a significant role for scientists in the region. In all it seems that the identification and recognition of the active Latin American scientists in each discipline was obtained, through the organisation of catalogues, directories, and virtual listings.

RELAB itself is very active and has been successful in obtaining external funding. It has organised many symposia, workshops, intensive courses, *etc.*, with resources from the national members and from international organisations such as UNDP, UNESCO, OAS, and FAO. Recently it has obtained a legal status in Chile. RELAFI and RELAMA have also strong ties with regional scientific societies.

### *Summary*

All Regional Secretariats try to promote capacity building and help to network individual scientists to reduce their isolation, and many Regional Secretaries are working heroically

to achieve this. The two Regional Secretariats in West Africa each promote one specific network/association, in addition to giving travel grants and supporting or organising meetings. The Regional Secretariats in South Africa and Jordan have chosen to concentrate their support to conferences and to catalyse additional support to selected meetings.

The Latin America Regional Secretariat has chosen the catalytic role, co-ordinating and encouraging scientific networks, and reaches many scientists in the region in this way. Regional Secretariats with paid staff or good support from the host institution, like those in India and Thailand, have the best chance to have regional activities that can have an impact. They have the resources to engage in fundraising, arrange relevant meetings and courses, and perform specific research studies.

However, the Panel has found that the regional impact of COSTED activities is very low in some cases. The core funding available to the Regional Secretariats is too small to have any significant impact, if not augmented with other resources. The Regional Secretariats for the most part are unable to play an effective information-gathering role for ICSU in the regions. They do not have the resources to call meetings of their own mandated regional advisory groups.

The Panel found that the Regional Secretaries do not give priority to the advisory role of COSTED, nor do they feel it is easy for them to have that role. They are not confident that ICSU is ready to receive advice from them. They also see the priorities of developing countries in their regions as capacity development actions (workshops, travel grants *etc.*) rather than giving advice to ICSU or UNESCO. Thus, most of the Secretaries believe that

the first call on the precious financial resources should be to provide what capacity building actions they can. This is the best way for COSTED to have some visibility in their regions.

### 3.4. Resources

COSTED has performed remarkably well considering the small amount of resources that most of its Secretariats have to work with. It is only the Secretariats in Chennai (India) and Bangkok (Thailand) that have significant support from their host institutions and host governments, which allows them to perform at a sufficiently high level of activities to make a real impact. The Latin America region operates through scientific networks, which are successful in raising funds for their activities. The remaining Regional Secretariats do not have enough core resources in cash or in kind to allow them to leverage larger amounts from other sources. They are operating at sub-critical levels.

The ICSU grant to COSTED decreased from 95,000 USD in 1998 to 70,000 USD in 2000. Membership fees have amounted to about 35,000 USD annually. From this core money, 10,000 USD in 1998 decreasing to 7,000 USD in 2000 has been allocated annually to each of the seven Regional Secretariats (5,000 USD in 2001). In the same period, the annual allocation to the Central Secretariat has increased from 8,000 USD to 11,000 USD. A summary of the COSTED budget for the three years 1998-2000 shows that approximately 50% of the money received was distributed to the Regional Secretariats; and 23% was for two Executive Committee meetings and two Regional Secretariats' meetings (Table 1).

**Table 1:** COSTED Income from ICSU and National Members and corresponding Expenditure for the three years 1998-2000

INCOME	(USD)	EXPENDITURE	(USD)
Opening balance	14,000	Distributed to Regional Secretariats	175,000
Received from ICSU	245,000	Central Secretariat	28,000
Membership fees	110,000	Two Executive Committee meetings	66,000
		Two Regional Secretariats meetings	18,000
		Central Secretariat activities	51,000
<b>Total income</b>	<b>369,000</b>	<b>Total expenditure</b>	<b>338,000</b>
<b>BALANCE</b>	<b>31,000 (USD)</b>		

An average annual investment of 120,000 USD spread across eight cost centres, including the Central Secretariat, for the whole of the developing regions of the world is minuscule in comparison with the broad and important mandate of COSTED. Were the total amount to be concentrated in few expenditure centres, it would be less difficult (but still not easy) to leverage larger amounts from external sources. Thus the Chennai Secretariat has succeeded in attracting some 170,000 USD from outside sources for the three-year period 1998-2000. With more strategic long-term planning, this multiplier effect could be higher.

The contribution to COSTED from the Indian Government is channelled through INSA. India has hosted and generously contributed to the COSTED Central and Regional Secretariats for nearly twenty years, which is an impressive commitment. In the three-year period alone they contributed 158,000 USD. The Central Secretariat has also been fairly successful in raising funds for its activities. During the period 1998-2000, they attracted 111,000 USD for regional and international activities, with main contributions from India, EU, CSC, UNESCO and UNIDO.

Fundraising has been a problem for the Regional Secretariats. For example, the Arab Secretariat has tried to approach the Gulf States, but without success, because they prefer to fund better-known organisations. It has also come across the problem that COSTED is not a legal entity in the region and that causes difficulty for potential donors.

Fundraising for own activities is not the only indicator of secretariats' performance. The Secretariats sometimes played a catalytic role in fundraising for the activities which are organised by other bodies. Their limited financial contribution of 500-2,000 USD to conferences seemed to be effective in leveraging funds from other sources. The Latin American networks have an anchor in the name COSTED/ICSU when seeking funds.

In recent years ICSU introduced a system of competitive grants rather than core funding, which has created problems for COSTED. Proposals from COSTED have unfortunately not been successful. They have not met the criteria requested, which mainly relate to scientific quality. One possibility is that ICSU may consider adding other criteria for future competitions, such as relevance to development and the needs of

developing countries. At the same time, the scientific quality of COSTED's proposals must increase.

This might be achieved through closer co-operation with ICSU scientific bodies and Unions early in the planning stage. So far, for various reasons some proposals have not been endorsed by Unions. The Panel was told that these reasons included a lack of interest, concerns about scientific quality, being approached too late in the planning process, and because the Union might already have a similar activity. There are clearly advantages to the Unions being able to draw on COSTED's experience in developing countries.

Membership fees were introduced in 1986 for National Members and are scaled essentially according to the GNP of the countries, the lowest fee being 500 USD per year. These fees contribute to the total financial picture for COSTED but even the lowest contribution level on the scale is still felt to high for the poorest countries, especially if they have to pay fees to other ICSU bodies as well.

