Review of the Initial Impact of the GEO-4 Report

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REVIEW *of the* INITIAL IMPACT OF THE GEO-4 REPORT

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EXECUTIVE SUMMARY

The Review

This *Review of the Initial Impact of the GEO-4 Report,* conducted ten months after GEO-4's launch, was designed to assess the extent to which target audiences have used the global GEO-4 Report and the Summary for Decision Makers, the influence it has had to date, and to identify the main factors affecting its use and influence. The premise of the Review is that the extent and types of use and influence are good indications of the potential impact of GEO-4 over time, and that understanding the patterns and the reasons will highlight issues that need to be considered in the design of GEO-5. Current literature on leading global assessment processes, previous assessments, the project logic and a mixed methods approach were used to capture and analyze the perceptions and experiences of just over 150 users and potential users[1], as well as key UNEP staff. Surveys and Internet research provided additional insights beyond GEO's 'inner circles'.

Overall conclusions

The Review Team recognizes that UNEP has established and maintained over many years a unique position of leadership in environmental assessment. The original concept and vision of the GEO process as an inclusive, participatory process of global assessment set an important precedent for UNEP and for the many other assessment processes that followed in the global environment community. Unlike most other assessment processes, UNEP has invested incrementally over time in the development of networks of data and assessment providers, the convening of geographically and gender balanced multi-stakeholder platforms and an inclusive and participatory process for the generation of regular global environmental outlook reports and associated products. The investment in this constituency has in turn increased the knowledge base relevant to addressing the most pressing of global environmental problems, as well as strengthening the capacity of governments, NGOs and research and academic institutions.

The strengths of the GEO process, its products and associated networks are evident in the broad base of support that GEO has developed among its primary environmental constituents, the expansion of 'GEO like' products and processes at regional, national, local and municipal levels, and the strong sense of identification that participants of the GEO process express in the value of it to their work. The expertise and commitment of the UNEP GEO Coordinating Team to the vision, concept, process and stakeholders have undoubtedly played an invaluable role in the successes and growth of GEO from its inception to the present day, and the Review Team commends UNEP for this sustaining this achievement over time.

Overall the Review Team concludes that GEO continues to fill an important niche in the global assessment landscape by being relevant, useful and adding value to most of its primary environment constituency. It also concludes that more needs to be done to reposition GEO in maximizing its potential to ensure that environmental problems and emerging issues of wide international significance receive appropriate, timely consideration by governments and other stakeholders, particularly with respect to human and ecosystem wellbeing and the role of private sector in global sustainable development.

Achievements

The GEO-4 Report is an assessment that remains pivotal to UNEP's mandate to keep the global environmental situation under review. The Review found that the actors responsible for its design and production have been very successful in meeting the overall GEO-4 objective to provide a 'comprehensive, reliable and scientifically credible, policy-relevant and legitimate up-to-date assessment of, and outlook regarding the interaction between environment and society'. It is

[1] Those interviewed were selected partly randomly, partly purposefully from the contact lists of the GEO-4 Coordinating Team: three quarters were involved in the GEO-4 production process, 61% worked in the environment, 10% in development and 13% in both. By sector, the largest group was from government (31%) followed by the academic sector (23%), non-government sector (21%), UN (14%), the private sector (7%) and no affiliation (4%).

widely used among those who were interviewed[2], in particular as a source of reference – an 'encyclopedia' - aimed at raising general awareness and informing research and teaching. Its use for policy purposes is concentrated at the beginning of the 'policy cycle' – problem identification, agenda setting and policy research.

A majority of respondents found the GEO-4 Report to be relevant to their work where they need a global and, to some extent, a regional perspective. This view is particularly strong among government and developing country representatives. More than the other target groups, policy makers and academia found it to be useful for their work. It is considered to be important for environmental governance and is making contributions to multilateral environmental agreements. There is significant appreciation for the focus on the intersection between environment and development, and a general view that this focus should be retained and strengthened. In a global assessment landscape that is becoming markedly more crowded, GEO-4 compares favorably with other assessment reports. Just over 60% of respondents found it to be the same or better than others in terms of the value it could add to their work.

The GEO-4 Coordinating Team and its collaborators worked hard and with considerable success to ensure that GEO-4 maintained its reputation as an assessment of high quality. The credibility of the Report is high in terms of comprehensiveness, reliability and standing and as an authoritative resource. It is perceived to be fairly user-friendly and up-to-date considering the significant challenges in this regard inherent in this type of assessment.

The GEO-4 team gave higher priority than any of its predecessors to reaching its primary target group. This yielded good results, especially during the production process when several impressive strategies were launched to ensure credible and high level intergovernmental engagement and input, especially among environmental actors. The Summary for Decision Makers played a significant role in the positive reception among policy makers. The availability of the Report in several languages, its distribution through the Internet and its successful launch made it widely accessible, increasing its reach among both primary and secondary target groups.

Challenges

Challenges inherent in the GEO-4 production process affected the scientific rigor (an aspect of its credibility) and legitimacy of the Report largely due to differences in data quality across chapters (due to the data available), the need for negotiation in a multi-stakeholder process and the balance between representation and expertise from scientific and policy communities. Of particular concern is the general perception across user groups that the Summary for Decision Makers production process did not meet standards of independence. The Summary for Decision Makers is therefore generally perceived to be less reliable and authoritative than the main assessment report.[3]

The Report was written for a global audience with a global focus on 'Environment for Development', and thus is perceived as less relevant, valuable and used by actors at national level. Development practitioners and private sector actors also perceive the Report as less relevant to their interests because of its specific lens on the environment that does not resonate strongly enough with their needs and 'language'.

Its relevance has also been affected by the increasingly crowded assessment landscape. Special concerns are twofold: the lukewarm views by a significant number of respondents and key informants[4] across the primary and secondary target audiences of the relevance, utility and value of GEO-4 compared to other sources of information, and the lack of coordinated, cohesive and focused action among UN agencies and by UNEP to use and promote the use of GEO. The limited conceptualization and articulation of target groups, desired outcomes and how they are to be achieved are factors that have influenced these perspectives.

2 It should be taken into account that these are likely to have a positive bias towards GEO.

3 This is primarily in response to what some see as a compromise during a negotiated process that sacrificed 'scientific rigor' for 'political expediency' during the final stages of the intergovernmental consultation towards endorsement of the GEO-4.

4 Key persons among primary and secondary target audiences usually selected due to their deep insights and broad perspectives.

The majority of users see the Report as a source of reference to be used as an 'encyclopedia' to justify or elucidate an argument, to highlight and confirm current trends and issues or to educate the next generation. This type of use rarely changes existing paradigms or leads to new policy narratives. Decision makers are now also more intent on seeking solutions and proposals for concerted action in which each actor can find their space. These are all important considerations in any revision of the niche GEO has to occupy in future.

Engaging influential policy makers from *outside* the environmental constituency, as well as secondary target audiences - in particular private sector and development actors - proved to be challenging, partly as a result of inadequate resources and concerted outreach strategies, and possibly also as a result of limited involvement in the assessment process of these secondary target audiences. Penetration therefore remains relatively low among the secondary target audiences compared to the primary target audience. They find that the lens through which the content has been designed and the 'language' in which facts and arguments are presented do not resonate or suit their needs. The potential of the Internet and the new as well as specialized media was used effectively for the launch but not fully tapped, nor were resources available to follow up on launch activities. There is some concern about the awareness and accessibility of GEO in developing countries with inadequate infrastructure and without adequate mobilization of organizations and individuals that can champion GEO.

While some of these issues are inevitable given the focus and nature of UNEP's mandate specifically on environment, the Review pointed to a need to clarify the purpose and objectives of GEO in the global environmental assessment landscape and the need for careful consideration of trade-offs in process and content. Other concerns relate to issues of design and execution. Key areas for attention were identified: (i) the design and management of the production process; (ii) the scope and focus of the Report; (iii) the conceptualization and strategies for penetration of primary and secondary target audiences; and (iv) the explicit and consistent articulation of impact pathways, including desired outcomes and underlying assumptions.

Strategic considerations

Over the past decade UNEP has successfully developed a niche in the increasingly crowded environmental assessment landscape. UNEP's reputation and weight as a neutral actor has supported the evolution of GEO as a unique product - an authoritative, comprehensive assessment of global environmental issues that sculpts the 'bigger picture' by articulating key environment and development issues and their interconnections, monitoring critical trends over time and using these to provide a global outlook on the future. Each successive GEO has increasingly built on and developed critical strengths – the unique network of contributing centers and individual experts from developing and developed regions, the multi-layered peer review mechanisms and an intergovernmental, multi-stakeholder process that increases the relevance and accuracy of the content.

The Review showed that GEO's mandate and niche are also the basis of some of its most significant challenges, including (i) competing sources of information that are more easily applied to action (from environment *and* development sectors), (ii) shifting demands for information - from problem identification and scenario building for the future towards providing policy options for concerted action, and (iii) the importance of engaging major actors beyond the environmental constituency in addressing the drivers of unsustainable development, particularly those in economic and social development, trade and finance at international, regional and national levels.

The Review also identified other critical factors that determine the extent of GEO's use and influence: (i) its scope and scale, timing and intent that requires clear articulation of desired outcomes and 'impact pathways'; (ii) the precision with which audiences are targeted; (iii) the strategies and mechanisms through which they are reached; (iv) perceptions among users of relevance, credibility and legitimacy, and (v) the receptiveness of the target audiences given their particular contexts and needs.

The new phase in UNEP's development heralded by the Medium Term Strategy 2010-2013 and the broader UN Reform process provides a strategic opportunity to evolve the mandate, role and niche of GEO to meet the challenges posed by changing institutional and global contexts, and thereby to

position GEO as the flagship assessment product that can help anchor and direct UNEP strategies and programmes.

To rise to the challenges of this opportunity, choices will have to be made. If the global GEO report is to remain a general public good in the service of the broad environmental constituency, GEO assessments will continue to evolve incrementally, focused on sharpening the understanding of how to design, produce and use the foundational GEO product to empower the environmental constituency for greater influence in the international environmental governance arena. If, on the other hand, GEO chooses to become a robust foundational product of high scientific integrity, authority and utility within the scope of "environment for development", with a stronger focus on the expansion of its influence to new, influential processes and actors beyond UNEP's traditional environment constituency, other strategies will have to be designed. Such approach will require a better understanding and targeting of strategic international, regional and national processes and primary audiences related to influential policy making outside of, but fundamental to the environmental domain, particularly in development and private sector processes.

In addition, there seems to be a demand for more practical solutions to use assessment results in designing and implementing programs and policies, and in monitoring and evaluation of development efforts. The degree to which UNEP can respond to this challenge will depend on the extent to which it positions and uses GEO as part of its leadership role in global environment and development agenda setting.

It is also likely that, regardless of whether the next global assessment continues to be very broad in its approach and target audiences or it seeks a more targeted influence at the science-policy interface, a range of ancillary products of different types and formats will be needed. These would have to be developed through the lens of the main target audiences, requiring their closer engagement from the beginning of the production process. Additional products will not necessarily require more GEO funds, but rather better coordination and partnerships within UNEP, through key UNEP program areas and divisions, and with key external partners in the UN system and more broadly.

ACRONYMS

BRICS	Brazil, the Russian Federation, India, China and South Africa
CCs,	Collaborating Centres
COPs	Conference of Parties
CSR	Corporate Social Responsibility
DCPI	Division of Communication and Public Information
DEPI	Division of Environmental Policy Implementation
DEWA	Division of Early Warning and Assessment
DTIE	Division of Technology, Industry and Economics
EEA	European Environment Agency
GEA	Global Environmental Assessment
GEF	Global Environment Facility
GRI	Global Reporting Initiative
HDI	Human Development Index
HDR	Human Development Report
ICT	Information and communication technologies
INGO	International Non Governmental Organization
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for the Conservation of Nature
LAC	Latin America and the Caribbean
MA	Millennium Ecosystem Assessment
MDG	Millennium Development Goals
MEA	Multilateral Environmental Agreement
MESA	Mainstreaming Environment and Sustainability in Africa Universities Partnership Program
MTS	Medium Term Strategy
NGO	Non Governmental Organization
OECD	Organization for Economic Cooperation and Development
SDM	Summary for Decision Makers
SOE	State of the Environment
SPSS	Statistical Package for the Social Sciences
SWOT	Strengths, Weaknesses, Opportunities, Threats
TEEB	The Economics of Ecosystems and Biodiversity
TOR	Terms of Reference
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
WBCSD	World Business Council on Sustainable Development
WHO	World Health Organization
WSSD	World Summit on Sustainable Development

1. INTRODUCTION

1.1 The evolving role and mandate of UNEP

UNEP has sought to respond to global environmental challenges since its inception in 1972 within its broad mandate "to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations".

