

# Report on International Scientific Advisory Processes on the Environment and Sustainable Development



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International Scientific Advisory Processes on  
the Environment and Sustainable Development**



This report was prepared for UN System-Wide Earthwatch Coordination, United Nations Environment Programme, under contract, by Jan-Stefan Fritz, Department of International Relations, London School of Economics and Political Science, United Kingdom. The document contains the views expressed by the author acting in his individual capacity and may not necessarily reflect the views of the United Nations or the United Nations Environment Programme.

This report is available from:

Division of Environmental Information and Assessment (DEIA)  
United Nations Environment Programme (UNEP)  
P.O. Box 30552  
Nairobi, Kenya

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## EXECUTIVE SUMMARY

A fundamental part of reconciling human development with environmental protection involves better understanding the relations between the two. Scientists have played an indispensable role in advising policy makers and managers on the most current state of knowledge regarding these issues. In fact, the role of international scientific advisory processes is increasing. However, as the importance of scientific advice grows, so too must some important questions be answered. For example, is the best advice available for each purpose and is it delivered as effectively as possible? Does this advice reflect the concerns and needs of policy-makers? This report is a first step toward answering these questions. It compares many of the existing international scientific advisory processes and makes general observations on their work and character. The aim is to provide a basis for discussion about how to make scientific advice more effective in the future.

Based on the comparative analysis, several general observations can be made. First, what constitutes scientific advice varies greatly, depending on the circumstances. As a means to ensuring the usefulness of advice in each circumstance, both scientists and policy-makers have to make their expectations clearer to each other. Second, the emphasis should be on the 'intellectual independence' of scientific advice rather than its institutional separation. Some of the most successful scientific advisory processes are those that maintain close relations with policy-making. Thus, dialogue should be encouraged between scientists and policy-makers. Third, under certain circumstances scientific advisory processes can provide valuable opportunities for scientific capacity-building in the training of new international experts. The opportunities for this might be explored in future. Fourth, despite receiving so much attention, there still exists some duplication and many gaps in the work of scientific advisory bodies. Fifth, environmental observing has become less of a priority for scientific advisory bodies in recent years, and yet the data necessary for sound scientific advice are often lacking. At a time when the complexity of issues is increasing, efforts should be made to reverse this trend. Finally, though the internet is an invaluable source of information, there is as yet no mechanism for standardizing the amount and quality of information provided to make it an accessible and reliable source of scientific advice.



## 1 INTRODUCTION

A fundamental part of reconciling human development with environmental protection involves better understanding the relations between the two. Scientists have played an indispensable role in advising policy-makers and managers on the most current state of knowledge regarding these issues. In fact, the role of international scientific advisory processes is increasing as policy-makers seek more clarity on complex existing and emerging social and environmental concerns. However, as the importance of scientific advice grows, so too must some important questions be answered. For example, is the best advice available for each purpose and is it delivered as effectively as possible? Does this advice reflect the concerns and needs of policy-makers? This report is a first step toward answering these questions. It compares many of the existing international scientific advisory processes and makes general observations on their work and character. It should thus provide useful background to the Secretary-General's 1998 Report to the Commission on Sustainable Development on the Role of Science in Sustainable Development.

As Task-Manager for Chapter 35 of Agenda 21, which addresses the role of science, UNESCO has been responsible for regularly updating the Commission on Sustainable Development (CSD) on progress since 1992. In line with Agenda 21, UNESCO is targeting four main areas in its reports:

- strengthening the scientific basis for sustainable development;
- enhancing scientific understanding;
- improving long-term scientific assessment; and
- building scientific capacity and capability.

Among the major requirements needed to achieve progress in these areas are an increased awareness and effective structuring of international scientific advisory processes. Based on UNESCO's reports and the priorities of Agenda 21, several guiding principles for what is expected of scientific advice by policy-makers, can be identified for the purposes of this analysis:

- the advice must be delivered in manner comprehensible to 'non-scientists';
- the process of formulating and proffering scientific advice must be flexible to evolve as the relevant problem areas do;
- scientific assessments must be interdisciplinary and inclusive reflecting both natural and social sciences as well as an understanding of technological developments and local or indigenous knowledge;
- scientific advice must be formulated on an interactive basis so that it meets the needs of policy-making;
- scientific advisory processes must be developed as long-term processes rather than being short-term and lacking follow-up;
- in order for advice to be globally appropriate and effective over the longer term, scientific education and activity, and the processes to draw on it for advisory purposes, must be geographically decentralized to involve the broadest number of individuals and groups possible; and
- the above processes must be mutually reinforcing so that, for example, flexible scientific advice always seeks to involve individuals on an interactive basis over the longer term.

## 1.1 The Advisory Processes Considered Here

Only those bodies that contribute directly to international policy-making processes as mediated by international organizations are considered here. The focus is on those bodies in particular whose work involves or relates to the United Nations system. Thus science advisory bodies which are bilateral or regional are not considered. Moreover, other important contributions, such as national reports on Agenda 21 follow-up, are not included. Since this short report is intended to be illustrative rather than comprehensive, certain important bodies which otherwise fit within the framework here, have not been discussed, such as the International Research and Training Institute for the Advancement of Women (INSTRAW) and the UN Research Institute for Social Development (UNRISD). A more comprehensive review would be desirable in the future.

The following is a list of advisory processes considered here and described in Annex I (listed in approximate chronological order):

- United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) (1955)
- Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (1969)
- Scientific Committee on Problems of the Environment (1969)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973)
- Scientific Council of the Convention on the Conservation of Migratory Species of Wild Animals (1979)
- Assessment Panels of the Montreal Protocol on Substances that Deplete the Ozone Layer (1987)
- Intergovernmental Panel on Climate Change (1988)
- Technical Working Group of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes (1989)
- Scientific and Technical Advisory Panel of the Global Environment Facility (1991)
- Global Observing Systems - The Global Climate Observing System (1992), the Global Ocean Observing System (1993) and the Global Terrestrial Observing System (1996)
- Subsidiary Body on Scientific, Technical and Technological Advice of the Convention on Biological Diversity (1992)
- Subsidiary Body for Scientific and Technological Advice of the UN Framework Convention on Climate Change (1992)
- Committee on Science and Technology of the UN Convention to Combat Desertification (1994)
- Intergovernmental Forum on Chemical Safety (1994)
- Intergovernmental Forum on Forests (1997)
- Major environmental assessment reports of recent years

Bearing in mind that information is more readily available for some bodies as for others, this report aims to provide points for discussion, rather than a definitive comparative analysis.

## 2 COMPARATIVE ANALYSIS

The contribution of science to policy-making is often assumed to be a relatively straightforward matter. That is, scientists first collect data and information as a basis for making assessments. The assessments are passed on to policy-makers who then consider these in making decisions. In practice, however, there exist a great variety of international scientific advisory processes. Using illustrative examples, this analysis compares and contrasts the various purposes for which scientific advisory processes are established, who establishes them, who participates in them, and what is the nature of their outputs. The main themes emerging from the analysis are summarized in the form of general observations.

### 2.1 The diversity of existing processes and what can be expected of them

In broad terms, advisory processes are established for several reasons. These can be grouped within four categories ranging from those that are intergovernmental policy-making processes drawing extensively on scientific information, to policy-relevant scientific initiatives which are not tied to intergovernmental negotiations.

- **Science-based policy-making processes**

These processes are created specifically to enable governments to build a basic policy consensus in order to facilitate negotiations in an issue area. In that process, they do tend to draw on scientific knowledge as background information. Although many participants may be scientists, they are appointed by governments usually to represent government positions.

Examples of such processes include the Intergovernmental Forums on Chemical Safety and on Forests. Each was established as a meeting of government representatives. The IFF is seeking to build a policy consensus on the sustainable development of all kinds of forest, possibly towards initiating negotiations on a convention on forests. The IFCS is working primarily on individual issues such as persistent organic pollutants within its broader scope. The Intergovernmental Panel on Climate Change (IPCC) was also established as a body of this type, but its work now more closely fits into the assessment category.

- **Assessment processes**

Assessment processes are also scientific processes. Through the assessment process, the global scientific community is mobilized to establish the current peer-reviewed scientific knowledge on a specific issue, including an identification of major gaps in scientific knowledge. Participants are almost exclusively scientists acting in their capacity as experts, rather than government representatives. They prepare reports on the state of the environment and sustainable development or some specific sector, often on an interdisciplinary basis. While most assessment processes are geared towards assisting policy-making or implementation, they are independent from treaty bodies and intergovernmental negotiations.

Perhaps the most prominent example of an assessment process is the Intergovernmental Panel on Climate Change (IPCC). It was established under the auspices of WMO and UNEP, and composed of government representatives, to assess the state of knowledge on climate change on an ongoing basis. While IPCC provides assessment reports, technical papers and other advice to signatories of the Framework Convention on Climate Change, it is otherwise an entirely separately constituted body. Over time, the IPCC has grown to involve many hundreds of experts. The subsidiary processes of

the biodiversity and desertification conventions have looked to IPCC as a model for assessments to be undertaken in their own fields.

Some conventions have mandated assessments, such as under the Montreal Protocol of the Vienna Convention for the Protection of the Ozone Layer. The Parties implemented the assessment process through a Scientific Assessment Panel and an Environmental Effects Assessment Panel. The *Scientific Assessment of Ozone Depletion: 1994* was the product of 295 scientists from the developed and developing world who contributed to its preparation and review; 230 scientists prepared the report and 147 scientists participated in the peer review process. It assessed the status of the ozone layer, UV-B radiation, causes of ozone depletion and examined options to reverse the depletion.

The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) is another example of an assessment process. GESAMP is a joint initiative of eight United Nations organizations. Members are appointed in their individual capacity by each of the sponsors. The group's aim is to prepare marine environmental assessments and frame these in policy-relevant terms.

Increasingly, major assessment reports are being published by intergovernmental organizations, based on processes compiling scientific data and knowledge. Prominent examples of such reports include UNEP's *Global Biodiversity Assessment*, *Global Environment Outlook-1*, and *World Atlas of Desertification*; the UN Division of Sustainable Development's *Critical Trends*; IPCC's *Climate Change 1995*; FAO's *Report on the State of the World's Plant Genetic Resources for Food and Agriculture*; and the International Maritime Organization's *Global Waste Survey*. The *Freshwater Resources Assessment* was prepared by the Subcommittee on Freshwater Resources of the Administrative Committee on Coordination, in cooperation with the Stockholm Environment Institute. The *World Resources 1996-1997* report was principally written by an NGO, the World Resources Institute, in cooperation with UNDP, UNEP and the World Bank. These assessments vary in scope and depth, ranging from large-scale assessments involving over 1000 people (for example, the *Global Environment Outlook* and the *Global Biodiversity Assessment*) to small groups working in consultation with selected individuals. Given the increasing number of such assessments, it seems important, for future reference, to study the cost-effectiveness of the various methods used in producing these reports.

Lastly, the international scientific community, through non-governmental organizations, has also initiated assessment processes that are policy relevant. Among the most prominent examples of such a process is the Scientific Committee on Problems of the Environment (SCOPE) of the International Council of Scientific Unions. SCOPE sometimes involves policy-makers in its projects, though its activities are never tied to intergovernmental negotiations.

#### • Scientific and technical advisory bodies

These are scientific processes established with very specific mandates to prepare technical guidelines or other specific outputs. Most often, scientific and technical advisory bodies are created by parties to treaties to provide scientific and technical information needed for intergovernmental negotiations and implementation of conventions.

Most, though not all, treaty-related scientific and technical subsidiary bodies fall within this category. This includes the subsidiary bodies of the conventions on climate change, trade in hazardous materials, ozone depletion, as well as endangered and migratory species. The parties to each treaty appoint representatives to participate in meetings of these bodies, normally in their individual expert capacity, though sometimes also to specifically represent government policy. In all cases, with the exception of the Convention on International Trade in Endangered Species (CITES), the parties established a formal standing body. In the case of CITES, the member states did not establish any

separate body, choosing instead to rely on what is provided by national governments (each of which established scientific authorities in accordance with CITES) and, in particular, existing NGOs like the World Conservation Monitoring Centre.

Another example is the Scientific and Technical Advisory Panel (STAP) of the Global Environment Facility (GEF). Since the GEF review of 1994, STAP has been an independent advisory body with a secretariat at UNEP Headquarters in Nairobi. It is notable for having developed a highly organized institutional structure for providing GEF with advice on scientific and technical matters as well as for reviewing proposals for funding.

- **Environmental observing systems**

In addition to the three categories above which aim to review and synthesize scientific information, environmental observing systems draw on scientific advice to collect, collate and disseminate data and information. Although in the past some observation programmes principally addressed scientific concerns, this has begun to change since advisory processes falling into the previous categories increasingly require, on an ongoing basis, timely information on the state of the environment.

Perhaps the most prominent global environmental observing processes are the Global Observing Systems, designed by extensive networks of scientific panels and working groups and implemented under the guidance of steering committees of scientific experts. Three systems exist addressing climate (GCOS), oceans (GOOS) and land (GTOS). Although each system was established by different groups of sponsoring organizations, they are now closely coordinating their work. Together, they aim to provide information on the state of the environment with focus on both current and emerging policy concerns. The Global Ocean Observing System has even created an Intergovernmental Committee to enhance the policy relevance of its work.

### *The Need to Establish Clear Expectations*

The fact that there exists a diversity of scientific advisory processes, raises the issue of the type of advice that is expected in different circumstances. These expectations are not always addressed in clear terms.

In 1990, the then Chair of IPCC, Bert Bolin, argued that the expectations of scientific advice had to be clarified. He advised policy-makers that if requests were to be made of IPCC, then they should distinguish between what could be provided quickly, usually based on what was gleaned from existing reports, and more complex questions involving more than one working group which would also take much more time.<sup>1</sup> Bolin's premise in making this statement was that often what is expected from scientific advisory bodies, IPCC in particular, is not always clear.