UNESCO support is provided to ICSU for distribution through the ICSU Grants Programme. At present COSTED does not receive any earmarked core support from UNESCO although earmarked support for specific activities, like the Asian study on mobility of scientists, might still be possible. UNESCO has for many years given regular support to regional networks, and the Latin American networks have together received about 100,000 USD annually from UNESCO in the past. This funding has now stopped, and will be replaced by grants on a case-by-case basis.

The very low amount of ICSU core funding allocated to each Regional Secretariat is a real problem, which undermines the very sustainability of COSTED in the regions. Some Regional Secretariats receive virtually no additional support from their host country or host institute and have to expend part of their tiny budget on airfares to participate in COSTED meetings.

### 3.5. Members of COSTED

National Members are identified as one of the bodies of COSTED in the Constitution. They should be National Members of ICSU and other appropriate national bodies, and

contribute to COSTED according to an annual fee scale. Corresponding Members are representatives of ICSU Unions, interdisciplinary bodies, ICSU Associates and those National Scientific Members of ICSU which do not wish to be National Members of COSTED. Therefore, National Members pay fees whereas countries that do not pay fees can become Corresponding Members.

The Membership fee scale was introduced in 1986 when 18 countries paid the fee to become National Members. In 2000 this had increased to 30 National Members (see Appendix 5). This is not a major increase considering the efforts of the Central Secretariat over 15 years to attract new paying National Members. Many more countries – around 65 – work with COSTED and do not pay the fees to become National Members.

National Members have been involved in COSTED in the following ways:

- Supporting COSTED proposals to ICSU Grants Programme as co-applicants
  - Open Distant Learning (*Japan*)
  - Science Communication Networks (*India, West Indies, Trinidad & Tobago*)
  - Bioactive Natural Products Networks (*Bangladesh, India, West Indies, Nepal, South Africa & Sri Lanka*)
- Country specific programs in response to requests from National Members:
  - Remote Sensing Training workshop (*Bangladesh*)
  - Intellectual Property Rights Seminar (*Sri Lanka*)
  - Intellectual Property Rights Seminar (*Nepal*)
  - Remote Sensing Training Workshop (*Mauritius*)
  - Intellectual Property Rights Conference (*Egypt*)
- National Members are invited to host Scientific meetings and Executive meetings:
 

China –Taipei (1993), Malaysia (1994), Egypt (1998), China –CAST (2001).
- National Member countries are consulted on COSTED matters and can participate and vote in Plenary Meetings (e.g. locating the Regional Secretariats, nominations for participants to COSTED meetings, awardees for travel grants).

Presently there are 30 national members of COSTED, of which 24 are from developing countries. Only a few of these belong to the poorest countries, among the most important stakeholders in COSTED. For example, in Africa there are only seven National Members, including Egypt, Mauritius and South Africa. Where the National Academies have meagre financial resources – where there are Academies at all – they must be selective in deciding which membership fees are most important to them. Clearly the current system of membership fees, although it provides some much-needed financial support to COSTED, does not meet the needs of the least developed countries. Other mechanisms to include the poorest countries in COSTED, need to be explored.

### 3.6. The COSTED-IBN merger

COSTED and IBN were merged in 1994, seemingly without much prior discussion with those involved. Part of the rationale behind the merger was that the more active IBN networks might re-energise COSTED, which was already causing some concern within ICSU about its lack of an effective presence in many developing regions. However, the Panel found that the general consensus was that the merger has not worked. Essentially, the COSTED network now consists of two types of regional networks and Secretariats – the original COSTED ones and the IBN ones.

Where strong regional scientific networks existed before, they have continued – such as in Latin America. The Latin America network RELAB served as a model for the establishment of five new thematic networks. RELAB and at least two more seem to work well. The ABN in Senegal, once successful with large UNDP funding and involving more than thirty countries, was unable to attract new funding. The merger with COSTED was unable to help secure additional support for the network.

AONBS in Thailand was initiated by COSTED in 1995, after the merger between COSTED and IBN. It is functioning well, concentrating on biosciences, and with good synergism with the International Division of its host institution BIOTEC, which provides 80% of the funding. However, it is clearly a biosciences network in its orientation rather than serving a broader-based interdisciplinary COSTED function, as described in the COSTED constitution.



It is a general feeling that the merger was a marriage of convenience rather than a well thought out partnership, and that there has been no added value of the merger for the IBN secretariats. The merger has also added greater and more complex responsibilities for COSTED, with dwindling funds. Today IBN would fit better in a biosciences cluster of ICSU Unions and interdisciplinary bodies. Positive outcomes of the merger include the new regional networks created in Asia (AONBS) and Latin America - networks that are now mature enough to link more directly to their scientific counterparts in ICSU.

### 3.7. Has COSTED been able to advise ICSU?

One of the questions addressed by the Panel is whether COSTED has fulfilled its mandate to provide “guidance and support for international scientific activities of ICSU, ICSU bodies and UNESCO in order to bring these in line with the requirements of sustainable development in developing countries.”

Overall, the Panel has found that COSTED has not been able to provide advice to ICSU and other organisations for three main reasons:

- ICSU has not asked for input except for a few occasions;
- COSTED’s resources (except in India) were insufficient to enable COSTED to play an effective information gathering role in the regions to provide input to ICSU;
- ICSU has not provided clear expectations for the Executive Committee or the Secretariats.

When ICSU asked for input to specific activities, COSTED sought to provide it, although it is not clear how far ICSU was actually influenced by the advice from COSTED. For example, COSTED provided input to:

- Preparation for UNCED / ASCEND 21 conference in 1991;
- ICSU delegation to WIPO in November 1997;
- World Conference on Science in 1999.

Apart from the above examples, the Panel found little clear and directed articulation of ICSU’s expectations from COSTED, either formally or informally. The panel noted that

the editorial in *Science International* (December 2000) on “ICSU’s new vision for the future” is surprisingly silent on developing countries and their special needs for science to support and guide their development. The COSTED Central Secretariat prepared a draft document in late 2001, outlining an ICSU vision for developing countries, and emphasising the universality of science, the role of S&T for basic human needs, and the role of ICSU and COSTED in examining generic issues where developing countries are at a disadvantage.

