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Policy issues: state of the environment

Findings of the fourth Global Environment Outlook report

Report of the Executive Director

Summary

The present report sets out the findings of the fourth *Global Environment Outlook: environment for development* report (GEO-4). The report provides an assessment of environmental change and how it affects people's security, health, social relations and material needs (human well-being), and development in general. The authoritative assessment tells a tale of unprecedented environmental changes caused by human activities taking place in an increasingly globalized, industrialized and interconnected world. It describes how the responsibility for global environmental pressures is distributed unequally throughout the world; while the rich contribute the most to those pressures, the poor are the most severely affected by their consequences.

Environmental change affects human development options. As clearly exemplified by disasters and armed conflicts, the poor, women and children are the most vulnerable to its effects. While environmental changes pose a serious challenge to humanity, they also represent opportunities, including for business, local communities and international cooperation. These aspects are interconnected; interlinkages, analyses and responses comprise an opportunity to address complex environment-development issues. For many of the issues, the benefits of early action outweigh the costs. Further knowledge about the value of these benefits, such as ecosystem services, as well as the understanding of interlinkages, can facilitate the transition to sustainable development. This transition will, however, require trade-offs among different values and concerns in society, which may involve hard choices. In addition, any such transition must be supported by well-governed and innovative institutions which are able to create the appropriate conditions for change.

The Executive Director suggests that the Governing Council/Global Ministerial Environment Forum (Council/Forum) consider the following three-tiered response to the findings of the GEO-4 report:

- a) Urging Governments, United Nations bodies, international organizations, the private

* UNEP/GCSS.X/1

sector, civil society and the public at large to work with UNEP and other environmental authorities at the global, regional, national and local levels towards sustainable development. The management of environment-development issues should be results-oriented. The characteristics of such efforts are set out in the present report;

b) Enhancing the capacity of UNEP to support worldwide efforts through the Medium-term Strategy for 2010–2013 and biennial programmes of work by:

- i) Providing scientific information, data and assessments and promoting awareness on the state and trends of the global environment;
- ii) Identifying targets, policies, regulations, tools and best practices;
- iii) Monitoring long-term achievements measured against such targets;

c) Further strengthening the scientific base of UNEP to keep the global environment under review.

The scope and objectives of the fifth Global Environment Outlook (GEO-5) report, which is currently scheduled for presentation in 2012, will be developed in consultation with governments, UNEP divisions, the scientific community and other stakeholders in the wake of a comprehensive review of the GEO-4 report. Provisions have been made in the 2008–2009 programme of work for consultations with governments, the scientific community, business and civil society. The global assessment should be used to strategically inform the preparation of UNEP programmes of work.

I. Suggested action by the Governing Council

1. The Governing Council may wish to consider the adoption of a decision along the lines suggested below:

A. SS.X/[...] Response to the findings of the fourth Global Environment Outlook report

The Governing Council,

Pursuing its functions and responsibilities as outlined in General Assembly resolution 2997 (XXVII) of 15th December 1972, including to keep under review the world environmental situation in order to ensure that emerging environmental problems of wide international significance are prioritized and receive appropriate and adequate consideration by Governments and to promote the contribution of the relevant international scientific and other professional communities to the acquisition, assessment and exchange of environmental knowledge and information,

Recalling its decisions 22/1 of 7 February 2003 on early warning, assessment and monitoring, 23/6 of 25 February 2005 on keeping the world environmental situation under review and 24/2 of 9 February 2007 on the world environmental situation,

Welcoming with appreciation the presentation by the Executive Director of the findings of the fourth Global Environmental Outlook report and the in-kind contribution from experts, governments, United Nations bodies, collaborating centres, the private sector and civil society in promoting the consultative and capacity-building process underpinning the assessment,