This situation may improve with experience. The 1995 request from the Parties to the Montreal Protocol to its assessment panels requested updates to their reports with specific emphases.

From the perspective of policy-makers, the advice offered by scientists has also not always been framed in terms useful for decision-making. It is commonly accepted that many earlier environmental monitoring programmes failed on this account. There is a need in some cases for both a clearer understanding by scientists of what precisely is expected from them, and clearer expectations by policy-makers of what scientific advice can or cannot, should or should not, provide in support of their decision-making processes.

### *Can Scientific Consensus be Expected?*

One recurring expectation is the need for scientific consensus as a prerequisite to finding political consensus. The debate on the need for reaching a consensus is most heated when broad assessments are requested. For example, IPCC assessments have been highly controversial in policy-making. It seems the debate is less heated and more often resolved on very specific issues. For example, the Montreal Protocol is often hailed as a success because of the scientific consensus that was achieved on the need to phase out CFCs and other ozone-depleting substances. Some processes, such as intergovernmental forums, for example on forests, are attempting to pre-empt this discussion by seeking to build first a basic political consensus so as to facilitate negotiations in an issue area.

Building a scientific consensus can be a problematic expectation. A permanent consensus cannot be expected if the aim is to better understand an issue and to improve this understanding over time. It seems logical that the more complex an issue, the less possible total consensus is. The Committee on Science and Technology of the Desertification Convention is an interesting body in this context. Despite its difficulties in establishing a roster of experts (discussed below), it is among the few bodies aiming to include more than the natural sciences. The second Committee meeting is to be dedicated to traditional knowledge. The move to include traditional knowledge is not normally what is expected from scientific advisory processes. It changes what constitutes a consensus. However, it is being recognized that traditional knowledge can serve to improve the understanding of the relevant environmental and human processes, thereby also improving policy outcomes. A consensus based only on science would lead to a different understanding of the problem and different policy.

What constitutes a scientific consensus not only changes when other forms of knowledge are included, but also through what sciences are included. For example, GESAMP has recognized the need to look more broadly at environmental issues - it changed the 'P' in its acronym from referring to 'pollution' to 'environmental protection'. GESAMP focuses only on the natural sciences, as do most scientific advisory bodies. Overall, however, there is an emerging recognition that the complexity of sustainable development related issues cannot be addressed by the natural sciences alone. Instead, they must be addressed on an interdisciplinary basis, including the social sciences as well as other forms of knowledge. Further study is needed to consider the growing role of social scientists and other knowledge-based communities in offering policy advice.

## **2.2 Who Establishes Them and How do they Relate to Each Other?**

What is expected from a scientific advisory process is often linked to how and by whom a process was established. In turn, these influence how the various processes relate to one another and who participates in them. From the range of processes considered here, three basic sources of initiative can be identified: governments, intergovernmental organizations, and international non-governmental organizations.

- Governments directly appoint and govern the workings of many scientific advisory panels. In particular treaty-related scientific advice falls under this category, including bodies related to the conventions covering Hazardous Materials, Biodiversity, Climate Change, Desertification, Ozone, as well as Endangered and Migratory Species. As discussed above, normally - except in the case of CITES - the institutional structure of treaty-related scientific advisory processes is determined by their respective Conference of the Parties (COP). Intergovernmental forums are another category of government-initiated mechanisms that are less formal than treaty bodies. The Intergovernmental Forums on Chemical Safety and on Forests, as well as the Intergovernmental Panel on Climate Change, were each established as a meeting of government

representatives, though in some cases they have developed a character beyond the 'world of diplomacy'. The IPCC has grown to involve many hundreds of individuals, while the other two forums continue to be rather smaller.

- Other advisory processes are established under the auspices of Intergovernmental Organizations. Examples of these include GESAMP, the Scientific and Technological Advisory Panel (STAP) of GEF, and the Global Observing Systems. Although each serves a substantially different purpose, all were established by or within intergovernmental organizations. This does not mean that they are separate from intergovernmental negotiations or do not include government representatives. However, none is tied exclusively, over the longer term, or directly, to a particular set of intergovernmental negotiations. GESAMP and the Global Observing Systems are both the products of joint initiatives of intergovernmental organizations and represent attempts to frame international scientific cooperation in policy relevant terms. The Global Ocean Observing System has established an Intergovernmental Committee to provide overall direction. Since the GEF review of 1994, STAP has been an independent advisory body established by GEF with a secretariat at UNEP Headquarters in Nairobi. STAP is a standing body that has developed a highly organized institutional structure for providing GEF with advice on scientific and technical matters as well as reviewing proposals from that perspective. The major assessment reports referred to earlier are also produced by, or in collaboration with, intergovernmental organizations drawing on scientific knowledge.
- Finally, the international scientific community, through non-governmental organizations, is also involved in giving scientific advice. The Scientific Committee on Problems of the Environment (SCOPE) is taken as an example of such a programme. Sponsored by the International Council of Scientific Unions, SCOPE is among the few initiatives of the international scientific community to provide assessments that are specifically intended to be policy relevant.

### *The Problem of Coordination*

Since the creation of the United Nations, there has been a continuous debate about how best to coordinate the activities being carried out under its auspices.<sup>2</sup> Despite this ongoing debate, the relations between the various groups of processes listed above continue to be unsystematic. This is not a critical matter in the case of certain assessment reports and the more technical advisory processes - for example, the Basel Convention, the Montreal Protocol or CITES. This is not to say they should exist separately, but in these cases the specific issue or technical guidelines at hand provide the focus that is necessary for targeting scientific advice in an appropriate manner. There has in fact been some coordination between more technical assessment processes, such as between the Montreal Protocol bodies, the Basel Convention Secretariat and the UN Framework Convention on Climate Change, and in the joint Montreal Protocol/IPCC/ICAO report on aviation and the global atmosphere. In contrast, the need to coordinate is greater regarding the more recent treaty-related processes - the Biodiversity, Climate Change and Desertification Conventions. Most of the coordination between these is pursued on the basis of individual initiative and specific projects rather than systematically. This point has been flagged in several recent reviews. The difficult issue is that these bodies, by virtue of their specific nature and place in intergovernmental Conventions and negotiations, are least likely to be closely linked to each other. Yet they are the lead bodies in those areas - they are the focus of attention and set an example for processes beyond their immediate spheres. Moreover, the international agreements being negotiated are so complex that they invariably and directly impact upon most other sustainable development-related concerns. A future study should consider these bodies specifically with a view to proposing concrete actions that should be taken by governments to ensure collaboration and avoid overlap.

In contrast to the problems of coordinating advisory bodies established by governments, several advisory processes established by intergovernmental organizations provide examples of how systematic voluntary cooperation can be achieved. GESAMP, for example, was founded in the late 1960s and has since provided a model of how UN agencies can cooperate. The Global Observing Systems represent another effort of this kind. The lessons learned by these bodies on both the limits and potential of inter-agency cooperation can serve as a guide for the future.

Coordination and cooperation are often used as methods for interlinking already established bodies. Considerable duplication can be avoided simply by encouraging a greater initial awareness of other existing and similar efforts. A good example of this is the Committee on Science and Technology of the Desertification Convention. Before starting its work, the CST prepared a number of reports with a view to placing itself in the context of what other research was being done. Bringing such reports to the attention of policy-makers and managers can substantially reduce duplication and pre-empt the difficulties of coordinating processes that have already been established. An important role for intergovernmental organizations can be envisaged here.

### 2.3 Who Participates, How, and in What Capacity?

The question of who participates in scientific advisory processes has been a matter of debate at least since the Stockholm Conference. A balanced geographic representation with individuals participating on the basis of their expertise is the goal of any international scientific advisory body. In the past, such bodies have principally focused on the natural sciences, often those requiring advanced technologies. Given that many countries do not have such expertise, representatives from these countries simply have not participated, or have done so on a limited basis. Even when experts from developing countries have had the relevant knowledge, financial constraints are a major factor in their ability to participate internationally. Few globally relevant advisory bodies have been established specifically with a goal to overcome this problem.

Though substantial inequities in scope and participation remain, most scientific advisory bodies have tended to become more inclusive. This can be seen in the recent treaty-related bodies. All have stipulated a geographically more balanced membership. However, even here the matter has led to some debate on more balanced gender and disciplinary representation. For example, in the establishing of a roster of experts for the Desertification Convention, the initial list proposed by member states was geographically limited and biased in terms of gender as well as expertise. As a consequence, the secretariat deemed it necessary to submit a report to the COP, urging its members to act more in accordance with the Convention they had signed and which had highlighted these issues. The Parties to the Montreal Protocol have adopted detailed terms of reference for their Technology and Economic Assessment Panel to ensure balance and turn-over.

Beyond merely stating the desire to be more balanced in all respects, scientific advisory bodies need to be structured to that end. For example, the standard approach to scientific expertise is to draw on known individuals wherever they may be found. However, apart from drawing on well-established experts, more effort could be made to train new international experts, as has been done, for instance, in the assessment processes under the Montreal Protocol. That is, scientific advisory processes could also provide effective mechanisms for scientific advisory capacity-building. Interactive processes between policy-makers and experts could build a better mutual understanding of expectations, and thus direct research activities to that end. This might also provide an important means for overcoming the problem of geographical and gender imbalances. This is an area which has not been researched yet and is certainly untapped in practice.

Sometimes, inequities between the individuals and groups that constitute an advisory process are quite simply a consequence of the limited number of individuals involved. For example, there exists a noticeable degree of cross-membership, especially on the part of prominent experts. These often participate on several high-level advisory bodies, chair panels, and author or edit reports all at the same time. While this is not inherently a problem, a review of GESAMP points out that some members have become semi-permanent. GESAMP was established as a group of some 30 experts named by the sponsoring agencies. This group was to be flexible, changing in a slow but regular manner. For each project, a larger number of individuals were to be designated on a strictly limited basis. However, over time, the review observes that the resistance to change increased and fewer new individuals became involved. GESAMP has now been restructured with new terms of reference. However, GESAMP is by no means the only body to suffer from the institutional inertia toward a status quo. Every body is subject to the same pressure, which can only be countered by involving individuals on a flexible, broad and revolving basis.

The most common form of scientific advisory process, the standing body, seems to be particularly susceptible to institutional inertia. In this format, traditionally, participants were appointed by the relevant governing body on a longer-term basis. More recently, the format of standing bodies involves appointing a small secretariat and a core group of scientific experts, with further individuals invited on an ad hoc basis. This is the format that GESAMP as well as SCOPE have employed successfully. However, the individuals being involved on an ad hoc basis are listed on Rosters of Experts - thus posing the potential problem of reducing the ad hoc and flexible character of their involvement.

Expert Rosters have become increasingly popular since UNCED. Ideally, rosters aim to balance the need for intellectual independence while maintaining a close link to intergovernmental negotiations. All three of the recently negotiated treaties - biodiversity, climate change, and desertification - have proposed and are working on establishing rosters of experts with knowledge relevant to their treaties. At present, however, all are facing difficulties due to debates about scientific independence, the degree of control exercised by the members of the COP in appointing experts, as well as their relations to other existing bodies.

### *Scientific Independence*

Questions raised by a process of nominating individuals to serve on Roster of Experts or on Standing Bodies are at the centre of debate about the independence of scientific advisory processes. Among the more prominent examples of this debate are the relations between the Subsidiary Body on Scientific and Technical Advice of the UNFCCC and the IPCC. While IPCC is an intergovernmental body, it is also acknowledged to be independent of specific government interests. Its assessments are considered so authoritative that its findings are accepted or argued against vehemently. Good examples of this can be seen in IPCC's *Climate Change 1995* assessment and in its October 1997 statement about climate inertia. SBSTA is also an intergovernmental body, with members appointed specifically by parties to the FCCC.

Some of the most successful scientific advisory processes are those that are recognised as being independent, but are not separate from policy-making processes. Various means of constructing such independence have been developed. Since its restructuring, the Scientific and Technical Advisory Panel (STAP) of GEF has become a model of reconciling the desire by governments for a roster of experts and the scientists' goal of independence. STAP has established an extremely detailed set of guidelines governing all the various actions and organization of its roster. The Parties to the Montreal Protocol have also defined strict rules and a code of conduct to ensure the scientific independence of their technical and economic advisory processes.

Strict guidelines in appointing government representatives are one method of governing independence. The detailed arrangements of STAP may be replaced in other cases with a simple precondition that all appointments to the relevant advisory body are made on the principle that individuals serve in their personal capacity. GESAMP is an example of such a case. Its members are appointed by its sponsoring organizations to serve as independent experts. This avoids the problems that can emerge when representatives to advisory bodies are appointed by governments to represent government positions. Hence, an active debate is being waged about the use of curriculum vitae to appoint individuals to Rosters of Experts.

In many respects, the Scientific and Technical Committee of the Desertification Convention is also in the process of showing that independence does not mean being separate from other debates - in this case, from traditional knowledge. The output from CST-2 will certainly be interesting and might provide an example for other bodies in similar situations.

Finally, a further means of establishing an independent advisory process is peer review. Anonymous peer review is the standard mechanism for evaluating contributions to academic journals in particular. Most advisory reports and major assessments are reviewed in some capacity before being submitted. While this seems a way to ensure intellectual independence, a potential problem exists, especially for the UN, because 'anonymous review' stands in contrast to 'public debate' - a principle at the core of increasing transparency in the work of the UN. An expanded analysis should consider this matter in more detail.