Rather than asking for guidance, ICSU has in fact allowed the COSTED Executive Committee to evolve its own mission and vision to the best of its judgement using the objectives spelled out in the COSTED constitution. ICSU is represented in all the Executive Committee meetings of COSTED, by its Executive Director and by a member of the ICSU Executive Board, but the apparent drifting of COSTED from the needs of ICSU has been allowed to continue over several years. If COSTED has indeed become marginal to ICSU, the Panel believes that ICSU must shoulder some of the responsibility.

### 3.8. Major achievements and shortcomings of COSTED

#### MAJOR ACHIEVEMENTS

- Understanding developing countries needs and perspectives and formulating programmes to address them, especially at the regional level.
- Ability to reach out and bring together scientists and experts from a wide range of developing countries around common themes and issues.
- Ability to examine a few generic issues and reflect developing countries’ perspectives; (IPR, Mobility of Professionals, Capacity Building).
- Mobilisation of scientists through scientific networks, e.g. Latin America.
- Some success in external fund raising and enrolment of National Members.

## SHORTCOMINGS

- Lack of an ICSU vision or clear set of expectations for COSTED, with no performance indicators, and no real receptivity in ICSU to advice from COSTED.
- A broad mandate combining operational and advisory roles has not facilitated targeted action with measurable impacts, and demonstrated successes.
- Severe mismatch between mandate and resources. Absence of adequate core funding and declining funding over recent years.
- Inability to engage the attention of ICSU or its Unions and bodies resulting in increasing marginalisation of COSTED within ICSU over the past few years.
- COSTED is unlikely to influence ICSU or UNESCO. It is not strong enough in either intellectual or financial resources to be a significant influence on other major international or regional organisations.
- Executive Committee has not played an effective role in advising ICSU or in setting strategic directions for COSTED.
- The Executive Committee has inadequate representation of the least developed countries.
- Lack of concerted actions amongst the Regional and Central Secretariats.
- Too many Regional Secretariats for the amount of core funding available. Regional Offices have no full time staff<sup>1</sup>.

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1. For example, the Regional Secretary in South Africa reports that he spends 5% of his time on COSTED affairs and his secretary spends 3%. This translates to approximately 10 days and 6 days per year respectively (assuming 200 working days in a year).

## 4. Conclusions and Recommendations

### 4.1. Proposals for the Future

COSTED has made some significant achievements over the period that the Panel has been able to examine. Recent highlights include the initiative on Intellectual Property Rights (IPR), the strong scientific networks in Latin America, and the study on the Mobility of Professionals. In addition, in each region COSTED has supported numerous scientific meetings and individual scientists. These successes are all the more remarkable, given the meagre financial resources that COSTED has had to work with.

COSTED was originally conceived some thirty-five years ago. The challenges now for science and technology in developing countries are very different. The developing world itself is more differentiated. Some countries, like China and India, invest large human and financial resources in science and technology; others – particularly in sub-Saharan Africa, still lag behind and need scientific capacity building as a first priority. Increasingly, the development agenda is to focus in on building institutional capacity for S&T and to network those institutions into National Systems for Innovation.

The Panel found that COSTED is not being as effective as is needed in providing advice to ICSU. Indeed, COSTED seems marginalised within the ICSU family. It is not a main conduit for advice to the Union Members in their work with developing countries; and it does not appear to have much visibility with many National Members, except where it has a Secretariat. COSTED has been unable to attract enough external funds to support its planned activities, although several governments, notably that of India, have provided important support to the COSTED Secretariats in their own countries. The capacity building activities of COSTED, such as support to scientific meetings and travel grants to scientists, are important in themselves but do not add up to a critical mass to make a significant difference at the national or regional level.

The Panel believes the reasons for this low profile of COSTED on the ICSU horizon lie in the lack of global coverage, partly due to the inadequate – and declining – financial resources, and partly due to the imbalance of resources and activities of the regions, and in the lack of adequate attention *within ICSU* to the issues of concern to developing countries that fall within COSTED's mandate. There has been no effective mechanism to give weight to and influence ICSU on developing countries issues. The Panel also believes that, after 35 years, a new model should be tried for ICSU's involvement in developing countries.

The Panel's vision to achieve (a) a stronger voice in ICSU for developing countries and (b) a stronger ICSU presence in the developing world, is to separate the present two functions of COSTED – advisory and operational – into two distinct organisational structures. The organisation of COSTED as we know it would be replaced by:

- Policy Committee on Science and Technology for Development
- ICSU Regional Offices

While there would be links between the two for information exchange, in our proposal there would be no oversight role of the Policy Committee for the Regional Offices as in the present Executive Committee of COSTED. Nor would there be a Central Secretariat. Each Regional Office would deal directly with ICSU, and would report to the ICSU Executive Board through the Executive Director of ICSU.

There would be no separate “National Members” as there were for COSTED, since all ICSU National Members would be invited to participate in and support the activities of the Regional Offices. Those countries, which have financially supported COSTED as its National Members to date, are invited to continue to provide financial support to the activities

of these Regional Offices. It is anticipated that countries may be more encouraged to support local activities in their own regions, than under the present arrangement where funds from certain regions, e.g. Latin America, are centralised by the Central Secretariat. Thus it is hoped that overall financial support from national bodies will increase. ICSU National Members in developed countries would be invited to support one or several Regional Offices at their choice. However, providing financial contribution equally to all regions may need to be an option for those countries, which prefer such a mechanism.

The question of a change of name for the Policy Committee remains open. There are arguments to be heard both in favour and against retaining the name of COSTED, although the majority view in the Panel is to have a new name to signal a renewed commitment of ICSU to development and to the developing world, and to underscore that the new committee is accorded more status as a standing Policy Committee of ICSU.

## 4.2. ICSU Regional Offices

The proposal is that instead of the present seven COSTED-IBN Regional Secretariats, there would be four ICSU Regional Offices; one each for Africa, Asia, Latin America and the Arab Region. These Regional Offices would incorporate into their objectives many of the functions of the COSTED Regional Secretariats, but would be responsible for a larger region and could act as regional focal points to support other ICSU activities, including those of the Scientific Unions, the ICSU Interdisciplinary Bodies and the Joint Initiatives. Their presence would signify an increased commitment from ICSU to work in developing countries and include their scientists and institutions in ICSU activities. There are, however, several conditions that will need to be fulfilled if the ICSU Regional Offices are to have more impact than the COSTED Secretariats have been able to do in recent years. A change of name is not enough.

