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**Second ad hoc intergovernmental and multi-stakeholder meeting on an
intergovernmental science-policy platform on biodiversity
and ecosystem services**

Nairobi, 5–9 October 2009

Item 4 of the provisional agenda*

**Consideration of options to strengthen the science-policy
interface for biodiversity and ecosystem services**

**Needs and actions to strengthen the science-policy interface on
biodiversity and ecosystem services**

Note by the secretariat

I. Introduction

1. The Governing Council of the United Nations Environment Programme (UNEP), in its decision 25/10 of 20 February 2009, noted the outcomes of the ad hoc intergovernmental and multi-stakeholder meeting on an intergovernmental science-policy platform on biodiversity and ecosystem services held in Putrajaya, Malaysia, from 10 to 12 November 2008, and recognized and emphasized the need to strengthen and improve the science-policy interface for biodiversity and ecosystem services for human well-being and sustainable development at all levels. The Governing Council took note of the preliminary report on the gap analysis carried out by UNEP to facilitate further discussions on the improvement of the science-policy interface.

2. On that basis and by the same decision, the Governing Council invited Governments and relevant organizations to continue to explore mechanisms to improve the science-policy interface for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development, taking into account the special need to develop and maintain the technical and scientific capacity of developing countries in biodiversity-related issues. The Governing Council requested the Executive Director of UNEP to undertake a further process to support efforts by Governments and relevant organizations to explore mechanisms to improve and to strengthen the science-policy interface, aiming to report on its progress at the special session on biodiversity of the sixty-fifth session of the General Assembly and other relevant meetings. For that purpose, the Governing Council also requested the Executive Director to convene a second intergovernmental and multi-stakeholder meeting at the earliest possible convenience in 2009, following completion of the full gap analysis on exploring mechanisms to improve the science-policy interface. Document UNEP/IPBES/2/INF/1 contains the full gap analysis, while document UNEP/IPBES/2/2 contains an executive summary thereof.

* UNEP/IPBES/2/1.

3. The present note highlights the main needs in strengthening the science-policy interface, drawing on the principal findings of the gap analysis, and presents actions for consideration at the current meeting.

4. As highlighted in the gap analysis, science-policy interfaces are structures and processes aiming to improve the identification, formulation, implementation and evaluation of policy to render governance more effective by:

(a) *Providing the opportunity and framework* for interrelations between science and policy at various governance levels and across a range of sectors and disciplines;

(b) *Assigning roles and responsibilities* to scientists, policymakers and other relevant stakeholders and knowledge-holders within these processes;

(c) *Facilitating improved coordination* within and between the various stakeholder groups.

II. Main needs

5. The five main needs set out below have been identified from the six key findings of the gap analysis. The findings do not necessarily match the needs exactly, as is the case for the first finding, which describes the multiplicity of the science-policy interfaces but does not give rise to any specific need. Similarly, the third and fifth findings together contribute towards the need to generate knowledge for a common and shared knowledge base.

A. Need for scientific independence

6. The second key finding in the gap analysis highlights that, notwithstanding the progress made by many of the existing science advisory bodies to improve the focus and quality of scientific inputs into policymaking processes, there is scope for further improvement in scientific independence through increased credibility, relevance and legitimacy, where:

(a) “Relevance” reflects the extent to which the approach and findings of a science-policy interface are closely related to the needs of decision-making processes and the extent to which a science-policy interface identifies key target audiences and ensures effective consultation and communication between such audiences and knowledge-holders, while building the capacity of both experts and decision makers to interact productively;

(b) “Credibility” reflects the perceived validity of information, methods and procedures to a defined audience and thus the extent to which data of appropriate quality and established methods are used, the availability of results and methods for peer review, the absence of bias and the selection of knowledge-holders through appropriate and transparent procedures, among other things;

(c) “Legitimacy” reflects perceived fairness, balance, political acceptability and trust, in particular the extent to which the processes are perceived as respecting stakeholders’ contributions, concerns and their divergent values and beliefs, including the extent to which these processes provide for the transparency and availability of data and information and efforts to build all interested groups’ capacity to contribute.

