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Policy issues: state of the environment

**Additional information on options for a future global environmental
assessment on environmental change**

Note by the Executive Director

Summary

The annex to the present note contains additional information on options for a future global environmental assessment on environmental change, as set out in document UNEP/GC/25/4/Add.1. The information is submitted to the Governing Council/Global Ministerial Environment Forum at its twenty-fifth session following the discussion by the Committee of Permanent Representatives on 27 November 2008 on the advance copy of the document.

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* Reissued for technical reasons.

** UNEP/GC.25/1.

Annex

Additional information on options for a future global environmental assessment on environmental change

UNEP has over the past two years initiated a strategic shift in its programme and priority areas. One of the core mandates of UNEP is to keep the environment under review notably by carrying out environmental assessments. This document briefly describes the context of the next global environmental assessment and how it responds to the strategic programmatic changes and new demands. It presents five options and associated products as well as gives cost estimates.

The context of the next global environmental assessment and its associated products:

- A direct response to UNEP's new strategic direction reflected through the Medium-Term Strategy (MTS), its six cross cutting thematic priority areas, and the strong and renewed emphasis placed on UNEP operating to become a more effective, efficient and results-focused entity, through, *inter alia*, ensuring its interventions are founded on sound science.
- An on-going "learning-by-doing" approach which takes into account the findings of the review of the initial impact of GEO-4 and self-assessment survey as well as views of UNEP's main stakeholders.
- A greater level of interaction between UNEP's Divisions ensuring a unified and coherent UNEP response on the state and trends of the global environment.
- A consultative process which uses mainly information technology and virtual interactive processes to communicate with a broader group of relevant stakeholders and to reduce the number of, and costs associated with, large, multiple face-to-face meetings.
- A sufficiently flexible design that accommodates rapid analysis of emerging issues and provides targeted analysis and policy options. As such, it will be more responsive to the needs of UNEP's Governing Council and to other specifically targeted audiences.
- A capacity-building approach that will increasingly take place through virtual learning platforms.
- A focus on content that assesses issues relevant to UNEP's cross-cutting thematic priority areas, is based on sound science, and that assists national and international stakeholders have access to sound science and policy advice for decision making
- An outreach and dissemination strategy that favour the use of electronic format for reports. Only specifically targeted products such as Summaries for Decision Makers (SDM) will be available in electronic and printed formats. UNEP will make use of information technology to broadly disseminate assessment findings.

Five options and associated products

Behind the delivery of any products is the fundamental principle that these are derived from an ongoing review of scientific knowledge. A fitting analogy would be a tree trunk and its various branches. The tree trunk represents the scientific knowledge that is continuously under review by UNEP and its collaborating partners. The branches correspond to the various by-products stemming from the review of this body of knowledge ranging from briefs and early warning alert bulletins, to thematic and regional outlooks and technical reports, and global assessment products such as the GEO-X series.

Each set of products in the five options discussed below stem from assessment processes that emphasize scientific credibility and policy-relevance. This will be achieved through substantive contributions from experts as well as through rigorous and independent peer review processes. There are variations in the complexity and length of each of these assessments due to the scale and timeframe used. For example, a rapid assessment can focus on a single issue such as linkages between biodiversity and food availability at the scale of a forest ecosystem and could take 6 to 12 months to conduct. Another example could be a global assessment that analyzes the environmental state, trends and linkages with activities in key economic sectors with special emphasis on poverty, vulnerability and human well-being. This type of assessment can take 4 to 5 years to carry out due to the complexity of the topic(s) under scrutiny.

Option 1:**A Global Integrated Environmental Assessment updated to better utilize information technology**

