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**REPORT BY THE DIRECTOR-GENERAL ON THE RESULTS
OF THE FEASIBILITY STUDY ON THE CREATION
OF AN INTERNATIONAL BASIC SCIENCES PROGRAMME**

SUMMARY

The present report on the results of a feasibility study on the creation of an international programme on basic sciences has been prepared in line with decisions taken by the Executive Board at its 160th and 162nd sessions (160 EX/Decision 3.3.2 and 162 EX/Decision 3.3.1), in pursuance of a review of the follow-up to the World Conference on Science (WCS).

The document provides an overview of prerequisites for a new international programme, possible options and their advantages and limitations, expected regional and international impact, budgetary and managerial aspects, as well as views of some principal partner organizations and scientists cooperating with UNESCO in the field of the basic sciences. Further action that can be undertaken is also outlined in the document.

Decision proposed: paragraph 52.

I. INTRODUCTION

1. Having considered the Report by the Director-General on the reorientation of UNESCO's programmes in the sciences to take account of the conclusions of the World Conference on Science (Budapest, 1999) at its 160th session (October 2000), the Executive Board invited the Director-General to prepare a feasibility study on the creation of an international programme on basic sciences (IBSP) (para. 6(h) of 160 EX/Decision 3.3.2). When, at its 162nd session (November 2001) the Executive Board took note of the Report by the Director-General on progress achieved in the follow-up to the World Conference on Science it asked that the results of the feasibility study on an IBSP, including financial implications, be reported to it at its 165th session (para. 7(d) of 162 EX/Decision 3.3.1).

2. The present report provides an overview of the basic issues that have a bearing on the feasibility of an international programme on basic sciences, provisionally being referred to as IBSP in this document. It seeks to appraise the expediency of an IBSP, its possible status and interface with existing programmes, conceptual options, the regional and international impact it may have, and budgetary viability. It also seeks to reflect the views stemming from an initial informal consultation on an IBSP that the Organization held with its principal partners in the basic sciences, including distinguished scientists from the South and North involved in UNESCO's science programmes and in the promotion of international cooperation.

II. CATEGORIES OF SCIENCE PROGRAMMES AND FRAMEWORK FOR ACTION IN THE BASIC SCIENCES

3. With its unique mandate for science within the United Nations system, UNESCO has, since its inception, promoted international cooperation in the basic sciences through a programme endorsed by Member States at successive sessions of its General Conference. The feasibility study on an IBSP does not therefore seek to introduce basic sciences into UNESCO's programme, but rather to provoke the search for a substantial innovation in a programme that has a wide profile and longstanding experience in meeting the needs of Member States. When examining opportunities for such an innovation, account should be taken of the fact that UNESCO has two different approaches and modalities for conceptualizing and implementing its science programmes.

4. The first category consists of a whole series of activities under the regular programme that address a great number of areas of science and respond to the expectations formulated by Member States. Once approved by the General Conference of UNESCO, these activities are carried out by the Secretariat. The Director-General regularly reports to the Executive Board and the General Conference on the status of implementation of the programme.

5. The second takes the shape of the intergovernmental programmes which also form part of the regular programme, but are administered through a specific mechanism. As a general rule, they benefit from a significant degree of extrabudgetary funding. Such programmes focus on a given major topic that necessitates intergovernmental cooperation concomitant to major national efforts. They are launched subsequent to a decision by the Executive Board and General Conference, in certain cases as a result of a major non governmental scientific effort. Each programme in this category is overseen by its own governing body that is headed by a Chairperson and consists of representatives of Member States. The Secretariat of UNESCO provides the back-up necessary for the governing body and monitors and discharges the practical implementation of the programme between consecutive sessions of this body. The Chairperson of the programme reports to the General Conference on the execution of the programme and gives information on the activities it is proposed to undertake.