### 4.2.1. OBJECTIVES AND FUNCTIONS

The Regional Offices will support the work of ICSU and its Scientific Unions, National Members and other bodies, as well as its partners such as UNESCO, in the regions to pro-

mote science and technology for sustainable and equitable development. They will work in association with scientific networks in the region and will help to strengthen them where appropriate. Overall, they will develop and conduct programs relevant to their regions within the general framework of ICSU's activities and those of its Unions. These could include:

- Collect information on locally developed strategies and priority needs, and scientific expertise within the regions to link science and technology to development and sharing this information with ICSU and its partners (*core budget*);
- Assist ICSU and its member Unions in their strategic planning in the regions and ensuring that their plans and activities are well grounded (*core budget*);
- Develop and maintain links with national and regional scientific institutions, societies, academies and governments, including the present National Members, in order to strengthen ICSU collaboration with them and to increase the impact of ICSU activities in developing countries (*core budget*);
- Facilitate the free flow of scientists and scientific knowledge across borders (*core budget*);
- Build opportunities for ICSU National Membership in developing countries through establishing contacts with scientific communities in those countries with no National Members (*core budget*);
- Keep the ICSU Executive Board informed through the Executive Director of the main activities undertaken and preparing an annual report (*core budget*);
- Liaise with the Policy Committee on Science and Technology for Development (*core budget*);
- Share information with UNESCO Regional Offices for Science and Technology (*core budget*);
- Undertake fundraising for activities within the region, in collaboration with ICSU and its subsidiary bodies (*core and programme budget*);

- Act as a focal point for regional program activities of ICSU, its Member Unions or Interdisciplinary Bodies (*programme budget*);
- Provide support and co-ordination, if needed, to scientific networks in the region and may work in association with them (*program budget*);
- Collaborate with the other Regional Offices on issues of global interest and take the lead role where suitable (*core and program budget*).

#### *Scientific networks*

COSTED has fostered and supported some important regional scientific networks, which are strongest in Latin America but exist also in Asia and Africa. There are other important scientific networks in the regions, including those of the International Scientific Unions, which have arisen from initiatives outside COSTED, that ICSU should seek to work more closely with in the future. ICSU may wish to encourage the formation of new scientific networks in some regions where they do not yet exist. In other words, ICSU Regional Offices should be actively engaged with ongoing and new scientific networks in the regions.

The nodes of these networks are likely to be in different locations and countries from the ICSU Regional Offices so that, by working more closely with the best scientific regional networks, the presence of ICSU is more extensive and integrated across the regions and across disciplines and research foci. Where new networks are initiated, the selection of these nodes should be left to the networks to decide.

The Regional Offices would seek accord with the scientific networks to ensure that, while the networks operate autonomously, they also assist the Regional Offices in their information and clearing house functions by providing information and access to scientists and institutions in their networks.

#### 4.2.2. ORGANISATION

The Panel's view is that the ICSU Regional Offices would be hosted and probably co-located in strong national or regional institutions, similar to the model provided by the present Central Secretariat of COSTED. This linkage of ICSU with national institutions would strengthen not only ICSU's

presence on the ground but would provide the necessary institutional support to make the Regional Offices function well. Indeed, the Panel sees a strong host institution as one of the conditions for success. The host institutions would also benefit through enhanced visibility and recognition, with accompanying advantages.

It is recommended that the identification of national or regional institutions to host each of the ICSU Regional Offices would be done through a selection process in which institutions and governments are invited to make offers to host the Regional Offices. The support that is to be provided by the host institution would be one of the criteria in the selection process.

The Panel envisages the Regional Offices as small efficient units with a minimum of two full time staff – a Regional Director and one other person, both supported by core funding, and the possibility of more staff paid for by program funds, where these funds are raised. The host institution should also contribute support for locally engaged staff. Secondments and internships can also increase the human resources available and at the same time provide valuable opportunities for young scientists. The Regional Directors would report to the Executive Director of ICSU. They should be scientists with good networks within the regions.

The Regional Director would be advised by a small Regional Advisory Group, composed mainly of outstanding scientists – including some younger scientists – from the region that are well-linked into regional networks and into ICSU Member Unions and Interdisciplinary Bodies. The Group should be able to work electronically and meet, preferably annually, around some scientific or ICSU event in the region.

#### 4.2.3. FINANCIAL ASPECTS

Based on the salutary experience of COSTED, the Panel believes that a minimum core grant from ICSU of 20,000-25,000 USD per year is necessary for each Regional Office. If these funds are not foreseen as stable over the next five years, ICSU should not embark on the effort of establishing Regional Offices (nor should it try to continue with under-funded COSTED Regional Secretariats). These core funds from ICSU allow the Regional Offices to hire staff that is not necessarily

from the host institution or host country. This independence in the selection of the head of a secretariat is critical to an international or regional office being able to play an international role and is one of the “lessons learned” by ICSU with respect to the present Central Secretariat. Any staff hired through regional competition should be paid at regional level salaries rather than at international level<sup>2</sup>.

The Regional Offices should also be located in prestigious and strong national or regional host institutions that can provide a scientific and administrative home, including some core financial contribution as well as significant in-kind support. In this, the Regional Offices would represent a partnership between ICSU and some of the leading scientific institutions in developing regions.

The Regional Offices should be able to enter proposals for regional program activities in the competition for ICSU Competitive Grants and should be strongly encouraged and supported to raise funds for their program activities. The Panel sees four main sources of funding in addition to ICSU core and competitive grants. These are:

- Core support from host institution/country/region;
- Voluntary contributions from ICSU National Scientific Members including sponsor countries (formerly “COSTED National Members”);
- Grants from international and bilateral donor agencies and Foundations;
- Administrative overheads charged on scientific networks and other program activities of the Scientific Unions and other ICSU bodies that use the services of the Regional Office.

The Panel believes that the Regional Offices are more likely to be able to attract funding from Development Assistance Agencies, Foundations and National Scientific Members if they are located in strong national or regional host institutions in developing countries, and if they have core funding from ICSU to ensure their international status and independence.