- This first option delivers a single comprehensive and global assessment report produced through a robust and inclusive assessment process. The assessment analyses priority issues, inter-linkages and cross-cutting issues identified in UNEP's six priority areas. The assessment is based on the integrated environmental assessment (IEA) approach and aims to provide a macro level perspective of the state and trends of the environment and its linkages with economic activities, and human well-being. Issues such as vulnerability, poverty and equity will also be analyzed. The global assessment will help guide the work of UNEP within the six priority areas and identify new areas of focus for the organization. The assessment report will identify science knowledge gaps in both natural and social sciences, notably in addressing emerging issues, and the need for more advanced and adequate scientific tools, methodologies and data in order to bridge the gap between science and policies. Following on the thematic focus of environment for development in GEO4, the report would focus on sustainable development, and could analyse, for example, the role of financial markets, the economic crisis, the global trade and linkages to the management of natural resources and job creation. The findings of the assessment would contribute to UNEP's work in areas such as the Green Economy and The Economics of Biodiversity and Ecosystem Services (TEEB). The global assessment would not go into elaborate and specific details as would be the case in a single-theme assessment (described in option 2).
- From this comprehensive and global assessment a series of by-products (aside from the main report) can easily be generated. The novelty here is that various assessment products at different scales and the processes behind them will make greater use of affordable information and communication technology. Specifically, the making of the global assessment product will rely heavily on virtual platforms such as Wikipedia, use of a centralized "Network of networks" where discussions, data sharing and dissemination, comprehensive consultative and peer-review processes will take place. Dissemination of policy findings and technical briefs will be accessible through these platforms as well as through UNEP's main Internet site and the sites of collaborating centres and national institutions. For those with difficult access to Internet or poor download capacity, copies of synthesis, summaries and technical briefs as well as the main report will be made available in CD-ROM format. Specific maps, data and indicators will be made available through UNEP's global data portal. Overlays of environmental maps and socio-economic indicators identifying 'hotspots' within a specific region is another possible by-product. Most of the capacity-building activities will be carried out through an e-learning platform whereby training-of-trainers will take place and later be disseminated at the national or regional level by the said trainers.

Option 2:**The objective expert out-sourced assessment**

- This product very much resembles the World Resource Institute (WRI) or UNDP Human Development Reports. It has a single overarching theme, for example 'wealth of the poor and ecosystem services' that is unpacked, and it analyzes various closely related issues. These issues are discussed through the lens of different disciplines such as governance and political science, the natural sciences, economics, and with the use of indicators, data and graphics. The assessment tends to be more focused and shorter in terms of timeframe (approximately 2 years) when compared to the comprehensive global assessment produced in option 1. It can be carried out as a joint venture between two or several institutions with specific expertise. A theme such as 'valuing the environment' for instance, can be explored using various techniques, and analyse breakthroughs and emerging issues in the particular discipline. A theme directly related to UNEP's six cross-cutting thematic priority areas could be 'climate change and Green Economy' and the assessment would analyze climate change issues through the lenses of regulatory instruments, governance, market-base instruments and technology (including energy efficiencies). Through the assessment process these various sub-themes do not only become the responsibility of UNEP's relevant substantive divisions, but also of the various collaborating agencies and experts carrying out specific work using cutting edge research and development. This type of product and its findings can be applied at the national level when conducting capacity-building exercises.
- A web-based/virtual approach and extensive use of networks are intrinsic to the making of this product. Peer review, sharing and dissemination of data, access to graphics and indicators as well as capacity-building are carried out via virtual means.

Option 3:**A coherent set of integrated and thematic assessments**

- Option 3 generates a set of assessments from within the six sub-programmes, targeting the knowledge gaps, priority and emerging issues of thematic areas. As each assessment has its own stand alone process it can be tailored towards a specific user group, target audience and/or major event (such as a World Environment Day). The possibility to select from a range of analytical methods, product formats and production timelines for each assessment makes this option flexible and responsive to changing programme and user needs. As several assessments can proceed in parallel, in a typical five year period the set of outputs might include several rapid (6 month) scientific appraisals of emerging issues (such as on black soot or desiccating rainforest ecosystems), two or three in-depth (2-year) assessments within UNEP's six cross-cutting thematic priority areas (such as an environment outlook on chemicals), an annual series to raise awareness of new research findings across the UNEP programme areas (such as the UNEP Year Book) and a comprehensive integrated global assessment (every four to five years) of policy-relevant environmental interlinkages. The latter would address the significant cross-cutting issues that may drive co-benefits and policy trade offs but that are beyond the scope of individual thematic assessments and therefore run the risk of insufficient consideration by policy makers. but which are so crucial in guiding policy responses. Having these various assessment processes ongoing within an integrated UNEP programme will encourage the exchange of expertise, new ideas and assessment findings leading to considerable enrichment of the individual processes and resulting over time in a coherent set of cutting edge global environmental assessments. This mutual enrichment distinguishes Option 3 from Option 1 where there is a single assessment process, where any targeted by-products are derived from the single body of knowledge, and where that knowledge may lack sufficient specificity to meet the diverse policy needs that UNEP will be expected to address. Option 3 combines the flexibility of rapid responses and focused action through targeted products with a macro level analysis of environmental trends and inter-linkages in a global report.
- This option will benefit from working in a matrixed UNEP environment with increased update across the organization and have a comprehensive capacity building and partnership development component. Online working groups will be responsible for determining data requirements, capacity building needs and tools as well as developing an outreach and communication strategy.