The above examples are important as they highlight that the debate about scientific independence is not about separating science from policy-making, but about 'intellectual independence', that is the freedom to base scientific advice on objective information unbiased by political pressures. The common denominator in the successful examples seems to be that each has maintained its distinctive character, and yet established close relations with policy-makers.

Interestingly, it is only intergovernmental processes that seem to engage in the debate about separating science from policy-making. The work of some NGOs shows a very different approach. A useful recent example can be seen in the Global Biodiversity Forums. Here numerous highly scientific papers are presented and debated, with none making any distinction between science and politics. The applicability, constraints and opportunities of this example for intergovernmental processes need to be considered in more detail.

Although small, another non-governmental initiative is SCOPE's recently concluded project on indicators of sustainable development, where representatives of governments met with scientists to discuss the creation and context of indicators. Scientists presented ideas on the creation of indicators, and policy-makers elaborated the context in which these had to be implemented. The process of producing the final product, a published book, was interactive.<sup>3</sup> Although this is only one example, shows how policy-makers can make clear their concerns and priorities, and scientists can explain directly their understanding of an issue. While there are certainly restrictions on the use of this form, it might suggest options to appointing bodies directly accountable to COPs.

#### **2.4 How is Information Delivered and with What Impact**

Scientific advice is usually delivered formally, meaning that it is delivered in report form. These reports may be oral, but usually they are printed and often subsequently made available electronically. The cases considered here suggest considerable differences in the impact these reports have, although further study is required. It seems that the reports most likely to have a noticeable immediate impact

are those requested by specific decision-making mechanisms of governments. This can be seen in, for example, the Basel, Migratory Species, Ozone and Trade in Endangered Species Conventions. For the vast majority scientific advisory processes that are not specifically requested by governments, impact is more difficult to demonstrate. However, not having a direct line to policy-makers does not necessarily diminish the value of the expertise or the impact it has; it is only more difficult to measure. The following two examples show how the attention of governments has been drawn to an issue, without having to rely on formal reporting mechanisms.

The IPCC is not directly tied to the climate change negotiations, yet it undoubtedly has played an important role in those negotiations. Its impact is reflected in the level of debate its assessments incite. Perhaps this level of influence derives from the fact that IPCC has both managed to collect a critical mass of expertise, and has built the confidence of governments through their direct involvement.

A second example, already described above, is SCOPE's project on indicators for sustainable development. It demonstrates how scientific advice can be delivered to policy-makers without compromising 'intellectual independence'. The implementation of the project and setting of priorities for future action were mutually constructed at two workshops by representatives of scientific bodies, intergovernmental organizations and national governments. This helped to resolve a number of sensitive political issues of concern to governments.

### **3. GENERAL OBSERVATIONS ON RECENT PRACTICE**

A comparative analysis of anything as complex as international scientific advisory processes is difficult. Differences between the bodies and the fact that some are only now being implemented precludes any straightforward or quantitative comparison. However, this review of scientific advisory processes can suggest some significant policy implications relevant both to improving existing processes and to creating new ones.

#### **3.1 Establishing Clear Expectations**

Advisory processes include diverse categories, for policy-making, technical advice, assessment and environmental observations, each drawing on or creating scientific knowledge in their own way. Not only are advisory processes substantively diverse, but they have also changed over the last twenty years. Many of the longer-existing advisory processes have reexamined their aims and have broadened them to be more inclusive. There is an emerging recognition that even the natural sciences can no longer exist on their own, but must work in concert with the social and human sciences as well as other forms of knowledge. As issues become more complex, there is an increasing need for the expectations of any advisory process to be flexibly and clearly stated by both scientists and policy-makers.

#### **3.2 Encouraging Dialogue Between Scientists and Policy-Makers**

Some of the most highly respected international scientific advisory processes are those that develop or retain a distinctive character, yet interact closely with policy-makers. These successful bodies also show that by increasing dialogue, a scientific advisory process need not be directly tied to intergovernmental negotiations in order to provide policy relevant advice.

#### **3.3 Capacity-Building as a Goal of Scientific Advisory Processes**

As mechanisms for gathering, assessing and passing on the 'best' scientific knowledge, scientific advisory processes could be at the centre of policy relevant scientific capacity-building in all countries. There are certainly benefits to both national and international scientific communities in training new international experts, in addition to drawing on existing ones. This approach may provide a useful means to overcoming the problem of geographical and gender imbalances. The issue of scientific capacity-building in this respect has not been researched and is seldom applied in practice.

#### **3.4 The Continued Potential for Duplication**

Recently, a debate has emerged about the lack of coordination between the secretariats and subsidiary bodies of the different conventions. Although there are several examples of cooperation between programmes, these tend to be ad hoc and voluntary. Coordinating the activities of advisory processes and encouraging cooperation between them is an important issue. However, it also seems that a more integrated approach needs to be taken from the beginning. Coordination and cooperation are often used as methods for interlinking already established processes. Considerable duplication can be

avoided simply by encouraging a greater awareness of other existing and similar efforts, especially before a new mechanism is established.

The following observations are not addressed specifically in the analysis, but stem from the process of preparing and writing this report.

### 3.5 Data Requirements for Emerging Priorities

Environmental observations have received less attention from scientific advisory bodies in recent years, yet the data necessary for sound scientific advice are often lacking. Most advisory bodies undertake reviews and syntheses using existing data, without devoting much attention to data collection programmes, yet they often complain about the inadequate or even worsening status of the information base on which they must rely. The Global Observing Systems and related environmental data collection efforts should be supported as, without adequate data on status and trends, scientific advice can be seriously hampered.

### 3.6 The Internet as a Source of Information and Guide to its Quality

The Internet is increasingly used to disseminate environment and sustainable development-related information. It has considerable potential both to facilitate international scientific advisory processes and to deliver the results of their work to larger audiences, expanding their impact. However mechanisms to ensure the quality and simplify the access to scientific information over the Internet are far from adequate. The Internet is also a remarkably useful tool for rapidly comparing the work of various agencies, and thus for identifying potential for collaboration and avoiding programmatic gaps and overlap. The acceptance of standardized formats for providing information would help efforts to build cooperation between scientific advisory processes. The use of the Internet to both support and explain international scientific advisory bodies needs further attention.

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<sup>1</sup> Bert Bolin, 'The Intergovernmental Panel on Climate Change (An Address to the Second World Climate Conference),' in Jill Jäger and H.L. Ferguson (eds.) *Climate Change: Science, Impacts and Policy - Proceedings of the Second World Climate Conference*, Cambridge: Cambridge University Press, 1991, p.21.

<sup>2</sup> For a slightly out-of-date, but particularly critical report prepared from within the UN system see Maurice Bertrand of the UN Joint Inspection Unit report JIU/Rep/85/9.

<sup>3</sup> Bedrich Moldan and Suzanne Billharz (eds.), *Sustainability Indicators: Report of the Project on Indicators of Sustainable Development*, Chichester: John Wiley and Sons and SCOPE, 1997.



## **ANNEX I: BACKGROUND SUMMARY OF EACH BODY**

The following selection of international scientific advisory bodies on the environment and sustainable development aims to highlight the principal approaches, rather than to be comprehensive. While the amount of information available was variable, the short background summaries review the following points concerning each body:

- The mandates or terms of reference, the past and present membership and the methods of selection, the meeting schedules and working procedures, and the principal outputs;
- The geographic representation and the coverage of scientific disciplines of the membership relevant to their terms of reference; and
- Any reviews or evaluations that may have been made of their impact or effectiveness, and of difficulties that may have arisen.

Despite the variability in the information readily available, care was taken to organize each of the summaries in a similar manner wherever possible.

The processes or bodies for which background summaries were prepared are:

- Scientific Committee on Problems of the Environment - SCOPE (1969)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES (1973)
- Scientific Council of the Convention on the Conservation of Migratory Species of Wild Animals - CMS (1979)
- Assessment Panels of the Montreal Protocol on Substances that Deplete the Ozone Layer (1987)
- Intergovernmental Panel on Climate Change - IPCC (1988)
- Technical Working Group of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes (1989)
- Scientific and Technical Advisory Panel (STAP) of the Global Environment Facility - GEF (1991)
- Global Observing Systems: Global Climate Observing System - GCOS (1992), Global Ocean Observing System - GOOS (1993) and Global Terrestrial Observing System - GTOS (1996)
- Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the Convention on Biological Diversity - CBD (1992)
- Subsidiary Body for Scientific and Technological Advice (SBSTA) of the UN Framework Convention on Climate Change - FCCC (1992)
- Committee on Science and Technology (CST) of the UN Convention to Combat Desertification - CCD (1994)
- Intergovernmental Forum on Chemical Safety - IFCS (1994)
- Intergovernmental Forum on Forests - IFF (1997)
- Major environmental assessment reports of recent years

## **1. UNITED NATIONS SCIENTIFIC COMMITTEE ON THE EFFECTS OF ATOMIC RADIATION (UNSCEAR)**

Address: Secretariat of the United Nations Scientific Committee  
on the Effects of Atomic Radiation (UNSCEAR)  
Vienna International Centre  
P.O. Box 500  
A-1400 Vienna, Austria  
Tel: (43-1) 21345 extension 4330  
Fax: (43-1) 232-608

The United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) is an example of a standing scientific advisory committee mechanism, created by the UN General Assembly in 1955 (GA Resolutions 3226 (XXIX) and 31/10). The Committee's mandate is to review the sources and effects of ionizing radiation and to inform the General Assembly of the risks of all exposures, both natural and man-made. The continued work of the Committee is in response to the widespread concern of countries on the hazards of radiation exposures that arise from natural sources and that are caused by man-made practices, events and accidents.

UNSCEAR is preparing an extensive assessment of information on radiation exposure world-wide for the year 2000, along with a comprehensive review of the biological effects of radiation.

## 2. JOINT GROUP OF EXPERTS ON THE SCIENTIFIC ASPECTS OF MARINE ENVIRONMENTAL PROTECTION (GESAMP)

Address: The Administrative Secretary of GESAMP  
Marine Environment Division  
International Maritime Organization  
4 Albert Embankment  
London SE1 7SR  
United Kingdom

### Background

The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) was established in 1969. It now is co-sponsored by eight organizations:

- International Maritime Organization (IMO)
- Food and Agricultural Organization of the United Nations (FAO)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- World Meteorological Organization (WMO)
- World Health Organization (WHO)
- International Atomic Energy Agency (IAEA)
- United Nations (UN), and
- United Nations Environment Programme (UNEP)

Over the years GESAMP's terms of reference have changed. Prior to 1993, GESAMP was principally concerned with pollutants and pollution related matters. Its basic terms of reference were:

- to provide advice relating to the scientific aspects of marine pollution; and
- to prepare periodic reviews of the state of the marine environment as regards marine pollution and to identify problem areas requiring special attention.

In 1993, the 'P' in GESAMP was changed from meaning 'Pollution' to 'Environmental Protection', and a corresponding shift came in the terms of reference. Since then, GESAMP's activities have fallen into two broad categories:

- the preparation of periodic reviews and assessments of the state of the marine environment and identification of problems and areas requiring special attention; and
- evaluation of specific scientific issues, processes and methodologies relevant to management actions for the protection of the marine environment.

### Organization

GESAMP is flexibly organized. Each of the sponsoring bodies appoints a Technical Secretary and IMO an Administrative Secretary. Together these nine individuals form the Joint Secretariat. Each of the sponsoring bodies appoints up to four experts to serve as members of GESAMP. Members meet annually, in GESAMP sessions, to discuss past work and organize future work. The substantive work is largely carried out in Working Groups which meet intersessionally. The participants of each Group, chaired by a GESAMP member, are appointed by GESAMP drawing also on experts beyond the membership. Groups are established for the purposes of carrying out specific projects only and then disbanded. Projects, in turn, are initiated by GESAMP at the request of one or more of the sponsoring bodies and usually last for up to two or three intersessional periods. Although sponsored

by UN organizations, GESAMP maintains its scientific independence, and the decision to approve and publish a report is made exclusively by the experts themselves.

While the foci of GESAMP's work have changed, certain characteristics are judged to be at the heart of its success over the years.

*Interdisciplinarity:*

GESAMP is seen by its proponents as a valuable example of an interdisciplinary body. However, it does focus specifically on the natural sciences. Projects have been rejected in the past on the basis that they were either not interdisciplinary enough or involved economics and politics to a large degree.

*Avoiding Duplication:*

The major accomplishment of GESAMP is that it minimizes duplication in the scientific assessment efforts of the various sponsoring UN bodies. Equally, the balance between GESAMP's independence and its close link with intergovernmental processes through its sponsors is also valued.

*A Varied Membership:*

Experts from approximately forty countries have participated in GESAMP. While this number is impressive, in absolute terms the overwhelming majority of participants have been from North America and Europe.

## Issues

GESAMP has many attributes which make it a good reference point when considering scientific advisory bodies in comparative terms. However, a recent unpublished review has raised some issues which are pertinent to all scientific advisory processes.

- Funds are inadequate to continue to support GESAMP at a level necessary to maintain its integrity. The number of experts the sponsors can afford to name to the body is declining. For a scientific advisory body to succeed over the longer-term, it requires stable funding.
- The principle of limiting the length of service of each expert is often ignored by sponsoring agencies, and some experts have acquired a 'semi-permanent' status, thus diminishing the opportunity for introducing new experiences, ideas and approaches.
- The problem of geographical representation threatens, in the view of some people, to 'politicize' GESAMP by raising the importance of selection criteria other than scientific expertise.

Several issues are important here:

- Independence is valued, both by the participants and the policy-makers, over the longer term. Integrity and trust need to be built.
- GESAMP likes to align itself very closely with policy processes, but stay separate from them. This has been part of its success. However, the more analytic GESAMP reports become, i.e. looking at cause-and-effect relationships, the closer it will come to policy-making processes. This move is unavoidable if GESAMP seeks to continue to be relevant.