6. There is a rationale for both approaches and processes in programme conceptualization and implementation. The programmes dealing with the basic and engineering sciences come under the first approach, whereas those oriented towards major environmental issues and the use of natural resources tend to belong to (but not exclusively) the second. There are four science programmes in this second category within the Natural Sciences Sector, namely:

- the International Geological Correlation Programme (IGCP);
- the International Hydrological Programme (IHP);
- the Intergovernmental Oceanographic Commission (IOC); and
- the Man and the Biosphere (MAB) Programme.

7. Each of these programmes deals with a particularly important subject and addresses it on the basis of symbiosis between national efforts and intergovernmental cooperation. The activities of these programmes are financed from both the regular budget of the Organization and extrabudgetary contributions, the latter constituting the major part of the financial resources available (see Table 1).

Table 1 The intergovernmental science programmes: figures from the Programme and Budget for 2002-2003 (31 C/5)

Intergovernmental programme	Regular programme budget (US \$)	Extrabudgetary resources (US \$)
IGCP	898,000	7,500,000
IHP	4,427,200	6,000,000
IOC	3,243,900	6,500,000
MAB	1,344,000	1,600,000

8. By the same token, an intergovernmental programme in the basic sciences could be equally justifiable and provide an opportunity to benefit from the experience UNESCO has gained in the use of intergovernmental mechanisms of cooperation.

9. When identifying a concept for an IBSP, the principal guidelines for innovating the basic sciences programme can be found in the Medium-Term Strategy for 2002-2007 (31 C/4) which is built around three main strategic thrusts. Two of these thrusts concern the programme in the basic sciences: the first aims at promoting empowerment and participation in the emerging knowledge society through equitable access, capacity-building and the sharing of knowledge, while the second calls for the development and promotion of universal principles and norms based on shared values in order to meet emerging challenges in education, science, culture and communication.

10. Furthermore, in document 31 C/4, the Organization has identified three Strategic Objectives for science, namely Strategic Objectives 4, 5 and 6, the last two having a direct bearing on the basic sciences. They aim at promoting principles and ethical norms to guide scientific and technological development and social transformation, as well as at enhancing scientific, technical and human capacities needed to participate in the emerging knowledge societies. By its very nature, the

programme in the basic sciences should also contribute to two cross-cutting themes introduced in the Medium-Term Strategy, namely the eradication of poverty and the contribution of information and communication technologies to the development of education, science and culture and the construction of a knowledge society.

11. While the Medium-Term Strategy provides basic orientations for innovating the programme in the basic sciences, account should also be taken of the provisions in the current Programme and Budget for 2002-2003 (31 C/5) in order to elaborate the most suitable approach to develop it and to identify and appraise possible options for an IBSP.

12. In the Approved Programme and Budget for 2002-2003 (31 C/5), the programme in the basic sciences is incorporated in Subprogramme II.1.2 – Science and technology capacity-building, which embraces in particular:

- Main line of action 1 (MLA 1). Capacity-building in mathematics, physics and chemistry (regular budget: \$2,078,200; extrabudgetary resources: \$15,000,000); and
- Main line of action 2 (MLA 2). Capacity-building in the biological sciences and biotechnologies (regular budget: \$1,755,100; extrabudgetary resources: \$3,500,000).

13. Both lines of action focus on assisting Member States in training and research through cooperation with competent IGOs, NGOs, networks and centres of excellence. Special attention is paid to developing countries and countries in transition. An important element of the programme targets the improvement of university science education. The scientific profile of programme activities is not predetermined in a rigid way and depends on the needs highlighted by countries and the opportunities for action identified together with partner institutions of a high scientific repute.

14. About 50% of the regular programme budget is decentralized to UNESCO field offices to meet needs in Africa, the Arab States, Latin America and the Caribbean, Europe and Asia and the Pacific.

15. The design of the present programme stems from what has been learnt from longstanding experience in responding to the needs and proposals of Member States and cooperation with partners, and is set to bear considerable fruits in years to come. Any innovation to be made should therefore be identified with care. On the one hand, a modification limited simply to a regrouping or re-labelling of activities would be of little value and should be avoided. On the other, any substantial innovation needs to be compatible with the rest of the programme, and should constitute a new element that would increase the outcome of the programme as a whole.