#### 4.2.4. LINKAGES

The Regional Offices would have direct linkages with Scientific Union activities, institutions and networks within

their regions and outside. In this regard, they would face both ways: internally within the region and externally beyond it. The main linkages would be:

#### *Within the region*

- National and regional institutions within their region;
- National Scientific Members of ICSU;
- Scientific Unions and ICSU Interdisciplinary Bodies, and their networks in the region;
- Other scientific bodies such as the CGIAR, TWAS;
- Other scientific networks;
- UNESCO Regional Offices;

#### *Beyond the region*

- The Executive Director of ICSU, and, through that office, the ICSU Executive Board;
- The proposed new Policy Committee on S&T for Development;
- The other ICSU Regional Offices.

### 4.3. Policy Committee on Science and Technology for Development

The Panel believes that there is a need for a stronger policy input to ICSU, its Unions and its other member bodies from developing country scientists, institutions, networks and National Members. It proposes therefore that ICSU establish a new Policy Committee on Science and Technology for Development. This Committee would be one of the Standing Committees of ICSU established to assist the Executive Board in fulfilling its objectives.

#### 4.3.1. OBJECTIVES AND FUNCTIONS

The principal objective of the Policy Committee will be to provide a vision and continuous advice to the ICSU Executive Board on its work relating to science and technology for development and in developing countries. It should make

<sup>2</sup> One view in the Panel is that regional or national level salaries are more easily applied if the funds did not come directly from ICSU in Paris, but, for example, came through a national body in a developing country, such as the Chennai secretariat in India.

ICSU and its subsidiary bodies aware of the needs and priorities of developing countries and at the same time, bring to ICSU's attention, generic issues that are important to the developing world.

The Policy Committee would have no role in overseeing the work or performance of the Regional Offices. Instead, it is proposed that the Regional Directors are ex-officio non-voting Members of the Policy Committee as they will have a special knowledge of ICSU activities and relationships within their regions. The membership of the Policy Committee should be small and drawn mainly, if not entirely, from the developing regions. Within the constraints of small size, it should seek to reflect geographic, disciplinary and gender balance.

In order to carry out its mandate, the Policy Committee may wish to undertake studies and reviews as needed. The ICSU Executive Director and the Regional Directors would promote follow-up actions to priorities set by the Policy Committee.

The Policy Committee would be supported by a staff person at the ICSU Secretariat in Paris, as are other Policy Committees.

#### 4.3.2. FINANCIAL ASPECTS

The Policy Committee should receive core funding from ICSU for its work, in a manner similar to the other Standing Committees of ICSU. If it needs additional funding for special studies or other activities, it should be able to request additional support from ICSU and/or be able to make requests for funding from outside ICSU. National Members may also wish to assist the Policy Committee in any special studies of interest to them.

#### 4.4. Transition issues

If the Panel's proposals – or some version of them – are accepted, there will be a number of transition issues to address. Some of these deal with winding down COSTED and others with starting new ICSU structures. The most sensitive issues are the connections between the wind-down and the start-up. These include:

- The disestablishment of the Central COSTED Secretariat at Chennai, India;
- The closing of Regional Secretariats;
- The winding down of the Executive Committee for COSTED;
- The selection process for the host institutions for the ICSU Regional Offices;
- The selection of Regional Directors and other staff for the Regional Offices;
- The establishment of the new Policy Committee on Science and Technology for Development;
- The invitation to ICSU National Members, and in particular existing National Members of COSTED, for future collaboration with Regional Offices;
- The question of the name for the new Committee: COSTED or something different?

The Government of India has been very generous in its support of COSTED and the Panel recommends that early discussions with the Government are entered into to determine whether there is a similar enthusiasm for hosting the ICSU Regional Office for Asia.

At the same time, a search process should be put in place to invite national and regional institutions to offer to host the ICSU Regional Offices. A small *ad hoc* committee should be struck to establish criteria for the selection process, rules of procedure, and a time frame. All offers must be treated confidentially and fairly; and usually visits will be made to a "short list" of host institutions by experienced negotiators who can provide the ICSU Executive Board with a comparative evaluation and recommendations.

The closing of the Regional Secretariats should also be handled with delicacy and every effort made to ensure that all the proper authorities are informed and thanked appropriately. Some of the present host institutions may wish to offer to host an ICSU Regional Office and should be included in the process.

#### 4.5. Recommendations

If the main conclusions of this Panel are accepted by the CSPR, the following recommendations are made to the CSPR and, through the CSPR, to the ICSU Executive Board and General Assembly:

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1. The COSTED-IBN Executive Committee is thanked for all the work that it has done and it is proposed at the General Assembly of ICSU in 2002 that its work and mandate be formally ended;

2. The Central Secretariat and Regional Secretariats are closed at some appropriate time between December 2002 and December 2003;

3. Regional Offices for ICSU are established in Africa, Asia, Latin America and the Arab Region with core funding from ICSU and are located in strong host institutions in a developing country;

4. A Policy Committee on Science and Technology for Development is created as one of ICSU's standing committees to assist the ICSU Executive Board;

5. A formal selection process is put in place before the end of 2002 to find host institutions for the ICSU Regional Offices that can provide them with visibility in the region and administrative and other support;

6. Discussions with the Government of India regarding the ICSU Regional Office for Asia and the possible transfer of resources from the COSTED Regional and Central Secretariats are entered into as soon as possible.



## Appendices

### Appendix 1: Terms of Reference of the COSTED Review Panel

#### BACKGROUND

The Committee on Science and Technology in Developing Countries (COSTED) was established initially as a special scientific committee in 1966 for the encouragement of science and technology in developing countries. In 1990, it was reorganised to function as an advisory group to ICSU on the range of ICSU activities in developing countries, and on how these relate to other international efforts. In 1993, the International Biosciences Networks (IBN), which was established as a joint UNESCO-ICSU undertaking in 1979, was merged with COSTED to streamline the activities of the two bodies. COSTED revised its constitution in 1995 reflecting this merger and was given the objective to act as an advisory body to ICSU and UNESCO.

Over 30 years since its establishment, COSTED has thus evolved, and expanded its membership, regional outreach, and number of its programs. Nevertheless recognising an increased expectation for ICSU to play a more vigorous role for the enhancement of science and technology in developing countries, ICSU and its member organisations have felt that a strategic approach to this issue needs to be developed. The 26th General Assembly (September 1999 in Cairo) requested that the Committee for Scientific Planning and Review (CSPR) conduct a special in-

depth review of COSTED, and report back to the 27<sup>th</sup> General Assembly, which is scheduled for September 2002.

