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OVERALL REVIEW OF MAJOR PROGRAMMES II AND III

OUTLINE

Source: 33 C/Resolution 2; 176 EX/Decision 7.

Background: 33 C/Resolution 2 called for a review of UNESCO's Major Programmes II and III. Document 176 EX/7 contains the Director-General's report on the conclusions and recommendations of the Review Committee and his comments thereon.

Purpose: The present document informs the General Conference of the Director-General's and Executive Board's follow-up to this resolution. The Annex to this document presents a summary of the Implementation Plan. An overview of scientific programmes and initiatives in the United Nations system is presented in document 34 C/INF.13.

Decision required: paragraph 16.

1. By 33 C/Resolution 2 the General Conference decided to launch an overall review of Major Programmes II (Natural sciences) and III (Social and human sciences) against the background of UNESCO's mandate, country and regional priorities and today's global needs, which would form an integral part of and contribute to programme planning.
2. In pursuance of this resolution, the Director-General appointed in February 2006 an Overall Review Committee composed of expert scientific representatives of Member States, inclusive of all regions, and senior staff from the Secretariat, chaired by the Deputy Director-General.
3. In its report, the Overall Review Committee¹ made several recommendations, highlighting *inter alia* the need for a major strengthening of interdisciplinary and intersectoral activities, science education and policy advice towards capacity-building in the sciences. The Committee also recommended better coordination and synergy among the large international and

¹ This report is contained in document 176 EX/7 and can be consulted at the following address: <http://unesdoc.unesco.org/images/0015/001502/150264e.pdf>, and will be available for consultation during the working session at the General Conference.

intergovernmental programmes (ISPs), improved outreach and partnerships and the creation of an external scientific advisory committee. The Review Committee did not make specific recommendations regarding changes in the current organizational structure for the sciences, this being understood as being the prerogative of the Director-General, as the chief administrative officer of the Organization.

4. The Director-General's comments on the report,² indicated his general agreement with the Committee, with some exceptions: regarding the recommendation that the ISPs and the Intergovernmental Oceanographic Commission (IOC) need improved coordination and synergy, the Director-General pointed out that this issue requires the special endorsement of the General Conference. As for the creation of an external scientific advisory committee, he considered that this issue requires a more comprehensive analysis, taking into account the prerogatives of UNESCO's governing bodies, the status of the IOC, the mandates of the IOC Assembly, the Scientific Boards of the ISP Councils and Committees, and the responsibilities of the Internal Oversight Service (IOS). While he welcomed the recommendation for improved outreach and partnerships, he considered that the sub-recommendation on the creation of a UNESCO science prize for peace is not necessary for the time being, in view of the numerous existing UNESCO science prizes, which need to be further streamlined. He also took note of the options put forward by the Committee for structural changes in the Science Sectors.

5. The report of the Overall Review Committee, together with the Director-General's comments was presented to the Executive Board at its 176th session (176 EX/7).³ After considering this document, the Executive Board recommended that the Committee's recommendations along with the Director-General's comments be taken into account in documents 34 C/4 and 34 C/5 (176 EX/Decision 7).

6. The Executive Board further requested the Director General to (i) forward document 176 EX/7 to the governing bodies of the IOC and the ISPs for their comments; (ii) conduct wide-ranging consultations on the possible implementation of the Review Committee's recommendations; and (iii) take appropriate steps to allow for informed decision-making regarding UNESCO's core functions and competencies in the sciences.

7. To this end, the current draft documents 34 C/4 and 34 C/5 take into consideration the recommendations contained in document 176 EX/7, bearing in mind that document 34 C/4 is considered a rolling document and that full implementation of a new strategic framework for the sciences will be further reflected in documents 35 C/5 and 36 C/5.

8. In response to the Executive Board's debate on document 176 EX/7 and its decision on document 34 C/4, the Director-General established a Task Force on Major Programmes II and III in June 2007, to prepare an Implementation Plan for the sciences at UNESCO, building on the recommendations of the report of the Review Committee and his comments thereon. A summary of the Plan is contained in the Annex to this document.

9. One important element of the Task Force's mandate is to advise the Director-General on any administrative measures and/or adjustments that may become necessary in order to ensure the effective and efficient action of the two Science Sectors and the highest level of impact of their programmes and, in particular, to increase intersectoral activities.

10. In accordance with the Executive Board's wishes, the Director-General transmitted document 176 EX/7 to the governing bodies of the IOC and the ISPs for their consideration. Responses from the International Geoscience Programme (IGCP), the International Hydrological Programme (IHP)

² The Director-General's comments to the report are also contained in document 176 EX/7.

³ 176 EX/Decision 7 can be consulted at the following address: <http://unesdoc.unesco.org/images/0015/001508/150871e.pdf>, and will be available for consultation during the working session at the General Conference.

and the Intergovernmental Oceanographic Commission (IOC) have been received to date. Others are expected when the governing bodies meet later in 2007.

11. The IGCP endorses the document, agreeing in particular on the high priority to be given for science education, but it is opposed to the creation of an external scientific advisory committee, in line with the Director-General's comments.

12. The IHP points out that it is already addressing several of the recommendations, in particular those stressing the need for increased interdisciplinary and intersectoral activities and the need for UNESCO to play a major role in strengthening science education. The IHP is opposed to the creation of an overarching scientific advisory committee and to the Review Committee's recommendation that the various administrative structures of the ISPs should be reviewed to consider the appropriateness of their merging to achieve better coordination and budgetary efficiency. The IHP further notes that in draft document 34 C/5, the budget of IHP-related items had been reduced in comparison with the current biennium and recommends that the same budget allocation contained in document 33 C/5 be reinstated in document 34 C/5 in real terms.

13. The IOC states that the Review was timely in terms of changes that are under way within the Commission. The IOC has already begun more systematic intersectoral coordination on climate, capacity-building and disaster risk reduction and mitigation, and will consider more enhanced coordination in the areas of hazards. Leveraging funding and expertise through partnerships is fundamental to IOC's strategy. Significant progress has been made on a new planning framework for IOC, which emphasizes performance, impact and budgetary transparency. Visibility for the IOC within governments must be improved and the IOC would benefit from being able to share in communication strategies and outreach opportunities of UNESCO as a whole. The IOC has been at the forefront of developing ocean data and information systems. The IOC agrees that the ISPs need better coordination and synergy and encourages the Director-General to ensure that future work plans provide for appropriate collaboration.

14. In addition to the ISP consultation, the Director-General started broad consultations with Member States, National Commissions and other key partners, which indicate a general consensus with his comments and with the Committee's report. This consultation process is ongoing and will continue until the General Conference.

15. Further responding to the Executive Board's invitation to the Director-General to take steps to allow for informed decision-making regarding UNESCO's core functions and competencies in the sciences, an overview of United Nations programmes and initiatives in the natural, social and human sciences, with special attention to fresh water, oceans, energy, the ethics of science and technology and human rights has been carried out. The results of this overview are contained in document 34 C/INF.13.