Five interrelated areas continue to provide the basis for UNEP's programming to fulfill its mandate, including: a) keeping the world environmental situation under review; b) catalyzing and promoting international cooperation and action; c) providing policy advice and early warning information based upon sound science and assessments; d) facilitating the development, implementation and evolution of norms and standards and developing coherent inter-linkages among international environmental conventions; and e) strengthening technology support and capacity in line with country needs and priorities[5].

The role and mandate of UNEP continue to evolve within the context of broader international development challenges as reflected in the UN Millennium Declaration, the Millennium Development Goals, and the Paris Declaration on Aid Effectiveness among others. There is renewed focus on the future evolution of international governance, including calls for more coherence within the UN System and increased focus on the role of the private sector. These directional shifts are reflected in UNEP's current Medium Term Strategy and, in turn, influence the focus and strategy of UNEP's programming, including the Global Environmental Outlook (GEO).

1.2 The Global Environment Outlook

The Global Environment Outlook (GEO) process and its related reports have, since their initiation in 1995, provided the foundation for practical implementation of UNEP's mandate to keep the global environmental situation under review and to ensure emerging environmental problems of wide international significance receive appropriate and adequate consideration by governments[6] (Annex I). GEO also contributes to the areas of policy advice, early warning, and capacity building.

The 1987 Brundtland Commission report – Our Common Future – articulated more fully the early concepts of sustainable development and the interwoven dependencies of the three pillars of environment, economy and people, and placed sustainable development on the international policy agenda. These concepts were subsequently locked into the international agenda through the outcomes of the Earth Summit held in Rio de Janeiro in 1992.

Responding to the environmental reporting requirements of Agenda 21 and a 1995 UNEP Governing Council decision which requested the production of a global state of the environment report, GEO evolved into a consultative, participatory, capacity building process for global environmental assessment and reporting on the state of the environment, trends and future outlooks.[7] It is therefore both a *process* involving stakeholders from across the globe and a *product* for environmental decision-making.

In initiating the GEO process in 1995, UNEP was among the first organizations to frame the assessment of environmental conditions and trends in the broader concept of sustainable development by assessing and exploring the relationships between environment and development. Each subsequent

5 UNEP (2008). Medium Term Strategy (MTS) – 'Environment for Development' – 2010-2013, Final Draft.
6 UNGA (1972). General Assembly Resolution 2997.
7 Detailed information on GEO can be found at http:/www.unep.org/GEO/About/

GEO has advanced this analysis through the consideration of major environmental, social and economic trends, and their impacts on the environment. The underlying theme of GEO-4, the most recent in the series, was environment *for* development and it paid special attention to the role and impact of the environment on human wellbeing. GEO-4 also assessed the inter-linkages between major environmental challenges and their consequences for policy and technology options.

Over the years GEO has targeted with different emphases a wide range of audiences in the environment and development sectors – practitioners, policy makers at all levels, scientists, NGOs, the educational sector, the media and civil society.[8]

Salient features of the GEO include assessment reports produced using a regional and participatory approach, with coordination managed by a central GEO Coordinating Team located in the Division of Early Warning and Assessment (DEWA) at the UNEP headquarters in Nairobi and supported by DEWA's regional coordinators. A wide range of individual experts and organizations throughout the world are mobilized to provide data, information and expertise, including a network of GEO Collaborating Centers with regional mandates that are at the core of the GEO process. They engage regional stakeholders, provide data and research, write and review major parts of each report.

Advisory groups provide guidance on conceptual approaches, methods development and capacity building. UNEP also organizes consultations with policy makers and other stakeholders to review and comment on draft materials in an extensive process of peer review. This iterative process is designed to ensure as far as possible that the content is both scientifically credible and policy relevant to users in different parts of the world and with different environmental information needs.

GEO has to date published four global state-of-the-environment assessments[9] as well as a number of sub-global and thematic reports. Additional products have also been developed including regional outlook reports, specialized assessment reports for small island developing states, products for teachers and children, the GEO Data Portal, training and capacity building manuals for integrated assessments. All products are available at http://www.unep.org/geo.

1.3 The unique contribution of GEO

UNEP's commitment to a regular cycle of global assessments that create a body of comparable knowledge on trends over time, its network of stakeholders and data providers, and its broad framing of environmental conditions and trends in relation to human development and wellbeing are among the features that makes GEO unique compared to other assessment efforts that are often 'one-off' assessments, or focused more narrowly on thematic aspects such as water, land, agriculture or biodiversity.

Science and policy increasingly interact to understand and appropriately manage environmental change and to devise mitigation and adaptation strategies at and across all levels, from global to local. The result has been a sharp increase in the number and intensity of efforts to mobilize science in the service of better environmental decision-making at local, national and transnational (regional and global) levels.[10] The assessments enable synthesis of fragmented scientific knowledge into systematic bodies of knowledge coupled to forward-looking analyses for the benefit of policy-makers. They promote the formation of global coalitions, serving as aids in efforts to develop consensus on problems and possible solutions. However, most of these efforts focus on specialized areas such as water, agriculture, biodiversity and health. GEO remains the only integrated global and integrated assessment carried out on an ongoing basis on the interaction between environment and society.

[8] The primary and secondary target audiences are discussed in detail in Chapters 2 and 6.
[9] GEO-1 in 1997; GEO 2000; GEO-3 in 2002; and GEO-4 in 2007.
[10] Mitchell, R.B., Clark W.C., Cash D.W. and Dickson N.M., eds. (2006). *Global Environmental Assessments: Information and Influence.* Cambridge: MIT Press.

1.4 GEO-4

Initiated in 2003, the fourth *Global Environment Outlook: environment for development* (GEO-4)[11] was designed as an integrated assessment of the global environment which was to involve governments, build upon national, sub-regional and regional information, assessments and experiences, and strengthen appropriate sub-regional and regional capacities.[12]

Significant efforts were made during GEO-4 to ensure its integrity, quality and relevance and to broaden its stakeholder involvement. An intensive intergovernmental and multi-stakeholder consultative process included a large number of global and regional meetings which defined the issues and priorities that needed to be addressed in the assessment. More than 380 scientific and policy experts researched and drafted the report; the interaction between scientists and policy makers was deemed essential to identify and focus the policy questions. Fifty-four Collaborative Centers (CCs) and more than 1 000 expert reviewers considered drafts at different stages of the process. A High Level Consultative Group with prominent figures from policy, science, the private sector and civil society provided guidance at various stages.

Overarching Objective of GEO-4

"To provide a global, comprehensive, reliable and scientifically credible, policy-relevant and legitimate up-to-date assessment of and outlook regarding the interaction between environment and society."

Global Intergovernmental and Multi-stakeholder Consultation, 19-20 Feb 2005

The launch of GEO-4 on 25 October 2007 coincided with the 20th anniversary of the launch of the Brundtland report, which was used as a point of reference to assess the progress made over two decades in addressing critical environment and development issues. More than any of its predecessors therefore, GEO-4 places sustainable development at the core of the assessment, highlighting the vital role of the environment for development and for human wellbeing. It also analyzes how environmental degradation poses challenges for vulnerable groups and ecosystems and how it can impede progress towards the achievement of the Millennium Development Goals (MDGs).[13] For the first time a Summary for Decision Makers (SDM) accompanied a global GEO assessment report, synthesizing findings, gaps and challenges into key policy relevant messages.[14] The SDM was considered and endorsed by 69 governments and a number of others stakeholders.[15]

1.5 Organization of the Review Report

The Review report is organized in seven parts:

- **Chapters 1 and 2** introduce GEO-4 and establish the Review framework, approach and methodology.
- **Chapter 3** discusses those findings related to the use and influence of GEO-4 to date.
- **Chapters 4-6** focus on the Review findings, drawing from user perspectives and other available evidence in line with the analysis framework:

– the relevance of the Report to users;
– its credibility and legitimacy;
– its reach among its primary and secondary target audiences (or potential 'user groups').

[11] UNEP (2007a). *Global Environmental Outlook 4: environment for development.* United Nations Environment Programme, Nairobi.

[12] Initiated in response to Decision 23/6/9 of the UNEP Governing Council/Global Ministerial Environment Forum (GC/GMEF), 2003.

[13] In chapter 1 GEO-4 provides an overview of global social and economic challenges, state-and-trends of the global and regional environments between 1987 and 2007, the human dimensions of these changes, an outlook for the future (until 2050) using four scenarios, and the policy options available to address current and emerging environmental issues in efforts to sustain a common future.

[14] The main report of the assessment is hereafter referred to as 'the Report'. Where reference is made specifically to the Summary for Decision Makers, this is clearly stated.

[15] Considered and endorsed by the Second Global Intergovernmental and Multi-stakeholder Consultation on 26 September 2007.

- **Chapter 7** considers key strategic as well as some practical management implications for UNEP.
- **Chapter 8** highlights lessons that can be used to inform future decisions and action, as well as suggestions for improvement made by the persons who were interviewed during the Review.

2. THE REVIEW APPROACH AND METHODOLOGY

2.1 Purpose

Over the years UNEP has commissioned several reviews of the effectiveness and impact of its GEO efforts.[16] More recently for GEO-4, DEWA commissioned two studies led by external agencies – the first a *Self-Assessment Survey* among participants in the GEO-4 process and the second a *Review of the Initial Impact of the GEO-4 Report* – to inform the response of among others the UNEP Governing Council.[17] The Review and Survey were intended to provide information and lessons towards design options for GEO-5.

The Review took place ten months after the launch of the GEO-4 Report. The purpose of the Review (Annex II) was to:

- assess the extent to which the GEO-4 Report and Summary for Decision Makers (SDM) have reached their intended target groups;
- identify and assess the actual use of the these products in relation to the intent;
- determine its impact to date in relation to intent if possible; and,
- provide suggestions for improvements that would strengthen the use of global assessment products in future.

The Review thus had a well defined and limited brief: to concentrate on the global products - the global GEO-4 Report and SDM – rather than on the manual for capacity building, the related regional or sub-regional products or the GEO process. Due attention to these aspects would have required a far more extensive review process. Although assessment products and production processes should ideally not be separated, process was considered only in this Review where it was found to have been pivotal to the use and influence of the products.

2.2 The Review design

2.2.1 Approach

The Review was designed to:

- assess early on whether the Report and SDM are being used as intended among those targeted as 'primary' and 'secondary' user audiences;
- analyze the types and patterns of use and the factors determining the extent of use in order to signal the potential for longer term influence and impact over time;
- identify the 'success factors' by analyzing those attributes known from the literature and experience to be critical for the use and influence of environmental assessments: (i) the three main attributes of salience (which includes issues of relevance and timeliness), credibility and legitimacy – determining factors in GEO-4's reputation for quality and authority; (ii) the extent to which users and potential users find it useful and of value to their work; and (iii) the extent to which the information reaches (penetrates) the intended primary and secondary target audiences; and
- identify lessons that can be useful for UNEP in shaping the purpose, focus, design and implementation of GEO-5, in particular in view of the vision and role of UNEP as articulated in the Medium Term Strategy.

The design was informed by the vision and objectives articulated for UNEP and GEO-4, the current literature on how science and global assessments influence policy, the GEO-4 'impact pathway' or 'theory of change' (refer to section 2.2.2), and quantitative and qualitative methods for breadth,

[16] Attere, A.F. (2000). Evaluation Report of Global Environment Outlook – 1 and – 2 Processes. Evaluation and Oversight Unit, UNEP, Nairobi. UNEP (2004c). Global Environment Outlook (GEO): SWOT Analysis and Evaluation on the GEO-3. Process from the Perspective of GEO-3 Process from the Perspective of GEO Collaborating Centres, UNEP.

[17] Council decision UNEP/GCSS.X/5/7b at the Ninth Special Session of the UNEP Governing Council/Global Ministerial Environment Forum, March 2008, requesting the UNEP Executive Director to report at the 25th Session of the Governing Council in February 2009 on options for "…a scientifically credible and policy-relevant global assessment of environmental change and its implications for development, including a cost analysis and an indicative benefit analysis for each option".

depth and adequate triangulation.[18] The questions that focused the Review are captured in Annex III.

It is well known that it can take years, sometimes a decade or more, for science to influence a policy or strategy. Research shows that policy influencing is a complicated affair[19], with many political, social, economic and other contextual factors affecting policy making processes. Over time conceptual thinking and opinion can therefore be swayed by many influences. This makes it difficult to attribute change to specific products or interventions.

A main premise has therefore been that it is too early and beyond the scope of the Review to focus on *impact*. How and by whom the Report and SDM are being used were considered to be the best indications at this stage of its potential to have influence and impact over time. Insights into the types, patterns and reasons for use are likely to highlight issues for consideration in the planning and execution of future GEO initiatives.