#### PROCEDURES

This special review of COSTED shall be based on "the Procedures for the Review of ICSU Interdisciplinary Bodies, Joint Programmes and Scientific Associates," which was adopted by the CSPR in May 2000. To ensure the legitimacy of the review process, it was agreed to establish an independent panel, which shall be comprised of a selected and well-balanced number of outside experts, who are knowledgeable about issues related to science and technology in developing countries. The panel will also have a representative of the CSPR as a member to act as a liaison with the CSPR. The CSPR is charged with establishing the terms of reference for, and selecting the membership of the Review Panel.

The Review Panel will closely examine the current process and performance, as well as organisational and operational structure of COSTED *vis-à-vis* the mandate stipulated in the constitution. The Panel will report to the CSPR on its findings and conclusions, including suggestions for possible ways and means for COSTED to achieve its proposed roles. UNESCO is expected to participate.

The second phase of the review by the CSPR will follow to further discuss future options in detail, taking into account ICSU's new strategy concerning science

and technology in developing countries, which shall be developed by the CSPR, and prepare final recommendations to the Executive Board. The Executive Board will then develop its proposals to the next General Assembly.

#### CRITERIA FOR THE PANEL REVIEW

The COSTED Review Panel will document and analyse the current process, performance and its organisational and operational structure of COSTED *vis-à-vis* its mandate stipulated in the constitution. The scope of the review will cover the past seven years since the merger with International Biosciences Networks in 1993, while the focus will be primarily on performance during the past three years. In the light of its findings, the Panel will make recommendations on new vision, mandate and organisation for the future.

In particular, the Panel will:

1. Review the performance of COSTED in terms of its stated objectives, its constitution, and the mandate given to it by ICSU;
2. Review the financial and human resources, and the organisational structure of COSTED for achieving its objectives, including the impact of the merger with IBN;
3. Review how COSTED has collaborated with other organisations, and added value to their work and met their expectations,

- within developing countries,
- within ICSU and its associated bodies,
- within UNESCO and other key bodies;

#### 4. In view of the Panel's findings,

- a) Review the objectives and mandate of COSTED and make suggestions for new vision and mandate for COSTED;
- b) Consider future options for ICSU to fulfil its own mandate to support science and technology in developing countries and to strengthen the 'voice' of the scientific communities in developing countries within ICSU and its programmes.

#### METHODOLOGY

The assessment by the Panel will be based on:

- Analysis of documents, such as annual reports, occasional reports and publications;
- Analysis of responses from COSTED central and regional secretariats to the questionnaire prepared by the CSPR;
- Interviews of selected ICSU and non-ICSU bodies, which have collaborated with COSTED, such as COSTED National Members and Corresponding Members;
- Site visits/contacts by selected members to the Central Secretariat in India and the Regional Secretariats, which are located in Mexico/Argentina, Ghana, Senegal, South Africa, Jordan, and Thailand.

The Panel will have a first meeting in Paris at the beginning of its work. The Panel will work through correspondence as much as possible. An additional meeting should be held in early 2002, subject

to a decision by the Executive Board concerning financial arrangements.

#### SCHEDULE

##### *October 2001*

As soon as the Panel is set up, each member will receive a set of documents for their preliminary analysis. The Panel will have a 3-day meeting where the members will be briefed on the background and objectives of the review, and finalise the evaluation criteria and programme of work. It will also discuss a general strategy for its review based on their preliminary analysis. Additional information required for the assessment will be identified at this stage.

##### *October - December, 2001*

The Panel members will conduct an in-depth analysis of the documents according to the agreed evaluation criteria and provide individual assessment reports. Selected members would be asked to visit/contact the COSTED central and regional secretariat offices to collect additional information for the review through discussions with staff of secretariat offices, representatives of host organisations and possibly others.

##### *January - February 2002*

The Panel will prepare a draft consolidated report synthesising findings and recommendations in the individual assessment reports. The draft report should be shared with the COSTED Executive Committee Officers, Indian National Science Academy (INSA), and UNESCO to invite their comments on the draft report.

##### *March - April, 2002*

Taking into account comments from COSTED Officers, INSA, UNESCO and

possibly others, the Panel will finalise the report and present it to the CSPR by April 5.

##### *April 2002 -*

The CSPR will review the report and make recommendations to the ICSU Executive Board and the 27<sup>th</sup> General Assembly (Rio de Janeiro, September 2002).

#### RESOURCES

ICSU will cover expenses of the Panel members for travel (economy class tickets and appropriate per diem for attending meetings and site visits) and other approved costs for the review. The ICSU Secretariat will provide the Panel members with assistance in collecting necessary information for their review, preparing documents, in addition to organising meetings and facilitating communication among the Panel members and with CSPR, as well as with other ICSU Bodies, if necessary.

## Appendix 2 – Members of the COSTED Review Panel

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## Appendix 3 – COSTED Secretariats (As of February 2002)

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## Appendix 4 – Constitution of the Committee on Science and Technology in Developing Countries and International Biosciences Networks (COSTED-IBN)

### I. DENOMINATION

1. The Committee on Science and Technology in Developing Countries and the International Biosciences Networks (COSTED-IBN), is a Scientific Committee of ICSU and is co-sponsored by UNESCO.

### II. OBJECTIVES

2. COSTED-IBN is charged specifically with linking science and technology to development. Its general objective is therefore to act as an advisory group to ICSU and UNESCO on the range of its activities in science and technology for developing countries, their potential applications to social and economic development, and how these relate to other international development efforts. This should primarily be pursued through co-operation with the Members of the ICSU family, the co-sponsors and other relevant organisations.

### III. FUNCTIONS

3. To achieve these objectives, the following types of activities may be carried out through the COSTED-IBN Executive Committee:

a. provide guidance and support for international scientific activities of ICSU, ICSU bodies and UNESCO in order to bring these in line with the requirements of sustainable development in developing countries;

b. gather information concerning the needs of each region of the developing

world and communicate this to ICSU and to the co-sponsors, thereby providing them with the ideas for relevant, new or improved types of activities to be undertaken;

c. encourage the design of programmes to strengthen and increase capacities in science and technology in developing countries;

d. increase public understanding and knowledge of science and technology and of their relevance to development;

e. build up networks of scientists in all parts of the world dedicated to the advancement of science and technology for development, and ensure that these scientists are in touch with each other through the COSTED-IBN networks; and

f. identify and sponsor specific activities of interest to more than one region, in which COSTED-IBN can make a unique contribution.