III. PRE-REQUISITES FOR AN IBSP

16. In assessing the feasibility of an IBSP certain fundamental issues need to be considered, among them:

- goals and focus of a new international programme;
- conceptual framework of the new programme;
- status of the new programme and its relationship with the existing regular programme in the basic sciences;

- relationship to other international mechanisms and initiatives (i.e. UNESCO's comparative advantage);
- regional and international dimensions;
- expected outcomes; and
- financial implications.

17. The identification and consolidation of views on these issues are pre-requisites for an initial study on the feasibility of an IBSP. The voice of Member States and principal stakeholders, especially in the scientific community should be a principal guiding factor in the quest for consensus on the issue. Some preliminary observations may, however, facilitate consideration by the Executive Board.

18. The IBSP would be expected to have a wide profile embracing mathematics, physics, chemistry and the life sciences. It would not exclusively address one of these disciplines or one of their areas. Therefore, the major goals and conceptual framework of such a programme should be determined in broad terms which have a bearing on all the basic science disciplines and their wider application in development.

19. These goals can be identified on the basis of the guidelines given in the Medium-Term Strategy for 2002-2007 referred to in the preceding section, as well as from lessons drawn by UNESCO from its continuing dialogue with Member States on the programme in science. Based on the foregoing and without constituting a major departure from strategic objectives 5 and 6 of document 31 C/4, these goals could be:

- building national capacities for basic research, training and science education through international and regional cooperation in development-oriented areas of national priority;
- transfer and sharing of scientific information and excellence in science through North-South and South-South cooperation;
- provision of scientific expertise for, and advice to, policy- and decision-makers, and increasing public awareness of science and the ethical issues which progress in science entails.

20. These goals are indeed consonant with the Declaration on Science and the Use of Scientific Knowledge (paras. 33-37) and the Science Agenda – Framework for Action (paras. 7-9, 12, 17-21, 22-28, 41, 48, 61-64, 71-76), documents that were adopted by the World Conference on Science as guidelines for follow-up to the Conference in Budapest. An IBSP oriented towards such goals would constitute one concrete response by UNESCO to the recommendations of the Conference.

21. The goals of an IBSP that originate from the Medium-Term Strategy will need to be also consonant with the orientation and priorities of the regular programme activities in the basic sciences. However, an IBSP is not meant to replace, but to complement and reinforce the existing regular programme. Its purpose would be to bring in a new thrust to the developmental aspects and returns of basic research and training in areas where focused intergovernmental cooperation can offer new opportunities to meet national and regional needs. The identity of an IBSP can be defined by Member States through the establishment of a conceptual framework the options for which are described below. In any case, an IBSP may offer an opportunity to benefit from an interface between pure and applied disciplines and between the regular programme activities and the

prospective IBSP. It could also provide guidance concerning all the activities under the regular programme.

22. It is also worth noting that an IBSP may offer a promising framework for regional action in the basic sciences. Indeed, major region-specific projects may constitute the principal integral elements of such a programme, though this will not exclude other global projects that may be decided by Member States.

23. Given the fact that the existing programme in the basic sciences needs to embrace a wide range of priority areas of modern science in all regions and at the international level, the budget available for programme activities imposes considerable limits. Hence, an IBSP can only be viable if extrabudgetary resources are provided for the implementation of many of its projects, as is the case for projects within the existing UNESCO intergovernmental programmes in the field of science (see Table 1). It is noteworthy that, as shown earlier, the current programme in the basic sciences attracts significant extrabudgetary contributions. Therefore, should a relevant option be identified for an IBSP, there could be every reason to expect governments and international organizations to invest in the implementation of projects approved by an intergovernmental body. Needless to say, it would be particularly important for these projects to be in harmony with national efforts and to reinforce them through intergovernmental cooperation. However, realism and the current development assistance situation dictates the comment that there will be no major net increase in extrabudgetary resources, and funds re-directed into an IBSP would of necessity be withdrawn from other ongoing activities. The advantages of an IBSP would nevertheless be to enable Member States collectively to direct the planning and implementation of programmes and projects of regional and interregional scope.