1. *Remains* deeply concerned over the evidence in the assessment of unprecedented environmental changes at all levels, including the natural and social time lags involved in addressing these changes and the risk of approaching tipping points beyond which there may be abrupt, accelerating and possibly irreversible changes, and their potentially negative implications for human well-being and economic and social development, especially for the poor and vulnerable groups in society;
2. *Acknowledges* that current environmental degradation represents a serious challenge for human development, peace and security, and that the benefits of early action outweigh the costs and represent opportunities for private sector investment, innovation and breakthroughs, consumer choices, local communities participation and strengthened cooperation at the national and international levels towards sustainable development;
3. *Stresses* that the transition towards sustainable development may involve hard choices among different concerns and interests in society which need to be supported by well-governed, innovative and results-oriented institutions which are able to create the appropriate conditions for change, and that it is the vision of the United Nations Environment Programme, as set out in the draft Medium-term Strategy for 2010–2013, to serve as a champion in this respect;
4. *Urges* Governments, United Nations bodies, international organizations, the private sector, civil society and the public at large to work with the United Nations Environment Programme and other environmental authorities at the global, regional, national and local levels for sustainable development by:
 - (a) Utilizing the evidence, projections and options for actions related to environmental change and its impacts on development and human well-being, which are highlighted in the fourth Global Environment Outlook report, to identify environmental commitments and targets for their activities;
 - (b) Integrating environmental targets into private and public sector decision-making by making effective use of legal regimes, financial instruments, standards, codes and guidelines, participatory processes and other evolving tools and capacities in order to create an enabling environment for:
 - (i) Increased private sector investments in technological innovations and initiatives for mitigation and adaptation to environmental change, including through sustainable production and consumption and improved resource efficiency;

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Comment [SB1]: How is this to be achieved at the level of general public? Not enough guidelines to underline and clarify this point in the whole document.

- (ii) Consumer and household investment in mitigation and adaptation to environmental change; [including through sustainable consumption and improved resource efficiency](#)
 - (iii) Expanding, in an equitable manner, the capabilities of people to mitigate and adapt to environmental change, paying particular attention to the needs of poor and vulnerable groups and their dependence on ecosystem services.
- (c) Reviewing the effectiveness of environmental performance of different social and economic sectors measured against environmental [commitments and targets](#);

5. *Requests* the Executive Director, through the programme of work and by working with national and regional environmental authorities, including through capacity-building and technology transfer, to respond to the present and future challenges facing humanity using an understanding of complex environmental interlinkages as a basis for the programme approach. The programme approach addresses six priority areas, namely, climate change, ecosystems management, environmental governance, hazardous substances (chemicals), natural disasters and post-conflict response, and resource efficiency, particularly sustainable consumption and production, as well as other environmental challenges by:

- (a) Partnering with centres of excellence and other stakeholders to develop a coherent and multi-scaled programme to provide compelling evidence through integrated environmental assessment on the interlinkages between environmental change and its impacts on development and human well-being;
- (b) Cooperating with other bodies in the United Nations system in the development of environmental targets and the promotion of the exchange of best practices in the areas of policies, regulations and use of economic instruments;
- (c) Reviewing and monitoring long-term achievements and effectiveness of environmental programmes in the United Nations system, including within the United Nations Environment Programme, as well as of environmental programmes of governments that wish to subject themselves to such reviews, measured against agreed environmental targets;

6. *Also requests* the Executive Director in building on the experiences gained from the fourth Global Environment Outlook report and other recent developments in the area of assessments, indicators and short- and medium-term environmental projections, to develop a scientifically credible and policy-relevant global assessment in close consultation with governments, the scientific community, the private sector and civil society to be concluded in time to strategically inform the development of the programme of work for the period 2014–2015.

II. GEO-4: Strengthening the scientific base of UNEP

2. The responsibility to provide credible environmental information for decision-making has been a core part of the UNEP mandate since it was created in 1972 and of its activities ever since. The challenge of providing such knowledge keeps growing with the ever-increasing scale and abundance of environmental change. As early as 1987, the World Commission on Environment and Development (The Brundtland Commission), chaired by Ms. Gro Harlem Brundtland, suggested that the capacities of UNEP, in this respect should be further strengthened.

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3. In 2002, the UNEP Governing Council/Global Ministerial Environment Forum acknowledged that the increasing complexity of environmental degradation required an enhanced capacity for scientific assessment and monitoring and for the provision of early warnings to Governments.¹ In order to respond to this need the Council/Forum initiated a broad-based consultative process on strengthening the scientific base of UNEP.² In February 2004, an intergovernmental and multi-stakeholder consultation on strengthening the scientific base of UNEP, which involved more than 100 governments and 50 partner organizations, identified needs and options to achieve this, which included calls for a

¹ See paragraph 8 (e) of the report of the Open-ended Intergovernmental Group of Ministers or Their Representatives on International Environmental Governance as adopted in decision SSVII/1.

² It engaged more than 100 Governments and 50 partners in written submissions and face-to-face dialogue (see also <http://science.unep.org>).

further strengthening of the Global Environment Outlook (GEO) process (See <http://www.unep.org/scienceinitiative/>).