2.2.2 Understanding the program theory for GEO-4

It is common practice in planning programs and interventions to establish an explicit 'theory of change' (or 'impact pathways') for the program or intervention. This clear articulation of the intended causal pathways of change, including specific and measurable description of the changes sought and the underlying assumptions to achieving the change, provides the basis upon which to implement and manage the program and to monitor and evaluate its results.

For GEO-4 there was no *explicitly* articulated 'theory of change', although elements are apparent from the Global Intergovernmental and Multi-stakeholder Consultation statement,[20] the DEWA programme of work, various GEO brochures and recent UNEP annual reports. Some inconsistencies and lack of clarity, including on precise target audiences and expected outcomes, reinforce the need for a clear articulation of GEO's proposed impact pathways.

The Terms of Reference required the Review team to construct causal pathways towards impact. The team therefore undertook as one of the first steps the reconstruction of the theory of change. Interaction with program managers and a review of relevant GEO documents led to a *first visualization* of the essence of the logic and causal relationships, although without consensus among the GEO team on what the comprehensive theory should look like. The visualization (Figure 2.1) highlights the integrated approach followed by the GEO-4 Coordinating Team, with a production process that includes extensive multi-stakeholder consultation supported by capacity building and outreach strategies. The dotted line indicates and emphasizes the limited focus of the Review and shows where it fits in theory.

The Review team encourages DEWA to further develop this visualization from the start of the next GEO design process in order to ensure a common understanding of the target groups, the expected results and the assumptions underlying the change strategy for GEO-5.

2.2.3 Mixed methods

A series of comparative case study analyses by Mitchell et al (2006)[21] found that assessment influence is relational and likely to vary significantly according to different audiences. The concerns, perspectives and assumptions of groups initiating an assessment might therefore differ markedly from the groups that should ideally use the results. For this reason the Review design and data analysis were based in large part on an analysis of the perspectives and responses of different user groups, comparing them to the intent and desired results.

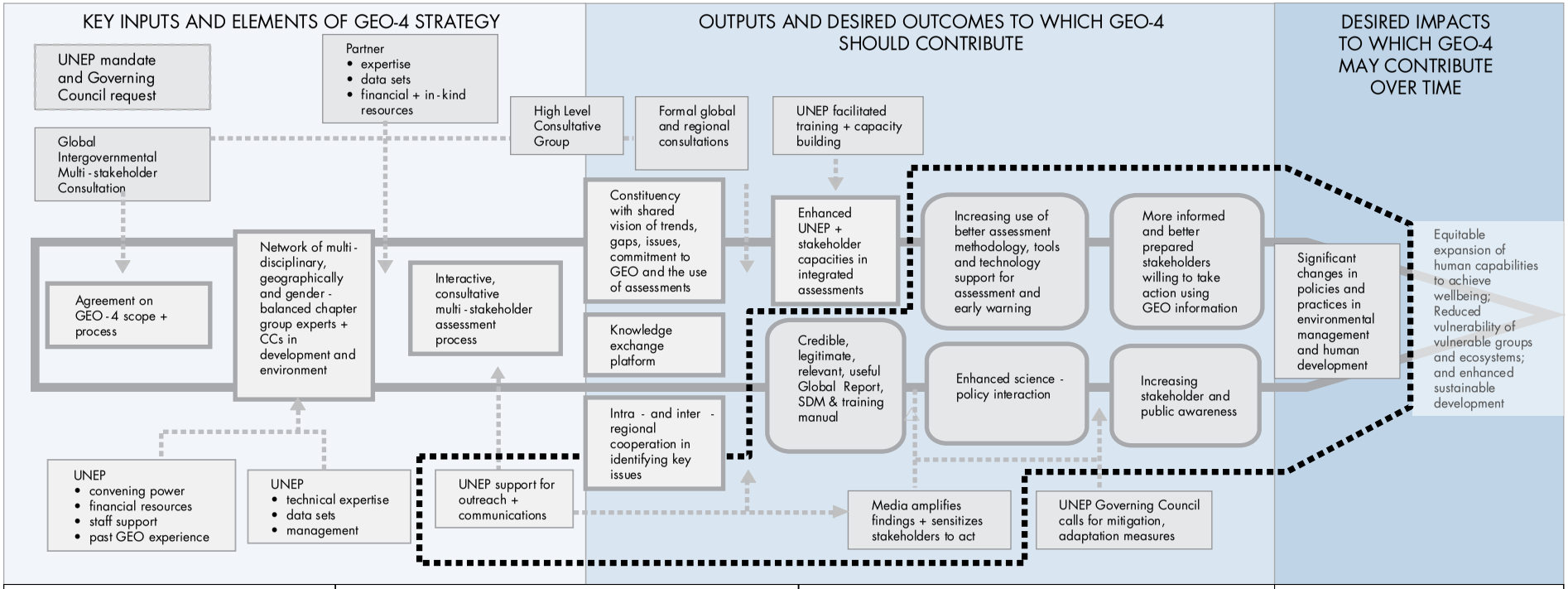
[18] Triangulation: cross-checking facts and perceptions using different methods, sources of information and analyst perspectives.
[19] Neilson, S. (2001). Knowledge Utilization and Public Policy Processes: A Literature Review. Evaluation Unit, IDRC.
[20] UNEP (2005d). UNEP/GC.23/CRP.5, 22 February 2005.
[21] Mitchell et al (2006), p. 7.

Assessment influence is relational and is known to vary significantly across audiences. This means that the concerns, perspectives and assumptions of those initiating an assessment might differ markedly from those of its potential users. This is one of the main reasons why the data collection methods drew from the perspectives of targeted groups of potential users (working in environment or development or both), and comparing these perspectives to what was intended. A distinction was made between potential users who had been part of the GEO-4 process and those who had not participated.

In order to obtain breadth and depth during data gathering and to enable triangulation, a mix of primarily (but not exclusively) qualitative methods was applied in an integrated manner. This included a desk study of relevant documents including literature on the influence of research and environmental assessments on policy making, previous assessments, Web based research, open and closed questions in a structured telephone interview, semi-structured interviews with key respondents and two short surveys among specific user subgroups.

A summary of the approach and methodology is provided in Annex IV, the Interview Guide in Annex V, the list of persons interviewed in Annex VI, and the desk study references in Annex VII.

Figure 2.1 A tentative program theory for GEO-4 showing the focus of the Review



MAIN ASSUMPTIONS	MAIN ASSUMPTIONS	MAIN ASSUMPTIONS	MAIN ASSUMPTIONS
• Government and other stakeholders are committed to participating in and learning from the process, and contribute appropriate resources. • Partners engage willingly and enthusiastically in the network, are willing to share their data and expertise, and see the broader value in collaborating in a global assessment product. • UNEP provides leadership and organizes the support to the network effectively and efficiently to maximize the value to participants. • UNEP remains committed to the process. • UNEP has adequate financial resources and appropriate technical and management expertise to implement the GEO initiative with partner contributions.	• Agreement has been reached on areas of disagreement and uncertainties in content. • The data and information are up to date, comprehensive (not too narrowly focused), scientifically credible and reliable (few errors) -and that these are the important factors that influence perceptions of credibility of the content. • The assessment is seen as having been developed through a credible, rigorous and transparent process and these are the important factors that influence perceptions of legitimacy and scientific credibility. • The assessment is seen as timely and very relevant to key stakeholder needs and potential uses – and these are the important factors that give the report salience. • The assessment and its Summary for Decision Makers are widely regarded among influential stakeholders as credible, legitimate, relevant (salient) and useful – not unduly influenced by political or other agendas. • The assessment is clear, transparent and predictable and allows governments and other key stakeholders adequate opportunity to prepare.	• Organisational capacities for doing and using assessments are adequate and sustained. • Capacity building efforts are well delivered and extensive enough to produce capacity change that makes a difference to decision- making and resource allocation. • Training participants can initiate and undertake assessments • The Report provides information that is clear and relevant enough to inform policies and practices at country, regional and local level. • Potential GEO user groups have been effectively identified, targeted and engaged - including government and other stakeholders representative of generic sector interests - and are well positioned to have influence over policies and practices, now and in future. • UNEP's outreach and engagement strategy has been informed by salient aspects of current understanding of how research and scientific information (and global assessments) influence policy decision-making.	• Changes in capabilities and commitment are sustained. • The external environment, including other influential initiatives are in support of the needed capacity, policy and practice changes. • Mitigation and adaptation measures are mainstreamed into all relevant sectoral policies. • Trade-offs between different societal concerns are based on the best available knowledge, and accepted.

Note: In order to enable visual illustration, the project logic for the GEO-4 Report has been simplified to include only key components, projecting them in a linear fashion. It does not indicate multiple interactions and feedback loops within and outside specific activities.

2.3 Sampling strategy

2.3.1 Defining the target audiences or intended user groups

The description of the primary and secondary target groups differed somewhat between different documents, for example, youth was explicitly mentioned in some and not in others. The GEO contact database provided to the Review also had a different architecture. The Review team used the description in the GEO-4 Outreach and Engagement Strategy,[22] which appeared to be the most detailed. It identified the **primary target audiences** for GEO-4 as the UNEP Governing Council/Global Ministerial Environment Forum; the UNEP Committee of Permanent Representatives; actors in intergovernmental processes, MEA Secretariats and Conference of Parties; and policy advisors (on the environment) in relevant ministries.

It identified the **secondary target audiences** for GEO-4 as the UN agencies/UN sustainable development processes, other government ministries and agencies, NGOs, civil society, the scientific community, the media, the private sector and the general public.

The Review team was asked to focus on both primary and secondary target audiences. Although noted in the Terms of Reference (TOR), the youth and civil society were for practical reasons not addressed. Educational institutions were explicitly mentioned in the TOR. As GEO-4 has a stronger focus than its predecessors on the nexus between environment and development, it was important to reach user groups working in either or both of these arenas. A distinction was made in analysis between those who had and had not been part of the GEO-4 process (within different levels of engagement).

2.3.2 Sampling

Interview respondents were sampled primarily from the UNEP GEO-4 contact list – the group targeted by the GEO team for communication during and after the production process. They were assumed to:

- adequately represent the primary groups of intended users of the GEO-4 Report;
- include the most important – deemed as most influential – potential users of the Report; and
- be some of the most informed users of GEO-4 due to their involvement and targeting by the GEO team.

For these reasons they should be considered as a 'purposefully biased' sample for the Review. This sample was extended and balanced by including a list of persons and organizations that ordered the Report from publishers. This list yielded a total of '1 506' contactable individuals. A combined stratified random and stratified purposive sampling approach was applied to select 300 persons to interview.[23] If a sampled person was not reached or available after multiple contact attempts, another person on the list from the same organization was approached. This person was replaced randomly only if it was not possible to find another individual from the same organization.

Anticipated as well as unanticipated difficulties affected the interview process: Many respondents were out of office or unavailable between August and September when data collection had to be done and the contact list provided to the Review team was frequently incomplete or not up-to-date. In the end 152 persons were interviewed, of whom four were from the GEO-4 team, giving a total of 148 potential users interviewed (breakdown by category in Table 2.1). Of these, a total of 133 responded to the closed interview questions that provided the quantitative data.

[22] UNEP/DEWA (n.d.). *Fourth Global Environment Outlook (GEO-4): Outreach and Engagement Strategy and Implementation Plan*. Document provided to the Review team by DEWA.

[23] About half of the intended 300 respondents were selected randomly to ensure that a diversity of views from different user groups and different regions were solicited. The other half was selected purposively in order to ensure that representatives from the private sector, NGOs, MEAs, research institutes and other organizations thought to have strong potential to make use of or comment on GEO-4, were adequately represented.

Table 2.1 The Review sample by user group

Respondent Category	Sampling Frame (%)	Sample (%)
Academia	11.8	15.0
Government	33.1	32.3
International organizations	4.0	3.8
MEAs	0.6	1.5
Civil society - private sector & NGOs[24]	28.3	21.1
Research institutes and Collaborating Centers	12.8	10.5
UN	2.2	5.3
UNEP	6.4	4.5
Other / Not Categorized	0.8	6.1

Additional inputs on aspects of use were obtained through two short on-line surveys: among the UNDP Energy and Environment global community of practice, and among UNEP staff. These provided a disappointing additional 52 respondents. The survey data reinforced a few of the main quantitative trends, but yielded no useful qualitative information.

A distinction was made during analysis between the user groups and between those who had been part of the GEO process and those who had not been engaged; those from developed and from developing countries; and those engaged in development, in environment and in both.

2.4 Respondent profile

An indication of the profile of those interviewed[25] is given below. The proportional representation of the different user groups corresponds roughly to the initial targets for the sample. About twice as many males as females were interviewed. Approximately three quarters worked in the field of environment or in environment and development, and three quarters were involved with the production of the GEO-4 Assessment.