IV. OPTIONAL CONCEPTUAL FRAMEWORKS FOR AN IBSP

24. The experience gained by the Organization in launching and running international and intergovernmental programmes in science demonstrates that they may be useful and viable when:

- the subject of the programmes requires international cooperation at the global level;
- both developing and industrialized countries have a strong interest stemming from the need for a better understanding of natural phenomena, a better sharing of information, and the use of scientific knowledge;
- the programme is problem- or goal- and results-oriented and not purely academic in its nature, and it involves activities in Member States and cooperation between scientific institutions and governmental establishments for the identification of priorities and the use of results;
- the programme is not limited to research and information exchange, but emphasizes the building up of national capacities, including training and the upgrading or sharing of research facilities;
- the programme benefits from partnerships with relevant non-governmental and intergovernmental organizations in science.

25. In this context, a number of different options for an IBSP could be conceived when examining the feasibility of such a programme. In particular, the programme may be designed as:

- A. a set of major research projects;

- B. a programme for the training of specialists and the sharing and transfer of scientific knowledge and information;
- C. a worldwide network of centres of excellence in basic research and science education for development;
- D. an interdisciplinary venture;
- E. a programme on science education.

26. Although this recapitulation is not exhaustive, it demonstrates some of the principal orientations the design of an IBSP could take. The choice of an optimum option depends on prevailing priorities of Member States and the commitment they may wish to make. In this context, Member States may identify an option, or a combination of options, for the design of the programme. When seeking an appropriate decision, it may also be expedient to consider in which of the various options UNESCO is likely to be the most successful. Needless to say, Member States may attribute an international or intergovernmental status to the programme whichever option is chosen. An initial appraisal of the feasibility of these options suggests consideration of the following.

27. **Option A:** UNESCO has already dealt with sets of major research projects in the basic sciences. For example, from 1988 to 1997 the Organization carried out a Human Genome project in order to provide research training for scientists from developing countries and offer opportunities for these countries to benefit from advances in human genome research and its medical implications. Another example is the preparation of the Pierre Auger Project for which UNESCO started to provide assistance as early as 1992. The Project was launched in Mendoza (Argentina) in 1999, involving 19 countries and offering an unprecedented opportunity for research on cosmic rays of extremely high energy and the advancement of fundamental physics and astrophysics.

28. It should be recognized that the Organization has been useful and effective as a catalyser of international cooperation. However, the degree of its involvement in the implementation phase inevitably depends on the budget available. In view of financial limitations, Option A is likely to embrace only a restricted number of projects. Given the variety of regions and scientific disciplines involved, it may be difficult to reach consensus on the projects to be implemented and, hence, to ensure extrabudgetary contributions for an IBSP. The opportunity for regional action will also be limited by these factors. These limitations can only be overcome if Member States would be prepared to invest their resources in an IBSP designed to implement their national or regional research projects through international cooperation in the framework of the programme.

29. **Option B** would respond suitably to priorities so far proclaimed by Member States. It implies the establishment of a versatile programme embracing a wide range of activities. However, such a programme will somehow or other replicate already existing and useful activities in the regular programme that provides a flexible means for action. Prospects for substantial national extrabudgetary contributions to an IBSP may, in this case, be limited because of the fragmented nature of action inherent in this Option. Should there nonetheless be some new contributions, they can be effectively used for extrabudgetary activities within the already existing regular programme.

30. **Option C** implies the creation and/or development of national, regional and international centres of excellence in basic research and the promotion of their services within a worldwide network to implement a wide variety of research and training projects oriented towards national needs. In numerous countries, such centres have already been created and many others are being established or planned. Hence, Member States may have a real interest in pooling their national

investments under the umbrella of an IBSP and making extrabudgetary contributions to it, thereby ensuring that their national efforts and projects benefit from international and regional cooperation and support.