16. The General Conference may wish to adopt the draft resolution proposed below:

The General Conference,

Recalling 33 C/Resolution 2 concerning the review of Major Programmes II (Natural sciences) and III (Social and human sciences),

Having examined document 34 C/13,

Having also examined the Implementation Plan, building on the recommendations of the Review Committee and the Director-General's comments,

Expresses its appreciation of the work of the Overall Review Committee as a valuable and timely contribution to further the relevance and effectiveness of UNESCO's activities in the natural and social and human sciences;

Notes the decision of the Executive Board at its 176th session (176 EX/Decision 7), which calls for the Committee's recommendations along with the Director-General's comments to be taken into account in documents 34 C/4 and 34 C/5;

Notes also the Director-General's consultations on the possible implementation of the Review Committee's recommendations, also called for in 176 EX/Decision 7;

Further notes the creation of the Task Force on Major Programmes II and III;

Acknowledges the overview of scientific programmes and initiatives in the United Nations system, carried out in accordance with the Task Force's mandate;

Requests the Director-General to take the necessary measures to carry out the Implementation Plan and to provide a progress report to the Executive Board.

ANNEX

Plan for Implementing the recommendations emerging from the overall review of Major Programmes II and III

I. Introduction

1. In response to a resolution of the General Conference at its 33rd session requesting the Director-General to undertake a review of the Organization's Natural sciences (Major Programme II) and Social and human sciences (Major Programme III) programmes, a committee, chaired by the Deputy Director-General and composed of external experts and senior members of the Secretariat, was established. The report of the work of the Committee and its nine broad recommendations were presented to the Executive Board at its 176th session in document 176 EX/7, along with the comments of the Director-General. By 176 EX/Decision 7, the Board acknowledged the need for the natural and the social and human sciences to contribute to the achievement of UNESCO's mission, took note of the Committee's findings that UNESCO needed some strategic reorientation of its activities and operational methods in the fields of the natural and social and human sciences, and underscored that the Committee's recommendations, along with the Director-General's comments, should be taken into account in documents 34 C/4 and 34 C/5.

2. This Implementation Plan for UNESCO's science programmes seeks to show how the recommendations made by the Review Committee, along with the Director-General's comments (i) have been taken into account in the Draft Medium-Term Strategy for 2008-2013 (34 C/4); (ii) are addressed in its various overarching objectives and strategic programme objectives; and (iii) are to be implemented and built upon in the coming years as a continuing process, in successive C/5 documents during the six-year period.

3. The Executive Board has endorsed the Director-General's proposal that document 34 C/4 be conceived as a rolling strategy, allowing UNESCO to periodically review its priorities, strategies, approaches and programmes in the face of a changing global environment and emerging challenges. Many of the changes recommended to the science programmes and their means of implementation are to be put in place within the period of document 34 C/5; others will be fully integrated in documents 35 C/5 and 36 C/5.

4. Each of the recommendations, though addressed generally to both the Natural Sciences (SC) and the Social and Human Sciences (SHS) Sectors, will be acted upon by at least one of the two Sectors, and in most cases by both. However, the Review Committee's report did not address all programmes and activities in the Social and Human Sciences Sector – for example, those relating to philosophy and sport. Thus, the Implementation Plan does not cover the totality of documents 34 C/4 and 34 C/5 of Major Programme III.

5. This Implementation Plan is intended to be indicative. The recommendations will be implemented at all levels and stages of programme delivery. This means that the recommendations will be addressed not only in document 34 C/4 and consecutive C/5 documents, but also in the more detailed programme work plans for each biennium of the Medium-Term Strategy and in all other aspects of programme execution, and in the establishment of partnerships and working relations. The revision of document 34 C/5 after the 34th session of the General Conference, to bring it into line with the adopted resolutions and main lines of action (MLAs), will result in more explicit indications on how the review recommendations are to be implemented.

6. A summary of the measures to be taken towards implementing each of the review recommendations is set out below. The Plan is presented in table form at the end of this document for further clarification.

II. Implementation of recommendations

Strengthening policy advice towards capacity-building (Recommendation 1)

7. If UNESCO is to act as a facilitator of global, regional and country-level science policy development for capacity-building in the sciences, it must continue to strengthen its links with national governments and provide the platform for high-level policy dialogue at the international level. It can best do this through the regular convening of major round table events involving Ministers of Science, Technology and Higher Education (to be normally held within the framework of sessions of the General Conference, or at major meetings of partner organizations such as the Academy of Sciences for the Developing World (TWAS)) to be supplemented by Regional Science Forums, involving parliamentarians, science policy-makers, academics, science commentators and journalists. This will also be sustained through the regular organization of regional and subregional forums of Ministers of Social Development to discuss emerging challenges arising from new social, cultural and scientific transformations.

8. Overall, UNESCO's activities aiming to foster policy-making and capacity-building in science, technology and innovation will be focused in pursuit of document 34 C/4 strategic programme objective 4. All science programmes will also increasingly contain a policy dimension.

9. Recent years have seen an increasing number of requests by Member States to UNESCO for assistance in developing national science and technology (S&T) policies. Needs assessments and policy advice will be provided to Member States on demand, especially to those in Africa and to LDCs. Attention will be given to developing generic science policy packages for Member States facing similar developmental and environmental challenges, such as small island developing States (SIDS). More extensive training for S&T policy practitioners will also be pursued.

10. Science policy activities will be reinforced as joint activities involving the two Science Sectors. The Social and Human Sciences Sector will play a particularly important role in needs assessments, especially regarding the development of social and human sciences policies, the research-policy nexus in the field of social development and the ethics of science and technology. A key function will be to promote debates and strengthen national capacities in the field of ethics of science and technology, in particular in Africa. SHS will also monitor the contribution of national science policies to sustainable development and methodologies for implementing national science policies. Science policy related activities will be supported by global monitoring of S&T capacities and trends, in close cooperation with the UNESCO Institute for Statistics (UIS).

11. An overarching priority for the Science Sectors will be assisting Member States to meet major goals and international commitments such as the Millennium Development Goals and those of the African Union-NEPAD S&T Consolidated Plan of Action (2006-2010) and its Environmental Action Plan. The responsibilities of UNESCO in this regard were especially identified in the Addis Ababa Declaration (January 2007). Another major priority is to integrate science components in United Nations country programming exercises.

12. The UNESCO-assisted project (funded by Nigeria and Japan) on the revitalization of the Nigerian science, technology and innovation system, that resulted in the government's acceptance of key policy recommendations including the proposal to establish a US \$5 billion Endowment Fund, could be a model for other Member States. Many countries (including Benin, Democratic Republic of the Congo, Ethiopia, Senegal, United Republic of Tanzania, Togo and the Republic of the Congo) have already expressed interest.

13. Capacity-building in the areas of the social sciences, basic and engineering sciences, energy, disaster risk reduction and the ecological and earth sciences will make increased use of South-South, North-South and, where appropriate, triangular North-South-South cooperation. Better and more strategic use will be made of UNESCO Chairs. Actions, including those within the International Basic Sciences Programme (IBSP), will centre on support for developing and

reinforcing centres of excellence at national and regional levels and sharing resources and capacities.

14. Strategic partnerships and networking with international or regional organizations as well as with research and academic institutions will be sought wherever possible, in pursuit of strategic programme objective 4.