4. Since 1997, UNEP has produced four GEO reports providing environmental assessments following a highly-regarded participatory process. The first GEO report in 1997 was followed by others in 1999 and 2002. With each report the GEO process evolved and expanded to include scenarios, among other things. The fourth assessment, *Global Environment Outlook: environment for development (GEO-4)*, is the result of the most comprehensive GEO process to date as called for in Governing Council decision 22/1 of 7 February 2003. The strengthened process was achieved by combining experiences from previous GEO assessments with elements from well-substantiated scientific assessment processes such as the Millennium Ecosystem Assessment.

5. GEO-4 was designed to ensure synergy between science and policy while maintaining its scientific credibility and making it responsive to policy needs and objectives. It was prepared through a comprehensive consultative process which began with the above-mentioned global intergovernmental consultation on strengthening the scientific base of UNEP in 2004. The global consultation was followed by regional consultations held from September to October 2004, which identified key regional and global environmental issues. Building on these consultations, the scope, objectives and process of *GEO-4* were finalized and adopted by the first global intergovernmental and multi-stakeholder consultation held in February 2005.

6. The assessment was carried out by ten chapter expert groups consisting of *coordinating lead authors* and *lead authors* supported by *chapter coordinators* provided by the UNEP secretariat. The draft outputs from the expert groups were subjected to an additional round of *regional consultations* and two rounds of extensive *expert and government peer review*. The review process was overseen by *chapter review editors*. The assessment was also guided and supported by a *high-level consultative group* of senior government policymakers, funding partners, scientists and academics as well as representatives of United Nations agencies, international organizations, the private sector, GEO collaborating centres and civil society.

7. In ten chapters, the *GEO-4* assessment sets out: an overview of environmental issues, state and trends of the environment between 1987 and 2007, the human dimensions of environmental change, an outlook for the future using four scenarios, and the policy options available to sustain our common future:

Chapter 1: Environment for Development

Chapter 2: Atmosphere

Chapter 3: Land

Chapter 4: Water

Chapter 5: Biodiversity

Chapter 6: Sustaining a Common Future

Chapter 7: Vulnerability of People and the Environment: Challenges and Opportunities

Chapter 8: Interlinkages: Governance for Sustainability

Chapter 9: The Future Today

Chapter 10: From the Periphery to the Core of Decision Making - Options for Action

8. The launch in 2007 of the *GEO-4* report coincided with the twentieth anniversary of the launch of the report of the World Commission on Environment and Development, *Our Common Future*. *GEO-4* uses that report as a reference to assess progress in addressing key environment and development issues. *GEO-4* highlights the vital role of the environment in development and, more importantly, for human well-being. Information is drawn from a broad range of credible sources, including scientific literature, the GEO data portal, local and indigenous knowledge and other assessments such as the Millennium Ecosystem Assessment and the fourth assessment of the Intergovernmental Panel on Climate Change (IPCC).

9. The Summary for Decision Makers (SDM) was prepared by UNEP with technical inputs from the coordinating lead authors and inputs from the members of the high-level consultative group. It was subjected to two rounds of extensive expert and government peer review and in-depth consideration by the second global intergovernmental and multi-stakeholder consultation in September 2007. The consultation adopted a statement which endorsed the SDM. The statement is set out in the annex to the present report.

10. Governments and various organizations were consulted during the process and their contributions have been vital in ensuring the policy relevance and legitimacy of the assessment. The

assessment was compiled by a group of more than 380 scientists, all leading figures in fields such as climate science, ecology, fisheries or land use, subdivided into ten expert groups that prepared the chapters. Some 157 of these experts were nominated by 48 governments. A further 1,000 scientists took part as peer-reviewers, scrutinizing the conclusions in the areas of their expertise to challenge any misleading claims. A total of more than 13,000 comments on the draft of the full report and 3,000 comments on the summary for decision makers, were recorded and considered by the expert groups writing each chapter.

11. The release of GEO-4 has considerably raised the public profile of environmental issues as well the role of UNEP to keep the global environment under review. This has also increased expectations for effective responses at different levels to address the challenges. GEO-4 provides decision makers with the best possible non-prescriptive yet policy-relevant knowledge platform upon which to act.