**Sources:**

Herbert L. Windom, *GESAMP: Two Decades of Accomplishment*, London: IMO, 1991.

Velimir Pravdic, *GESAMP: The First Dozen Years*, Geneva: UNEP, 1981.

Stjepan Keckes, unpublished report, 1997.

### 3. SCIENTIFIC COMMITTEE ON PROBLEMS OF THE ENVIRONMENT (SCOPE) OF THE INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS (ICSU)

Address: The ICSU Secretariat  
51 Boulevard de Montmorency  
F-75016 Paris, France  
Tel. (33 1) 4525 0329  
Fax (33 1) 4288 9431  
E-mail [icsu@lmcp.jussieu.fr](mailto:icsu@lmcp.jussieu.fr)  
Web Address: <http://www.lmcp.jussieu.fr/icsu/>

#### Background

The Scientific Committee on Problems of the Environment (SCOPE) is ICSU's activity relating to the environment. Established in 1969, SCOPE originated as an interdisciplinary body of natural science expertise which addresses constraints of society on the environment as well as the human response to environmental issues.

ICSU is a non-governmental organization, founded in 1931 to bring together natural scientists in international scientific endeavour. It comprises 95 multidisciplinary National Scientific Members (scientific research councils or science academies) and 25 international, single-discipline Scientific Unions to provide a wide spectrum of scientific expertise enabling members to address major international, interdisciplinary issues which none could handle alone. ICSU also has 28 Scientific Associates.

The major scientific activities of ICSU and its partners that address global environmental change:

- International Partnerships: the Role of ICSU in Earth System Science
- Linking Science and Society: Appraisal and Assessment Activities
  - Scientific Committee on Problems of the Environment (SCOPE)
- Earth System Research: the International Framework
  - World Climate Research Programme (WCRP)
- International Geosphere-Biosphere Programme (IGBP)
  - DIVERSITAS
  - International Human Dimensions Programme on Global Environmental Change (IHDP)
- Measuring and Monitoring Our Planet: Global Observation Systems
  - Global Climate Observing System (GCOS)
  - Global Ocean Observing System (GOOS)
  - Global Terrestrial Observing System (GTOS)
- Increasing the Resources of World Science: Capacity Building
  - START

"ICSU Members have established a number of interdisciplinary bodies to address specific problems that require international collaboration. Through these bodies, ICSU provides a source of independent and scientifically authoritative analysis. Since such assessments and guidance are free from the biases and constraints of national interests, they are generally regarded as the world's best available consensus of fact and scientific judgement.... Increasingly, ICSU is called upon as the voice of world science and as an adviser to governments and intergovernmental organisations. In collaboration with both governmental and non-governmental organisations, ICSU undertakes international research programmes that focus on critical scientific problems of global scope...."

ICSU itself has very limited financial resources. Yet it acts as a catalyst to promote and influence worldwide science, and helps to develop policies that are scientifically informed. Amongst its very many concrete achievements, it can claim to have initiated the international study of global environmental systems, through the Global Atmospheric Research Programme in the 1960s and 1970s...."

## SCOPE

The Scientific Committee on Problems of the Environment (SCOPE) has a flexible programme and no pre-defined structure apart from its Secretariat. It acts as an interface between science and decision-making, providing advisors, planners and policy-makers with the analytical tools to promote sound management and policy practices.

Results of SCOPE projects are usually published as scientific monographs. The 57 titles in the SCOPE Series are widely referenced state-of-the-science analyses and evaluations of environmental issues. Other outputs (including executive summaries, journal articles and brochures) target a wider audience, and these have been well received by those involved in policy-making, planning and decision-making.

The current SCOPE programme, *Towards Sustainability (1996-1998)*, addresses a wide range of scientific issues of international importance. At present, 17 projects operate relatively independently of each other. However, their grouping within three clusters (see below) provides a framework for enhanced interdisciplinary coordination, with a collective focus on the concepts and practices of sustainability. In this context, sustainability means maintaining the life-support system of humankind by safeguarding the natural resource base over time, without compromising or reducing development opportunities or production possibilities for future generations. Special attention is given to the role of regional differences, new technologies and increasing human populations.

The long-term aim of these projects is to develop processes and practices which lessen the depletion rate of non-renewable resources, identify substitute resources, assure the supply of renewable resources, and reduce waste and pollution. As a matter of principle, SCOPE projects recognize that natural resource management should be based on science, and in concert with cultural sensitivity and social fairness.

### *Practices and Policies:*

SCOPE studies within this cluster examine how environmental knowledge and socio-economic disciplines can be used to develop practices and policies that favour sustainability.

One of the most interesting projects in this category, in this context, a study of Indicators of Sustainable Development, has fostered the development of highly aggregated indicators that are policy relevant, scientifically valid, economically feasible and technically achievable. Such indicators are needed to alert decision-makers to priority issues, guide policy formulation, simplify communication and foster a common understanding of key trends. From the beginning, the project was conceived not solely as an academic but also as a practical exercise, working in close connection with the needs of the international community as outlined by the Commission on Sustainable Development (CSD) delegates, supporting the CSD process in a manner that would be acceptable to member countries.

In January 1995, a Workshop was held in Ghent, Belgium cosponsored by the Governments of Belgium and Costa Rica, by the United Nations Environment Programme and by SCOPE. The final report was submitted to the Commission on Sustainable Development for its work on indicators. This workshop was remarkable for its participation: it was attended by 20 representatives of 13

governments (13 non-OECD representatives, 7 OECD), 11 representatives of 8 intergovernmental organizations, 8 scientists from SCOPE, and NGO representatives from the New Economics Foundation and the IUCN Eastern African Regional Office. As the report states: "this ... combination of participants allowed an ... exchange between a sample of decision-makers from national governments who will be the ultimate users of indicators, experts who are designing indicators, and the organizations who will need to implement work programmes in this area". The result was a direct and dynamic two-way scientific advisory process.

SCOPE then convened a second International Workshop (Wuppertal, November 1995) to discuss the state of the art within the field of indicators of sustainable development, the most recent results, the directions and priorities for future work, and to produce the elements of a research agenda, as a stimulus for new work on indicators. Finally, the project culminated in a report synthesizing the most up-to-date work in this area, with the double aim to contribute to a deeper understanding of the idea of sustainability, and to make the concept of sustainable development more operational. This report was presented during the UN General Assembly Special Session in June 1997.

*Ecosystem Processes and Biodiversity:*

Projects in this cluster examine specific ecosystem characteristics and their interactions with human activities, to assist in formulating valid policy options and strategies.

*Health and Environment:*

The efforts of SCOPE here are directed at the underlying principles of ecotoxicology (SCOPE pioneered ecotoxicology studies), environmental pathways, and problems at the ecosystem scale, where international collaborations provide most benefit. In addition to studies on contamination by heavy metals, pesticides and other specific chemicals, previous work has included an assessment of the global effects of increased ultraviolet radiation, with emphasis on ecosystem perturbations and linkages to biogeochemical cycles.

**Sources:**

Nadine Gouzée, et. al., *Indicators of Sustainable Development: Report of the Workshop of Ghent, Belgium*, (9-11 January 1995)

#### **4. CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA (CITES)**

**Address:** CITES Secretariat  
15, chemin des Anemones  
Geneva Executive Center  
CH-1219 Chatelaine (Geneva)  
Tel. (+4122) 917 8139/40  
Fax (+4122) 797 3417  
E-mail: [cites@unep.ch](mailto:cites@unep.ch)

**Web Address:** <http://www.unep.ch/cites.html>

#### **Background**

CITES is an international treaty, which was drawn up in 1973, to protect wildlife against over-exploitation and to prevent international trade from threatening species with extinction. It entered into force on 1 July 1975 and now has a membership of 143 countries. These countries act by banning commercial international trade in an agreed list of endangered species and by regulating and monitoring trade in others that might become endangered.

The Secretariat of the Convention, administered by UNEP, is located in Switzerland. It helps the Parties to implement CITES by providing interpretation of the provisions of the Convention, and advice on its practical implementation. The Secretariat also conducts a number of projects to help to improve implementation, such as training seminars, and to examine the status of species in trade so as to ensure that their exploitation remains within sustainable limits. Some of the Secretariat's projects are designed to provide assistance to the Parties in preparing national legislation to implement the Convention.

#### **Scientific Advisory Process**

CITES has no separate scientific advisory panel. Scientific contributions to CITES principally come from:

- National governments through one or more Scientific Authorities designated by each Party according to Article IX of the Convention.
- The World Conservation Monitoring Centre (WCMC) which has provided services to CITES since 1980, computerizing the trade records of species listed in the CITES Appendices, as reported by the Parties.

#### **Global Biodiversity Forum**

In 1997, IUCN organized the seventh Global Biodiversity Forum entitled 'Non-Detrimental Export and Sustainable Use' from 6-8 June 1997 in Harare, Zimbabwe, immediately prior to the 10th meeting of the Conference of the Parties to CITES. GBF7-CITES, as it is referred to, focused on four themes: identifying and monitoring the causes of species loss; non-detrimental export and sustainable use; access to floral resources; and community-based resource management.

GBF7-CITES is part of a series of Forums that have been held to assist in the evolution and effective implementation of the CBD. The Forum concept was initially proposed by the *Global Biodiversity Strategy* (WRI, IUCN, UNEP, 1992). The aim is to provide for an independent, open and strategic mechanism to foster analysis and unencumbered dialogue and debate among interested parties to address priority ecological, economic, institutional and social issues related to the options for action to conserve biodiversity, and use biological resources sustainably and equitably. It is designed to contribute to the further development and implementation of the Convention on Biological Diversity (CBD) and other biodiversity-related instruments at the local, national and international levels. It complements intergovernmental processes by: 1) providing a broad spectrum of perspectives, proposals and experiences from all stakeholders; 2) looking for innovative approaches to enrich national policies and inter-sectoral positions; 3) building diverse partnerships among stakeholders (for example, governments, indigenous groups, local communities, NGOs and the private sector); and, 4) identifying areas of agreement and points of conflict on different biodiversity issues.

Reflecting its non-governmental character, participants included predominantly representatives of wildlife and other environment bodies. Many of these came from Africa (Zimbabwe, South Africa, and many others), but also numerous representatives of Arctic-based groups from Canada as well as representatives of IUCN, the Executive Secretary of the CBD, and one representative of UNEP.

GBF8-SBSTTA3 was held immediately prior to the 3rd meeting of the CBD SBSTTA (see SBSTTA-CBD summary).

## 5. SCIENTIFIC COUNCIL OF THE CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS

Address: UNEP/CMS Secretariat  
United Nations Premises in Bonn  
Martin-Luther-King-Str. 8  
D-53175 Bonn, Germany  
Tel: (+49 228) 815 2401/2  
Fax: (+49 228) 815 2449  
E-mail: cms@unep.de

Web Address: <http://www.wcmc.org.uk/cms/english/> (maintained by WCMC)

### Background

The Convention on Conservation of Migratory Species (CMS) aims to conserve migratory (avian, marine and terrestrial) species over the whole of their range. The Convention provides a framework within which Parties may act to conserve migratory species and their habitats by :

- Adopting strict protection measures for migratory species that have been categorized as being in danger of extinction throughout all or a significant proportion of their range (listed in Appendix I of the Convention);
- Concluding Agreements for the conservation and management of migratory species that have unfavourable conservation status or would benefit significantly from international cooperation (listed in Appendix II of the Convention); and
- Undertaking joint research and monitoring activities.

A secretariat under the auspices of UNEP provides administrative support to the Convention. The decision-making organ of the Convention is the Conference of the Parties (COP) which held its Fifth meeting in Geneva in April 1997. A Standing Committee provides policy and administrative guidance between the regular meetings of the COP. The Scientific Council is appointed by individual member States and by the COP, in accordance with Article VIII of the Convention, and gives advice on technical and scientific matters.

### Membership of the Scientific Council (as of 1 August 1997)

Experts are appointed by member states of the Conference of the Parties to CMS. The following (46) Parties have nominated an expert to serve on the CMS Scientific Council: Argentina, Australia, Belgium, Burkina Faso, Cameroon, Chile, Czech Republic, Democratic Republic of the Congo, Denmark, Egypt, European Community, Finland, France, Germany, Ghana, Guinea, Hungary, India, Ireland, Israel, Italy, Luxembourg, Mali, Monaco, Morocco, Netherlands, Niger, Nigeria, Norway, Pakistan, Panama, Peru, Philippines, Poland, Portugal, Saudi Arabia, Senegal, Slovakia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Tunisia, United Kingdom, and Uruguay.

In order to prepare more detailed assessments of specific species/groups, in April 1997 the Conference of the Parties appointed five Councillors with expertise in areas including: marine mammals, marine turtles, neotropical fauna, terrestrial mammals and waterfowl.