Option 4:**Indicator-based approach**

- This type of report would follow a model similar to the UN Secretary General's annual Millennium Development Goal report and make great use of data, indicators, graphs and maps that describe and analyse trends and environmental problems globally and in various regions. The report can be used as a 'scorekeeper' between regions and countries and can have significant impact amongst decision-makers. This product is highly visual with easy to grasp interactive maps and graphs often supported by online platforms. However, and unlike products described in options 1 and 3, these reports generally present a 'snapshot' of a situation rather than an in depth analysis or rigorous assessment of environmental parameters. These types of data-driven products can be updated regularly depending on resources, new data availability and upkeep and maintenance of online platforms. Such products have much more impact when used in an online setting as opposed to hardcopy format.

Option 5:**Targeted assessments on thematic priority areas supported by a “UNEP-live” enabling framework**

- The type of assessments produced under option 5 is the most innovative and technologically-driven of the different options. However, this type of endeavour has to be carried out in a step-wise fashion as we build a whole new architecture to support a new way of delivering and creating UNEP’s global assessments, and it cannot be achieved in time to support the next global assessment due in 2012. It therefore represents a longer-term objective with regard to responsiveness and capacity that UNEP would eventually like to develop and host. The products and assessments will be based on a virtual, dynamic, system-based and interactive platform which processes and analyses data and information, and cultivates and facilitates participatory expert discussion groups to help better understand the complexities and interactions between society and the natural environment. The UNEP-live framework provides a highly interactive, issue-driven **‘instrument panel’** where decision-makers have easy access to assessment findings, syntheses, summaries and technical briefs. Search engines will make it possible for users to modify variables of their choosing in various regions, in order to understand and anticipate likely scenarios, as well as investigate potential impacts, occurrences and emerging environmental, economic and social issues. A electronic knowledge base **compendium** will also be available, to support more in-depth and thorough investigation of the environmental state and trends, indicators, data and outlooks.
- Capacity building methodologies, training modules and tools will be made available online as well as continuously updated data, information and assessment findings. The objective is to have a platform with a wide reach and accessibility which could be used to carry assessments at global or sub-global levels and engage and attract diverse group of experts, stakeholders and decision-makers.

As stated in document UNEP/GC/25/4/Add.1 entitled State of the environment and contribution of the United Nations Environment Programme to addressing substantive environmental challenges: overview of the international environmental assessment landscape and options for a future global assessment on environmental change, under the heading ‘Preferred Option’, option 3 described above is the preferred in as it:

- 1) responds best to the new strategic directions in UNEP by aligning the assessment along the main themes of the Medium Term Strategy;
- 2) leverages the new, cross-divisional working modalities and synergies within UNEP to engage all divisions in the production of the global assessment; and
- 3) provides short-term and long-term perspectives on the state of the global environment related to UNEP’s identified cross-cutting thematic priority areas of focus and analysis of trade-offs under various policy responses.

Options for future global integrated environmental assessment	Option 1: A Global Integrated Environmental Assessment updated to better utilize information technology	Option 2: The objective expert out-sourced assessment	Option 3: A coherent set of integrated and thematic assessments	Option 4: Indicator-based approach	Option 5: Targeted assessments on thematic priority areas supported by a “UNEP-live” enabling framework
Cost estimates*					
Indicative cost (US\$ million), including costs of the:	5 to 6 million (M)	2.5 to 3 million	8 to 10 million	2 to 2.5 million	Starting from 8.5 million
<ul style="list-style-type: none"> Process (Production meetings and consultations): 	1.5M	0.25M	2.0M	0.25M	2.0M (Platform development)
<ul style="list-style-type: none"> Publication, distribution and website.(NB: cost of product translations is not included: 	1.0M	0.5M	1.0M	0.5 M	1.0M
<ul style="list-style-type: none"> Experts, consultants, collaborating centres and institutions: 	1.5M	0.25M	2.0M	0.25M	2.0M
<ul style="list-style-type: none"> Outreach and communication 	0.25M	0.25M	0.5M	0.25M	0.25M
<ul style="list-style-type: none"> Staff travel 	0.25M	0.5M	0.5M	n.a	0.25M
<ul style="list-style-type: none"> Capacity building: 	1.0M	n.a.	1.0M	0.25M	1.5M
<ul style="list-style-type: none"> Data portal maintenance: 	1.0M	1.0M	1.0M	1.0M	1.5M

* Costing under various options cover the whole production cycle. Staff costs are not included.