III. The GEO-4 key messages for decision-makers

12. The following key messages for decision makers were endorsed by the second global intergovernmental and multi-stakeholder consultation in September 2007:

Humankind depends on the environment, which is critical for both development and human well-being. Natural resources — as opposed to financial, material and human resources — are the foundation for much of the wealth of countries. Environmental change can profoundly impact the fundamental rights of human beings and affect people's security, health, social relations and material needs.

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There is evidence of unprecedented environmental changes at global and regional levels:

- **The Earth's surface is warming. This is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and the rising global average sea level.** Other major impacts include changes in water availability, land degradation, food security, and loss of biodiversity. Such impacts will have a long term effect on economic security and escalate global poverty, and may prove to be a major obstacle in the attainment of the Millennium Development Goals. The projected increase in frequency and intensity of heatwaves, storms, floods and droughts would dramatically affect many millions of people including those in small island developing States and Polar regions. While in the past century the global average temperature increased by 0.74°C, the Intergovernmental Panel on Climate Change best estimate for additional warming over the current century is projected to be from 1.8 to 4.0°C. Climate change may further exacerbate the loss of biodiversity and degradation of land, soil, forest, freshwater and oceans.
- **More than two million people globally die prematurely every year due to outdoor and indoor air pollution.** Although air pollution has decreased in some cities due to technological and policy measures, increasing emissions in other cities are intensifying the challenges. Indoor air pollution due to the improper burning of solid biomass fuels imposes an enormous health burden.
- **The "hole" in the stratospheric ozone layer over the Antarctic – the layer that protects people from harmful ultraviolet radiation – is now the largest it has ever been.** Due to decreased emissions of ozone-depleting substances, the ozone layer is expected to recover, assuming full Montreal Protocol compliance, but not until between 2060 and 2075 due to long lag times.
- **Unsustainable land use and climate change are driving land degradation,** including soil erosion, nutrient depletion, water scarcity, salinity, desertification and disruption of biological cycles. Poor people suffer disproportionately from the effects of land degradation, especially in the drylands, which support one third of the world's population.
- **The per capita availability of freshwater is declining globally, and contaminated water remains the greatest single environmental cause of human sickness and death.** If present trends continue, 1.8 billion people will be living in countries or regions with absolute water scarcity by 2025, and two-thirds of the people in the world could be subject to water stress. The declining quantity and quality of surface and groundwater is impacting aquatic ecosystems and their services.
- **Aquatic ecosystems continue to be heavily exploited, putting at risk the sustainability of food supplies and biodiversity.** Global marine and freshwater fish catches show large-scale declines, caused mostly by persistent overfishing.
- **The great majority of well-studied species are declining in distribution, abundance or both.** Although the decline in the area of temperate forest has been reversed, with an annual increase of 30,000 km² between 1990 and 2005, deforestation in the tropics continued at an annual rate of

130,000 km² during the same period. More than 16,000 species have been identified as threatened with extinction.

These unprecedented changes are due to human activities in an increasingly globalized, industrialized and interconnected world, driven by expanding flows of goods, services, capital, labour, technologies, information, ideas and people, affecting even isolated populations. The responsibility for global environmental pressures is not equally distributed throughout the world. In 2004, for instance, United Nations Framework Convention on Climate Change Annex 1 countries, which account for 20 per cent of the world population, produced 57 per cent of gross world product based on purchasing power parity and accounted for 46 per cent of greenhouse gas emissions. Industrial development, natural resource extraction and carbon-intensive industrial production may have significant environmental consequences, which need to be addressed. Responses include increased investment in research and innovation and the use of the best available technologies and practices, as appropriate.

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Environmental changes affect human development options, with poor people being the most vulnerable to its effects. In the period between 1992 and 2001, for example, floods were the most frequent natural disaster, killing nearly 100,000 people and affecting more than 1.2 billion people. More than 90 per cent of the people exposed to natural disasters live in the developing world.

Biophysical and social systems can reach tipping points, beyond which there are abrupt, accelerating or potentially irreversible changes. The four *GEO-4* scenarios show an increasing risk of crossing tipping points even as some global environmental degradation trends are slowed or reversed at different rates towards the middle of the century. Changes in biophysical and social systems may continue even if the forces of change are removed, as evidenced in stratospheric ozone depletion and the loss of species.

The transition towards sustainable development needs to be pursued more intensively by nations and the international community, including through capacity-building and technological support to developing countries. Actions by all stakeholders, including the private sector and consumers, for reducing the drivers of environmental changes require trade-offs among different values and concerns, which may involve hard choices.