B. Need for better collaboration and coordination to generate knowledge for a common and shared knowledge base

7. The third and fifth key findings show that, while many institutions contribute valuably to building a common knowledge base in some form, it could be argued that the fundamental challenges of building a common knowledge base covering the full range of biodiversity and ecosystem service issues cannot be adequately met by uncoordinated studies of individual components of isolated traditional disciplines in an ad hoc set of research sites scattered across the globe. Instead, it is argued that gaps in knowledge are to a large extent evidence of the lack of a process providing common and regularly reviewed guidance on a strategic approach to research, designed to ensure that the most important needs in terms of knowledge to support more effective governance at all levels are being identified and responded to in a coordinated manner. There is therefore a need to improve coordination and to facilitate collaboration across and between the various science networks and science-policy interfaces to have a more cohesive and coherent knowledge generation strategy. In addition, there is a need to improve access to the data, information and knowledge that are already available.

C. Need for regular and timely assessments to generate and disseminate policy-relevant advice

8. The fourth and fifth key findings highlight that various mechanisms synthesize, present and communicate knowledge to inform policy. There is, however, a need to strengthen regular processes by providing periodic, timely and policy-relevant information to mainstream biodiversity and ecosystem services for human well-being into all development policymaking arenas, covering economic, social and environmental forums. There is also a need for a process, almost certainly intergovernmental in nature, which can provide a unified and authoritative voice that supports development policymaking on national and global scales through periodic and timely scientific assessments that draw on scenarios, integrated models and indicators.

D. Need to support policy implementation

9. The fourth key finding highlights that various mechanisms synthesize, present and communicate knowledge to inform policy. There is, however, a lack of regular processes within existing science-policy interfaces to turn policy-relevant assessment findings into development policy implementation, in particular at the national level. There is therefore a need to assist policymaking further by providing scientific support in the form of decision-support tools and methodologies.

E. Need for building capacity to mainstream biodiversity and ecosystem services for human well-being

10. The sixth key finding points out that numerous institutions and processes are helping to build capacity to use science effectively in decision-making at all levels. Significant gaps, however, remain in terms of the capacity to produce relevant knowledge effectively, to formulate or reflect critically on policy choices, to translate knowledge into policy action and to coordinate these processes. There is therefore a need for greater involvement by scientists from a range of disciplines to build capacity to participate in various national, regional and global scientific initiatives. There is also a need to build the capacity of scientists in developing countries to engage more effectively in science-policy dialogues on biodiversity and ecosystem services for human well-being. This includes the need to build scientists' capacity to provide scientific information in a manner that can be used not only by environmental decision makers but also by economic and development decision makers.

III. Opportunities for strengthening the science-policy interface

11. Representatives may wish to consider how the following actions might meet each need identified above and thus strengthen the science-policy interface. These actions are not mutually exclusive and representatives may wish to consider adopting one or more of them.

A. Need for scientific independence

12. To improve scientific independence by enhancing credibility, relevance and legitimacy, actions might include those set out below.

1. Action 1

13. Steps should be taken to increase the financial and human resources available to each of the scientific advisory bodies or processes to facilitate access to a broader science expertise base and improve working mechanisms within existing mandates, without the need to adopt new decisions.

Advantages

- Each scientific advisory body or process would be independently strengthened
- Each scientific advisory body or process would be able to tackle the broad range of issues related to biodiversity and ecosystem services within its current agenda

Disadvantages

- It is prohibitively expensive to fund fully each science advisory body or process
- Redundancy and overlap could continue and increase when generating and providing policy-relevant scientific information, specifically on cross-cutting issues

2. Action 2

14. The governing organs of existing scientific advisory bodies and processes should be encouraged to revise their agendas and mandates and adopt new decisions so that existing financial and human resources are used more efficiently for:

(a) Tackling a more focused and smaller set of agenda items specific to their primary objectives while requesting an external common mechanism to take on cross-cutting agenda items, especially those requiring coordination with other biodiversity and ecosystem service interfaces;

(b) Establishing working mechanisms to avoid problems that may be encountered, for example when an advisory body is responsible for providing scientific input to the policy process while acting as an initial negotiating platform.