4. To undertake through the regional offices of COSTED and IBN, activities on a regional level which are appropriate to regional situations, and which, when possible, bring the international framework provided by ICSU and UNESCO to the regions. These activities could include, inter alia:

a. reflection on regional needs for scientific and technological development;

b. stimulation of scientific exchange in order to help break the isolation of scientists in developing countries (e.g. where appropriate through the organisation of scientific workshops and seminars, the provision of travel grants/fellowships, the formation of regional scientific organisations and networks);

c. publication and dissemination of scientific information;

d. capacity building through training, education and research; and

e. identification and formulation of projects to address specific problems of science as related to development.

### IV. MEMBERSHIP

5. National Members of COSTED-IBN shall be ICSU National Scientific Members and other appropriate national bodies which wish to contribute financially to the work of COSTED-IBN on an annual basis.

6. Corresponding Members shall be designated representatives of ICSU Unions, interdisciplinary bodies, ICSU Associates, those National Scientific Members of ICSU which do not wish to be National Members of COSTED-IBN, and other appropriate organisations approved by the COSTED-IBN Executive Committee.

7. National and Corresponding Members will be provided with all information regarding COSTED-IBN activities and will be invited to comment on its programmes and plans. National and Corresponding Members may send observers to COSTED-IBN Executive Committee meetings. The terms of office of these Members shall be determined by the body nominating them.

### V. EXECUTIVE COMMITTEE

8. The COSTED-IBN Executive Committee shall consist of scientists with expertise in the biological, physical, earth and human sciences, serving in their individual and independent capacity. Membership will consist of:

Chairperson

Vice Chairperson

Past Chairperson (initially 2: past chairs of COSTED and IBN)

Scientific Secretary / Treasurer

Regional Secretaries

Up to ten other persons with expertise in different areas of science for development

Ex-officio: representatives of ICSU, UNESCO, IFS, TWAS and INSA.

9. Members of the Executive Committee except the Scientific Secretary, Regional Secretaries and the ex-officio members shall be appointed by the Executive Board of ICSU in consultation with UNESCO for up to three year terms, with the possibility of renewal for one further term of up to three years, subject to review by the Co-sponsors. A rotation of membership of the Executive Committee shall be ensured by adjusting the terms of office appropriately. The ex-officio members will be nominated by the respective agencies they represent.

10. The Scientific Secretary, who is responsible for the day to day affairs of COSTED-IBN shall be appointed by the Executive Board of ICSU in consultation with UNESCO and the Indian National Science Academy hosting the COSTED-IBN Central Secretariat in Madras, India, for a three year term which is renewable.

11. The Regional Secretaries who are responsible for the day to day affairs of the regional secretariats shall be appointed by the Executive Board of ICSU in consultation with the scientific institution/organisation which is hosting the regional secretariat or with the regional structure set up to oversee the work of the Secretariat as the case may be for a three year term which is renewable.

## VI. STRUCTURE AND RESPONSIBILITIES

12. The organisational structure of COSTED-IBN shall consist of:

- a. an Executive Committee as set out in Section V above;
- b. a Plenary of members as set out in paragraph IV-5 and IV-6 above, and observers invited by the Chairperson;
- c. a Central Secretariat under the responsibility of the Scientific Secretary located in Madras, India; and
- d. Regional Secretaries including those of Networks located in various regions of the developing world under the responsibility of Regional Secretaries.

13. The Executive Committee shall be responsible for promoting the objectives and functions of COSTED-IBN as set out in section II and III above through the Executive Committee meetings, consultations and such other means appropriate for the purpose.

14. The Chairperson will preside over all meetings of the Executive Committee and of the Plenary of members defined under paragraphs IV-5 and IV-6. In the absence of the Chairperson, the Vice Chairperson will take his/her place. In the event of both the Chairperson and the Vice Chairperson being absent at any of these meetings, a Chairperson will be elected by the members present, to preside over that meeting.

15. The Central Secretariat shall be responsible for promoting the objectives of COSTED-IBN and for assisting the Executive Committee in the implementation of the plans and activities of the COSTED-IBN as decided by the Executive Committee. These will include:

a. providing advice to the co-sponsors based on decisions of the Executive Committee regarding activities in developing countries;

b. co-ordinating fund-raising for COSTED-IBN;

c. assisting the Regional Secretariats in setting their scientific priorities and in co-ordinating their activities where needed;

d. facilitating the exchange of information, and communication among the various secretariats;

e. facilitating the exchange of information and ensuring adequate linkage between on-going activities of ICSU and UNESCO of interest to developing countries and other international plans and programmes, and those of the Regional Secretariats;

f. organising inter and multi-regional activities when appropriate; and

g. preparing an annual report of COSTED-IBN activities for submission to the COSTED-IBN Executive Committee and to the Co-sponsors.

16. The Regional Secretariats shall develop and conduct regional programmes of primary interest to their respective regions with majority of participants from the region in accordance with the aims of COSTED-IBN. These include:

a. collecting and distributing information on strategies and needs linking science and technology to development in their respective regions;

b. establishing contacts with scientific communities in countries which have no formal links with scientists outside of their country thereby strengthening such communities and enhancing opportunities for ICSU National Membership in developing countries;

c. keeping the Central Secretariat

informed of their activities periodically and seek its co-operation where needed;

d. establishing a Regional Programme Board (RPB) with its members either elected by the regional network or selected by the Regional Secretary in consultation with appropriate scientific organisations in the region, and approved by the COSTED-IBN Executive Committee;

e. arranging for the meeting of the RPB at appropriate intervals preferably in conjunction with a regional scientific meeting. The Scientific Secretary shall attend the regional RPB meeting whenever possible; and

f. preparing and submitting the annual report of regional activities along with audited statement of accounts of the previous year sufficiently in advance to the Scientific Secretary for integration and submission to ICSU by 31 March every year.

17. Recognising the effectiveness of regional biosciences networks in Latin America (RELAB) and Africa (ABN) to promote biological sciences in developing countries, regional COSTED-IBN secretariats may make efforts to initiate similar networks in large areas of science. In doing this, existing regional network structures may be suitably involved. New networks will be instituted in close consultation with and approval of the Executive Committee.