Decision makers can promote timely action by integrating prevention, mitigation and adaptation efforts into the core of decision-making through sustained efforts which include:

- **Reducing people's vulnerability to environmental and socio-economic changes** by decentralization, strengthening the resource rights of local people, improving access to financial and technical support, improving capacities to cope with natural disasters, and empowering women and other vulnerable groups;
- **Integrating environmental activities into the broader development framework,** including by ascertaining the environmental impacts of proposed public spending, identifying sectoral and intersectoral environmental targets, promoting best practices and monitoring long-term achievements;
- **Enhancing treaty compliance** by overcoming administrative costs and the heavy reporting burden of Parties, improving monitoring and compliance, and enhancing coordination, particularly at national level;
- **Creating enabling environments for innovations and emerging solutions** by using economic instruments, new and existing technologies, the empowerment of stakeholders and more adaptive approaches which break away from the traditional, segmented, institutional management and production systems, and result in more sustainable consumption and production patterns;
- **Strengthening environmental knowledge, education and awareness** by making the best scientific research and data available through improved monitoring, assessments and knowledge infrastructure, building on the rapid developments in information and communication technologies;
- **Mobilizing financial resources to address environmental problems** through innovative approaches, including payments for ecosystem services as a tool for decision-making while achieving an open, non-discriminatory and equitable multilateral trading system as well as meaningful trade liberalization benefiting countries at all stages of development.

Comment [SB2]: Strengthening the economic case for socially and environmentally responsible investments, cost-benefit analysis of such investments, assessment of loss accruing from continuing and long term environmental degradation, providing for incentives for best practices.

Knowledge of the interlinkages between environment and development, and their impacts on human well-being, gained since the release of *Our Common Future*, the report of the World Commission on Environment and Development, can be used effectively in the transition towards sustainable development. Concerns about the global environment may have reached a tipping point of their own, with the growing realization that, for many problems, the benefits of early action

outweigh the costs. Now is the time to pursue sustainable development supported by well-governed, innovative and results-oriented institutions.

IV. Responding to the GEO-4 findings

13. In its decision 24/2 of 9 February 2007, the Governing Council requested the Executive Director to “present the findings of the fourth Global Environment Outlook report to the Governing Council at its tenth special session in order to facilitate consideration of the findings and their potential implications, for example for the strategic direction of the programme of work of the United Nations Environment Programme and for the performance of the functions of the United Nations Environment Programme in the United Nations system and in the provision of services to Member States of the United Nations”.

14. In considering the findings of the assessment the Council/Forum may, in particular, wish to consider the key messages for decision makers of the summary for decision makers endorsed by the second global intergovernmental and multi-stakeholder consultation in September 2007, presented above. The key messages are based on a thorough assessment of environmental change and how it affects people’s security, health, social relations and material needs (human well-being), and development in general. The assessment highlights unprecedented environmental change at global and regional levels that may reach tipping points, beyond which there may be abrupt, accelerating and potentially irreversible changes.

15. These unprecedented changes are caused by human activities taking place in an increasingly globalized, industrialized and interconnected world, driven by expanding flows of goods, services, capital, people, technologies, information, ideas and labour. The responsibility for global environmental pressures is distributed unequally throughout the world; while the rich contribute the most to those pressures, the poor are the most severely affected by their consequences.

16. Environmental change affects human development options. As clearly exemplified by disasters and armed conflicts, the poor, women and children are the most vulnerable to its effects. Conflicts, violence and persecution, for example, displace large civilian populations, forcing millions of people into marginal ecological areas within countries and across international boundaries. This undermines, sometimes for decades, sustainable livelihoods, economic development, and the capacity of ecosystems to meet an increased demand on resources. In addition, over the past 20 years, natural hazards have claimed more than 1.5 million lives and affected more than 200 million people annually.

17. While environmental changes pose a serious challenge to humanity, they also represent opportunities, including for business, local communities and international cooperation. These aspects are interconnected; interlinkages, analyses and responses comprise an opportunity to address complex environment-development issues. For many of the issues, the benefits of early action outweigh the costs. Further knowledge about the value of these benefits, such as ecosystem services, as well as the understanding of interlinkages, can facilitate the transition to sustainable development and trade offs among different values, interests and concerns in society.

18. The Executive Director suggests that the Council/Forum considers the three-tiered response to the findings of GEO-4 as set out below.