Advantages

- Each existing scientific advisory body or process could be independently strengthened
- Limited financial and human resources could be used more efficiently and more attention paid to achieving scientific independence
- The mandates and objectives of each scientific advisory body and process could be made clearer and streamlined, thereby reducing the potential for overlap and redundancy with other, similar science-policy interfaces

Disadvantages

- It is complex and time-consuming to revise mandates and adopt new decisions
- This action is predicated on the assumption that an external common mechanism is available to provide the policy-relevant scientific information on cross-cutting issues needed to support a wide range of processes
- Establishing new working mechanisms by each existing science-policy interface to separate the activities of providing scientific information and of acting as the initial negotiating platform might require significant changes in the institutional arrangements for a particular science-policy interface and might require additional resources

3. Action 3

15. A new mechanism (hereinafter “the new mechanism”) should be established to strengthen the existing science-policy interface, which by design would have a specific mandate to provide regular and timely policy-relevant scientific information responding to the requests from existing scientific advisory bodies and processes, pertaining in particular to cross-cutting issues covering the full range of biodiversity and ecosystem services. The new mechanism would liaise with the scientific advisory bodies of existing science-policy interfaces so as to make distinct the roles of providing credible and independent scientific information and being the initial negotiating body, as in the case of the climate regime, where there are clear and distinct roles for the Intergovernmental Panel on Climate Change, the Subsidiary Body for Scientific and Technological Advice under the United Nations Framework Convention on Climate Change and the Conference of the Parties to that Convention. The new mechanism could be built upon well-defined institutional arrangements, defining scope, governance and legal status to respond to the needs of the various existing processes.

16. Details of the possible institutional arrangement for the new mechanism, including the legal basis, governance structure, secretariat, work programme and funding, can be found in documents UNEP/IPBES/1/3–5, which are made available also for the current meeting.

Advantages

- The work of existing scientific advisory bodies and processes could be strengthened by the new mechanism providing scientific information, leaving the important yet distinct role of negotiation to other existing bodies
- The new mechanism could release existing scientific advisory bodies and processes from an over-burdened agenda by tackling cross-cutting issues currently within the purview of existing science-policy interfaces
- The new mechanism could provide scientific inputs from a common platform to each existing body and process upon request, as was the case with the Millennium Ecosystem Assessment

Disadvantages

- New sources of funding would be required, but the returns on information generated for numerous science-policy interfaces might outweigh the cost of duplication and redundancy

B. Need for better collaboration and coordination to generate knowledge for a common and shared knowledge base

17. To facilitate knowledge generation and build a common and shared knowledge base, consideration might be given, among others, to the actions set out below.

1. Action 1

18. An informal working group comprising representatives of science networks at the global level and regional representatives of national science networks, together with representatives from individual scientific advisory bodies and processes, could be formed. The aim of such a group could be to strengthen existing initiatives through the regular exchange and sharing of information reflecting respective needs and demands. The working group would not specifically undertake activities to generate such scientific information but focus more on identifying the needs of the scientific and policy communities, exchanging information and informing them with a view to enhancing support for a coordinated research strategy to meet the needs of each science-policy interface. This group could also work to increase access to existent data, information and knowledge and incorporate new material when it becomes available.

Advantages

- It is relatively simple to establish an informal working group (or groups) as no formal endorsement of such a group by the governing organs of the respective bodies or interfaces would be required
- Existing initiatives could be strengthened through increased cooperation and coordination and could also become more relevant because of the increased interaction with science advisory bodies and processes

Disadvantages

- The group would enjoy limited legitimacy given the lack of formal endorsement by the respective governing organs
- There could be a lack of financial support for the scientific community, especially from developing countries, to participate in working group meetings and also to have access to data, information and knowledge

2. Action 2

19. The second action is similar to the first but, in this case, a formalized ad hoc working group endorsed by the governing organs of the respective institutions would be established. This would entail a more coordinated and organized approach with clear mandates and objectives. Funding would be allocated to ensure a coordinated approach to strengthening the building of a common and shared

knowledge base that could be used by the various scientific advisory bodies and processes. The working group would not undertake activities to generate such scientific information but focus more on the needs of the scientific and policy communities, exchanging information and informing them with a view to enhancing support for a coordinated research strategy to meet the needs of each scientific advisory body and process and increase access to data, information and knowledge.