31. There are numerous examples of UNESCO's effectiveness in the creation and/or development of centres of excellence in the basic sciences. The Organization was at the very root of the establishment of the European Organization for Nuclear Research (CERN) in Geneva; it made a significant contribution to the development of the Abdus Salam International Centre for Theoretical Physics (ICTP); a network of centres of excellence in the South has been developed by the Third World Academy of Sciences (TWAS) in cooperation with UNESCO; over sixty centres of excellence in molecular and cell biology are now operational within the Global Molecular and Cell Biology Network (MCBN) established and developed by UNESCO; in biotechnology and microbiology UNESCO has long-standing cooperation with the network of Microbial Resources Centres (MIRCEN); an International Centre for Synchrotron Light for Experimental Science and Applications in the Middle East (SESAME) is currently being established in Jordan under the auspices of UNESCO. These and other examples amply demonstrate the determination of many countries to promote centres of excellence and to provide them with the required financial resources.

32. It should be added that existing centres of excellence have made, and are still making, an outstanding contribution to the promotion of national capacities in basic research, and the transfer of scientific knowledge and information. They have proved to be one of the most efficient means of building up Member States' national research capacities in areas they need most. Centres of excellence cover a wide spectrum of actions, including the implementation of research projects, the training of specialists, the transfer and sharing of scientific information, scientific expertise and advisory services. Thus, Option C may also help ensure services that would be expected from alternative options.

33. Experience with the Man and the Biosphere (MAB) programme has shown that a network can be a very useful mechanism for implementing an intergovernmental programme. In the framework of MAB, a network of biosphere reserves embracing almost 400 sites in nearly 100 countries has been successfully operating within UNESCO's programme in the environmental sciences. Thus, Option C, which proposes to develop centres of excellence within a worldwide network, would seem to offer a promising scenario for an IBSP.

34. **Option D** advocates an interdisciplinary venture that offers the possibility of pooling elements of various basic sciences within a single programme. However, to date the long-standing programme in the basic sciences has shown no evidence that Member States feel the need for a particular interdisciplinary topic in the basic sciences to be addressed in the framework of an intergovernmental programme. Nanobiotechnology, a possible topic suggested to the Organization during the consultation held would involve chemists, molecular biologists, physicists and bioengineering researchers. However when highlighting this interdisciplinary topic, what was referred to was the need to create a centre of excellence in this area and not the setting up of an intergovernmental programme.

35. **Option E:** One of the major thrusts of the WCS recommendations in the Science Agenda – Framework for Action was the call for determined action at national, regional and international levels to improve and expand science and technology education and to increase public awareness of science and technology. In response to this recommendation, the Sector of Education and the Sector of Natural Sciences of UNESCO have joined forces to develop a new long-term follow-up project on science education at all levels in both formal and informal spheres. During the 2002-2003 biennium, an Integrated Plan of Action for Science and Technology Education is being put in train.

UNESCO's action in science education has, in recent years, been rather limited in scale and the resources allocated to it relatively modest. It can therefore be asked whether the establishment of an intergovernmental programme exclusively devoted to science education is currently feasible and timely, but an international venture addressing this issue is nonetheless worthy of consideration. Any undertaking to promote science education would, of course, incorporate a considerable educational component that goes far beyond the area of basic science per se.

V. FEED-BACK ON THE PROPOSAL FOR AN IBSP

36. During the discussion at the 160th session of the Executive Board, the representative of the Director-General proposed that the International Council for Science (ICSU) and the Third World Academy of Sciences (TWAS) – two of UNESCO's principal non-governmental partners in the basic sciences – be consulted on the feasibility of an IBSP. These consultations have been duly undertaken, but they have also been extended to include other key partners. Among them the International Mathematical Union (IMU), the Abdus Salam International Centre for Theoretical Physics (ICTP), the intergovernmental Centro Latino-Americano de Física (CLAF), the International Union for Pure and Applied Physics (IUPAP), the International Union for Pure and Applied Chemistry (IUPAC), the Federation of European Biochemical Societies (FEBS), the International Brain Research Organization (IBRO), the International Cell Research Organization (ICRO), the International Union of Biochemistry and Molecular Biology (IUBMB), and Euroscience.