2.5 Data collection methods

The data collection methods used for the Review contained six elements: Document analysis, development of project theory, stakeholder and user group identification, sampling strategy, informant and key informant interviews, surveys, web-based research, and validation strategy. These are all described in detail in Annex IV Summary of Review Approach and Methodology.

The perceptions and experiences of the 148 potential users[26] and four GEO-4 Coordinating Team members were captured through structured and semi-structured interviews. A desk study, two short surveys, Internet searches in English, French and Spanish and the publisher's list of clients who bought GEO-4 were used to gather data beyond the 'inner circle' presented by the GEO contact list.

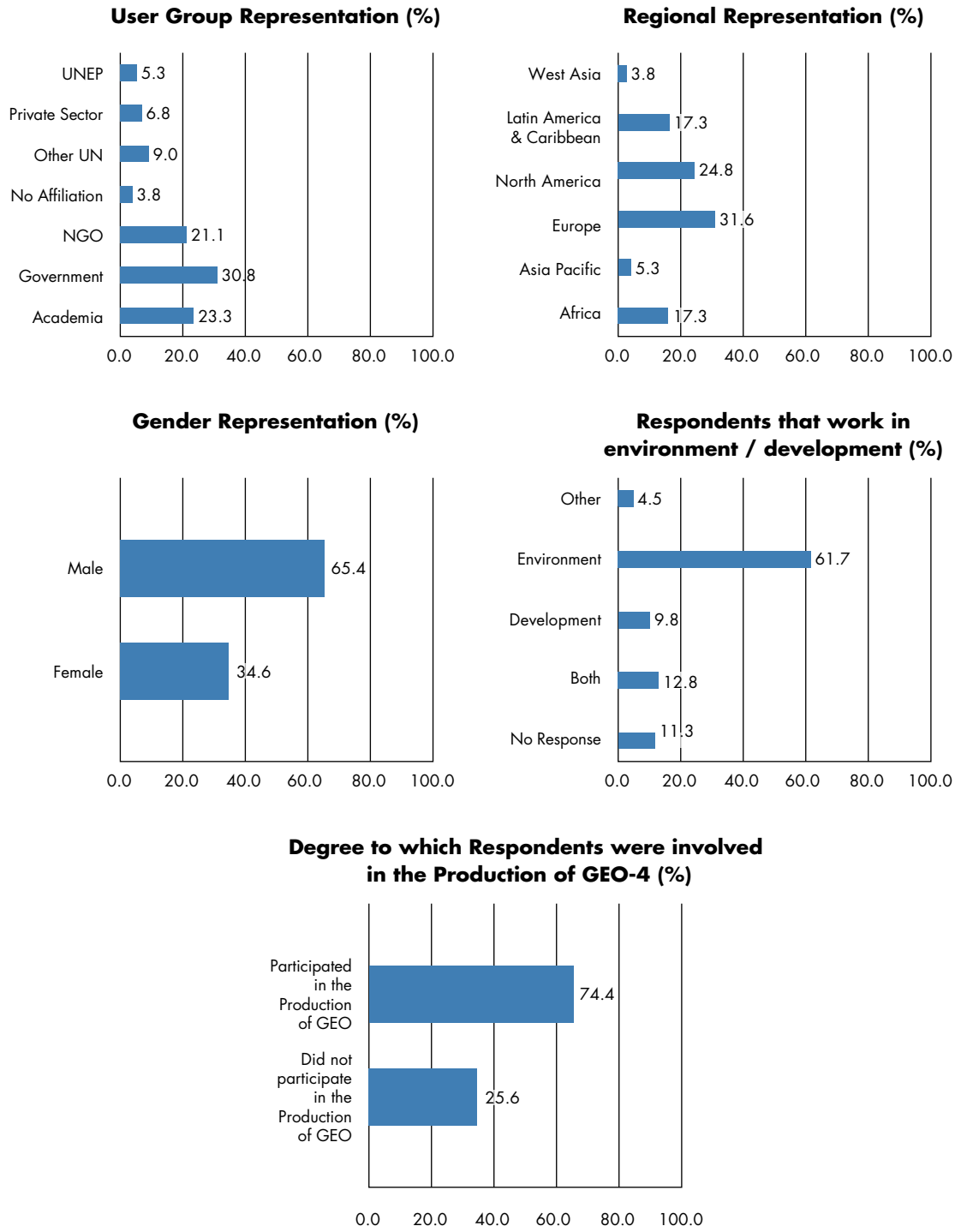
Due to the relatively small sample sizes, the quantitative data for each target group should be seen as indicating opinions and trends. Triangulation was used extensively to ensure robust and credible findings. The extensive qualitative comments were used to illuminate and add to the findings.

[24] This categorization comes from the UNEP contact list used by the Review team. No distinction was made between private sector and NGOs. The information obtained directly from those interviewed made the distinction more accurate.

[25] The term 'respondents' instead of 'informants' is used throughout the Review report to refer to the persons interviewed for the Review.

[26] Those interviewed were selected partly randomly, partly purposefully from the contact lists of the GEO-4 Coordinating Team: three quarters were involved in the GEO-4 production process, 61% worked in the environment, 10% in development and 13% in both. By sector the largest group was from government (31%) followed by the academic sector (23%), non-government sector (21%), UN (14%), the private sector (7%) and no affiliation (4%).

Figure 2.2 The respondent (informant) profile



2.6 Data analysis

Data were captured and managed using Survey Monkey as an interview capture system and the Statistical Package for the Social Sciences (SPSS) for quantitative analysis. Review team members conducted qualitative analysis on specific aspects of the Review design using both inductive and deductive methods. Some of the qualitative information was also subjected to quantitative analysis.

The analysis was informed by the Review of the Knowledge Products of IUCN[27] as well as the growing literature on how research and science influence policy. A series of comparative case study analyses by Ronald B. Mitchell et al[28] confirmed that global environment assessments vary considerably in their influence. A number of propositions could explain why this is so and Mitchell and his team advanced a common understanding of what it would mean to say that one effort to mobilize scientific information is more effective than another. It suggests that users' attributions of salience (relevance), credibility, and legitimacy are critical enabling factors of influence of a global environmental assessment in a given issue domain over time.[29] The Review team used part of their conceptual framework during analysis.

2.7 Constraints

Given the timing and resourcing of the Review it was impossible assess the long-term impact and even influence of GEO. At this stage its use was the best indicator of potential influence, with the caveat that use is necessary but not sufficient for influence or impact.

The delays experienced in reaching respondents had a significant impact on the Review sampling strategy and timeframe. Primary reasons were outdated or incomplete contact information and time constraints as a result of the August start date for data collection. The initial target of 300 interviewees – half intended to be randomly and half purposefully selected – therefore proved to be unrealistic.

The limited financial resources and time for the Review led to inadequate sampling of influential persons per targeted sector, especially among those audiences that have not been close to the GEO processes in the past.

The degree to which the findings in this initial assessment are representative of the views of the broad population of GEO-4 users requires explanation:

- A complete sampling frame of GEO-4 users was not available and it is possible that the population from which the respondents were selected might have introduced some bias into the sample - most likely towards those with a vested or special interest in GEO-4 as a large portion of the sample was obtained from the UNEP list of contacts. This is not entirely problematic in a study that aims to assess perspectives and obtain insights into the types of potential influence and impact. Those closest to GEO-4 are also those more likely to use the Report and recognize its (potential) impacts.
- Participation in this Review was voluntary. It is possible that respondents who declined to participate might have introduced some bias and that those with less exposure to GEO-4 would be less likely to agree to participate. It is therefore possible that the views are slightly more representative of those who are actually using the Report and continue to find it useful. This is not entirely problematic since the brief of the Review team was to identify and focus on impact rather than quantify or investigate the lack of impact among users.
- The estimate of quantitative parameters is subject to a sample-size related sampling error of between 5% and 7% for the whole sample. Quantitative findings for sub-groups, for example, comparisons of user group should be treated as indicative rather than definitive as the sample size was inadequate to provide statistically representative population parameter estimates. A statistically representative sample would have required the inclusion of approximately 100 – 300 respondents in each of the sub-groups – something that would not have been feasible given the study's limited time, budget and qualitative approach that aimed for in-depth insight rather than overall quantitative trends.

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27 Ofir, Z. M., and Whyte, A. (2004). *The Knowledge Products and Services Study. Addendum to the 2004 External Review of the IUCN Commissions*. IUCN, Gland.

28 Mitchell et al. (2006), p. 4

29 For Mitchell et al (2006), the concept of *salience* is defined as the relevance of information to user decision making; the concept of legitimacy is defined as the belief that information produced by a process that took account of the concerns and insights of relevant stakeholders and was deemed procedurally fair; and *credibility* broadly linked to use of standard procedures that leads to acceptance of scientific claims. (See Chapter 1, William Clark, et. al., "Evaluating the Influence of Global Environmental Assessments," p. 15).

3. USE AND INFLUENCE

3.1 Approach

This chapter focuses on the Review findings concerning the impact of GEO-4. More specifically, it analyzes how the global GEO-4 Report and the Summary for Decision Makers were used. In subsequent chapters the reasons for the use (or lack thereof) are investigated.

It can take years, sometimes a decade or more, for science to influence policy and strategy. Conceptual thinking and opinion can be swayed, over time, by many influences. This makes it difficult to attribute change to specific products or interventions. One of the premises of the Review is therefore that ways have to be found instead to determine the *potential* for influence or impact. As noted in section 2.7, use was at this stage the best indicator of such potential, with the caveat that use is necessary but not sufficient for influence and for longer-term impact.[30]

Mitchell et al used a definition of influence that refers to changes in an 'issue domain', defined as arenas in which interested actors seek to address an issue of common concern about which they have different beliefs and policy preferences.[31] There should be "changes in the actors involved in the issue domain, including in their relevant goals, interests, beliefs, strategies, and resources; the institutions that enable and constrain interactions between these actors; the framings, discourses and agenda related to the issue; and the existing policies and behaviors of the relevant actors". Influence tends to come about through a gradual shift in conceptual thinking – and hence in the policies that support that shift.

As there are many influences on such 'issue domains', causality should be established. That is, the many pathways to change should be analyzed and the contribution of the assessment understood. Such an extensive exercise was outside the scope of the Review. The team decided instead to focus on patterns of use and the reasons why (or why not) it was seen as useful. Although use does not guarantee eventual impact, it gives some early proxy indication of the *potential* for impact – and provides early indications of the conditions or factors that may foster or inhibit influence.

Influence always involves changing the actors' beliefs.[32] A limitation in the methodology was that the Review team did not gather information on such changes. However, from the literature we know that if it is to change beliefs, the assessment has to be regarded as salient, credible and legitimate. The performance of GEO-4 in this regard is discussed in the next chapters.

A total of 148 users and potential users were interviewed using closed and open-ended questions. The data were supported by Internet research and the results of two surveys (details in Chapter 2 and Annex IV). We used in the broadest of terms the tentative theory of change for GEO-4 and established a typology of use based on information gathered from the GEO-4 Self-Assessment Survey and the 2004 GEO User Study. The interviews provided opportunities to highlight types and examples of use not captured in the typology, vignettes that best illustrated how GEO was being used, and the factors that in their opinion determined whether it was used or not.

The results for different user groups (targeted audiences) were captured in Figures 3.3-3.9. Note that the examples of use have been placed along the horizontal axes according to our own subjective judgment of their potential to contribute to the knowledge base or to policy, legislation and governance. In the figures, the examples located more to the right (towards Governance) are likely to be more influential in the policy arena (in that specific context) than those on the left (towards Knowledge):

30 'Policy impact' refers to long term societal effects due to changes in policies or strategies (or in other parts of the 'policy cycle' in Figure 3.2). 'Policy influence' refers to something that induces a change in a policy or strategy (or any other aspect on the policy cycle).