## Work of the Scientific Council

The Scientific Council held its seventh meeting in April 1997, where several points relevant to this study were raised. A progress report on linkages and cooperation was also presented by the CMS Secretariat to the third meeting of the subsidiary body (SBSTTA) of the Convention on Biological Diversity in September 1997. The following are some highlights on the Scientific Council and its linkages:

- Since February 1996 a Technical Officer acts as the Secretariat's liaison officer with the Scientific Council. This was seen as a move toward using the full potential of the Council as an advisory body for the Conference of the Parties.
- The importance of co-locating several treaty secretariats with the CMS Secretariat was welcomed. Such co-location would help to concentrate the focus of work and provide impetus, while also bringing cost savings. The permanent Secretariat of the Agreement on the Conservation of Bats in Europe (EUROBATS) is co-located with the CMS Secretariat and this provides a good basis for others to follow suit. In fact in a recent meeting of the Agreement on the Conservation of Small Cetaceans on the Baltic and North Seas (ASCOBANS) it has been decided to co-locate this Secretariat with the CMS Secretariat, with the intention of integrating the Secretariat fully in the Agreements Unit in 2001.
- In terms of relations with international IGOs and NGOs, there is continued cooperation with the UNEP, mainly within the fields of personnel, finance and budget. It was hoped that cooperation could be extended to cover the implementation of the work programme, but this had not been possible so far under the prevailing circumstances.
- A memorandum of understanding was concluded with the Secretariat of the Convention on Biological Diversity (CBD) in 1996, and the third meeting of the COP to the CBD invited the Scientific Council to liaise with that Convention. The fifth meeting of the CMS COP in 1997 encouraged its Scientific Council to communicate with the respective bodies of the CBD and other relevant conventions and to participate in their meetings, and the Scientific Council has named a focal point for liaison with the CBD SBSTTA. Further synergies between the conventions are being developed. A memorandum of understanding has also been concluded with the Ramsar Convention.

The bulk of the substantive work of the Council at its seventh meeting was to discuss reports by members regarding specific species/groups of migratory animals. Also mention was made of the preparations for a Symposium on Animal Migration which was held in April 1997.

## Data Collection

Not all science-related work is engaged in by the Scientific Council. National scientific institutions, specialized government agencies and NGOs also provide relevant data for the Secretariat. CMS thus does not collect precise and comprehensive data on the species, their distribution, reasons for their depletion etc. The data are to be collected by the Parties in the framework of their national nature conservation work. CMS is largely a framework convention aiming at the conclusion and implementation of Agreements for certain migratory species. It is expected that more detailed data will be collected within these agreements.

On the recommendation of the CMS Secretariat, the German Government is funding the development of a database for a world register of migratory species. The data base aims at providing a basis for future priority settings in the implementation of CMS and a type of information within the clearinghouse mechanism on the Convention of Biological Diversity.

#### **Relations with WCMC**

The World Conservation Monitoring Centre provides services to the secretariat relating to information. Apart from WCMC databases, which are consulted, direct support is provided in terms of maintaining the web site and identifying possible future signatories by preparing country reports.

#### **References:**

- Report of the Seventh Meeting of the Scientific Council (Geneva, 7-8 April 1997)
- Linkages and Coordination between CMS and CBD. A Progress Report for the Third Meeting of the SBSTTA (Montreal, September 1997) submitted by the UNEP/CMS Secretariat
- Earthwatch Web site summary of CMS (<http://www.unep.ch/earthw/Pdcms.htm>)

## 6. ASSESSMENT PANELS OF THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER UNDER THE VIENNA CONVENTION FOR THE PROTECTION OF THE OZONE LAYER

Address: The Secretariat for the Vienna Convention and the Montreal Protocol  
Executive Secretary  
P.O. Box 30552, Nairobi, Kenya  
Tel: (254-2)62-1234/62-3851  
Fax: (254-2)52-1930 /62-3913

Web Address: <http://www.unep.ch/ozone>

### Background

Under the auspices of UNEP, 28 Governments adopted The Vienna Convention on the Protection of the Ozone Layer in 1985. Through this Convention, governments committed themselves to protect the ozone layer and to cooperate with each other in scientific research to improve understanding of atmospheric processes. The Montreal Protocol on Substances that Deplete the Ozone Layer was agreed to by Governments in 1987 and has been amended in London in 1990, Copenhagen in 1992 and Montreal in 1997, and adjusted four times. The Protocol aims to reduce and eventually eliminate the emissions of man-made ozone depleting substances. 166 countries are now Parties to the Convention. The Ozone Secretariat is based at the United Nations Environment Programme (UNEP) offices in Nairobi, Kenya.

### Scientific Advisory Process

Scientific assessment reports have long stimulated the international policy process for the protection of the ozone layer. In 1981, the report *The Stratosphere 1981 Theory and Measurements* served as background for the adoption of the Vienna Convention for the Protection of the Ozone Layer in 1985. The report *Atmospheric Ozone 1985* provided the grounding for the Montreal Protocol on Substances that Deplete the Ozone Layer adopted in 1987.

The *International Ozone Trends Panel Report 1988* and the *Scientific Assessment of Stratospheric Ozone: 1989* were taken into account by the Parties to the Montreal Protocol in its Adjustments and Amendment in London in 1990.

The *Scientific Assessment of Stratospheric Ozone: 1991* and the report *Methyl Bromide: Its Atmospheric Science, Technology, and Economics* provided the relevant information to the Parties to the Montreal Protocol for the Adjustments and Amendment of Copenhagen in 1992.

The *Scientific Assessment of Stratospheric Ozone: 1994* gave the necessary information for the Adjustments of the Montreal Protocol done in Vienna in 1995 and for the Adjustments and Amendment of Montreal in 1997.

The Montreal Protocol of the Vienna Convention provides for the following scientific assessment process:

Beginning in 1990, and at least every four years thereafter, the Parties shall assess the control measures provided for in Article 2 and Articles 2A to 2H on the basis of available scientific, environmental, technical and economic information. At least one year before each assessment, the

Parties shall convene appropriate panels of experts qualified in the fields mentioned and determine the composition and terms of reference of any such panels. Within one year of being convened, the panels will report their conclusions, through the Secretariat, to the Parties. Later, the assessment process was given more continuity, with intermediate reporting to the Parties each year.

Data, in turn, are provided to the Secretariat directly by the Parties in accordance with Article 7 of the Montreal Protocol.

Three major assessments were produced in 1994: *Scientific Assessment of Ozone Depletion: 1994; Report of the Technology and Economic Assessment Panel*, and *The Environmental Effects of Ozone Depletion*, with a combined *Synthesis Report* for policy-makers. A follow-up assessment is planned for 1998. An interim summary of this assessment was published in September 1997. The main subjects addressed include: ozone and UV changes, health effects, effects on terrestrial ecosystems, effects on aquatic ecosystems, effects on biogeochemical cycles, effects on air quality, and materials damage.

Several science-related bodies have been established by the Conference of the Parties. These include:

- Scientific Assessment Panel (SAP)
- Environmental Effects Assessment Panel (EEAP)
- Technology and Economic Assessment Panel (TEAP), and its Technical Options Committees (TOC):
  - Aerosols Technical Options committee
  - Economic Options Committee
  - Flexible and Rigid Foams Technical Options Committee
  - Halons Technical Options Committee
  - Methyl Bromide Technical Options Committee
  - Refrigeration, Air Conditioning and Heat Pumps Technical Options Committee
  - Flammable Refrigerants Subcommittee of the Refrigeration, Air Conditioning and Heat Pumps Technical Options Committee
  - Solvents, Coatings and Adhesives Technical Options Committee

### Lessons learned

The assessment process under the Montreal Protocol is separated from the political process. At its First Meeting, held in Helsinki in May 1989, the Parties established four review panels:

- Panel for Scientific Assessment
- Panel for Environmental Assessment
- Panel for Technical Assessment
- Panel for Economic Assessment

the last two united later as Technology and Economic Assessment Panel.

In the same First Meeting, the Parties established an Open-ended Working Group inter alia to:

- review the reports of the four panels and integrate them into one synthesis report;
- based on (a) above, and taking into account the views expressed at the First Meeting of the Parties to the Montreal Protocol, prepare draft proposals for any amendments to the Protocol which would be needed, to be circulated to the Parties in accordance with article 9 of the Vienna Convention.

Another lesson is that the assessment process under the Vienna Convention and the Montreal Protocol has been a long term process. It has involved scientists and experts from all geographical regions and,

in the case of TEAP, has allowed and encouraged the transfer of knowledge from developed to developing countries.

In September 1997, a 10th Anniversary Colloquium was held, entitled 'Lessons from the Montreal Protocol'. It made the following conclusions which are of interest here:

- The protocol acted as a stimulus to new insights in ozone layer science and improved understanding useful in dealing with the threat of climate variability and change. Science in turn was indispensable to making progress in implementing the Protocol.
- The most important feature of the protocol was the innovative, dynamic and flexible arrangements that it put in place. It was designed to facilitate the integration of science into policy, thereby allowing for adjusting phase-out schedules and controlling all ozone-depleting substances, not just those initially identified in the Protocol.
- The importance of assessments keeping politics at arm's length was critical. This means not letting special economic or political interests interfere with the science. It is done by drawing on top experts and relying on extensive peer review.

## 7. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)

Address: IPCC Secretariat  
 WMO  
 Case Postal No.2300  
 CH-1211 Geneva 2  
 Telephone: +41 22 7308 284  
 Telefax: +41 22 7331 270  
 E-mail: IPCC\_Sec@gateway.wmo.ch  
 Web Address: <http://www.ipcc.ch/>

### Background

The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) to assess the available scientific, technical, and socio-economic information in the field of climate change. The IPCC is organized into three working groups:

- WGI responsible for assessing available information on the science of climate change, in particular that arising from human activities;
- WGII to assess available technical, environmental, social and economic information regarding impacts of climate change and response options to adapt to and/or mitigate climate change;
- WGIII to deal with cross-cutting economic and other issues (e.g. development and assessments of emissions scenarios) related to climate change.

The IPCC released its *Second Assessment Report* in 1995 and continues to produce Technical Papers and develop methodologies (e.g. national greenhouse gas inventories) for use by Parties to the Climate Change Convention. The *Third Assessment Report* will be completed and issued around the year 2000.

### Working Group 1: The Science of Climate Change

Working Group I (WGI) of IPCC was established in 1988 to assess available information on the science of climate change, in particular that arising from human activities. In performing its assessments the WGI is concerned with:

- developments in the scientific understanding of past and present climate, of climate variability, of climate predictability and of climate change including feedbacks from climate impacts;
- progress in the modelling and projection of global and regional climate and sea level change;
- observations of climate, including past climates, and assessment of trends and anomalies;
- gaps and uncertainties in current knowledge.

This working group specifically addresses science, while the other two focus on social-science-related themes.

### The IPCC Third Assessment Report Decision Paper (extracts)

#### "Scope of the Third Assessment Report

- (i) The IPCC agrees that the Third Assessment Report will be comprehensive and cover the complete range of scientific, technical, economic and social issues associated with the climate system and climate change deemed important by the expert or policy-making communities;

- (ii) The IPCC agrees that the Third Assessment Report will summarize the state of knowledge covered in previous IPCC reports, but will primarily assess information generated since the Second Assessment Report, recognizing that climate change is a global issue, but emphasizing the assessment of the regional aspects of climate change.

#### Structure of the Third Assessment Report

- (i) The IPCC agrees that the Third Assessment Report will consist of reports of the three IPCC Working Groups (each with a brief Summary for Policy-makers, a technical summary, and a series of chapters, each with an executive summary) and a Synthesis Report.
- (ii) The IPCC agrees that:
- Working Group I will assess the scientific aspects of the climate system and climate change;
  - Working Group II will assess the scientific, technical, environmental, economic and social aspects of the vulnerability (sensitivity and adaptability) to climate change of, and the negative and positive consequences (impacts) for, ecological systems, socio-economic sectors and human health, with an emphasis on regional sectoral and cross-sectoral issues;
  - Working Group III will assess the scientific, technical, environmental, economic and social aspects of the mitigation of climate change, and through a task group (multidisciplinary team), will assess the methodological aspects of cross-cutting issues (e.g., equity, discount rates and decision making frameworks);

The Synthesis Report will provide a policy-relevant synthesis and integration of the three Working Group Reports...."

#### "Peer-review process for the Working Group reports of the Third Assessment Report

- (i) The IPCC agrees that Working Group reports (chapters, chapter executive summaries, and technical summaries) should undergo sequential open expert and expert/government peer reviews and then be accepted by the Working Groups;
- (ii) The Summaries for Policy-makers will undergo simultaneous expert/government reviews and then be approved line-by-line by the Working Groups...."

Other priorities include:

- "Promoting enhanced participation of experts from developing countries and countries with economies in transition;"
- "Promoting the participation of experts from business/industry/finance, development and environmental organizations;"
- "Utilization of the non-English language literature."

#### **Technical Papers**

Technical Papers are initiated at the request of the bodies of the Conference of the Parties (COP) of the Climate Change Convention and agreed by the IPCC Bureau, or as decided by the IPCC. They are based on material already in IPCC Assessment Reports and Special Reports and are written by Lead Authors chosen for the purpose. They undergo simultaneous expert and government reviews.

Past Technical Papers:

- *Technologies, Policies and Measures for Mitigating Climate Change*, Nov. 1996.
- *An Introduction to Simple Climate Models used in the IPCC Second Assessment Report*, Feb. 1997
- *Stabilization of Atmospheric Greenhouse Gases: Physical, Biological and Socio-Economic Implications*, Feb. 1997.
- *Implications of Proposed CO<sub>2</sub> Emissions Limitations*, Oct. 1997

## **8. TECHNICAL WORKING GROUP OF THE BASEL CONVENTION ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL**

Address: Secretariat of the Basel Convention  
Geneva Executive Center  
15 chemin des Anemones  
CH-1219 Chatelaine (Geneva)  
Telephone: (41 22) 917 8218  
Fax: (41 22) 797 3454  
E-mail: [sbc@unep.ch](mailto:sbc@unep.ch)  
Web Address: <http://www.unep.ch/basel/index.html>

### **Background**

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted in 1989 and entered into force on 5 May 1992. The Convention is the response of the international community to the problems caused by the annual world-wide production of 400 million tonnes of wastes which are hazardous to people or the environment because they are toxic, poisonous, explosive, corrosive, flammable, eco-toxic, or infectious. This global environmental treaty regulates the transboundary movements of hazardous wastes and provides obligations to its Parties to ensure that such wastes are managed and disposed of in an environmentally sound manner. The main principles of the Basel Convention are:

- Transboundary movements of hazardous wastes should be reduced to a minimum consistent with their environmentally sound management.
- Hazardous wastes should be treated and disposed of as close as possible to their source of generation.
- Hazardous waste generation should be reduced and minimized at source.