37. Consultations were also held with a number of renowned scientists and promoters of international cooperation familiar with the advantages and limitations of UNESCO's programme actions. In this exercise, scientists from industrialized and developing countries from various regions were approached, as were selected Chairpersons of the science committees of National Commissions, and Permanent Delegates to UNESCO who happen to be eminent scientists themselves. These consultations were of an informal character and were designed to investigate attitudes that could be taken into consideration when contemplating the feasibility of an IBSP. They led to the following conclusions.

38. The proposal to initiate the creation of an IBSP was unanimously supported in the comments received from international science organizations/centres, and scientists from Brazil, Chile, Finland, France, India, Iraq, Kenya, the Russian Federation and Saudi Arabia. Such an initiative was also applauded by the Chairpersons of the science committees of the National Commissions of France and the United Kingdom. It was felt most expedient for UNESCO to prepare and launch an IBSP to reflect its unique mandate for the basic sciences in the United Nations system (TWAS). Some comments emphasized that an IBSP could be created within the existing regular programme (Finland) and that UNESCO should be prepared to launch discussions with scientists and nations in the various regions and model an IBSP on the results of such discussions (IUPAP).

39. There was consensus on the goals of an IBSP. Comments highlighted the following:

- bridging the huge gap in the basic sciences separating the developed and developing countries (Universidad de Chile; ICRO);
- development of basic science capacity in areas of importance in regions with a strong connection between research and high-level training (IUPAP; Université Paris-Sud, France);

- the better integration of scientists from developing countries into the global scientific community (IUPAC);
- assistance to developing countries (particularly LDCs) to build and sustain a critical mass of world-class experts in the basic sciences (TWAS);
- sharing and transfer of scientific knowledge with account taken of interdisciplinary areas and new disciplines arising in the basic sciences and the use of new information technologies (University of Oulu, Finland; IUPAP);
- emphasis on science that is relevant to the local economy (IUPAC).

40. TWAS qualified Option C as the optimum one for an IBSP and pointed to the fact that the other options can be easily integrated into it to form part of a worldwide network of centres of excellence in basic sciences for development. Given the fact that TWAS and UNESCO are already working together to strengthen basic sciences in developing countries through a network of over 40 centres of excellence, TWAS has indicated that it would be prepared to expand this cooperation by linking the centres of excellence in the South with their counterparts in the North and so form a global network.

41. The majority of other respondents also favoured Option C and highlighted opportunities for action within this Option.

42. ICTP proposed that its existing scheme for Affiliated Centres to which Benin, Cameroon, Ethiopia, Ghana, Indonesia, Lebanon, Pakistan, Peru, Senegal, and Sudan are associated be considered a starting point for this kind of IBSP. IUPAC supported Option C and proposed cooperation in both the design and operation of centres of excellence. It suggested two possible projects, namely: a centre of excellence in chemical safety and the environment, and an analytical chemistry centre as applied to local needs to meet international standards. CLAF pointed out that the improvement in electronic means of communication allows efficient collaboration among centres in different parts of the world and referred to its cooperation with ICTP, CERN, and the Joint Institute for Nuclear Research (JINR) in Dubna (Russian Federation).

43. The science committee of the UK National Commission qualified MCBN as an excellent model of a network of centres of excellence and suggested that an IBSP be built on this model to cover several other topics. The science committee of the French National Commission proposed an alternative formulation for Option C: “a world network of centres of excellence and reference for development oriented to education and research in the basic sciences, make it possible to share and jointly generate knowledge in a spirit of openness towards regional diversity and interdisciplinary initiatives”. The committee also considered a recent agreement signed between the International Centre for Pure and Applied Mathematics (CIMPA) in Nice and ICTP to be in the spirit of an IBSP, and that the latter may offer better prospects for a more dynamic development of CIMPA.