Addressing new scientific paradigms: incorporating “cutting-edge” research
(Recommendation 2)

15. The flexibility provided by UNESCO’s rolling strategic planning allows it to adjust to the fast-moving nature of certain areas of the sciences. The Organization will seek to take advantage of rapidly emerging areas and the development of new paradigms to address changing scientific needs in the Member States. In the context of its science policy advice activities, the Organization will strive to identify emerging areas of strategically important “cutting-edge” research, and assist Member States in developing policies and capacities that utilize these findings. The Organization will increasingly develop a monitoring or observational role in this regard, drawing on the expertise and experience of its intergovernmental and international science programmes (ISPs), the category 1 International Centre for Theoretical Physics (ICTP), category 2 centres and institutes, UNESCO Chairs, university twinning arrangements and National Commissions, as well as links with other international scientific governmental and non-governmental organizations. Emphasis will be given to the ethical and societal implications of new research areas and emerging scientific issues.

16. All the human capacity-building initiatives of the Natural Sciences and Social and Human Sciences Sectors will incorporate “cutting-edge” science as appropriate. Partnerships will be strengthened with United Nations and other international scientific organizations (both governmental and non-governmental) to better incorporate new areas of research and their results into national S&T policies, programmes and educational curricula. The IBSP Strategy for the Future involves “support for cutting-edge basic research efforts of value to multiple nations challenged by common problems of development”.

17. SHS will make a major effort to disseminate cutting-edge research in the different policy-oriented research fields, in particular ethics of science and technology, poverty eradication, migration, and urban issues, as well as the social impact of climate change, particularly in the developing and least developed countries.

18. The timely identification of new areas of research and assessment of their strategic value to Member States will require a reinforcement and consolidation of the special relationships with the International Council for Science (ICSU), the International Social Science Council (ISSC), the International Centre for Genetic Engineering and Biotechnology (ICGEB), the Academy of Sciences for the Developing World (TWAS) and the European Organization for Nuclear Research – European Laboratory for Particle Physics (CERN).

19. The ISPs will continue to develop scientific and societal responses to new scientific paradigms as they emerge (e.g. vulnerability, risk, resilience and adaptive management of the environment).

20. Local and indigenous knowledge will be fully taken into account in programme areas such as coastal management, biodiversity science and natural hazard risk reduction.

21. With respect to cutting-edge research in the field of the environment, UNESCO will provide evidence-based advice to governments on scientific issues related to fresh water and the oceans, drawing on its key role in collaborative United Nations system efforts, in particular through the UN-Water and UN-Oceans mechanisms, and with respect to biodiversity and desertification. Emphasis will be placed on support to interdisciplinary research aimed at understanding global

climate change and its impact on the environment and human societies. MAB biosphere reserves, natural World Heritage sites and geoparks will be used as living laboratories and monitoring platforms for climate change, biodiversity loss and sustainable development.

Strengthening interdisciplinary and intersectoral activities (Recommendation 3)

22. It is widely recognized that many of the more intractable problems facing humanity are complex ones that demand holistic, transdisciplinary approaches involving many sectors of society, and needing the skills and knowledge of a range of disciplines applied together. Challenging issues such as climate change, social development, the ethics of science, biodiversity preservation, and disaster preparedness and mitigation can only be addressed through interdisciplinary approaches. In pursuit of overarching objective 2 of document 34 C/4, UNESCO will strengthen its interdisciplinary action in the science programmes, drawing on contributions not only from, and between, the two Science Sectors, but also from the Education, Culture and Communication and Information Sectors as appropriate, underscoring the strong comparative advantage of the Organization.

23. Overall, efforts will continue to ensure greater involvement of natural scientists in the design and implementation of activities of Major Programme III, and social and human scientists in those of Major Programme II (and, where necessary, experts in education, communication and culture). All science programmes (including those of the ISPs) will incorporate or reinforce the ethical and human rights dimensions in their activities.

24. Commencing from 2008-2009, UNESCO's intersectoral approach will be significantly enhanced through the establishment of 12 major Intersectoral Platforms, several of which (science education, strengthening national research systems and enhancing linkages between cultural and biological diversity as a key basis for sustainable development, for example) will require a particular commitment on the part of the Science Sectors. The intersectoral Platform on Strengthening National Research Systems will build on the success of UNESCO's ongoing Forum on Higher Education, Research and Knowledge, an intersectoral activity supported by the Swedish International Development Cooperation Agency (SIDA).

25. Both Science Sectors will play a major role in the Intersectoral Task Force on Global Climate Change, established by the Director-General in June 2007.

26. In addition, the mandate of the Task Force on Major Programmes II and III, established by the Director-General in response to Recommendation 9, also includes advising the Director-General on measures to increase intersectoral activities.

Science education as a priority (Recommendation 4)

27. Science education is an essential component of UNESCO's efforts to attain quality education for all, and a prerequisite for any human capacity-building in the natural and social and human sciences in Member States (strategic programme objectives 2 and 4); as such, it will be reinforced at all educational levels, building on the expertise and experience built up in the field offices, UNESCO institutes and centres, UNESCO Chairs, and on existing activities that seek to help Member States improve the quality and relevance of science education that is responsive to social, economic and cultural needs, and to enhance learning outcomes.

28. The SC and SHS Sectors both have key roles to play in implementing the new Intersectoral Platform on Science Education in 2008-2009, in cooperation with the Education Sector, in particular with its Division of Higher Education.

29. In addressing the integration of research and education, the Natural Sciences Sector will seek to improve the capacity and knowledge base of policy-makers, curriculum planners, teacher trainers and teachers, as well as national and regional capacities for advanced training and

university education, including teacher training at the university level. Programmes will advocate the incorporation of improved scientific curricula and scientific content at all levels of education, including through distance learning methods. Increased effort will be made in the translation of the scientific results and knowledge generated by the ISPs to the classroom, in cooperation with the Education Sector, and especially the International Bureau of Education (IBE) and to their dissemination in a coordinated way.

30. One of the main elements of the strategy of the International Basic Sciences Programme will concern activities to promote science education, access to knowledge and the use of information and communication technologies (ICTs) in science education and the sharing of scientific information. The IBSP will develop its education activities using a networking and decentralized approach.

31. The Natural Sciences Sector will draw on the considerable educational expertise and international reputation of ICTP and the UNESCO-IHE Institute for Water Education in their respective fields in the implementation of new programmes on science education.

32. The Social and Human Sciences Sector will place emphasis on the monitoring of social and human sciences teaching at secondary and tertiary levels; adapting cutting-edge research results on key issues relating to social transformations and social development for teaching purposes, in cooperation with the International Council for Philosophy and Humanistic Studies (ICPHS), ISSC and MOST networks and elaborating and disseminating teaching materials on environmental ethics, bioethics and ethics of S&T in higher education.

33. Priority will be given to cooperation with UNESCO Chairs, category 2 institutes, United Nations University (UNU), the United Nations Research Institute for Social Development (UNRISD) and regional research networks with a view to enhancing the development of curricula and research tools.

34. The development and increased use of new technologies in disseminating and delivering scientific learning materials will be supported in cooperation with the Communication and Information Sector, and building on experience gained by field offices in satellite- and Internet-delivered materials.

35. All science programmes will enhance efforts to attract young people, in particular women, into science and scientific careers. For example, UNESCO will continue support for the Youth Forum on Science Ethics, the development of the World Academy of Young Scientists (WAYS) and for fellowships and prizes for young scientists, such as the L'Oréal Prizes and Fellowships for women scientists and the Mondialogo Engineering Award.