31 Mitchell et al (2006), p. 11.

32 Ibid, p. 13.

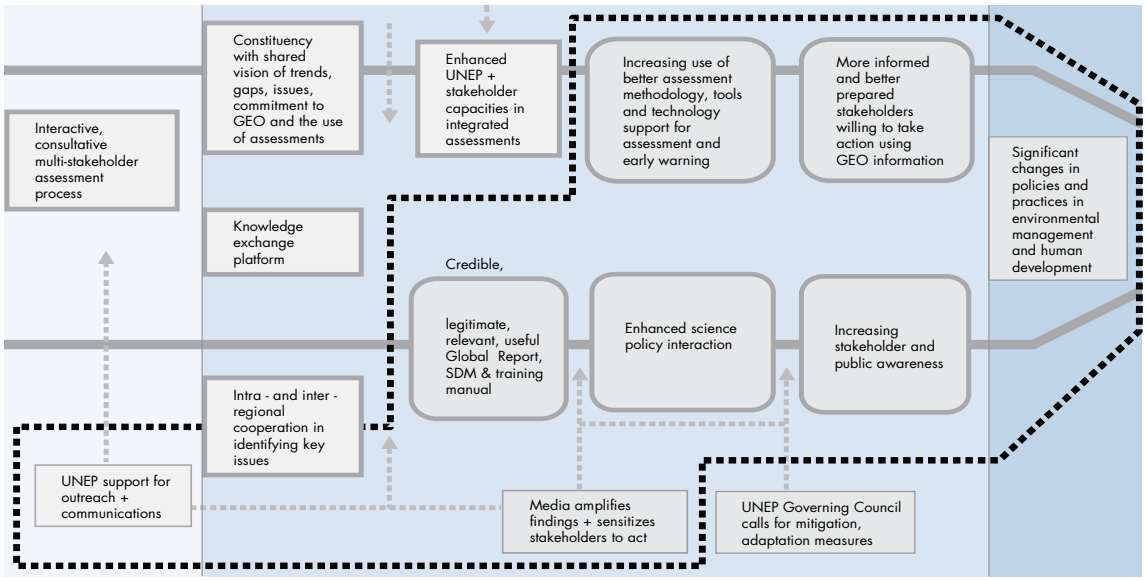
- A: Use as reference, source of data and information = far left
- B: A + potential influence and input into assessments, state of the environment reports = slightly to the right
- C: B + use in briefing notes, policy exploration = further to the right
  Policy research, frameworks and national strategies = further to the right again.

A gradation from weak (white) to increasing density (yellow) was used to indicate those that the Review team perceived to be more substantive or significant users.

3.2 Intended impact

The Review team could not find one clear, consistent articulation of expected outcomes and impact of GEO-4. The objectives (Annex 1) focus on the process and the establishment of the output – a credible, legitimate, useful global report – that would make available the 'best scientific knowledge' for environmental governance and the mainstreaming of environmental concerns into other sectors. The primary target audience is policy makers. The assumption is that the most desired changes are to be in the policy domain. The 2007 UNEP Annual Report refers to 'many impacts'; these were used together with other references[33] to develop retrospectively the tentative 'theory of change' or 'impact pathway' for the GEO-4 (Figure 3.1, extracted from Figure 2.1). GEO-4 should therefore contribute to shifts in mindsets that will foster efforts to establish better policies and strategies in environmental management and human development.

Figure 3.1 Extract from the tentative program logic for GEO-4, highlighting the focus of this Review



Other results were also expected as part of GEO's contribution to the strategies and work plans of DEWA, namely increased numbers of:

- references to environmental assessments in intergovernmental fora and the media;
- Internet visits;
- governments, UN bodies, CCs and scientists contributing to environment assessment processes led or supported by UNEP;
- partner institutions participating in data and information networks supported by UNEP; and
- institutions from developing countries and countries with economies in transition partnering in UNEP-led or supported environmental assessment processes and data and information networks[34].

[33] For example, (UNEP 2005a) Global Intergovernmental and Multi-stakeholder Consultation on GEO-4 held 19-20 February 2005 in Nairobi, UNEP/GC.23/CRP.5.

[34] UNEP/DEWA (n.d.). Fourth Global Environment Outlook Outreach and Engagement Strategy and Implementation Plan, p. 2.

As noted in the described approach, this Review focused on the *use* of the assessment information, based on the simple theory that if the Report has reached its target audiences and they perceive it to be relevant, credible, legitimate and useful, many will use it. Over time this would lead to changes in policy and practice *if* those reached (over time) or their actions are influential enough to effect such change.

3.3 The use of GEO-4

Finding 1: A very high percentage (92%) of persons interviewed had used the GEO-4 Report. The number is likely to have been influenced by the sampling strategy used for the Review.

The high percentage shows the utility of the GEO-4 Report among all sectors targeted as users. The positive result should be viewed in the context of the sampling strategy for the Review. Nearly all of those interviewed (93%) had been either engaged in the GEO-4 process (75%) or were familiar with previous GEO efforts. It is therefore likely that these numbers reflect a more positive situation than if the sampling had targeted those who had not been involved in past or current GEO processes. This is confirmed by the view among many of the persons interviewed that GEO-4 does not have a high profile among their peers who did not participate in GEO processes (finding 3).

Finding 2: Most of the non-users were from UN agencies. Qualitative information showed that the most positive and active users were in the government, academic and research sectors. Thirty percent of persons interviewed in UN agencies and around 10 per cent of those in government, the private sector and UNEP had not used GEO-4.

Finding 3: In spite of the high percentage of GEO-4 users among those interviewed, 48 per cent were concerned that the profile of GEO-4 was not high enough among their peers who had not been engaged in GEO production processes.

This finding indicates the significance of the network of contributors and the strong constituency that GEO has built up over the past decade, in particular in the academic and research sector. Only 35% of representatives from these sectors felt that GEO-4 was not adequately known. Persons interviewed from UN agencies were also among the most positive; only 38% shared this concern, although the number was higher in UNEP (50%). Persons interviewed from the private sector (71%) and NGOs (62%) were the most concerned about the profile of GEO in their sectors. Government representatives (46%) also wished for GEO to have a higher profile among their peers.

Although these numbers express subjective opinions without any supporting data, it confirms the pattern found throughout the interviews that the private sector, NGOs and UN agencies (including UNEP) were the most concerned about the utility of GEO for their needs.

Finding 4: Among those interviewed, the GEO-4 Report has been (by far) most frequently used as source of reference to raise general awareness of environmental issues and trends (57%) at global level and to a lesser extent at regional level, and to inform research and teaching (59%). The implications of this type of use for the niche GEO occupies in the assessment landscape should be well understood.

Finding 5: With some notable exceptions GEO-4 is generally perceived and used as one of a number of data or information sources rather than as a preferred or vital source.

Figures 3.2 and 3.3 provide an overview of the most prevalent uses of GEO-4, based on the typology used for the Review as well as analysis of responses to open-ended questions. In the academic and research sectors (Figure 3.4) it informs curricula and research, thus targeting the next generation of decision makers. A reasonable number (20.2%) have used the information to conduct other integrated assessments, learning from the content and processes of the global products (Figure 3.3). Users in the non-governmental sector (Figure 3.6) are some of the most innovative, using GEO-4 to create awareness of programs, to inform and justify project proposals and to advocate for policies and issues.

The majority of users see the Report as a source of reference to be used as an 'encyclopedia', usually serving in tandem with others to justify or elucidate an argument, or to highlight and confirm current trends and issues. Comments frequently referred to the content as being 'too overwhelming' to use in another way. Only a few noted it as *the* most authoritative and/or useful source, or with an edge over any of the others.

Most of the types of use confirm the dominance of the 'enlightenment' function[35] of assessment information – educating current (and future) decision makers in a manner that may over time lead to changes in policy and strategy. This type of use appears to best characterize GEO's current niche in the current environmental assessment landscape. It should be recognized that this type of use rarely leads to 'new policy narratives'. Hall[36] identifies three different kinds of policy change: 'first order' policy change is where policy decisions are largely influenced by previous policy ('policy legacies'); 'second order' change is where different policy instruments may be used without challenging the overall policy framework or paradigm; 'third order' change – the paradigm shift – is frequently the most desired, where both the means and the ends of the policy environment undergo a dramatic revision. The use of GEO-4 appears far more likely to be associated with first or second order than with third order change.

Finding 6: Around 40 per cent of persons interviewed purport to have used GEO-4 to inform policy – primarily to identify policy problems and set policy agendas. Few examples were provided where it was used to frame and guide policies or strategies.

The focus on policy makers as the primary target group appears to have paid off. More than ever before have been engaged in the production process and interview respondents have been complementary about the 'user-friendly' Summary for Decision Makers. Around 40% of persons interviewed have used the assessment information for policy work (a high percentage even though policy makers were the largest interview user group) (Figure 3.5), primarily for identifying policy problems and setting policy agendas (Figure 3.2). Just over a third of the 100 references to GEO-4 found during the Google searches (in English, French and Spanish) were in the policy domain, most frequently justifying arguments or calling for action, often with comment on the high credibility of the assessment.

The examples of policy use given during interviews, however, were frequently less impressive than the quantitative responses seem to imply. In Figures 3.4-3.9 those users and uses subjectively judged by the Review team to be the most substantive – including those that present the best potential for policy and strategy change – have been indicated through a gradation from weak (white) to increasing density (yellow).

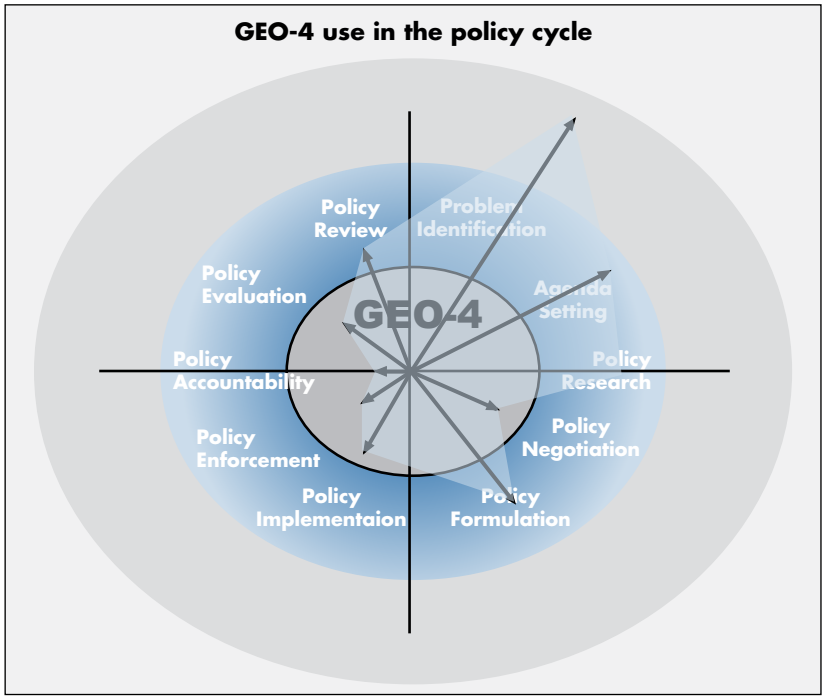
As can be expected, the most prevalent types of use were at the beginning of the 'policy cycle' (Figure 3.2) - for problem identification (25%) and agenda setting (18%) as well as for policy research (17%) primarily in the academic sector. It was to a lesser extent used for policy formulation (7%). These patterns are reflected in the examples provided by the users. There were few examples where GEO-4 clearly had influence on an organization's policy or strategy, or served as a framework for strategic planning, for example as presented by the World Wildlife Foundation (WWF) (Figure 3.6).

Finding 7: Developing country respondents were more likely to use GEO than respondents from developed countries. Developing countries often do not have such well established and reliable services and developed countries tend to rely more heavily on their own data sources and analysis services.

Respondents from developing countries appeared to make more use of the GEO-4 information. Like their counterparts in developed countries, they tended to complain about GEO data not being detailed enough, yet were more inclined to promote its use at national level due to a dearth of own reliable data sources. Several key informants from developed countries confirmed that they were less likely to use GEO as they have sources of information in their own countries that provide more relevant and detailed data and information than GEO.

[35] Weiss, C. (1991). Policy Research as Advocacy: Pro and con. *Knowledge, Technology & Policy,* 4 (1/2), 37-56.
[36] Hall, P.A. (1993). Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain. *Comparative Politics,* 4, 275-292.

Figure 3.2 Most prevalent uses of GEO-4 as they relate to the policy cycle



Finding 8: Qualitative information indicates that the penetration and use of GEO-4 remains low among most of its secondary audiences, in particular among the private and development sectors and very likely also among influential policy makers in sectors such as finance, development planning, trade and industry.

The most infrequent users were found to be the private sector (Figure 3.7). Although this sector was not well represented in the total sample, key informants were firm in their views that the penetration of GEO-4 among its secondary and non-environmental target audiences remains low, in particular in the private and development sectors. These sectors are in the view of the Review team pivotal if GEO is to successfully promote large-scale change.

In addition, influential policy makers in areas such as finance, development planning, and trade and industry at national, regional and global levels were not well targeted. Even if the intent has been to provide policy makers working in the environment with the tools to approach and convince these sub-sectors, key informants doubt whether the current format, language and examples are convincing enough.

Finding 9: The use of the GEO-4 Report among UN agencies, including in UNEP, appears to be low, primarily due to their use of other data sources more relevant for their purposes. Key informants indicated lack of ownership and incentives to engage in GEO processes as main reasons.

Several UN agencies were contributors of data and information and there are several examples of the use of GEO-4 as source of reference and for framing of arguments and strategies (Figure 3.8), including for the first time explicit acknowledgment of GEO report findings by UNGA.[37] Yet the persons interviewed from UN agencies confirm that the GEO Report is under-utilized in the system, including in UNEP itself. Key informants are adamant that there is a 'lack of ownership' as well as lack of incentives in the UN system to engage in a time-consuming production process.