44. The importance of the other options was also acknowledged, particularly that of Option E regarding science education (CLAF; Euroscience; ICSU; IBRO; ICRO; France; the United Kingdom) and that of Option B on the training of specialists and the sharing and transfer of scientific knowledge and information (ICRO; IUPAP). While favouring Options B and E, ICRO indicated that the resources needed to do something significant under Options A or C are of an order of magnitude greater than UNESCO can realistically hope to attain. As regards Option B, IUPAP stressed the need to address the problem of communication pathways between countries and regions where a coordinated UNESCO programme might have a profound effect if it were to subsidize the cost of high-speed communications between areas of the developing world and the

developed world. This observation may also have a bearing on the intergovernmental programme Information for All. When acknowledging the priority given to the promotion of science education, it should be recalled that it is not only Option E, but also Options B, C, and to a certain extent Option D, that address this challenge. To this end, for example, centres of excellence in science education could provide new opportunities for UNESCO to develop curricula, train science teachers, foster the use of information technologies in science teaching, and promote the training of scientists through postgraduate and post-doctoral fellowships, professorships and UNESCO chairs.

45. The foregoing overview of the feed-back received is not aimed at favouring any predetermined decision. At this stage, it may simply be concluded that there is a subject worthy of more in-depth consideration requiring the participation of experts authorized by Member States to represent their views and prepare a feasible elaborate proposal on an IBSP within a selected option.

VI. BUDGETARY AND MANAGERIAL ASPECTS

46. Whichever framework is favoured, Member States will be interested in benefiting from international cooperation within the programme in order to reinforce their science capacities and implement basic/applied research projects needed for their national development plans. Such international cooperation will therefore provide an opportunity and rationale for Member States to invest available resources in an IBSP that will bring returns to national science and technology, and provide an economic tool for research training, the transfer of scientific knowledge and information, the sharing of research facilities and the promotion of excellence in research and science education. The extrabudgetary resources invested by Member States and donor agencies should constitute the core of the IBSP budget and they must correspond to the strategic objectives of document 31 C/4. The scale of the budget may be substantial bearing in mind that there is need to implement a large number of projects in order to build up national capacities in science. A resourceful international action to take advantage of these promising opportunities would therefore be most expedient.

47. It should be recognized that the budget of the regular programme activities in the basic sciences is so far very limited, and that this priority programme should continue to provide important services to Member States. Notwithstanding this, an IBSP could benefit from some limited support from the regular programme budget and be carefully meshed with its activities. In this context, the preparation and launching of IBSP projects in the regions could constitute one of the main thrusts of regional programmes – it will be recalled that about 50% of the resources available in the regular budget for activities in the basic sciences are decentralized. In view of current budgetary restrictions, the running costs of the IBSP monitoring body would be covered through the reallocation of resources for regular programme activities. Funding of the monitoring body can be envisaged along the lines of decisions taken by the Executive Board and the General Conference with regard to programmes such as the Information for All Programme, IGCP or IHP. Under such circumstances the costs to be covered – excluding staff costs – would necessitate a budgetary provision of about \$90,000 per biennium. This preliminary estimate takes account of austerity measures and may vary depending on the decision taken as regards the frequency of meetings of the body that would oversee the IBSP and on recourse to virtual meetings.

48. The Organization may establish a Council to monitor the IBSP. The status of the Council and its membership should be determined according to the status Member States assign to the IBSP. The council of an intergovernmental programme normally consists of representatives of Member States elected by the General Conference on the basis of equitable geographical distribution and appropriate rotation. The regions may establish small Ad-hoc Working Groups to assist the Council. Their purpose would be to oversee and promote cooperation within the IBSP at the regional level.