International science programmes: towards better coordination and synergy
(Recommendation 5)

36. Since their establishment, the ISPs have proven to be effective partnerships between scientists and governments, as was recognized in the Committee's report. They enjoy a high reputation worldwide, have proven to be cost-effective and responsive to Member States' needs, and have played key roles at the level of the United Nations (e.g. IOC with UN-Oceans and the World Climate Research Programme; IHP with UN-Water and the World Water Assessment Programme).

37. The ISPs have developed – through a broad participatory process involving their National Committees, United Nations agencies, and professional scientific NGOs – strategic plans aligned with UNESCO's Medium-Term Strategy (C/4). This has ensured that they periodically renew and redirect their work to meet the evolving interests and needs of Member States and the scientific community. More specifically, while each ISP is open-ended in nature, constituent activities and subprogrammes are implemented within time limits (sunset clauses), to be replaced by others in a

continuous process of succession, as they become self-sustaining or supported by other stakeholders.

38. Thus, in recent years, the activities of ISPs have increasingly been planned to contribute to peace, poverty eradication, sustainable development and the dialogue among civilizations.

39. Cooperation and articulation between the ISPs are facilitated by meetings of the chairpersons of the respective ISP governing bodies. Joint statements delivered to successive sessions of the General Conference have enunciated shared objectives and resolve to collaborate on joint projects, as well as collective concerns. Communication between the chairpersons on a more regular basis will be pursued, including through videoconferencing and other communication tools.

40. External evaluations are carried out on all ISPs on a rotational basis, and their results reported to the Executive Board at the first available opportunity. The results will be widely disseminated.

41. Each ISP works closely with the United Nations and other organizations to ensure complementarity of action. This process will be continued with increased rigour to minimize overlapping functions.

42. Each ISP has its own specificity and serves its own constituency. Any change to the governance of the ISPs would require appropriate decisions by the General Conference. However, streamlining of management of the ISPs through, for instance, shared administrative support will be examined.

43. The advantages of closer cooperation between UNESCO National Commissions and the National Committees for the ISPs will be demonstrated to Member States and promoted.

Improved partnerships and outreach (Recommendation 6)

44. As indicated in document 34 C/4, every effort will be made to improve UNESCO's effectiveness of action through dynamic partnerships with the appropriate members of the UNESCO "family" – field offices, category 1 and 2 centres and institutes, National Commissions, National Committees of the ISPs, UNESCO Chairs and UNITWIN networks.

45. New partnerships within the United Nations family, and those involving other international organizations (both governmental and non-governmental) and major scientific institutions, will be established, or existing ones improved through more frequent contact – both at planning and implementation stages. Care will be taken to ensure complementarity of mandates, functions and audiences, and to avoid overlap and duplication.

46. Every encouragement will be given to Member States to ensure that the natural and social and human sciences are well represented on National Commissions. This is expected to give UNESCO's science programmes increased leverage in the Member States.

47. Greater attention will be given to increasing the visibility and outreach of the science programmes of the Organization, in cooperation with the Bureau of Public Information (BPI). This will involve greater use of web-based materials, more consistent use, and regular updating, of the UNESCO portal by all programmes and field units, the timely announcement of events and initiatives, and a consistent translation of all materials into non-technical language for the benefit of non-specialists – if possible in all working languages of the Organization.

48. A joint SC-SHS communications and knowledge management unit will be set up to reinforce the dissemination of the results of the Organization's work in the sciences.

49. Communication links with National Commissions will be improved so that materials may be printed locally and disseminated, especially in areas with weak ICT infrastructure and Internet connectivity.

50. The important role played by the existing awards in natural, human and social sciences administered by UNESCO in both increasing the visibility of science and providing role models for young scientists, especially girls, is to be recognized. However, the Director-General does not consider the recommendation to create a UNESCO science prize for peace to be necessary in view of the several existing science prizes. However, greater efforts will be made to encourage Member States to celebrate each year the World Day of Science for Peace and Development (10 November).

Rigorous and transparent selection, assessment and evaluation of programmes and projects (Recommendation 7)

51. In keeping with all other parts of the Secretariat, the Science Sectors rely upon constant interface with Member States at formal and informal levels to identify national and regional needs and clear scientific imperatives, in the design and establishment of their draft programmes presented to the General Conference and, in the case of the ISPs, their respective governing bodies.

52. A professional peer review process will be put in place for all science programmes involving key partners of the science community, to ensure greater scientific rigour in the choice, design, implementation and evaluation of activities. The choice and designation of category 1 and 2 institutes will be founded upon wider independent scientific expertise and peer review as part of the feasibility study to be conducted for each applying institute.

53. The Science Sectors will pursue a policy of phasing out financial support for activities, once the latter have proved themselves self-sustaining or are able to attract funding from elsewhere, thus allowing financial resources to be directed towards new activities or respond to new needs.

54. UNESCO-wide management tools (e.g. SISTER) will be improved and made available for continual assessment of activities and their results.

55. The regular evaluations of units and programmes by the Internal Oversight Service (IOS) will be reinforced with respect to science. Evaluation plans will be built into all science programmes and adequately financed.

UNESCO's leadership enhanced through new global initiatives (Recommendation 8)

56. In the coming years there must be increased proactive engagement on the part of UNESCO at the highest levels of the United Nations as well as with its specialized agencies and programmes, demonstrating UNESCO's real comparative advantage within the United Nations system – being the only agency which, through its mission, is able to bring together the sciences, education and culture.

57. This comparative advantage may prove crucial, for instance, within the United Nations system's response to global climate change. The Natural Sciences Sector – largely through the Intergovernmental Oceanographic Commission (IOC) – contributed background scientific data and monitoring to the Intergovernmental Panel on Climate Change (IPCC) and the United Nations Framework Convention on Climate Change (UNFCCC). However, UNESCO's role in education and the social sciences will be equally critical as the Organization contributes to mitigation and adaptation to global climate change.

58. The Science Sectors will seek to take advantage of UNESCO's respected global outreach and convening power with both governments and civil society to assure the Organization's major

advocacy role within the United Nations system for science and the use of scientific knowledge. “Science for science’s sake” is no longer a viable option; science must be a key component of sustainable development and poverty eradication, peace, intercultural dialogue and in addressing the challenges of emerging issues such as global climate change and their consequences. Investment in science and technology is not a luxury, but vital to sustainable development.

59. Ministers of Science, Technology and Higher Education will be invited periodically to round table events (see Recommendation 1) to discuss new and emerging issues in the sciences, their Member States’ science needs, and the formulation of common approaches, thus reinforcing UNESCO’s legitimacy as the global meeting point and forum on science at the intergovernmental level. In addition, other dialogues and debates on new fields of research and emerging ethical and societal issues will be convened.

60. Organization-wide actions will be formulated on future-oriented studies concerning emerging issues of relevance to UNESCO’s fields of competence.

61. Consultations will be held on the feasibility of convening, in 2009, a major review of follow-up to the UNESCO-ICSU World Conference on Science (Budapest, 1999) and its two principal documents: the *Declaration on Science and the Use of Scientific Knowledge* and the *Science Agenda – Framework for Action*.