A. Initiating an international effort for the environment

19. The Brundtland Commission inspired many initiatives at the global, regional, national and local levels, including the ground-breaking 1992 United Nations Conference on Environment and Development (Earth Summit) and National Strategies for Sustainable Development, as well as local, participatory conservation and sustainable use projects based on the principles of fairness, equity and benefit-sharing.

20. Twenty years later, GEO-4 concludes that the transition towards sustainable development needs to be pursued more intensively by nations and the international community, including through capacity building and technological support to developing countries. Actions by all stakeholders, including the private sector and consumers, for reducing the drivers of environmental changes require trade-offs among different values and concerns, which may involve hard choices.

21. Individuals, consumers, households, villagers, farmers, small-scale businesses and large-scale private companies, [investors and shareholders](#), need the right enabling environment to make

environmentally friendly choices. They need to be supported in their choices by well-governed, flexible, adaptive, innovative and results-oriented institutions able to create the appropriate conditions for change. This requires social and economic sector authorities to integrate environmental concerns into the core of their decision-making. Environmental authorities need to backstop and support this integration.

22. The Executive Director suggests that the Council/Forum urges Governments, United Nations bodies, international organizations, the private sector, civil society and the public at large to work with UNEP and other environmental authorities at the global, regional, national and local levels for sustainable development by:

(a) Utilizing the evidence, projections, analysis and options for actions related to environmental change and its impacts on development and human well-being, such as those provided in the fourth Global Environment Outlook, to identify environmental targets for their activities;

(b) Integrating environmental targets into private and public sector decision-making by making effective use of legal regimes, financial instruments, standards, [codes and guidelines](#), participatory processes and other evolving tools and capacities in order to create an enabling environment for:

- (i) Increased private sector investments in technological innovations and initiatives for mitigation and adaptation to environmental change, including through sustainable production and consumption and resource efficiency;
- (ii) Consumer and household investment in mitigation and adaptation to environmental change;
- (iii) Expanding, in an equitable manner, the capabilities of people to mitigate and adapt to environmental change, paying particular attention to the needs of poor and vulnerable groups and their dependence on ecosystem services;

(c) Reviewing the effectiveness of environmental performance of different social and economic sectors measured against environmental targets.

B. **Enhancing the capacity of UNEP to support interlinkages in response to environmental change**

Comment [SB3]: Strengthen business engagement in UNEP participatory processes

23. The fourth Global Environment Outlook (GEO-4) assessment report highlights the interlinkages between environmental change and development, emphasizing the strategic need for adaptive, legal, institutional and market frameworks which can respond to environmental change and its impacts on development and human well-being. GEO-4 also emphasizes the need to enhance society's understanding of the interlinkages of environmental change and the risk of breaching tipping points beyond which the recovery of the environment itself would be compromised with severe impacts on development and an interdependent world.

24. The Executive Director further suggests, therefore, that UNEP provide support through the Medium-term Strategy for 2010–2013 and its programmes of work to leverage substantial funding resources to support further policy-relevant scientific research and sustainable support to governments to enable them to respond effectively at the appropriate level. An interlinkages-based response to environmental change is also important in addressing one of the principles of the United Nations Charter on peace and security. Integrated environmental assessment is the foundation upon which UNEP will base the Medium-term Strategy with regard to:

- (a) Climate change;
- (b) Ecosystems management;
- (c) Environmental governance;
- (d) Hazardous substances;
- (e) Natural disasters and post-conflict response;
- (f) Resource efficiency – sustainable consumption and production.

25. These are the building blocks for sustainable development. Activities related to tackling these issues will build on the current UNEP programme of work and facilitate the introduction of innovative

and cutting edge initiatives. GEO-4 is a starting point to respond to the needs of countries in these six priority areas as well as to other environmental challenges. Adequate and sustainable funding for scientific assessments is key to UNEP success in these six priority areas. In addressing the priority areas, UNEP will cooperate with other United Nations bodies and complement their programme activities, particularly those of the multilateral environmental agreement secretariats.

26. UNEP will perform the following functions identified by GEO-4 as being among the core functions for environmental authorities in support of environmental mainstreaming:

- (a) Providing scientific information, data and assessments, and promoting awareness;
- (b) Identifying targets, policies, regulations, tools and best practices;
- (c) Monitoring long-term achievements measured against such targets.