49. It would be feasible for the Secretariat to provide back-up and support for the Council. Among these tasks would be the assembling and analytical reviewing of proposals from Member States and international and regional partner organizations, the preparation and conduct of the Council sessions and their follow up, the dissemination of information on IBSP and its projects, and assistance in the preparation of specific project proposals and reports to the Executive Board and the General Conference. In this way, the Organization would be fulfilling its role as clearing house to, and catalyser of, international cooperation within the IBSP. Were the Secretariat also to be required to manage projects, in the same way as currently occurs in the case of the Intergovernmental Oceanographic Commission (IOC), regular staffing arrangements would not be sufficient and recourse to extrabudgetary-funded short-term consultancies would be needed. Moreover, the Chairperson of the IBSP Council might join the existing group of Chairpersons of the five intergovernmental science programmes. This would provide an important opportunity to enrich the interface between the basic sciences programme and the existing five intergovernmental programmes of UNESCO and other activities addressing the environment, social transformation, ethical issues and follow-up to the World Summit for Sustainable Development.

VII. FURTHER STEPS TO BE ENVISAGED

50. Should the Executive Board conclude that further steps conducive to the establishment of an IBSP are to be taken, action could be envisaged to enable authorized representatives of Member States to elaborate recommendations on an IBSP for submission to the Executive Board and the General Conference. These recommendations should address such issues as the status of the IBSP, an optimum option for the programme and its terms of reference. They should also address the mandate and rules of procedure of the body entrusted to oversee the IBSP, initial project proposals and estimated financial support for them to be provided by Member States and donors, budgetary issues, the support staff required, etc. The Executive Board may wish to convene an ad-hoc IBSP Expert Committee to carry out the above-mentioned action. The Director-General could set up this Expert Committee as early as November 2002 following consultation on its composition with the electoral groups. The Expert-Committee would be entrusted with preparing a Report for the Executive Board at its 167th session. The Executive Board's conclusions on the Report and its recommendations thereon would then be transmitted to the 32nd session of the General Conference which would take a decision on further action to be taken.

51. Having carefully considered the preliminary findings that are outlined above, the Director-General is of the opinion that the reflection and consultation process that has been engaged with this feasibility study should be continued through a more appropriate representative mechanism. He perceives the desirability of further concerted reflection and action among stakeholders concerned and, in the first place, representatives of Member States, who with their experience and expertise could pursue the consideration of the setting up of an international basic sciences programme.

DRAFT DECISION

52. The Executive Board may wish to adopt a decision along the following lines

The Executive Board,

1. Referring to 160 EX/Decision 3.3.2, on the Report by the Director-General on the reorientation of UNESCO's programmes in the sciences to take account of the conclusions of the World Conference on Science (Budapest, 1999), and 162 EX/Decision 3.3.1 on the Report by the Director-General on progress achieved in the follow-up to the World Conference on Science,

2. Having examined document 165 EX/9,
3. Recognizing that today more than ever, basic science and its applications play a critical role in the globalization process and are indispensable for development to meet the basic needs of the population and to take advantage of the unprecedented potential of the science endeavour for societal advancement,
4. Recalling that enhancing scientific, technical and human capacities to participate in the emerging knowledge societies is a Strategic Objective of the Organization in the Medium-Term Strategy for 2002-2007 and that it calls for reinforced determined action towards reducing disparities in scientific capacities,
5. Responding to recommendation 28 of the Science Agenda – Framework for Action that invites countries, NGOs, IGOs, and United Nations agencies to strengthen their programmes involving science to address pressing developmental problems,
6. Seeking to stimulate new significant initiatives in the basic sciences to implement the principal recommendations of the World Conference on Science,
7. Invites Member States to:
 - (a) participate and increase their support for international and regional cooperation within the programme in the basic sciences for building up science capacities and implementing activities in the basic sciences and science education that respond to national needs;
 - (b) inform the Director-General of relevant national and regional projects in the basic sciences in which they would be prepared to support through extrabudgetary funds and to cooperate at an international level in training, research and promotion of the use of research findings;
8. Invites the Director-General to:
 - (a) reinforce the building of national capacities in science in Member States and the transfer of science and technology through the existing programme in the basic and engineering sciences;
 - (b) convene an ad hoc IBSP Expert Committee for consultation and preparation of a proposal for an IBSP in the framework of a selected optimum option and provide support to its work;
 - (c) report to the Executive Board at its 167th session on the work of the ad hoc IBSP Expert Committee and its proposals.