## VII. FINANCE

18. The Funds of COSTED-IBN are obtained from the dues of its National Scientific Members, grants from the Co-sponsors, donations, contracts, or revenues from sales of investments. All of them must be accepted by the COSTED-IBN Executive Committee on behalf of

COSTED-IBN, to be used for:

- a. COSTED-IBN general programmes,
- b. COSTED-IBN regional activities,
- c. infrastructure in the central and regional centers,
- d. the operation and maintenance of the Madras Secretariat.

19. Funds in respect of 18a to d above shall be disbursed as under:

i. In respect of 18a to c funds shall be disbursed under the authority of the Scientific Secretary / Treasurer or the Regional Secretary as the case may be after the programme concerned has been approved by the COSTED-IBN Executive Committee.

ii. In respect of 18d, funds received from the Government of India through the Indian National Science Academy and the Council of Scientific and Industrial Research will be disbursed by the Scientific Secretary according to the approved plans and they will be regularly reported to the Co-sponsors and the COSTED-IBN Executive Committee.

20. Funds may be raised by the regional secretariats including those of the Network from national, regional and international sources for regional activities: these will be regularly reported to the Scientific Secretary.

21. The Scientific Secretary/Treasurer shall be responsible for financial matters and in doing this he will keep in close touch with the ICSU Secretariat. He will integrate the annual statement of accounts from all the regional and central secretariats and submit it to ICSU in the prescribed format by 31<sup>st</sup> March of the following year.

## VIII. MEETINGS

22. Meetings of the Executive Committee of COSTED-IBN shall be held at least once every 18 months. The date and place will be communicated to members by the Scientific Secretary at least 4 months in advance.

23. A Plenary meeting of COSTED-IBN may be organised in conjunction with each General Assembly of ICSU.

24. Travel and subsistence expenses incurred in connection with attendance at COSTED-IBN Executive Committee meetings may be claimed by members of the Executive Committee from COSTED-IBN; but such expenses incurred by those members who are representing organizations, and by ex-officio members shall normally be defrayed by the organizations they represent.

## IX. GENERAL PROCEDURES

25. All programmes bearing the name of COSTED-IBN, whether general or regional, must receive the prior approval of the COSTED-IBN Executive Committee the COSTED - IBN Chairperson.

26. Decisions taken by the COSTED-IBN Executive Committee shall be by a simple majority of those present and voting. Each member has one vote and the Chairperson also has, in addition, a casting vote in case of a tie.

27. The Executive Committee may amend this Constitution by a two-thirds vote of those present and voting, subject to the approval of the Executive Board of ICSU and provided that notification of the proposed amendment has been sent

to the members of the Executive Committee at least four months in advance.

28. No decision shall be deemed valid unless a quorum of half the members of the Executive Committee is present.

*Approved by ICSU Executive Board  
May 1995*

## **Appendix 5 – National Members of COSTED**

(According to the Categories of Annual Membership Fees)

### CATEGORY I (500 USD)

#### BANGLADESH

Bangladesh Academy of Sciences

#### COLOMBIA

Academia Colombiana de Ciencias Exactas, Fisicas Y Naturales

#### EGYPT

Academy of Scientific Research and Technology

#### GHANA

Ghana Academy of Arts and Sciences

#### GUYANA

University of Guyana

#### JAMAICA

Scientific Research Council

#### MALAYSIA

Malaysian Scientific Association

#### MAURITIUS

The University of Mauritius

#### MOZAMBIQUE

The Scientific Research Association of Mozambique (AICIMO)

#### NEPAL

Royal Nepal Academy of Science and Technology (RONAST)

#### PALESTINE

Science & Technology Planning Unit

#### PHILIPPINES

National Research Council of the Philippines

#### SRI LANKA

National Science Foundation

#### SUDAN

National Centre for Research

#### TRINIDAD & TOBAGO

Caribbean Academy of Sciences

#### YEMEN REPUBLIC

University of Aden

### CATEGORY II (1,000 USD)

#### ARGENTINA

Consejo Nacional de Investigaciones Cientificas Y Tecnicas (CONICET)

#### CHILE

Chilean Academy of Sciences

#### INDIA

Indian National Science Academy

#### THAILAND

National Centre for Genetic Engineering and Biotechnology

#### SOUTH AFRICA

Foundation for Research Development

#### SWEDEN

The Royal Swedish Academy of Sciences

### CATEGORY III (2,000 USD)

#### CHINA (CAST)

China Association for Science and Technology

#### CHINA, TAIPEI

The Academy of Sciences Located in Taipei

#### SWITZERLAND

Swiss Academy of Sciences

### CATEGORY IV (5,000 USD AND ABOVE)

#### BRAZIL

Brazilian Academy of Sciences (10,000 USD)

## GERMANY

Deutsche Forschungsgemeinschaft

## JAPAN

Science Council of Japan

## UNITED KINGDOM

The Royal Society

## UNITED STATES OF AMERICA

National Research Council

**Appendix 6 – Acronyms**

## CAST

China Association for Science and Technology

## CGIAR

Consultative Group on International Agricultural Research

## CLRI

Central Leather Research Institute (of India)

## CODATA

Committee on Data for Science and Technology

## CSC

Commonwealth Science Council

## CSPR

Committee on Scientific Planning and Review

## FASAS

Federation of Asian Scientific Academies and Societies

## FAO

Food and Agriculture Organisation of the UN

## GEF

Global Environment Facility

## IBN

International Biosciences Networks

## IFS

International Foundation for Science

## INSA

Indian National Science Academy

## OAS

Organisation of American States

## STAP

Scientific and Technical Advisory Panel (of GEF)

## TWAS

Third World Academy of Science

## WIPO

World Intellectual Property Organisation

## UNDP

United Nations Development Programme

## UNIDO

United Nations Industrial Development Organisation

## UNCED/ASCEND 21

United Nations Conference on Environment and Development/ ICSU Conference on an Agenda of Science for Environment and Development into the 21<sup>st</sup> Century

## UNESCO

United Nations Educational, Scientific and Cultural Organisation





## INTERNATIONAL COUNCIL FOR SCIENCE

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### ICSU's Mission

To identify and address major issues of importance to science and society, by mobilising the resources and knowledge of the international scientific community; to promote the participation of all scientists, irrespective of race, citizenship, language, political stance or gender in the international scientific endeavour; to facilitate interactions between different scientific disciplines and between scientists from 'Developing' and 'Developed' countries; to stimulate constructive debate by acting as an authoritative independent voice for international science and scientists.