[37] UNGA (2008). UN General Assembly 63rd Session of the Second Committee, Agenda Item 49g: Report of the Governing Council of the United Nations Environment Program on its tenth special session. A/C.2/63/L.54 OPs10-11, 25 November 2008.

This issue is discussed further in Chapter 6 but may signal that insufficient attention has been paid to establishing GEO as an important product of and for the UN system.

Finding 10: Google searches on the Internet in three languages yielded more than a 100 references to GEO-4. While just over a third of references were in the policy domain, several references appeared in civil society network blogs.

The majority of the 114 references to GEO-4 on the Internet were promotional, provided primarily by the media around the time of the launch. They tend to highlight the fact that GEO-4 was the result of the work of 1 400 scientists and experts, thus giving it authority and credibility. Other main sources are policy makers and civil society. A number of on-line communities (blogs) hosted by civil society organizations promote the report and inform its constituency about the content. More than half (52%) of references in English were by policy makers, and 18% by civil society. Nearly half of those in French and Spanish were by civil society organizations.

Policy makers either promote the report – in particular their own involvement or contribution – or use the data and information to substantiate their own data or research. Twenty of the references were calls for urgent action. Several examples of use were found among multilateral organizations, including those working with Multilateral Environmental Agreements (Figure 3.9), even though the latter have been under-represented in the sample.

BBC promotes GEO-4

"With its GEO-4 report, the United Nations tells us that most aspects of the Earth's natural environment are in decline; and that the decline will affect us, the planet's human inhabitants, in some pretty important ways…So what, you might ask, is special about this report? Why is it worth any more than a cursory headline glance before returning to the party? Well, first there is the sheer scale. Hundreds of researchers from a huge variety of disciplines…covers the whole range of environmental issues, and the links between them…"

BBC News: Richard Black, "Humans failing the sustainability audit", BBC News website, Thursday 25 October 2007; access at: http://news.bbc.co.uk/2/hi/science/nature/7060072.stm

Figure 3.3 Overview of the most prevalent types of use of GEO-4 by Review respondents

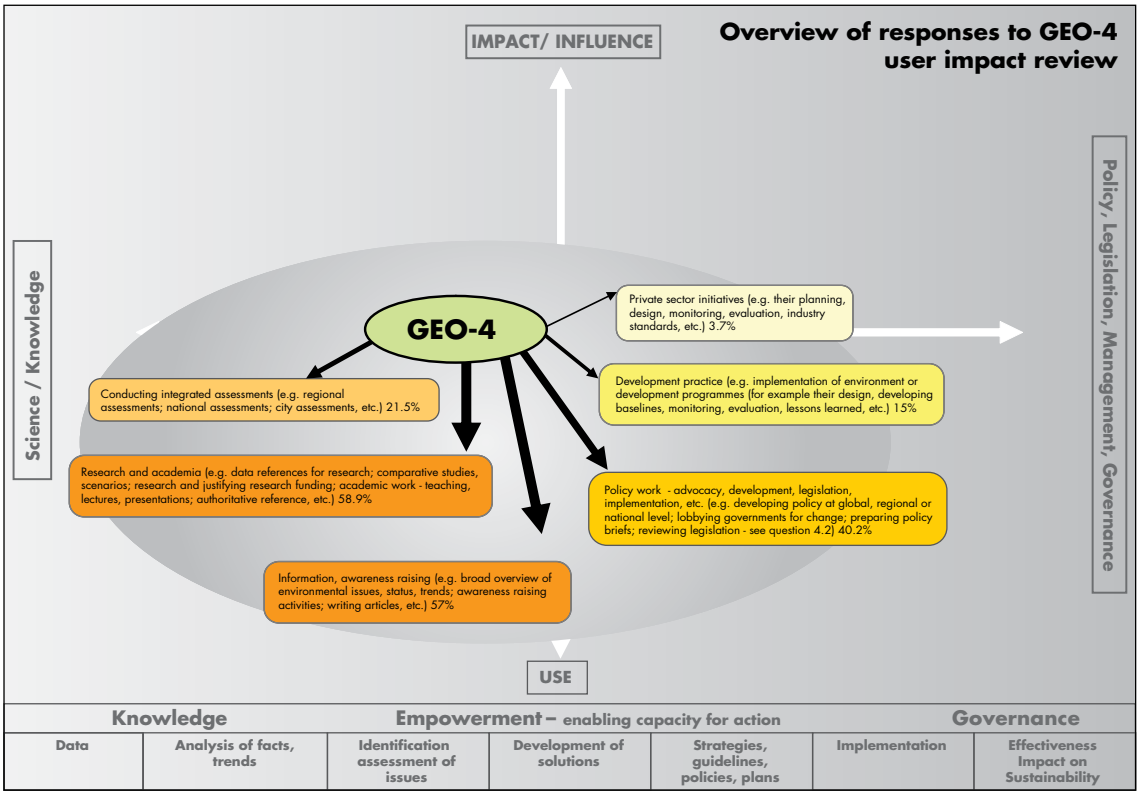


Figure 3.4 Examples of the use of GEO-4 in research and academic institutions (refer to section 3.1 for interpretation)

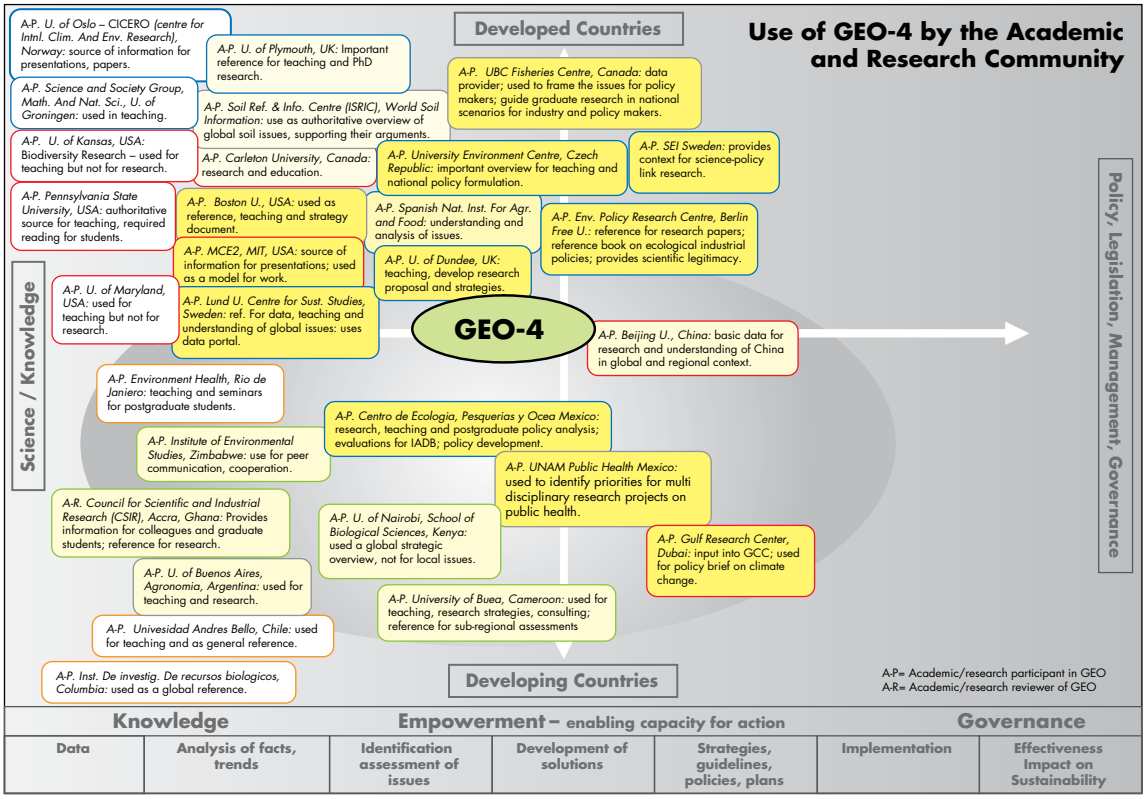


Figure 3.5 Examples of the use of GEO-4 in national and regional governments and related agencies (refer to section 3.1 for interpretation)

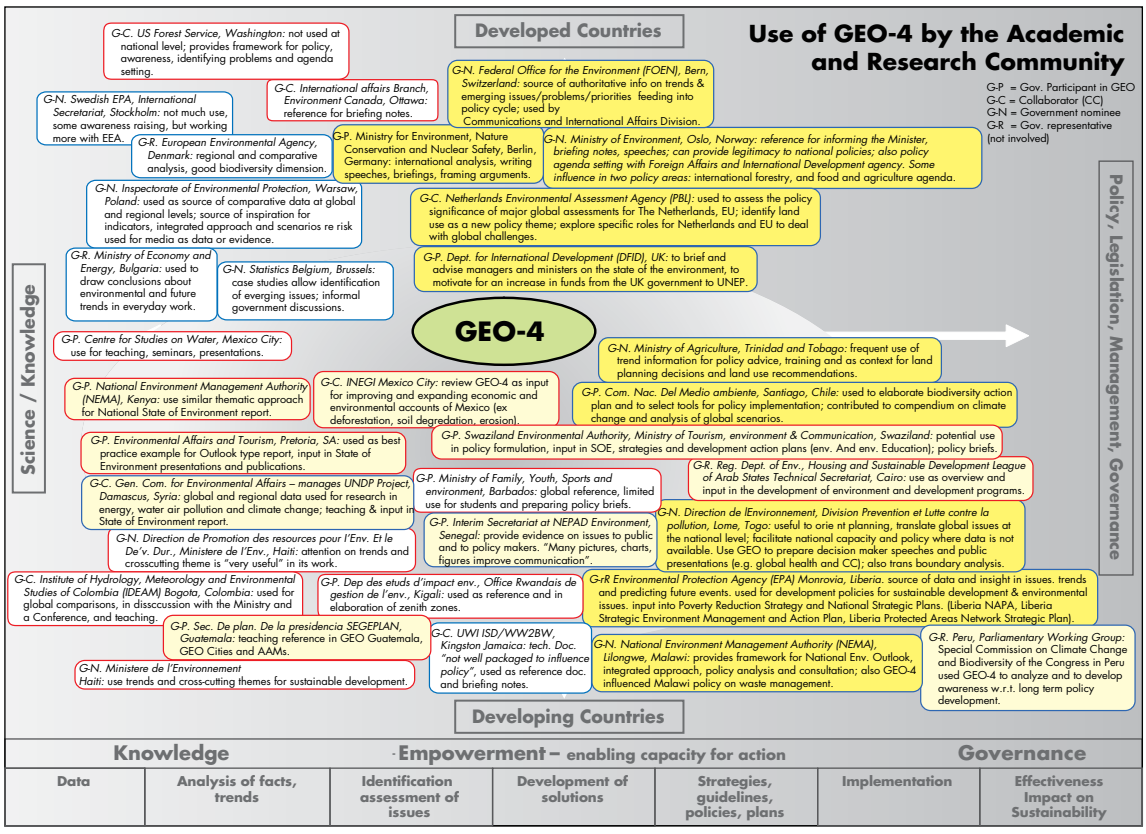


Figure 3.6 Examples of the use of GEO-4 in non-government organizations (refer to section 3.1 for interpretation)