A science advisory committee is required (Recommendation 9)

62. The Director-General considered that this recommendation requires a more comprehensive analysis, taking into account the prerogatives of UNESCO’s governing bodies, the status of the IOC, the mandates of the IOC Assembly, the Scientific Boards of the ISP Councils and Committees, and the responsibilities of the Internal Oversight Service (IOS). Furthermore, this recommendation has not received support during discussions of the Executive Board and from other consultations carried out with Member States, National Commissions and other key partners.

63. However, in June 2007, a Task Force on Major Programmes II and III was established by the Director-General with the mandate to (i) prepare a plan for implementing the recommendations emerging from the overall review of Major Programmes II and III for presentation to the 34th session of the General Conference; (ii) guide and review the 34 C/5 work plans of Major Programmes II and III to ensure that they are in line with the Implementation Plan; (iii) advise the Director-General on any administrative measures and/or adjustments that may become necessary in order to ensure the effective and efficient action of the two Science Sectors and the highest level of impact of their programmes, and in particular, to increase intersectoral activities; (iv) analyse the scientific functions and activities of the principal United Nations organizations and agencies, as well as other relevant organizations, addressing the natural and social and human sciences; and (v) review UNESCO’s country-level contributions in the sciences to United Nations country teams and to provide guidance for further development of such efforts.

64. Six months after the approval of the work plans of document 34 C/5, the Director-General will assess the Task Force’s activities and take a decision on its future role and modalities.

65. It is hoped that the Implementation Plan described above will respond to, and build upon, the recommendations stemming from the review process carried out during 2006-2007, such that UNESCO will regain its reputation as the foremost institution within the United Nations system with responsibility for the sciences, and successfully pursue its overarching medium-term objective of mobilizing science knowledge and policy for sustainable development to the benefit of its Member States.

III. Table of the Implementation Plan

66. The attached table is intended to illustrate the Implementation Plan more clearly. The first and second columns of the table list the recommendations of the Review Committee and the Director-General's comments, as shown in document 176 EX/7. The third column shows the implications and modalities of action, i.e. HOW the recommendations by the Committee be implemented, as indicated in the Implementation Plan. The last column addresses WHEN the planned actions will take place, starting from the time frame of document 34 C/5 (2008-2009), it being understood that some of the recommendations will be initiated and/or developed more fully in subsequent biennia.

67. The numbering of the main lines of action (MLAs) listed in the last column is consistent with the 17 August 2007 version of the draft resolution for document 34 C/5 of the Executive Board's Drafting Group (177 EX/PLEN/DR/1). The expected outcomes of the MLAs (also taken from 177 EX/PLEN/DR/1) are intended only as examples of some of the outcomes specifically relevant to the Review Committee's recommendations.

68. As noted in the introduction, this Implementation Plan is indicative. The recommendations by the Committee and the Director-General's comments will be addressed in the final version of document 34 C/5 after approval by the General Conference and in subsequent biennia. Detailed descriptions of programme level activities in 2008-2009 will only be possible after the work plans are elaborated by the Secretariat.

Appendix

Table: Modalities and time frame for the implementation of the recommendations emerging from the Overall review of Major Programmes II and III

Recommendation	Director-General's comments	Implications and modalities of action	34 C/5 time frame (2008-2009)
<p>1. Policy advice towards capacity-building needs strengthening</p> <ul style="list-style-type: none"> • UNESCO should strengthen its science policy work by using its access to governments to encourage and help plan the direction of resources to capacity-building in the sciences, <ul style="list-style-type: none"> - through the establishment of science and technology infrastructure and research, development and innovation capacity, - demonstrating to governments that investment in science and technology is vital to human, social and economic progress. • In addition, bringing scientists the means and opportunities to work in their home countries on locally important research and development and to build meaningful international partnerships is a central aspect of reducing brain drain. 	<p>The Director-General <u>fully supports</u> the view that UNESCO should strengthen its science policy work using its access to governments to encourage and help plan the direction of resources to capacity-building in the sciences.</p> <p>He notes that this issue is specifically addressed in draft document 34 C/4 in:</p> <p>overarching objective 2 (“Mobilizing science knowledge and policy for sustainable development”) and</p> <p>strategic programme objective 4 (“Fostering policies and capacity-building in science, technology and innovation”)</p>	<p>Organization of Ministerial round table events (with Ministers of Science and Technology, Higher Education and Social Development) and regional and subregional forums.</p> <p>Policy advice and preparation of needs assessment to Member States concerning the reform and governance of science, technology and innovation (STI), especially in Africa. Generic STI policy packages to be developed for countries with similar socio-developmental challenges, such as SIDS. Policies to couple science with local knowledge, addressing marginalized communities such as indigenous communities.</p> <p>Science policy activities to be reinforced as joint activities involving both SC and SHS. Policy dimensions to be incorporated and/or expanded in all natural science and social and human sciences programmes.</p> <p>Policy-related activities to be supported by global monitoring of S&T capacities and trends in close cooperation with UIS.</p> <p>Increased use of South-South, North-South and triangular cooperation for capacity-building.</p> <p>Better and more strategic use to be made of UNESCO Chairs.</p> <p>Strategic partnerships and networking enhanced.</p> <p>Science components to be integrated in United Nations country programming exercises during 2008-2009.</p>	<p>MPII MLA 4: Supporting STI policies for sustainable development and poverty eradication and developing countries in basic sciences, energy and engineering.</p> <ul style="list-style-type: none"> • Evidence-based national STI policies, integrating principles of sustainable development and contribution of local knowledge formulated and adopted. • Policies and practices for sustainable development of SIDS shared with and across all SIDS regions. <p>MPII MLA 2: Oceans and coastal zones: improving governance and fostering international cooperation through ocean sciences and services.</p> <ul style="list-style-type: none"> • Management of ocean resources and coastal areas improved via development of policy-relevant information on impacts of climate change and variability on marine ecosystems and coastal zones. <p>UNESCO Action Plan developed and implemented in response to African Union/NEPAD action platform for S&T.</p> <p>Promotion of International Year of Planet Earth (2008)</p> <p>MPIII MLA 1: Promoting ethics of S&T with emphasis on bioethics.</p> <ul style="list-style-type: none"> • Policy-makers in Member States, higher education institutes, national research systems and wider public sensitized. <p>MPIII MLA 2: Enhancing research policy linkages in field of social development.</p> <ul style="list-style-type: none"> • Policy-oriented research networks in social sciences strengthened.