Advantages

- A formalized ad hoc working group would offer the legitimacy needed to coordinate a strategy for generating scientific knowledge
- The group could offer the legitimacy and relevance that would enable the scientific community to raise funds to undertake research activities
- Existing initiatives could be strengthened through increased cooperation and coordination and could also become more relevant because of the increased interaction with science advisory bodies and processes

Disadvantages

- To establish a formalized ad hoc working group, to identify knowledge generation priorities and to adopt findings, a decision by each governing organ of the existing scientific advisory bodies and processes would be required, which could be a lengthy process¹
- There could be a lack of financial support for the scientific community, especially from developing countries, to participate in working group meetings and also to have access to data, information and knowledge

3. Action 3

20. The generation of knowledge and the development of a common and shared knowledge base could be considered to be one of the focus areas within the new mechanism. Representatives of the various science networks could be formal members of the new mechanism, in addition to representatives of existing scientific advisory bodies and processes. As in the second action, the new mechanism would not generate knowledge but would support the development of a shared strategy that endeavours to fill knowledge gaps covering the full range of biodiversity and ecosystem services and to increase access to data, information and knowledge.

Advantages

- The development of a coordinated research strategy covering the full range of biodiversity and ecosystem services could by design form an integral component of the new mechanism
- The new mechanism might not require additional funding for generating a common knowledge base since it could be one of its key components

Disadvantages

- This action is predicated on the assumption that the new mechanism for regular and timely assessments providing policy-relevant information is already in place

¹ For example, in the field of chemicals and wastes, the conferences of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and the Stockholm Convention on Persistent Organic Pollutants established an ad hoc joint working group to consider the ways to enhance cooperation and coordination between the conventions and produced a set of recommendations that were eventually adopted by the three conferences of the Parties. This approach is based on the autonomy of the three conventions and therefore requires a decision by each Conferences of the Parties each time a common issues needs to be resolved.

C. Need for regular and timely assessments to generate policy relevant advice

21. To provide regular and timely scientific assessments covering the full range of biodiversity and ecosystem services for human well-being, the actions set out below might be considered.

1. Action 1

22. A formal ad hoc working group should be established with a clear mandate to produce regular scientific assessments drawing on the respective assessments of existing scientific advisory bodies and processes to provide a comprehensive synthesis report to cover the full range of biodiversity and ecosystem services.

Advantages

- This action would take advantage of scientific assessments already undertaken by existing science-policy interfaces
- It would improve the legitimacy, and potentially also the relevance, of synthesis reports

Disadvantages

- There is no common conceptual framework to cover the full range of biodiversity and ecosystem service issues between and across ecological and governance scales
- It is complex to establish common baselines from a range of assessments using varying conceptual frameworks, methodologies, indicators and scenarios
- The action would require approval by the governing organs of each scientific advisory body and process on the topic, scope and findings of all reports

2. Action 2

23. The new mechanism would be given a clear mandate to undertake regular, comprehensive assessments and provide policy-relevant, regular and timely scientific information for the various science-policy interfaces, as was the case with the Millennium Ecosystem Assessment, using a common conceptual framework. The new mechanism would also encourage and support national-level assessments using similar conceptual frameworks, focusing on their effective use at the national level and on using them as building blocks for global and regional assessments. The new mechanism would produce in a timely manner assessment reports on emerging issues, as appropriate, for the various scientific advisory bodies and processes.

Advantages

- The new mechanism could provide a uniform and consistent framework for generating policy-relevant information, through integrated assessments using the Millennium Ecosystem Assessment framework, about the state, drivers, trends and outlooks of interactions between humans and the environment, focusing on the impacts of changes in biodiversity and ecosystem services on human well-being at multiple levels
- The new mechanism would use scientifically credible baselines provided by the Millennium Ecosystem Assessment as the basis for regular assessments to ensure consistency with past and future efforts
- A common conceptual framework under the new mechanism could facilitate scaling-up and scaling-down assessments between the national, regional and global levels
- The new mechanism could provide early warning and early lessons by monitoring trends and new scientific findings in the form of reports and alerts to be made available to relevant stakeholders in a timely manner
- The new mechanism would be underpinned by experiences of relevant assessment processes
- The new mechanism could achieve cost efficiency by preventing duplication of activities across the various interfaces

Disadvantages

- The new mechanism could duplicate and overlap with some of the assessments undertaken by existing science-policy interfaces
- The new mechanism would need the support and endorsement of existing science-policy interfaces if it is to provide policy-relevant information to deal with human well-being issues pertaining to biodiversity and ecosystem services.
- The new mechanism would require financial and human resources to undertake work at the various scales to provide the regular and timely scientific assessments

D. Need to support policy implementation

24. To provide policy support and outreach to relevant stakeholders by packaging and disseminating scientific information in a manner that responds to their needs, the actions set out below might be considered.