To assist in operationalizing these principles a Secretariat as well as several Subsidiary Bodies were established under the Conference of Parties of the Basel Convention. These are:

- the Open-ended Ad Hoc Committee for the Implementation of the Basel Convention;
- the Ad Hoc Working Group of Legal and Technical Experts to consider and develop a draft Protocol on liability and compensation for damage resulting from transboundary movements of hazardous wastes and their disposal; and
- the Technical Working Group to prepare draft technical guidelines for the environmentally sound management of hazardous wastes subject to the Basel Convention. This group is responsible for scientific matters relating to the convention.

### **The Technical Working Group of the Basel Convention**

The Technical Working Group is a subsidiary body of the Conference of the Parties (COP). Its mandate is to prepare technical guidelines for the environmentally sound management of hazardous wastes and for disposal options. As instructed by the COP-3 in September 1995, the Technical Working Group is working on the hazard characterization and classification of wastes within the Basel Convention. More generally, it provides technical advice and guidance on the implementation of the Convention.

Meetings are held on a twice-yearly basis. The latest meeting for which reports are available was the twelfth meeting held in February 1997 in Geneva. At this meeting, the Executive Secretary of the Convention emphasized that the TWG has a very broad mandate and referred to the need for the finalization of lists of wastes and the applicable procedure for their review at this meeting. This Group is also requested to work further on hazard characterization of wastes and to provide technical guidance on bilateral, multilateral or regional agreements or arrangements concluded within the framework of the Basel Convention. It will review modalities for incorporating the lists of wastes into the system of the Basel Convention.

The February 1997 meeting of the TWG was attended by experts designated by sixty-eight Parties to the Convention. The balance between these parties was relatively equal between industrialized, developing and newly-industrializing economies. Haiti, Thailand and the USA sent observers to the meeting. As well, numerous intergovernmental organizations were represented including: International Lead and Zinc Study Group (ILZSG), Organization for Economic Cooperation and Development (OECD), United Nations Conference on Trade and Development (UNCTAD), United Nations Economic Commission for Europe (UNECE), United Nations Industrial Development Organization (UNIDO) and the World Trade Organization (WTO). In addition, Greenpeace and the following industry non-governmental organizations were represented: Association Force Ouvriere Consommateurs (AFOC), Bureau of International Recycling (BIR), European Association of Metals (EUROMETAUX), European Chemical Industry Council (CEFIC), European Federation of Waste Management and Environmental Services (FEAD), European Metal Trade and Recycling Federation (EUROMETREC), Institute of Scrap Recycling Industries, International Chamber of Commerce (ICC), International Precious Metals Institute (IPMI), Japan Mining Industry Association, Japan PVC Association, and Waste Minimization Technology International, Inc. (WMTI).

The Technical Working Group prepared the following draft position papers and reports to be submitted to the thirteenth meeting of the Conference of Parties in Kuching, Malaysia from 23-27 February 1998 for their consideration:

- Draft Position Paper on Hazard Characterization and Classification of Wastes within the Framework of the Basel Convention (UNEP/CHW.4/2)
- Consolidated lists of wastes and the applicable procedure for their review or adjustment (UNEP/CHW.4/3)
- Wastes placed on list C awaiting Classification (UNEP/CHW.4/4)
- Draft Instruction Manual on the Control System for the Transboundary Movements of Hazardous Wastes and Other Wastes (UNEP/CHW.4/5)

## 9. SCIENTIFIC AND TECHNICAL ADVISORY PANEL OF THE GLOBAL ENVIRONMENT FACILITY (STAP-GEF)

Address: The STAP Secretariat  
 GEF Coordination Office  
 P.O. Box 30552  
 Nairobi, Kenya  
 Tel: +254 2 624 155  
 Fax: +254 2 623 140  
 Email: danae.issaias@unep.org  
 Web Address: <http://www.unep.org/unep/gef/stap>

### Background

The Global Environment Facility (GEF)'s Scientific and Technical Advisory Panel (STAP) is an independent advisory body that provides scientific and technical guidance. UNEP provides the STAP's secretariat and liaises between the Facility and STAP. It was established by the Executive Director of UNEP pursuant to the Instrument for the Establishment of the Restructured Global Environment Facility and the terms of reference of STAP approved by the GEF Council.

STAP was originally established in 1991 with a similar mandate. However, as an Independent Evaluation of the GEF Pilot Phase<sup>2</sup> showed, GEF and indeed STAP had substantial problems. These problems included that the criteria set forth to judge whether GEF funds should be allocated were "arbitrary and not sufficiently spelled out". STAP was judged to be poor in providing analytic frameworks to guide GEF, it lacked influence, and communications from Nairobi were poor. However, the original STAP was judged to be effective in prioritizing proposals.

In 1994, GEF and STAP were revamped. STAP was established as an advisory body of GEF to provide objective, strategic, scientific and technical advice on GEF policies, operational strategies and programmes, to conduct selective reviews of projects in certain circumstances and at specific points in the project cycle and to maintain a roster of experts.

The reconstituted STAP has attempted to address comprehensively the problems cited in the Evaluation. The organization, membership and programme of STAP are defined clearly and in great detail. In November 1997, the GEF Council reviewed favourably the incorporation of STAP advice into its decisions.

### The Roster of Experts

For the purposes of conducting reviews of projects for GEF, STAP maintains a Roster of Experts. Individuals are chosen from this Roster, depending on the review at hand. The detail in the arrangements made to revamp STAP are reflected in the following extract from the web site about the Roster of Experts:

"The Scientific and Technical Advisory Panel (STAP) of the Global Environment Facility (GEF) was instructed by the GEF Council to develop and maintain a roster of experts. This roster consists of a wide range of internationally recognized specialists in the GEF focal areas who review the scientific and technical soundness of project proposals for GEF funding. Every project proposal submitted to the GEF Operations Committee (GEFOP) must be accompanied with a technical review by an expert

from the STAP roster; GEFOP is responsible for recommending the project proposals to be included in the work programme to be considered by the GEF Council. The mandatory review of the project proposal by a STAP expert does not preclude the implementing agencies from obtaining complementary technical reviews from experts not in the roster.

STAP has established the roster in consultation with the GEF implementing agencies and the GEF Secretariat. Although STAP receives nominations of experts to be listed in the roster from the implementing agencies and other sources, the responsibility for selecting those to be included in the roster and maintaining the roster lies solely with STAP.

"To ensure transparency and some comparability, STAP has established a standard format for nominating experts for the roster. Nominees will be required to confirm their availability to review projects. The STAP Secretariat will assist STAP in developing the list of experts and screening nominations to ensure that the minimum criteria for inclusion are met. STAP approves or rejects the nominees based on an evaluation of their level of experience, the relevance of their expertise to GEF and the overall thematic and regional balance of the roster.

"This STAP roster is produced in a format similar to that of the previous one, but with updated software. It will be made available in book form, on diskette and through the Internet."

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<sup>2</sup> Report of the Independent Evaluation of the Global Environment Facility Pilot Phase, 23 November 1993, prepared by Stjepan Keckes for UNEP, UNDP, and The World Bank

## 10. THE GLOBAL OBSERVING SYSTEMS

The Global Climate Observing System (GCOS),  
The Global Ocean Observing System (GOOS), and  
The Global Terrestrial Observing System (GTOS)

GCOS Joint Planning Office  
WMO  
P.O. Box No. 2300  
CH-1211 Geneva 2  
Switzerland  
Phone: +41 22 730 8401  
Fax: +41 22 740 1439  
E-mail: gcosjpo@gateway.wmo.ch

GOOS Project Office  
UNESCO  
1, rue Miollis  
75732 Paris Cedex 15  
France  
Phone: +33 1 45 68 40 42  
Fax: +33 1 45 68 58 12  
E-Mail: c.summerhayes@unesco.org

GTOS Secretariat  
FAO  
Viale delle Terme di Caracalla  
Rome 00100 - ITALY  
Tel: +39 6 5705 2586 / 3450  
Fax: +39 6 5705 3369  
E-mail: GTOS@fao.org

Web Access via: <http://www.unep.ch/earthw/g3os.htm>

### Background

GCOS has grown out of such WMO programmes as the World Weather Watch, and is co-sponsored by ICSU, IOC and UNEP. GOOS is centred in IOC, with ICSU, UNEP and WMO as co-sponsors. GTOS, with its secretariat at FAO, is the most recent creation and just moving beyond the planning stages. ICSU, UNEP, UNESCO and WMO are also co-sponsors. Each operates through a scientific and technical Steering Committee made up largely of scientists, and various scientific panels and working groups. GOOS also has an Intergovernmental Committee to ensure its policy relevance. These bodies draw on a wide range of scientific advice to plan globally-harmonized operational data collection systems integrating satellite and in situ components. They provide the information needed for various national and international assessment and management processes. They thus complement, and help to build a foundation of solid scientific information necessary for, other international scientific advisory processes.

Although each has been established at different times and under the auspices of different UN agencies, their implementation is being coordinated. A number of joint panels have been established to address space information, climate-related inputs and data and information management. Most of these bodies are still in the planning or initial stage of implementation due to a lack of funding.

The following are extracts from the *Integrated Strategic Plan for the Global Observing Systems* describing the mandates of each of the bodies:

"An Integrated Global Observing Strategy will not be a new organization or structure, but will be a framework encompassing integrated planning, linking research and operational activities, and linking space and in situ observations. It is important that such a strategy be, in reality, a strategic planning process, and that it be seen as user driven and very concrete. It will be implemented through a series of individual systems making up a greater whole, with a process to help them join forces."

"Integrated objectives for all the global observing systems and a global observing strategy will need to be synthesized and generalized from those for each system. The following are the goals and objectives as defined by each observing system and by CEOS/IGFA:

"The GCOS objectives are to ensure the acquisition of the observations required to meet the needs for:

- climate system monitoring, climate change detection, and response monitoring, especially in terrestrial ecosystems;
- data for application to national economic development; and
- research towards improved understanding, modelling, and prediction of the climate system."

"The objectives of GOOS are:

- To specify and detail in terms of space, time, quality and other relevant factors, the marine observational data needed on a continuing basis to meet the common and identifiable requirements of the world community of users of the oceanic environment and ocean knowledge.
- To develop and implement an internationally coordinated strategy for the gathering or acquisition of these data and synthesizing them for common use and practical application.
- To facilitate the development of uses and products of these data, and encourage and widen their application in the use and protection of the marine environment.
- To facilitate means by which less developed nations can increase their capacity to acquire and use marine data using the GOOS framework.
- To coordinate the ongoing operation of GOOS and ensure its integration within other and wider global observation and environmental management strategies."

"The GTOS objectives are to provide an observational framework and data for:

- detection and understanding of the impacts of regional and global change on terrestrial and freshwater ecosystems, including their biodiversity, as well as responses of ecosystems to such change, and of their role in causing change;
- evaluation of the impacts and consequences of global change on terrestrial ecosystems components and the environment (impacts of climate change, cycling and long-range transport of pollutants, human population dynamics in time and space, and other anthropogenic impacts);
- forecasting, prediction and early warning of future terrestrial changes and their impacts;
- validation of global models of ecosystem processes and change;
- policy formulation and development planning."

"The CEOS/IGFA scoping paper identified several goals reflecting the value of an integrated global observing strategy:

- provide a framework for a coherent set of user requirements so that providers can respond to them;
- reduce unnecessary duplication of observations;
- assist in the improved allocation of resources between different types of observation systems;

- make possible the creation of improved higher level products by facilitating the integration of multiple data sets from different agencies and national and international organizations;
- provide a framework for decisions on continuity and spatial comprehensiveness of key observations;
- identify situations where existing international arrangements do not exist for the management and distribution of key global observations and products;
- assist in the transition of systems from research to operational status through improved international co-operation;
- provide improved understanding for Governments on the need for global observation through the presentation of an overarching view of current system capabilities and limitations."

"Additional objectives that could be considered include:

- defining harmonization and quality control criteria;
- demonstrating the utility of databases for developing countries.
- organizing a systematic process to review observations initiated in scientific research projects that have demonstrated their utility and significance, and to ensure their integration into, and maintenance by, operational programmes."

**References:**

*Integrated Strategic Plan for the Global Observing Systems* (November 1997).

Colin Summerhayes, "The Global Ocean Observing System (GOOS)", 4 *WMO Bulletin* (January 1998).

## 11. SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL ADVICE OF THE CONVENTION ON BIOLOGICAL DIVERSITY (SBSTTA-CBD)

Address: Secretariat of the Convention on Biological Diversity  
 World Trade Centre  
 393 St Jacques Street, Office 300  
 Montreal, Quebec, Canada H2Y 1N9  
 Tel: +1-514-288-2220  
 Fax: +1-514-288-6588  
 E-mail: [biodiv@mtl.net](mailto:biodiv@mtl.net)  
 Web Address: <http://www.biodiv.org/sbstta>

### Background and Terms of Reference

Article 25 of the Convention on Biological Diversity establishes the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) to provide the Conference of the Parties and, as appropriate, its other subsidiary bodies with timely advice relating to the implementation of the Convention. The terms of reference of the SBSTTA are contained in paragraph 2 of Article 25 of the Convention:

- "1. Provide scientific and technical assessments of the status of biological diversity;
2. Provide scientific and technical assessments of the effects of types of measures taken in accordance with the provisions of this Convention;
3. Identify innovative, efficient and state-of-the-art technologies and know-how relating to the conservation and sustainable use of biological diversity and advise on the ways and means of promoting development and/or transferring such technologies;
4. Provide advice on scientific programmes and international cooperation in research and development related to conservation and sustainable use of biological diversity;
5. Respond to scientific, technical, technological and methodological questions that the Conference of the Parties and its subsidiary bodies may put to the body."