Recommendation	Director-General's comments	Implications and modalities of action	34 C/5 time frame (2008-2009)
<p>2. Programmes must address new scientific paradigms and incorporate “cutting-edge” research</p> <ul style="list-style-type: none"> UNESCO should be “forward-looking” and be aware of “emerging areas” of science (such as nanotechnology, science intelligence, knowledge economy, etc.). UNESCO science programmes should convene the required meetings and debates in order to be better prepared to identify emerging ideas. Programmes should incorporate “cutting-edge” scientific research and knowledge through partnerships with scientific organizations such as ICSU and TWAS. UNESCO should further emphasize new scientific paradigms, such as socio-ecological resilience, vulnerability and adaptive management of the environment. UNESCO should at the same time ensure that diverse knowledge systems are taken into consideration in designing and managing its programmes. UNESCO should examine its inscribed sites (507 biosphere reserves in 102 countries, 162 natural World Heritage sites, etc.) to determine the appropriateness of making them more available for coordinated global monitoring of climate change, biodiversity loss and sustainable development. 	<p>The Director-General <u>agrees</u> with Recommendation 2, that UNESCO’s science programmes must address new scientific paradigms and incorporate “cutting-edge” research. This language is contained in overarching objective 2.</p> <p>The use of UNESCO sites is addressed in: strategic programme objective 3 (“Leveraging scientific knowledge for the benefit of the environment and the management of natural resources”)</p>	<p>Monitoring and observation of emerging areas through category 1 and 2 centres and institutes, UNESCO Chairs and university twinning arrangements; also through the evolving programmes of the ISPs.</p> <p>Organization of meetings and debates for the identification of emerging ideas.</p> <p>Dissemination of cutting-edge research in different policy-oriented fields, in particular poverty eradication, migrations and urban issues, as well as on the social impact of climate change, particularly in developing countries and LDCs.</p> <p>Assessment of new areas of research and their strategic value to Member States, through reinforced relations with ICSU, ISSC, ICGEB, TWAS and CERN.</p> <p>Advice provided to governments on cutting-edge research in environment (fresh water, oceans, biodiversity and desertification).</p> <p>Local and indigenous knowledge to be fully taken account of in programmes in areas such as coastal management, biodiversity science and natural hazard risk reduction.</p> <p>MAB biosphere reserves, natural World Heritage sites and geoparks to be encouraged and supported to act as living laboratories and monitoring platforms for global climate change, loss of biodiversity and sustainable development.</p>	<p>All MPII and MPIII MLAs to address this recommendation.</p> <p>SHS will develop its watch function regarding emerging areas of social and human science research and contribute to strengthening paradigms relating to socio-ecological resilience and vulnerabilities.</p> <p>Plans developed for establishment of an observatory for science serving the United Nations system.</p> <p>IBSP to implement future strategy supporting cutting-edge basic research efforts.</p> <p>Contributions to cutting-edge scientific water-related research and the emphasis on new scientific paradigms made via IHP, UNESCO-IHE Institute for Water Education, WWAP and the network of centres.</p> <p>IOC to address cutting-edge research related to oceans and climate, science and modelling for the prevention and reduction of the impacts of natural hazards, including tsunamis; and marine assessments.</p>

Recommendation	Director-General's comments	Implications and modalities of action	34 C/5 time frame (2008-2009)
<p>3. Interdisciplinary and intersectoral activities require major strengthening</p> <ul style="list-style-type: none"> UNESCO should assign an important priority to promoting intersectorality and interdisciplinarity in the next C/4 and C/5 documents. UNESCO should develop overarching objectives to integrate the sciences (natural, social and human), as well as to integrate the sciences with education, culture, and communication and information. UNESCO's programmes and projects should be developed from a problem-based perspective, applying interdisciplinarity and cross-sectoral approaches as needed. All the science programmes should have components of both natural sciences and social and human sciences. They should also include elements of education and training, culture and communication and information, building on UNESCO's comparative advantage within the United Nations system. The ethical dimension and values should be incorporated in all programmes. 	<p>The Director-General welcomes this view, noting that draft document 34 C/4 emphasizes a broadened intersectoral and interdisciplinary engagement as an integral part of the programming process.</p> <p>Overarching objective 2 states that "All programmes will integrate interdisciplinary approaches drawing on contributions from all of UNESCO's fields of competence".</p>	<p>Establishment of Intersectoral Platforms.</p> <p>All science programmes to include greater involvement of natural, social and human scientists, as well as experts in education, communication and culture in the design and implementation of activities.</p> <p>Ethical dimension to be incorporated in all science programmes.</p> <p>Task Force on MP II and III to advise the Director-General on measures to increase intersectoral activities.</p>	<p>All MP II and MP III MLAs to address this recommendation.</p> <p>Intersectoral Platforms launched: Science education; HIV & AIDS; Education for sustainable development; Contribution to implementation of Mauritius Programme of Action for the sustainable development of SIDS; Fostering ICT-enhanced learning; Strengthening national research systems; Languages and multiculturalism; Enhancing linkages between cultural and biological diversity as key basis to sustainable development; Contributing to dialogue among civilizations and cultures and a culture of peace; Support to countries in post-conflict and disaster situations; Development of cross-sectoral programme for capacity-building; and multilingualism; Priority Africa – coordinating and monitoring the plan of action to benefit Africa.</p> <p>SC and SHS to play major roles in Intersectoral Task Force on Global Climate Change.</p> <p>MP II MLA 1:</p> <ul style="list-style-type: none"> Sustainable development promoted via establishment of interdisciplinary learning laboratories, using sites of the World Network of Biosphere Reserves for research on biodiversity and sustainability. <p>New intersectoral earth science partnerships to result from the International Year of Planet Earth. IGCP to implement new objectives to address better the need for interdisciplinary work in earth system science.</p>

Recommendation	Director-General's comments	Implications and modalities of action	34 C/5 time frame (2008-2009)
<p>4. Science education should be a high priority.</p> <p>At the 2005 General Conference's High-Level Ministerial Round Table on the Basic Sciences, Ministers called for greater emphasis on science education as an integral part of capacity-building and recognized the "symbiotic relationship between scientific research and higher education".</p> <ul style="list-style-type: none"> • UNESCO should increase efforts to assist countries to develop national science systems, to strengthen university education in the sciences, particularly through the integration of research and education, and to improve the quality of science teaching, including through e-learning. • In all of these endeavours, UNESCO category 1 and 2 centres, Chairs and associated university networks are important assets. Closer coordination with the United Nations University (UNU) is also recommended. • UNESCO should play a major role in strengthening science education in the basic and applied sciences, and the social and human sciences worldwide in order to attract young people into science and scientific careers. • All types of media (e-learning, including through lectures by leading scientists broadcast through the electronic media, museums, exhibitions, etc.) should be utilized. 	<p>The Director-General <u>finds particularly important</u> Recommendation 4, that science education should be a high priority.</p> <p>Science education is specifically addressed in strategic programme objective 2 ("Developing policies, capacities and tools for quality education for all and lifelong education") and strategic programme objective 4.</p> <p>UNESCO-IHE is the premier postgraduate institution in the world in water education and is very active in expanding water education activities in developing countries.</p>	<p>Increased science education efforts, building on the expertise and experience in the field offices, UNESCO institutes, category 1 and 2 centres, UNESCO Chairs and in cooperation with ED.</p> <p>SC to draw on educational expertise of ICTP and UNESCO-IHE to implement new science programmes.</p> <p>Addressing the need to integrate research and education, SC to increase efforts to improve capacity and knowledge base of policy-makers, teacher trainers and teachers, including teacher training at university level. Improved scientific curricula and scientific content at all levels of education (with ED, CLT and CI).</p> <p>SHS to emphasize (i) monitoring of social and human sciences at secondary and tertiary levels; (ii) adapting cutting-edge research results on key issues relating to social transformations and social development for teaching purposes, in cooperation with ISSC, ICPHS, MOST networks; and (iii) elaborating and disseminating teaching materials on environmental ethics, bioethics and ethics of S&T in higher education.</p> <p><i>ICTs for science education promoted in collaboration with CI sector.</i></p> <p>Priority given to cooperation with UNESCO Chairs, category 2 institutes, UNU, UNRISD and regional research networks with a view to enhancing development of curricula and research tools.</p>	<p>Intersectoral Platforms on Science Education and Education for Sustainable Development</p> <p>MPII MLA 1: Fostering policies, technical capacity-building, networking, <u>education</u>, and international cooperation in the fields of water, ecological and earth sciences for enhancing societal responses.</p> <ul style="list-style-type: none"> • Fresh water education programme developed within the framework of the United Nations Decade of Education for Sustainable Development. <p>MPII MLA 4:</p> <ul style="list-style-type: none"> • National and regional capacities for research, training and <u>education</u> in the basic sciences strengthened to foster applications for societal needs and to encourage careers in science, taking into account gender equity and equality. • Human and institutional capacities in engineering, technology and innovation strengthened, with focus on knowledge management in engineering. <p><i>IBSP to implement strategy promoting science education, use of ICTs in science education and sharing of scientific information.</i></p> <p>UNESCO's revised science teaching handbook to be widely disseminated via National Commissions.</p>