1. Action 1

25. Each existing scientific advisory body and process should be strengthened by providing adequate financial and human resources to facilitate the translation of assessment findings for policymaking within their existing institutional structures.

Advantages

- The policy impact of each scientific advisory body and process with regard to their specific issues could be enhanced

Disadvantages

- This action might not provide a full understanding of the complete range of biodiversity and ecosystem services and the key interlinkages with other sectors and interfaces
- It could perpetuate the sectoral or issue specific approach to solving biodiversity and ecosystem services issues for human well-being
- It could make policy-prescriptive recommendations that clearly fall outside its mandates as a scientific knowledge-holder

2. Action 2

26. The new mechanism would provide support in the form of decision-support toolkits for policymakers.

Advantages

- A new mechanism could by design cover the full range of biodiversity and ecosystem services both across and between scientific advisory bodies and processes and sectors at the global, regional and national levels
- This action could complement and further strengthen existing scientific advisory bodies and processes that might adopt action No. 1, above, which calls for improving the translation of scientific findings into policymaking within each science-policy interface
- Assessment findings provide a unique information base for translating scientific information into development policy action

Disadvantages

- This action is predicated on the assumption that the new mechanism for regular and timely assessments providing policy-relevant information is already in place
- The new mechanism might not fully recognize the policy specificities of and demands by each scientific advisory body and process

E. Need to build capacity to mainstream biodiversity and ecosystem services for human well-being

27. Actions to build the capacity of scientists and policy makers, especially in developing countries, to mainstream biodiversity and ecosystem services for human well-being by generating scientific information, undertaking multiscale scientific assessments and translating scientific knowledge into policy action might include those set out below.

1. Action 1

28. Existing scientific advisory bodies make clear requests for capacity-building in the three areas mentioned above to existing capacity-building initiatives under various organizations, such as UNEP, the United Nations Development Programme and the World Bank, or in the context of the Global Environmental Facility, among others.

Advantages

- No additional financial resources would be needed by the existing science-policy interfaces to establish separate capacity-building programmes
- It would reduce the probability of duplicating capacity-building efforts by existing capacity-building initiatives

Disadvantages

- This action could restrict capacity-building activities to the specific issues relating to each scientific advisory body and process and not cover the full range of biodiversity and ecosystem service issues necessary to inform development policy
- There is no guarantee that existing capacity-building programmes would accommodate these requests in a manner that satisfies the requirement of the existing science-policy interfaces

2. Action 2

29. The new mechanism could support existing capacity-building initiatives by identifying potential areas requiring capacity-building.

Advantages

- Under this action, recommendations for capacity-building would embrace a comprehensive approach responding to the full range of biodiversity and ecosystem services issues
- It would reduce the probability of duplicating capacity-building efforts by existing capacity-building initiatives

Disadvantages

- There is no guarantee that existing capacity-building programmes would accommodate these requests in a manner that satisfies the requirement of the existing science-policy interfaces

3. Action 3

30. This action is similar to the second but, in this case, capacity-building is an integral component within the new mechanism.

Advantages

- Capacity-building would be embedded in the activities across the new mechanism
- Capacity-building would embrace a comprehensive approach responding to the full range of biodiversity and ecosystem services issues
- Capacity-building demands identified by the new mechanism are addressed directly by the mechanism itself and do not depend on other capacity-building programmes

Disadvantages

- This action is based on the assumption that the new mechanism for regular and timely assessments providing policy relevant information is already in place
- This action might require significant financial resources and could divert attention away from the main mandate of providing regular and timely scientific information
- This action might duplicate or overlap with existing capacity-building programmes

IV. Consideration of an overarching policy framework and recommendations for strengthening the science-policy interface on biodiversity and ecosystem services

31. Based on the needs and opportunities identified above, representatives may wish to determine an overarching science-policy framework aimed at providing regular and timely policy-relevant scientific information covering the full range of biodiversity and ecosystem services with a view to strengthening the science-policy interface. In recommending ways and means to implement this framework, representatives may wish to consider one or more of the actions presented in the present note.

32. Details of possible institutional arrangements for implementing such a framework, including the legal basis, governance structure, secretariat, work programme and funding, can be found in documents UNEP/IPBES/1/3–5, which are made available also for the current meeting.