27. UNEP will perform these functions at the global level by working with partners and by enhancing the capacities of regional and national environmental institutions through capacity-building and technology support. In this manner, UNEP will capitalize fully on the capacities of member States and regional and international intergovernmental institutions. To enhance its capacity to perform these functions in support of an interlinkages response to environmental change, UNEP will:

- (a) Enter into partnership with centres of excellence and other stakeholders to strengthen a coherent and multi-scaled programmatic approach to provide compelling evidence through integrated environmental assessment on the interlinkages of environmental change and their impacts on development and human well-being;
- (b) Cooperate with other bodies in the United Nations system in providing support to developing countries in the development of environmental targets and promoting the exchange of best practices in the areas of policies, regulations and use of economic instruments;
- (c) Review and monitor the long-term achievements and effectiveness of environmental programmes in the United Nations system as well as the environmental programmes of governments wishing to subject themselves to such reviews, measured against agreed environmental targets.

C. Initiating consultations on future global GEO series

28. As part of strengthening the scientific base of UNEP, comprehensive consultations with governments, the scientific community and stakeholders will be conducted in 2008 on the GEO-4 assessments to capture the lessons learnt in order to better inform the following generation of the GEO series. GEO-4 mobilized scientists, collaborating centres, governments and other partners in preparing a critically peer reviewed, scientifically credible and policy-relevant assessment of global as well as regional issues. It became an intergovernmental and multi-stakeholder process based on the mandate and convening power of UNEP without necessitating the creation of a new intergovernmental body.

29. GEO-4 drew heavily on existing sub-global assessments, as well as on thematic assessments, such as those of IPCC. The preparation of future global GEO reports will build upon the successes of GEO-4 as well other assessment processes, including those of IPCC. The intergovernmental and sub-global features will be sustained and further strengthened through capacity-building in developing countries for collection, assessment and exchange of environmental data and information. The ongoing assessment of the regular process for the global reporting and assessment of the state of the marine environment initiated by the United Nations General Assembly is expected to provide useful insights in this respect. Regional and national integrated environmental assessment processes will be further strengthened in consultation with governments and other stakeholders to ensure synergy with the global process.

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30. The next global GEO report needs to build on GEO-4 and the Millennium Ecosystem Assessment and further enhance our knowledge about the value of ecosystem services and the impacts of environmental change on human vulnerability and well-being. Assessment of effectiveness of policies and identification of on-the-ground best practices and emerging good practice opportunities will also need more attention.

31. Indicators could be used more effectively to structure and strengthen the evidence base of the next generation of international assessments. Core indicators, including existing ones such as the 2010 biodiversity indicators and those of the Millennium Development Goals, can be used to enhance the flow of data both in short- and the long-term. Cutting-edge scientific research, enhanced accessibility to timely and appropriate data and information as well as policy-relevant indicators are critical to the

user-driven integrated environmental assessment through which UNEP will deliver its 2010–2013 Medium-term Strategy in terms of keeping the global environment under review.

32. Provisions have been made in the UNEP 2008–2009 programme of work for initiating a scientifically credible, policy-relevant and legitimate fifth assessment. The scope and objectives of the fifth global GEO report will be developed in consultation with governments, UNEP divisions, the scientific community and other stakeholders. Provisions have been made in the 2008–2009 programme of work for consultations with governments, the scientific community, business and civil society. The assessment should be concluded by mid-2012, but preliminary findings released in 2011 will be used to strategically inform the preparation of the UNEP2014–2015 programme of work.

V. Conclusions

33. GEO-4 provides an assessment of environmental change and how it affects people's security, health, social relations and material needs (human well-being), and development in general. The authoritative assessment tells a tale of unprecedented environmental changes at global and regional levels, some of which may reach tipping points, beyond which there may be abrupt, accelerating, or potentially irreversible changes. These changes are caused by human activities taking place in an increasingly globalized, industrialized and interconnected world, driven by expanding flows of goods, services, capital, people, technologies, information, ideas and labour. It describes how the responsibility for global environmental pressures is distributed unequally throughout the world; while the rich contribute the most to those pressures, the poor are the most severely affected by their consequences.