Recommendation	Director-General's comments	Implications and modalities of action	34 C/5 time frame (2008-2009)
<ul style="list-style-type: none"> The science programmes should focus on young researchers, helping to prepare future leaders in science and technology. 		<p>Increased efforts to attract young people and especially women into science and scientific careers (Youth Forum on Science Ethics, WAYS, fellowships and prizes and awards for young scientists).</p>	
<p>5. The ISPs need better coordination and synergy</p> <ul style="list-style-type: none"> The ISPs should be reoriented to exhibit a problem-based perspective and to reflect their contributions to peace, poverty reduction, sustainable development and the dialogue among civilizations. Better coordination and cooperation is needed among the ISPs, as well as with other United Nations programmes. The ISPs should be evaluated periodically to ensure that they incorporate state-of-the-art scientific research in their activities, prevent intellectual overlap with other activities, promote coordination and cross-cutting activities with other relevant United Nations entities and national and international organizations, and leverage resources through appropriate partnerships. Given the open-ended nature of the ISPs, questions of sunset clauses and/or evolution to self-sustaining extrabudgetary funding for the programmes and also for specific projects within these programmes should be considered. 	<p>The Director-General <u>observes that this issue requires the special endorsement of the General Conference.</u></p> <p>Improved cooperation with other United Nations programmes is already included in strategic programme objective 3.</p> <p>However, the Director-General <u>does not concur</u> with the Committee's findings that there is overlap and insufficient coordination on fresh water issues within the United Nations system, since the International Hydrological Programme is the only science programme within the United Nations system dealing with fresh water issues and closely interacts with the United Nations-wide coordinating body UN-Water.</p>	<p>The ISPs to enhance ongoing efforts to contribute to peace, poverty eradication, sustainable development and the dialogue among civilizations.</p> <p>ISPs to increase cooperation and coordination through regular meetings of chairpersons of respective ISP governing bodies.</p> <p>ISPs to continue working closely with the United Nations and other organizations to ensure complementarity of action and minimal overlap.</p> <p>Advantages of closer cooperation between UNESCO National Commissions and National ISP Committees to be demonstrated to Member States.</p> <p>Periodical evaluations of all ISPs to be widely disseminated.</p>	<p>Any change to the governance of the ISPs is subject to approval by the General Conference. However, streamlining the management of the ISPs through, for instance, shared administrative support, to be provided by the Secretariat of UNESCO, will be examined.</p>

Recommendation	Director-General's comments	Implications and modalities of action	34 C/5 time frame (2008-2009)
<ul style="list-style-type: none"> The administrative structures of the ISPs should be reviewed to consider the appropriateness of their merging to achieve better coordination and budgetary efficiency. Better cooperation is needed between the ISP National Committees and between those Committees and the UNESCO National Commissions. 			
<p>6. Outreach and partnerships need improvement</p> <ul style="list-style-type: none"> UNESCO should make better use of its existing partnerships within the UNESCO family (field offices, National Commissions, category 1 and 2 centres and institutes, National Committees of the ISPs, Chairs, UNITWIN networks and Clubs) and the United Nations family. Scientists should be represented in all National Commissions for UNESCO, thereby strengthening their ability to be effective partners. Outreach and communication strategies should be integrated in all the science programmes, reporting to the public on their results and impacts. UNESCO should strengthen key partnerships with leading organizations (e.g. relevant United Nations entities, research and development institutions, funding 	<p>The Director-General <u>welcomes</u> Recommendation 6 on the need for improved outreach and partnerships, noting that draft document 34 C/4 already highlights this issue in the sections “Constituencies, partners and partnerships” and “Visibility and public information”.</p> <p>He also agrees with the specific recommendation (to the attention of Member States) that scientists should be represented in all National Commissions of UNESCO, thereby strengthening their ability to be effective partners.</p> <p>The Director-General considers that the specific recommendation to establish a UNESCO science prize for peace is <u>not necessary</u> for the time being, in view of the numerous existing UNESCO science prizes, which need to be further streamlined. He notes that the important UNESCO-L'Oréal Awards for Women in Science give high visibility to the Organization. He further notes that the Executive Board at its 171st session approved a new strategy and criteria for</p>	<p>Improvement of UNESCO action through enhanced partnerships with the UNESCO family, including improved communication links with the National Commissions.</p> <p>New partnerships to be established within the United Nations family and other international and scientific organizations.</p> <p>Member States to be encouraged to include experts in the natural and social and human sciences in their National Commissions.</p> <p>Cooperation increased with the Bureau of Public Information (BPI) to develop tools for outreach.</p>	<p>A joint SC-SHS communications and knowledge management unit to be set up to reinforce the dissemination of the results of the work of UNESCO.</p> <p>Greater use of web-based materials, more consistent use, and regular updating, of the UNESCO portal by all programmes and field units, the timely announcement of events and initiatives, and a consistent translation of all materials into non-technical language for the benefit of non-specialists – if possible in all of UNESCO's working languages.</p> <p>IHP will implement the strategy developed in 2007 to foster coordination and collaboration among the category 1 and 2 water-related institutes and centres.</p> <p>Through the International Year of Planet Earth, cooperation to be strengthened with the National Commissions and UNESCO Associated Schools Programme in the organization of outreach activities on the geosciences.</p>