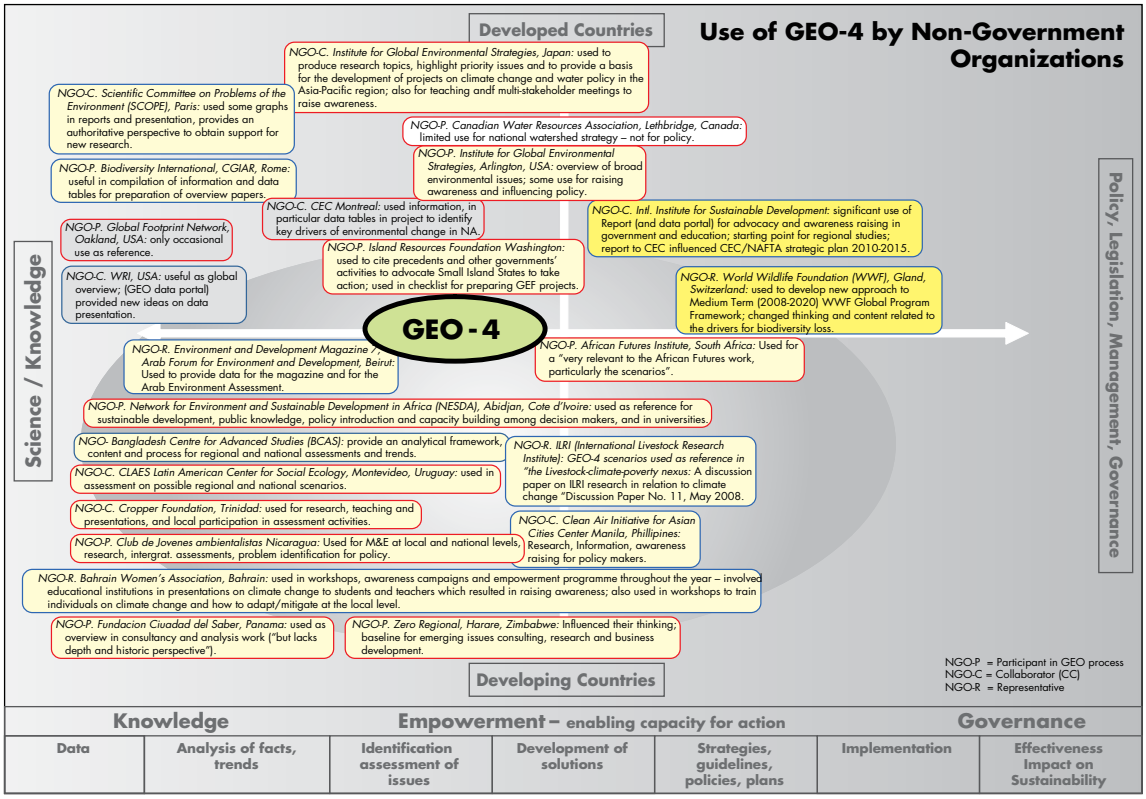


Figure 3.7 Examples of the use of GEO-4 in the private sector (refer to section 3.1 for interpretation)

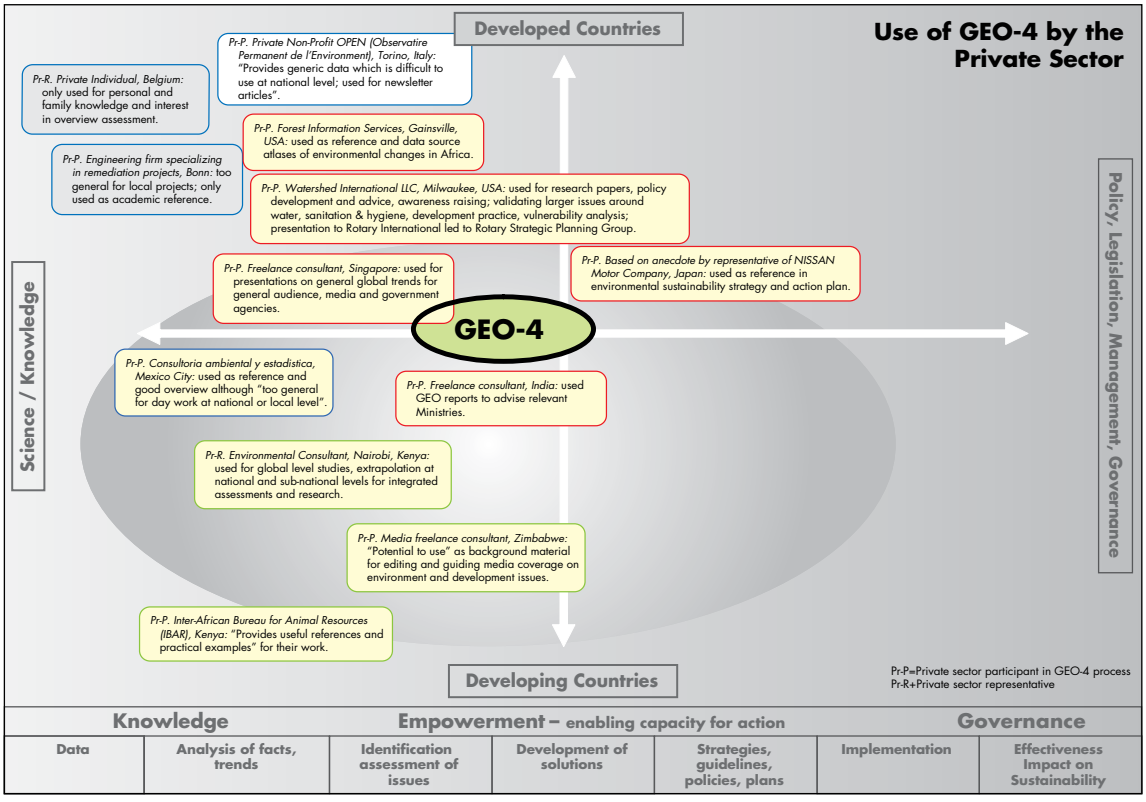


Figure 3.8 Examples of the use of GEO-4 in UN organizations (refer to section 3.1 for interpretation)

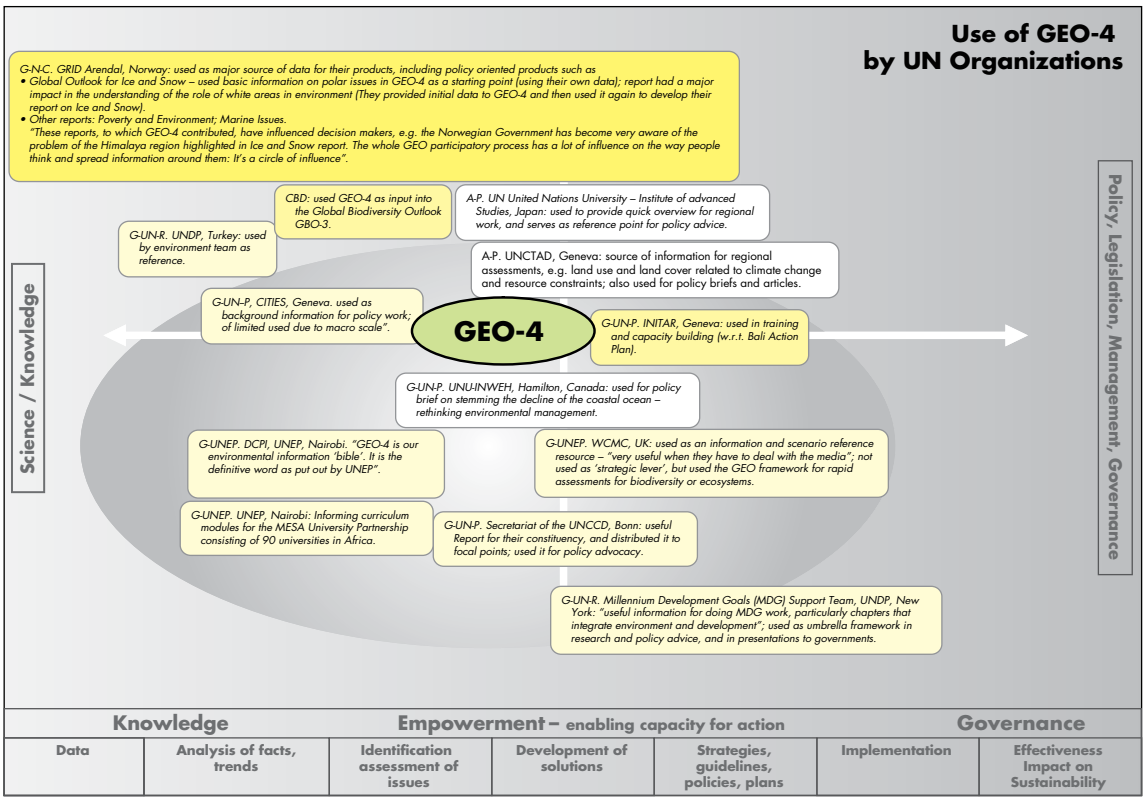
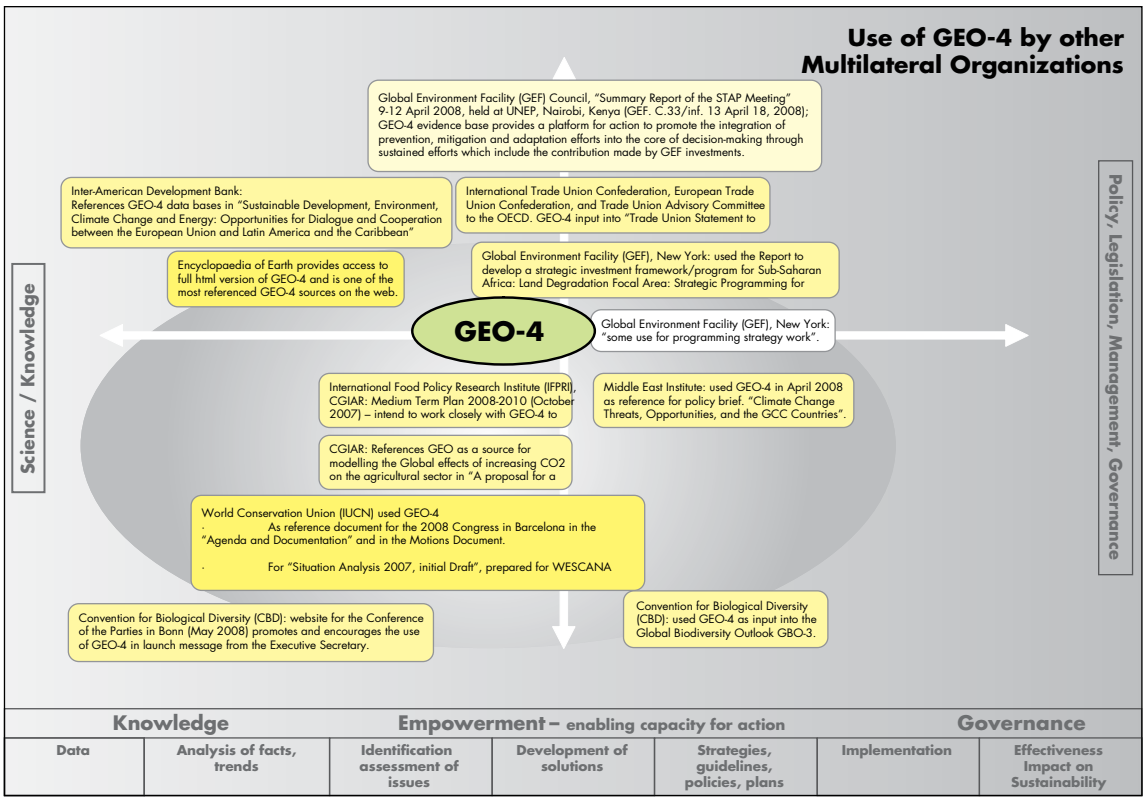


Figure 3.9 Examples of the use of GEO-4 in other multilateral organizations (refer to section 3.1 for interpretation)

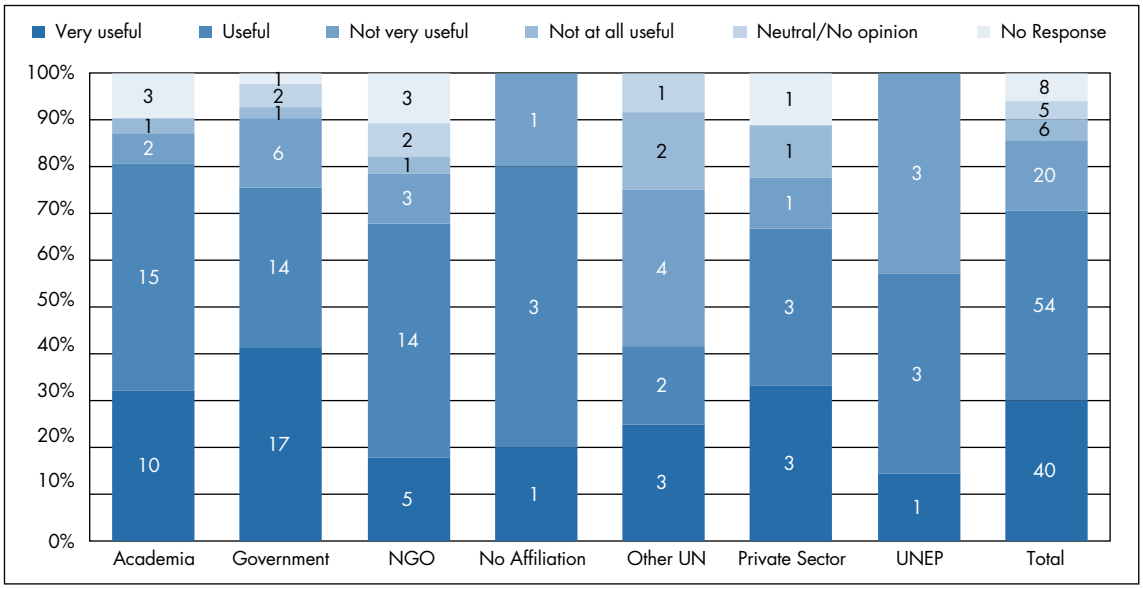


3.4 User perspectives: The utility and value of GEO-4

Finding 11: Respondents from government and academic institutions found the GEO-4 Report to be more useful for their work than respondents from other user groups. The scope and format of the Report lends itself to in an academic environment, while the Summary for Decision Makers has enhanced its utility for policy makers.