34. The key messages for decision makers endorsed by the second global intergovernmental and multi-stakeholder consultation held in September 2007 warrant particular consideration by the Council/Forum. The Executive Director suggests that the Council/Forum considers the following three-tiered approach to responding to the findings of GEO-4:

(a) Urging Governments, United Nations bodies, international organization, the private sector, civil society and the public at large to work with UNEP and other environmental authorities at the global, regional, national and local levels for sustainable development;

(b) Enhancing the capacity of UNEP to support worldwide efforts through the Medium-term Strategy for 2010–2013 and its programmes of work. UNEP will support an interlinkages response to environmental change by:

- (i) Providing scientific information, data and assessments and promoting awareness;
- (ii) Identifying targets, policies, regulations, tools and best practices;
- (iii) Monitoring long-term achievements measured against such targets;

(c) Further strengthening the scientific base of UNEP through the development of future global report series. The scope and objectives of the future global GEO will be developed in consultation with governments, UNEP divisions, the scientific community and other stakeholders. Provisions have been made in the 2008–2009 programme of work for consultations with governments, the scientific community, the private sector and civil society. Subject to guidance from the above-mentioned consultations, the next global GEO could be concluded by mid-2012, but preliminary findings released in 2011 will be used to strategically inform the preparation of the UNEP 2014–2015 programme of work.

35. The GEO-4 assessment is a key resource and knowledge base through which UNEP will strengthen interlinkages and bridge environment-development policy processes.

Annex

Statement by the second global intergovernmental and multi-stakeholder consultation on the fourth Global Environment Outlook report held in September 2007

**UNITED
NATIONS**

EP

UNEP/DEWA/GEO/IGC.2/2



**United Nations
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Second global intergovernmental and multi-stakeholder consultation on the fourth Global Environment Outlook report
Nairobi, Kenya, 24–26 September 2007

Statement of the second global intergovernmental and multi-stakeholder consultation on the fourth Global Environment Outlook report, held in Nairobi from 24 to 26 September 2007

We, the participants at the second global intergovernmental and multi-stakeholder consultation on the fourth Global Environment Outlook report,

Recalling the responsibilities of the Governing Council of the United Nations Environment Programme as outlined in General Assembly resolution 2997 (XXVII) of 15 December 1972, to keep under review the world environmental situation in order to ensure that emerging environmental problems of wide international significance are prioritized and receive appropriate and adequate consideration by Governments and to promote the contribution of relevant international scientific and other professional communities to the acquisition, assessment and exchange of environmental knowledge and information,

Recalling also Governing Council decisions 18/27 of 26 May 1995, 19/3 of 7 February 1997, 20/1 of 4 February 1999, 22/1 I B of 7 February 2003 and 23/6 of 25 February 2005, and, in particular, decision 24/2 of 9 February 2007 on the world environmental situation, in which the Governing Council called on Governments and experts to contribute to the finalization of the fourth Global Environment Outlook report in accordance with the process outlined during the global intergovernmental and multi-stakeholder consultation on the fourth Global Environment Outlook assessment, held in Nairobi on 19 and 20 February 2005, by, among other things, reviewing the summary for decision makers in 2007, participating in the second global intergovernmental and multi-stakeholder consultation in September 2007 and supporting outreach activities relating to the fourth Global Environment Outlook report and requested the Executive Director to present the findings of the fourth Global Environment Outlook report to the Governing Council at its tenth special session in order to facilitate consideration of the findings and their potential implications, for example, for the strategic direction of the programme of work of the United Nations Environment Programme and for the performance of the functions of the

United Nations Environment Programme in the United Nations system and in the provision of services to Member States of the United Nations,

Having considered the summary for decision makers of the fourth Global Environment Outlook report section by section,

Noting with appreciation the support provided by the Governments of Belgium, the Netherlands and Norway in the process of producing the fourth Global Environment Outlook report,

1. *Recognizes* the important role that Governments and stakeholders have played and should continue to play in identifying the key issues to be assessed through the Global Environment Outlook process by providing data, information and knowledge from regional, national, local and indigenous sources, in reviewing draft findings and in considering actions based on the findings of the process;
 2. *Welcomes* with appreciation the in-kind contributions from Governments, individual experts and organizations that have contributed to the coordination, preparation and review of the fourth Global Environment Outlook report and its summary for decision makers in response to the statement by the first global intergovernmental and multi-stakeholder consultation on the fourth Global Environment Outlook report held in Nairobi on 19 and 20 February 2005;³
 3. *Endorses* the fourth Global Environment Outlook report summary for decision makers set out in the annex to the present statement and encourages its consideration by the global community and the United Nations system;
 4. *Recommends that* the Executive Director submit the summary for decision makers of the fourth Global Environment Outlook report to the Governing Council/Global Ministerial Environment Forum at its tenth session for its consideration and agreement on follow-up action to be taken by the United Nations Environment Programme in its Medium-term Strategy and on the budget and programme of work.
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³

UNEP/GC.23/CRP.5.