The work of SBSTTA is driven by the programme of work of the Conference of the Parties and participants are representatives of governments. This has led to some difficulties, notably about 'politicization'. For example, the *Earth Negotiations Bulletin* states about SBSTTA-2 "Despite Chair Peter Johan Schei's plea to delegates to maintain 'scientific integrity' and avoid turning SBSTTA into a 'mini-Conference of the Parties,' the issue of identity and the precise role of SBSTTA in managing the scientific content continued to occupy many participants as they departed at the conclusion of the week-long meeting. While a few issues were covered in adequate technical detail, notably economic valuation and taxonomy, the primary outcome of SBSTTA-2 seemed to be a desire to reform the process. Publicly, delegates called for sharp limits to the agenda and greater involvement of scientific organizations...(some observers also believed). SBSTTA-3 was confronted with some of the same dilemmas as SBSTTA-2, such as an 'identity crisis,' reflecting a divergence between SBSTTA's scientific mandate and its political practice."

A summary of SBSTTA prepared by the Secretariat of the CBD also acknowledges that problems exist. Due to the timing of SBSTTA meetings immediately prior to COP meetings, it has become a preparatory meeting, rather than a scientific and technical advice body.

**Roster of experts:**

The first meeting of the SBSTTA recommended the establishment of a roster of experts with experience and expertise in the fields of relevance to the Convention. The roster would be based on nominations received in writing from the Parties and from competent entities and would be updated by the Clearing-House Mechanism for technical and scientific cooperation when this mechanism is fully operational.

Rosters of Experts have been established for four ecosystems. The mechanisms now have to be developed to draw on these rosters effectively. The aim is that SBSTTA will produce multidisciplinary assessments based on an ecosystems approach.

**Organization and Relations with Other Bodies**

Presentations to SBSTTA by various officials definitely suggest that the body is seeking to take the lead position on biodiversity science within the UN. Early documents indicate the use of IPCC as a model of what some proponents of SBSTTA envisaged.

SBSTTA does not actually conduct monitoring or data collection itself. Its work is concerned mainly with the review of materials and assessment of data and analyses from competent national, regional and international organizations. During the first meeting of the COP, it was agreed that the SBSTTA should complement and not duplicate the scientific and technical work undertaken by other relevant bodies. The mandate for SBSTTA states: 'The SBSTTA may thus wish to consider how to establish institutional working relations with other relevant scientific and technical intergovernmental bodies to make the best use of their expertise. Particular attention may be paid to the scientific organs established under international environmental conventions and legal instruments directly related to the objectives of the Convention.'

To this end, preparatory papers for the third meeting of the COP held in October 1997 proposed that SBSTTA-3 "may wish to receive" reports prepared by the Global Biodiversity Forum's 8th meeting (see below) and ICSU-Diversitas. It is also suggested that reports prepared for and by the Intergovernmental Panel (now Forum) on Forests should also be considered.

Apart from considering documents of others, some cooperation has been achieved in the following areas:

- CBD actively cooperates with FAO on agricultural biodiversity and plant genetics and with IFF on forests.
- A memorandum of cooperation between the CITES and CBD Secretariats was signed stressing the development of working relations with organizations addressing trade and intellectual property rights.
- STAP-GEF is actively collaborating with SBSTTA. It is currently organizing a workshop on the sustainable use of biodiversity and related social, economic and ecological dimensions such as the interplay between local and global benefits, possible indicators, best practices and case studies on the sustainable use of marine and arid ecosystems.

## Global Biodiversity Forum

SBSTTA is not the only advisory body that has influenced the Conference of the Parties in terms of substance, scientific and otherwise. The Global Biodiversity Forum has also had an influence which, in basic terms, seems to resemble the link between the Global Forum and the Rio Conference. Just as the Global Biodiversity Forum held its seventh meeting immediately prior to the CITES COP meeting in Harare, so its 8th session (GBF8-SBSTTA3) was convened in Montreal, Canada, on 28-31 August 1997, immediately prior to SBSTTA-3 (Montreal, 1-5 September 1997). Convenors for the GBF8-SBSTTA3 included IUCN, WRI, African Centre for Technological Studies (ACTS), DIVERSITAS (IUBS-ICSU/SCOPE-UNESCO), Biodiversity Action Network (BIONET) and UNEP, in collaboration with the Secretariat of the Convention on Biological Diversity.

The debate about biodiversity has raised some interesting issues which are relevant beyond the bounds of CBD and the issues it addresses. At the Global Biodiversity Forum, the panels addressed a mix of social and natural scientific issues. The following were the core themes addressed at the Forum:

- policy research capacity to implement the CBD;
- biodiversity of inland waters;
- incentives, private sector partnerships and the marine and coastal environment;
- biodiversity education and communication; and
- the role of forest protected areas and sustainable forest management in biodiversity conservation.

### Additional References:

- UNEP, *Global Biodiversity Assessment*, Cambridge: Cambridge University Press, 1995.
- 'Report of the Third Session of the Subsidiary Body for Scientific, Technical and Technological Advice to the UN CBD,' *Earth Negotiations Bulletin*, (V. 9, N.73, Tuesday, 9 September 1997)

For more detail on GBF8-SBSTTA3, see: <http://www.iisd.ca/linkages/sd/sd0801e.txt>

## 12. SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE OF THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE (SBSTA-FCCC)

Address: Climate Change Secretariat  
P.O. Box 260124  
D-53153 Bonn, Germany  
Tel: +49 228 815 1000  
Fax: +49 228 815 1999  
E-mail: [secretariat@unfccc.de](mailto:secretariat@unfccc.de)

Web Address: <http://www.unfccc.de/>

### Background

The Subsidiary Body for Scientific and Technical Advice (SBSTA) was established at the first Conference of the Parties (COP) to the UNFCCC, in August 1995, to provide the COP and, as appropriate, its other subsidiary bodies, with timely information and advice on scientific and technological matters relating to the Convention. The aim is for it to be multidisciplinary, comprised of government representatives competent in the relevant fields of expertise.

Among the most contentious issues at the first meeting of SBSTA was its relations with the Intergovernmental Panel on Climate Change (IPCC). Their work is entirely separate. This came to the fore when SBSTA reacted to IPCC's Second Assessment Report with a carefully worded response which avoided any specific conclusions. Relations improved with IPCC in December 1996 at SBSTA-4. Here participants agreed, among other things, to cooperate more closely with IPCC.

SBSTA-7 was the latest meeting of the group and was held 20-28 October 1997. Among the main themes discussed at this meeting were national communications from Annex 1 Parties, methodological issues, activities to be implemented jointly, as well as the nature and substance of relations between itself and IPCC. The latter issue is of most relevance here. On this, a draft decision on cooperation with IPCC was passed and forwarded for approval to the COP. It stated that the COP would express its appreciation to IPCC for contributing to the FCCC process, and for its prompt response to SBSTA requests. The specific requests included asking IPCC to develop an overall environmental objective for the FCCC process and to review whether long-term observation and satellite systems were adequate. Also, the draft decision proposed that governments would be called on to contribute more funding to existing observational networks. Finally, the decision also proposed that COP call on SBSTA to report on the observation systems. The concern for observation systems was raised by the participants in a meeting of the World Climate Research Programme (August 1997). A memo was released calling on the COPs of the FCCC and Convention on Desertification to reverse the decline in these systems, in line with relevant statements in each of the conventions.

SBSTA is also involved with IPCC in requesting its Working Group 1 on Science to contribute Technical Papers to SBSTA and in turn to the COP. (see IPCC Summary).

### Roster of Experts

The question of a roster of experts has also been a concern of SBSTA. Proposed in the FCCC, a roster was established in 1996. Since then, debate has ensued about refining this roster, including at

SBSTA-7. The meeting proposed that the Secretariat consider an experts' relevant professional background, regional representation and capacity building in approaching these to take on specific tasks. Beyond that it was still too early, it was concluded, to draw any lessons about the utility of the roster.

**Sources:**

Several issues of *Earth Negotiations Bulletin* and the *UN Climate Change Bulletin*

### 13. THE COMMITTEE ON SCIENCE AND TECHNOLOGY OF THE UN CONVENTION TO COMBAT DESERTIFICATION

Address: Interim Secretariat CCD  
Geneva Executive Centre  
11/13 Chemin des Anemones  
CH-1219 Chatelaine, Geneva  
Tel: (41-22) 917 8420  
Fax: (41-22) 917 8030/31  
Email: secretariat@unccd.ch

Web Address: <http://www.unccd.ch>

#### Background

The Committee on Science and Technology (CST) was established under the Convention to provide the Conference of the Parties (COP) with information and advice on scientific and technological matters relating to combating desertification and mitigating the effects of drought. The CST meets in conjunction with the Conference of the Parties, is multidisciplinary, and its members are appointed by the Parties. The CST is not yet fully operational. Individual aspects of its organization and work are highlighted below.

#### Proposed Roster of Independent Experts

Paragraph 2 of Article 24 of the CCD provides that: "The Conference of the Parties shall establish and maintain a roster of independent experts with expertise and experience in the relevant fields. The roster shall be based on nominations received in writing from the Parties, taking into account the need for a multidisciplinary approach and broad geographical representation."

At its tenth session, the Intergovernmental Negotiating Committee for Desertification (INCD) invited Parties to submit in writing, through diplomatic channels, nominations of independent experts for the roster, taking into account the need for a multidisciplinary approach, an appropriate gender balance and a broad and equitable geographic distribution. The same decision requested the Secretariat to prepare a list of those nominations received by 31 May 1997. The list was then to be submitted to the first session of the Conference of the Parties (COP-1) which was held 29 September-10 October 1997 in Rome.

Instead, the Secretariat prepared a report to the COP summarizing the list that had been submitted. The following are extracts from ICCD/COP(1)/6 of 8 August 1997 entitled 'Proposed Roster of Experts: Note by the Secretariat':

"Paragraph 2 of Article 24 of the Convention to Combat Desertification (CCD) provides that: 'The Conference of the Parties shall establish and maintain a roster of independent experts with expertise and experience in the relevant fields. The roster shall be based on nominations received in writing from the Parties, taking into account the need for a multidisciplinary approach and broad geographical representation.'

"...Under the draft terms of reference for the establishment and maintenance of the roster (document ICCD/COP(1)/2), nominees are to have expertise and experience in fields relevant to combating

desertification and drought, and the roster should include expertise from grass-roots and non-governmental organizations....

"...The list shows:

- (a) there are 584 nominations;
- (b) nominations come from the countries listed in Annex IV;
- (c) as indicated in Annex IV(a), 69% of the nominations came from eleven Parties, each of which submitted in excess of 20 nominations: Brazil, Cuba, Egypt, France, Ghana, India, Italy, Morocco, Pakistan, Portugal, Spain;
- (d) as indicated in Annex IV(b), there is representation from most disciplines identified but adequate representation is lacking from the following disciplines: anthropology and sociology, health sciences, legislation, microbiology, and trade; and
- (e) as indicated in Annex IV(c), there are 514 men and 70 women. Men represent 88% and women 12% of nominees.

"Bearing in mind the relevant provisions of the Convention and the recommendations of the INCD, the COP may wish to consider any recommendations from the Committee on Science and Technology regarding the establishment of the roster, including possible guidance to the Secretariat as to steps to be undertaken for making the roster more balanced in terms of geographical distribution, disciplines and gender representation."

The Linkages Web site of the International Institute for Sustainable Development (IISD) summarizes the discussion about the roster as follows:

"The proposed roster of independent experts (ICCD/COP(1)/6 and Add.1) contained 584 nominated experts. Many delegates wanted an open-ended roster that is updated regularly. Others suggested: increased representation of social scientists, women, NGOs and all regions; inclusion of representatives from regional and subregional organizations; and putting the roster on the Internet. Some countries were concerned because their nominees were not included on the list. The Secretariat said it could not include nominations unless received through diplomatic channels. Finally, a number of agencies announced their willingness to contribute their expertise and ongoing desertification activities to the CST."

### **Reports Prepared for COP-1**

Beyond the Roster of Experts, the first work for the CST was to prepare several background reports contextualizing the proposed and expected work of CST in future, including most recently:

- Supplementary report on survey and evaluation of existing networks (ICCD/CST(1)/2/Add.1 dated 6 August 1997)
- Supplementary report on work on benchmarks and indicators (ICCD/CST(1)/3/Add.1 dated 25 July 1997)
- Report on work of other bodies performing work similar to that envisaged for the CST (ICCD/CST(1)/4 dated 20 June 1997)
- Reports on modalities and timing of future work on inventories of research and traditional knowledge; establishment of research priorities (ICCD/CST(1)/5 dated 25 June 1997)

### **Future Work Programme**

The CST work programme states that each CST session should address a priority issue in depth and that the priority issue for CST-2 will be traditional knowledge. Concerning the same issue, the COP adopted the CST decision encouraging Parties and observers to collate information on traditional knowledge, including how it might be linked to modern technology. It requests the Secretariat to prepare a synthesis of the reports.

#### 14. INTERGOVERNMENTAL FORUM ON CHEMICAL SAFETY

Address: Intergovernmental Forum on Chemical Safety  
 World Health Organization  
 CH-1211 Geneva 27, Switzerland  
 Phone: +41 22 791 36 50 / 43 33  
 Fax: +41 22 791 48 75  
 E-mail: ifcs@who.ch  
 Web Address: <http://www.who.ch/whosis/ifcs/ifcshome.htm>

The Intergovernmental Forum on Chemical Safety (IFCS) was created, at the invitation of ILO, UNEP and WHO, by the International Conference on Chemical Safety held in Stockholm in April 1994. The full Terms of Reference for the Forum are contained in the Resolution on the Establishment of an Intergovernmental Forum on Chemical Safety adopted by the Conference.