Recommendation	Director-General's comments	Implications and modalities of action	34 C/5 time frame (2008-2009)
<p>agencies, research councils, space agencies, NGOs, etc.) in order to implement joint programmes.</p> <ul style="list-style-type: none"> UNESCO should consider establishing a “UNESCO science prize for peace”. 	<p>the establishment of UNESCO prizes, which stresses in particular the need for extrabudgetary funding for all UNESCO prizes.</p>		<p>Campaign to celebrate each year the World Day of Science for Peace and Development (10 November).</p>
<p>7. Rigorous and transparent selection, assessment and evaluation of programmes and projects are required</p> <p>Programme/Project selection</p> <ul style="list-style-type: none"> Screening procedures to ensure relevance of programmes to 34 C/4 and demonstrating UNESCO's unique contribution. UNESCO to initiate programmes in key areas and exit as soon as other organizations take the lead. External and independent review for selecting programmes and category 1 and 2 institutes and centres. <p>Assessment</p> <ul style="list-style-type: none"> All programmes to be assessed on a continuous and regular basis to determine existing areas that should be continued and developed further; existing areas, which have become either less relevant or overlapping, and which should therefore be phased out or passed on to other bodies; and new forms of knowledge and innovative forms of action, in recognition of new trends and emerging priorities. 	<p>The Director-General <u>agrees</u> with Recommendation 7 “Rigorous and transparent selection, assessment and evaluation of programmes and projects are required” and points out that this recommendation is largely in line with draft document 34 C/4 in its section dealing with “Managing for impact”.</p> <p>With regard to the Committee's observation on “the imbalance in funding of science programmes in favour of water-related activities”, the Director-General wishes to draw attention to the fact that the additional financial resources accorded to water-related activities are a direct result of UNESCO's decision to establish principal priorities for each major programme, starting with document 31 C/5, in view of UNESCO's limited resources and the need for improving the focus of UNESCO's actions. “Water and associated ecosystems” has been approved as the principal priority for Major Programme II (Natural sciences) for the last three biennia, thereby strengthening UNESCO's role and visibility within the United Nations system.</p>	<p>Continued consultations with Member States to be carried out to establish national and regional needs and clear scientific imperatives in the design and establishment of programmes presented to the General Conference and, in the case of the ISPs, their respective governing organs.</p> <p>The choice and designation of category 1 and 2 institutes and centres to be founded upon wider independent scientific expertise and peer review as part of the feasibility study to be conducted for each applying institute.</p> <p>Science Sectors to phase out financial support for activities, once latter have proved themselves self-sustaining or able to attract funding from elsewhere. UNESCO management tools to be improved and made available for continual assessment of activities and their results.</p> <p>Evaluation plans to be adequately financed and built in to all science programmes.</p>	<p>A professional peer review process, involving key partners, will be put in place for all programmes to ensure greater scientific rigour.</p> <p>Management tools to be improved and made available for continual assessment of activities and their results.</p> <p>The regular evaluations of units and programmes carried out by the Internal Oversight Service will be reinforced with respect to science.</p> <p>IGCP will implement results of extensive review, to include peer reviewed research projects with annual evaluation and a sunset clause after five years.</p> <p>The MAB Programme and network of biosphere reserves will undergo significant review in the preparation of the Madrid Action Plan to be adopted at the third World Biosphere Reserve Conference and the 20th session of the MAB-ICC, both to be held in Madrid, Spain, from 4 to 8 February 2008.</p> <p>The implementation of the Madrid Action Plan will be evaluated during 2012-2013.</p>

Recommendation	Director-General's comments	Implications and modalities of action	34 C/5 time frame (2008-2009)
<p>Monitoring and evaluation</p> <ul style="list-style-type: none"> Monitoring and evaluation should be built into all its programmes and conducted at pre-determined intervals by diverse and independent scientific experts using meaningful performance indicators. Evaluations should use a well-defined set of criteria. 	<p>For the preparation of the work plan for the 2008-2009 biennium, screening procedures are being already set up with a view to ensuring relevance to 34 C/4 objectives, distinctive contribution within the United Nations system and integration of new forms of knowledge and emerging priorities.</p>		<p>All MAB and biosphere reserve activities will have a framework for regular evaluation within each of UNESCO's strategic planning cycles.</p> <p>IOC to implement a new approach for better monitoring and evaluation of all its programmes and improved synergy with UNESCO programmes and actions.</p>
<p>8. UNESCO's leadership must be enhanced through <u>new global initiatives</u></p> <ul style="list-style-type: none"> Organize and convene on a regular basis a Forum of Ministers of Science, Technology and Higher Education, to promote dialogue and to better understand the science policy issues UNESCO should address, particularly in developing countries. Special attention must be paid to both the format for these meetings and follow-up by UNESCO to ensure maximum value for the time invested by the participants. Provide a forum for scientists to inform UNESCO on new and emerging areas of the sciences and to bring together scientists with opposing views on important contemporary scientific issues to debate their positions. Perform a "global watch" function in order to be capable of monitoring critical emerging ethical and societal issues. Monitor science and technology indicators at the global level, benefiting from the capabilities of the UNESCO Institute of Statistics (UIS). 	<p>The Director-General <u>fully supports</u> Recommendation 8 that UNESCO's leadership in the sciences must be enhanced through four new global initiatives.</p> <p>Regarding the regular Forum of Ministers of Science, Technology and Higher Education, the Director-General notes that such a forum was held during the 33rd session of the General Conference and another is planned for the 34th session of the General Conference.</p> <p>The detailed recommendation on UNESCO performing a global watch function in order to be capable of monitoring critical emerging ethical and societal issues is fully addressed in strategic programme objective 8 ("Fostering research on critical emerging ethical and social issues").</p>	<p>Dialogue with governments at the highest level to be increased by periodical round tables of Ministers of Science and Technology and Higher Education.</p> <p>Organization-wide actions to be formulated on future-oriented studies concerning emerging issues of relevance to UNESCO's fields of competence.</p> <p>Convening of dialogues and debates on new fields of research and emerging ethical and societal issues. (See also Recommendation 2).</p> <p>Consultations to be held on feasibility of convening in 2009 major follow-up to UNESCO-ICSU World Conference on Science.</p>	<p>The Ministerial Round Table <i>Science and Technology for Sustainable Development and the Role of UNESCO</i> is planned during the 34th session of the General Conference.</p> <p>Follow-up to high level meetings (expressed through declarations, plans of action) to be carried out.</p> <p>IOC to continue as one of the two lead agencies for the Global Reporting and Assessment of the State of the Marine Environment, and its Assessment of Assessments (see also Recommendation 2).</p> <p>Preparation of monitoring of S&T indicators at global level, in cooperation with UIS.</p>

Recommendation	Director-General's comments	Implications and modalities of action	34 C/5 time frame (2008-2009)
<p>9. A science advisory committee is required</p> <p>The establishment of an <u>overarching scientific advisory committee</u>, which would meet at regular intervals and report to the Director-General.</p>	<p>The Director-General has carefully <u>examined</u> Recommendation 9 on the establishment of a scientific advisory council and <u>considers that this issue requires a more comprehensive analysis</u>, taking into account the prerogatives of UNESCO's governing bodies, the mandates of the Scientific Boards of the ISP Councils and Committees and the responsibilities of the Internal Oversight Service (IOS) for evaluation of UNESCO's programmes.</p> <p>However, in order to strengthen intersectorality and interdisciplinary activities, the Director-General <u>will establish</u> a task force within the Secretariat under his authority.</p>	<p>Task Force on Major Programmes II and III established by DG/Note/07/23 of 26 June 2007 with mandate to (i) prepare plan for implementing the recommendations emerging from the overall review; (ii) guide and review 34 C/5 work plans of Major Programmes II and III to ensure that they are in line with the Implementation Plan; (iii) advise the Director-General on any administrative measures and/or adjustments in order to ensure effective and efficient action of the two Science Sectors and highest level of impact of their programmes, and in particular, to increase intersectoral activities; (iv) analyse the scientific functions and activities of the principal United Nations organizations and agencies, as well as other relevant organizations, addressing natural and social and human sciences; and (v) review UNESCO's country-level contributions in sciences to United Nations country teams and to provide guidance for further development of such efforts.</p>	<p>Six months after the approval of work plans of document 34 C/5, the Director-General will assess the Task Force's activities and take a decision on its future role and modalities.</p>