The Forum is a mechanism for cooperation among governments for promotion of chemical risk assessment and the environmentally sound management of chemicals. It is a non-institutional arrangement whereby representatives of governments meet together with intergovernmental and non-governmental organizations with the aim to integrate and consolidate national and international efforts to promote chemical safety. Intergovernmental and non-governmental organizations participate without the right to vote.

In establishing the Forum, governments stressed the need for and benefits of strengthening regional cooperation in the area of chemical safety. At its first meeting a set of 'priorities for action' were established for the effective implementation of Chapter 19 of Agenda 21. The Priorities for Action indicate immediate actions and goals to be achieved in the long term. The Priorities for Action are first and foremost the responsibility of governments, but several of them involve work by which international bodies may develop effective tools for use by governments.

There is an Intersessional Group (ISG) composed of the Officers of the Forum and not more than 26 Government Participants which meets between sessions of the Forum in order to carry out its work. The ISG may make recommendations to the Forum, study special problems, and advise on the implementation of strategies and programmes as approved by the Forum. Additionally, Ad Hoc Working Groups can be established by either the Forum or the ISG, for a set period of time to undertake specific tasks. An Ad Hoc Working Group on Persistent Organic Pollutants (POPs) was established.

The non-institutional nature of the IFCS and its general and comprehensive terms of reference provide a flexibility and adaptability not often found in international organizations. Transparency of its working procedures and the strong emphasis on full and open participation of all partners/all sectors, with the result that the IFCS operates by consensus, gives great weight to the conclusions and recommendations made by the IFCS. The work done on persistent organic pollutants (POPs) is a case in point.

The IFCS developed, in collaboration with a number of international intergovernmental organizations, at the request of the UNEP Governing Council, an assessment of 12 specified POPs and provided recommendations on international action including a legally binding international instrument on POPs. Although few resources were available, the IFCS was able to meet the UNEP request in little over

a year and laid the groundwork for the POPs convention. A more traditional approach would have taken both more time and more money. The IFCS recommendations were endorsed by the UNEP Governing Council and will be used as the basis for negotiating an international legally binding instruments on POPs.

Documents and papers on POPS are available through the UNEP Information Clearinghouse on Persistent Organic Pollutants (<http://irptc.unep.ch/pops/>).

## 15. INTERGOVERNMENTAL FORUM ON FORESTS (IFF)

Address: Secretariat to the Intergovernmental Forum on Forests  
 United Nations  
 Two United Nations Plaza, 12th Floor  
 New York, New York 10017 USA  
 Tel: 1-212-963 6208  
 Fax: 1-212- 963 3463  
 Web Address: <http://www.un.org/esa/sustdev/iff.htm>

### Background

Forests occupied a prominent position in the international deliberations at UNCED. Two products were dedicated entirely to forests, namely Chapter 11 "Combating Deforestation" of Agenda 21 and the "Non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests". During the preparations for the Third Session of the CSD, it became clear that the international policy and, indeed, political debate on forests would need more attention and time, and that there was a need for an intergovernmental forum focused on priority issues. Therefore an Open-ended ad hoc Intergovernmental Panel on Forests (IPF) was established under CSD.

### Intergovernmental Panel on Forests (IPF)

The CSD decided that the Panel should consider the following categories of issues:

- Implementation of UNCED decisions related to forests at the national and international level including an examination of sectoral and cross-sectoral linkages.
- International cooperation in financial assistance and technology transfer;
- Scientific research, forest assessment and development of criteria and indicators for sustainable forest management;
- Trade and environment relating to forest products and services.
- International organizations, multilateral institutions and instruments including appropriate legal mechanisms;

The IPF was established with a firm deadline to report to the CSD meeting in 1997 and then be disbanded. The Panel drew upon the expertise and resources of relevant organizations within and outside the UN system, as well as from all relevant major groups. The Secretariat consisted of staff seconded from ITTO, FAO, UNDP, DPCSD and UNEP. Only the Coordinator and Head of the Secretariat was recruited directly. In addition, meetings of experts, sponsored by one or more countries, international organizations, and major groups, contributed to the Panel's work, particularly on issues that needed further analysis and elaboration. In order to ensure coherent support from the UN System, an informal Interagency Task Force on Forests was formed (by FAO, UNDP, UNEP, ITTO, World Bank, UNDSO, and the Secretariat of the Convention on Biological Diversity) to contribute to the work of the Panel.

### Intergovernmental Forum on Forests (IFF)

The Intergovernmental Forum on Forests was formed in 1997 to continue the work started by the IPF. It had its first organizational meeting 1-3 October 1997. As no details of its work yet exist, the following extracts taken from Report of the Secretary reflect the nature and substance of the new body<sup>1</sup>:

"The General Assembly acknowledged that 'to maintain the momentum generated by the Intergovernmental Panel on Forests process and to facilitate and encourage the holistic, integrated and balanced intergovernmental policy dialogue on all types of forests in the future, which continues to be an open, transparent and participatory process, requires a long-term political commitment to sustainable forest management worldwide'. (A/S-19/29, annex, para. 39)

" Consequently, the General Assembly decided 'to continue the intergovernmental policy dialogue on forests through the establishment of an ad hoc open-ended Intergovernmental Forum on Forests under the aegis of the Commission on Sustainable Development to work in an open, transparent and participatory manner, with a focused and time-limited mandate, and charged with, inter alia:

- (a) Promoting and facilitating the implementation of the Panel's proposals for action;
- (b) Reviewing, monitoring and reporting on progress in the management, conservation and sustainable development of all types of forests;
- (c) Considering matters left pending as regards the programme elements of the Intergovernmental Panel on Forests, in particular trade and environment in relation to forest products and services, transfer of technology and the need for financial resources'. (A/S-19/29, annex, para. 40)

"In addition, the General Assembly decided that 'the Forum should also identify the possible elements of and work towards consensus on international arrangements and mechanisms, for example, a legally binding instrument. The Forum will report on its work to the CSD in 1999. Based on that report, and depending on the decision of the Commission at its eighth session, the Forum will engage in further action on establishing an intergovernmental negotiation process on new arrangements and mechanisms or a legally binding instrument on all types of forests....' (A/S-19/29, annex, para. 4)"

"It is proposed that intergovernmental organizations as well as the full range of non-governmental organizations and other major groups participate as observers ... on an open-ended and fully participatory basis, in accordance with the rules of procedure of the CSD.

"Furthermore the IFF could draw in particular on the resources and technical expertise of the informal high-level Inter-Agency Task Force on Forests and other relevant organizations within and outside the UN system, as well as secretariats of relevant conventions, with appropriate contributions from non-governmental organizations...."

"...IFF may wish to consider welcoming any proposals that may be made by Governments to organize expert meetings or to conduct studies in support of the Forum's work and may in particular consider welcoming regional approaches...."

#### "III. Proposed Programme of Work

"...the Forum may wish to cluster its work into four categories as proposed below:

"Category I: Promoting and facilitating the implementation of IPF's proposals for action, and reviewing, monitoring and reporting on progress in the management, conservation and sustainable development of all types of forests...."

"Category II: Considering matters left pending as regards the programme elements of IPF, in particular trade and environment in relation to forest products and services, and the need for financial resources...."

"Category III: ... Identify elements, build a global consensus and engage in further action. Identify the possible elements of and work towards consensus on international arrangements and mechanisms, for example, a legally binding instrument on all types of forests. Based on the report submitted to and depending on the decision taken by the Commission at its eighth session, the Forum will engage in further action on establishing an intergovernmental negotiation process on new arrangements and mechanisms or a legally binding instrument on all types of forests.

"Category IV... (a) Examine research, technology development and improved utilization.... (b) Examine meeting future needs for goods, services and social requirements."

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<sup>1</sup> Report of the Secretary-General, 'Proposed programme of work and organizational modalities for the open-ended ad hoc Intergovernmental Forum on Forests of the CSD' (1-3 October 1997).

## 16. MAJOR ENVIRONMENTAL ASSESSMENT REPORTS - Post UNCED

The major international environmental assessment reports are generated by groups of scientists in another form of international scientific advisory process. Some recent examples are listed below.

### I. GENERAL

1. *Global Environment Outlook (1997)*  
United Nations Environment Programme (UNEP), Oxford University Press, New York and Oxford, 1997. Web Address: <http://www.grid.unep.ch/geo1/>

Produced with the support of 20 collaborating scientific centres and many additional experts. A new edition, GEO-2, is in preparation for 1999.

2. *World Resources 1996-1997: The Urban Environment (1996)*  
World Resources Institute (WRI)/UNEP/UNDP/World Bank, Oxford University Press, New York and Oxford, 1996.  
World Resources 1998-1999 is in preparation
3. *Critical Trends: Global Change and Sustainable Development (1997)*  
Department of Policy Coordination and Sustainable Development, United Nations, New York, 1997, ST/ESA/255. Web Address: <http://www.un.org/esa/sustdev/trends.htm>

Critical Trends reviews key issues over the quarter-century since the UN Conference on the Human Environment in Stockholm, and suggests policy approaches to tackle them. The report was prepared by a small Project Team at the UN Division for Sustainable Development which drew on data and information provided by various UN and other agencies and an Editorial Advisory Board consisting of individuals at UN agencies, IGOs, NGOs, national governments and universities. It is a one-off report with no follow-up planned.

### II. SPECIFIC ISSUES:

4. *Health and Environment in Sustainable Development: Five Years After the Earth Summit (1997)*, World Health Organization, Geneva, 1997, WHO/EHG/97.8
5. *Climate Change 1995 (1995)*  
WMO/UNEP Intergovernmental Panel on Climate Change (IPCC), Second Assessment Report. Cambridge University Press, Cambridge.

The IPCC Third Assessment Report will cover a range of scientific, technical, economic and social issues. It will consist of reports of IPCC Working Groups I (scientific aspects), II (vulnerability of systems) and III (mitigation), and will focus heavily on regional aspects. The three Working Group reports, which will be approved by late 2000 or early 2001, will be integrated into a policy relevant Synthesis Report, which will be completed by the second quarter of 2001.

6. ***Forest Resources Assessment 1990: Global Synthesis*** (1995)  
Food and Agriculture Organization of the UN (FAO), Rome, 1995

This report encompassed a thorough assessment of the forest resources of countries around the world and was data intensive. The next forest resources assessment is planned for 2000. A more analytic report, entitled *The State of the World's Forests*, was published in 1997.

7. ***World Atlas of Desertification*** (1997)  
United Nations Environment Programme, Nairobi, 1997

The Atlas summarizes in graphic form the current state of scientific knowledge about drylands around the world. This is the second edition of the report.

8. ***Global Biodiversity Assessment*** (1995)  
UNEP, V.H. Heywood (Executive Editor), R.T. Watson (Chair) and 1500 experts  
Cambridge University Press, Cambridge, 1995 - 1140 p.

- IPCC was used as a model in terms of structure and process.
- The Assessment has no formal link to the CBD or any other intergovernmental process.
- The text was submitted to 'extensive peer review'. A draft version was submitted to SBSTTA of the CBD for their use as a background document. Altogether about 1100 experts participated from 80 countries. Governments were informed and invited to participate in this process of review throughout the report's preparation.
- A summary was also printed specifically for policy-makers.

9. ***The State of World Fisheries and Aquaculture*** (1995)  
FAO Fisheries Department, FAO, Rome, 1995

10. ***Comprehensive Assessment of the Freshwater Resources of the World*** (1997)  
Preparation coordinated by Stockholm Environment Institute (SEI) for UN/UNDP/UNEP/FAO/UNESCO/WMO/World Bank/WHO/UNIDO.  
Published by WMO and also issued as Report of the Secretary General to CSD-5 (E/CN.17/1997/9). Web Address: <http://www.un.org/esa/sustdev/freshwat.htm>

The report was prepared by the UN, through a Steering Committee representing those UN agencies involved with water issues, and a government-supported organization, the Stockholm Environment Institute. The Steering Committee consisted of representatives from the DPCSD, Department for Development Support and Management Services, FAO, UNDP, UNEP, UNESCO, UNIDO, the World Bank, WHO and WMO.

11. ***Global Waste Survey: Final Report*** (1995)  
Prepared by S. Adrian Ross, International Maritime Organization (IMO), London, 1995

This report was prepared by members of staff at IMO with consultants, drawing on information provided by, and other cooperation with, national government agencies.

## ANNEX II: REFERENCE LIST

The following references were consulted for purposes of the comparative review and general observations:

Fritz, Jan-Stefan, 'Earthwatch 25 years On: Between Science and International Environmental Governance,' IIASA Interim Report (IR-97-059, September 1997).

Report of the UN Secretary General to the CSD, Science for Sustainable Development: Education, Science, Transfer of Environmentally Sound Technologies, Cooperation and Capacity-Building (2 March 1995) E/CN.17/1995/16.

UNEP, *Biennial Report 1996-1997*, Nairobi: December 1997.

UNEP, UNDP, and The World Bank, Report of the Independent Evaluation of the Global Environment Facility Pilot Phase (23 November 1993).

UNEP, NASA and The World Bank, Report on the Interlinkages of Environmental Issues (draft of 18 August 1997).

UNEP-HEM, *Survey of Environmental Monitoring and Information Management Programmes of International Organizations* (Edition 3.4, March 1995).

UN System-wide Earthwatch Web site: <http://www.unep.ch/earthw.html>

Various issues of *CSD Update*.