Seventy five percent of respondents from government and 80% from academic institutions were convinced that GEO-4 was useful or very useful for their work, compared to UNEP (57%) and other UN organizations (40%) which found it to be the least useful (Figure 3.10). The GEO-4 format and scope lends itself to use by academic institutions. The qualitative information also showed that the policy orientation of the content and the availability of the SDM enhanced the utility of GEO-4 for policy makers.

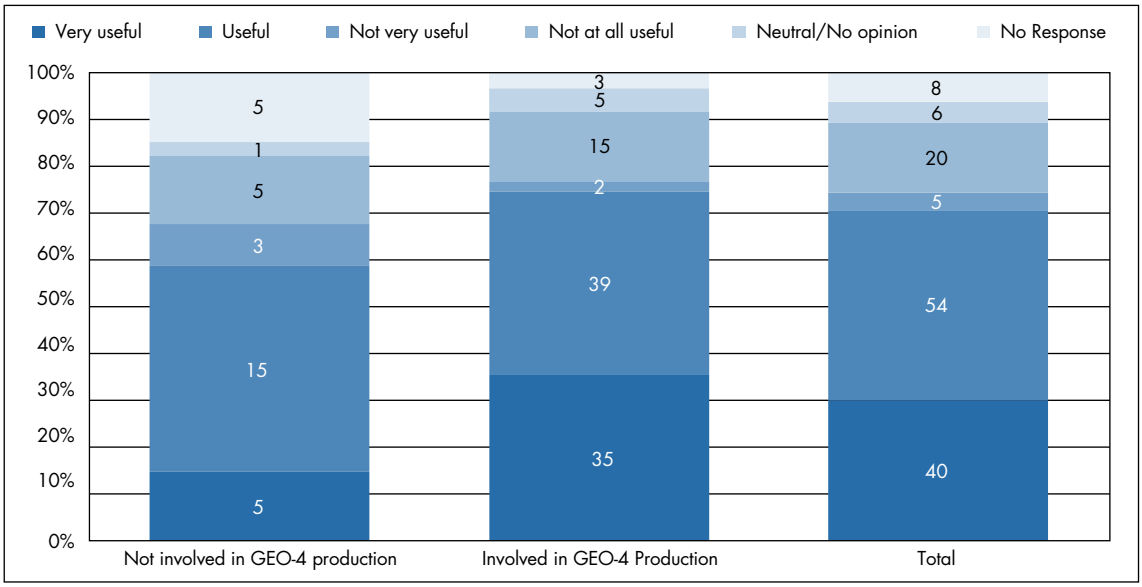
Figure 3.10 Respondents' rating of the usefulness of the GEO-4 Report for their area of work – by user group



Finding 12: Nearly three quarters of respondents perceived the GEO-4 Report useful or very useful for their work. Those who participated in its production were more positive than those who had not done so.

A large majority of 71% of all respondents found the Report useful or very useful; only 19% found it of little or no use (Figure 3.11). Of those respondents who participated in the GEO-4 process, 35% were of the opinion that the GEO-4 Report was *very useful* for their work compared to 14% among those who did not participate. A total of 44% of those who participated found the Report *useful* compared to 39% of those not involved. The reasons for the marked difference were not investigated, but experience with other assessments has generally shown that participation in production processes creates greater ownership of the product and understanding of the issues.

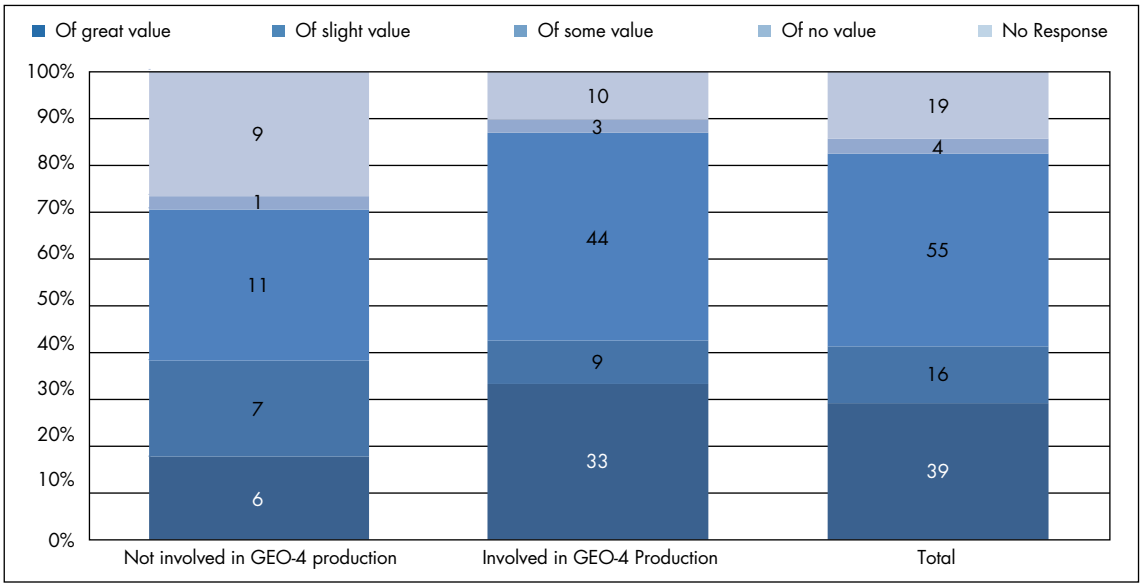
Figure 3.11 Users' rating of the *usefulness* of the GEO-4 Assessment Report for their area of work - by those who have, and have not been, involved in the production in GEO-4



Finding 13: The number of respondents involved in the production of GEO-4 who found the Report of value in their work correlated well with the numbers who found it to be useful. More than 70 per cent agreed that it is either useful and/or valuable.

A product can be very useful but not necessarily of high value to a user's work. Figure 3.12 shows that the ratio of respondents who found the Report of value or of great value to their work corresponds to the ratio of those who found the Report *useful* or *very useful*. A large majority found the Report both useful and valuable to their work. Those involved in the GEO-4 production were again more positive than those who were not.

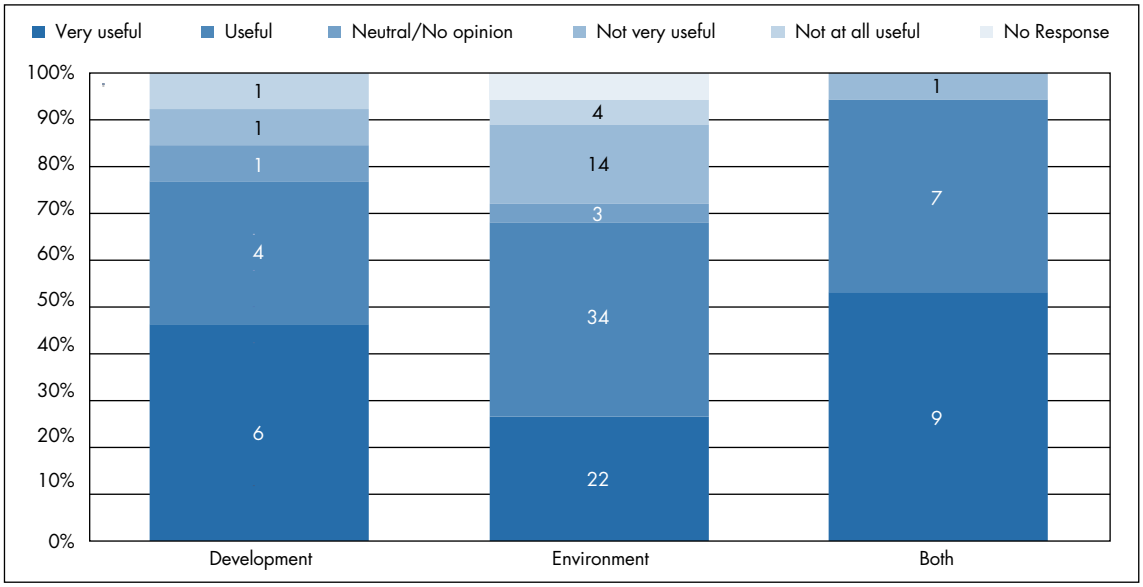
Figure 3.12 Users' rating of the value of the GEO-4 Report for their area of work - by those who have, and have not been, involved in the production in GEO-4



Finding 14: The Report appears to be filling a gap for people working in development and even more so for those working on the interface between development and environment.

A total of 94% of those working in both environment and development found the Report *useful* or *very useful*[38], compared to those working primarily in development (77%) and those in environment (68%). Those working primarily in development were somewhat more positive: 46% found the Report to be *very useful* compared to 27% working primarily on the environment, while 30% found it to be useful compared to 42% working primarily on the environment The Report appears to be filling a gap for people working in development and even more so for those working on the interface between development and environment. However, the data need to be treated with care as the samples for those working in development or in both were much smaller than for those working primarily on the environment.

Figure 3.13 Users' rating of the usefulness of the GEO-4 Report for their area of work, by their involvement in development, environment or both



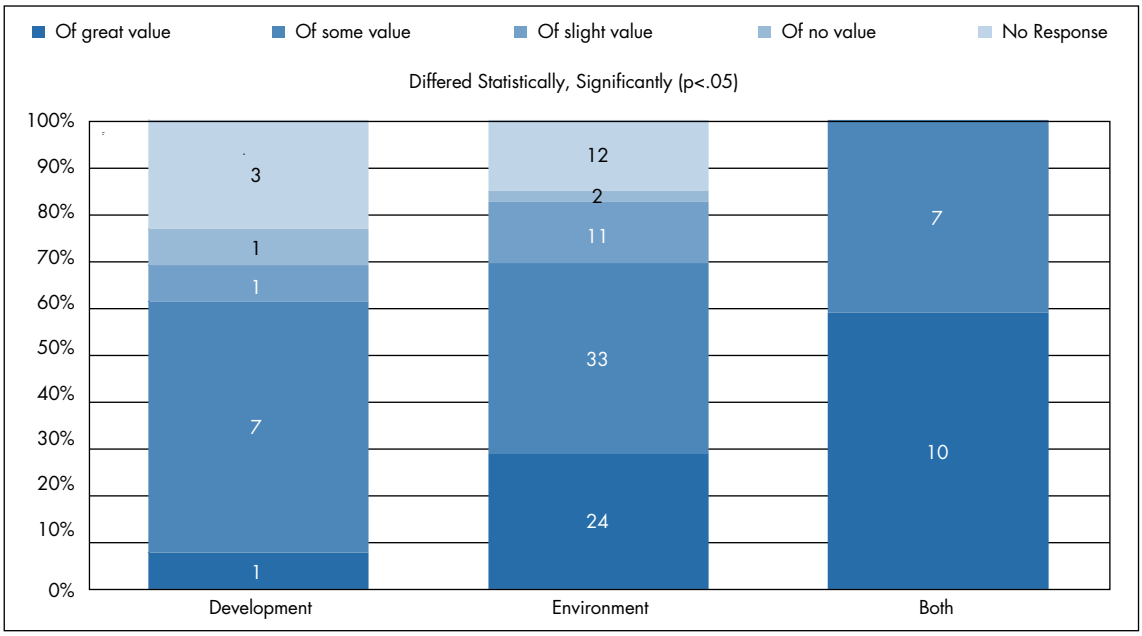
Finding 15: The environment sector clearly remains GEO's main constituency although it has to some extent proved its utility and value to those working in development. Respondents working in development found the Report of significantly less value to their work than those working in the environment.

In spite of the positive finding with respect to utility (finding 14), Figure 3.14 shows that there is a significant difference in the perceived *value* of the GEO-4 Report among those primarily involved in development compared to the other groups. Only 8% found it to be *of great value* compared to 29% among those working in the environment, and 54% *of some value* compared to 40% among those working in environment.

This means that although the GEO-4 content is useful, the value addition to the work of those in development, or working on the interface between development and environment, is much less. The environment sector clearly remains the primary audience for GEO-4 although it has succeeded to some extent in proving its utility and value to those working primarily in development.

[38] The result should be treated with some care as the number of respondents is small.

Figure 3.14 Users' rating of the value of the GEO-4 Report for their area of work, by their involvement in development, environment or both



Finding 16: Of all three groups, those working in both environment and development valued GEO-4 most and also found it to be the most useful for their work.

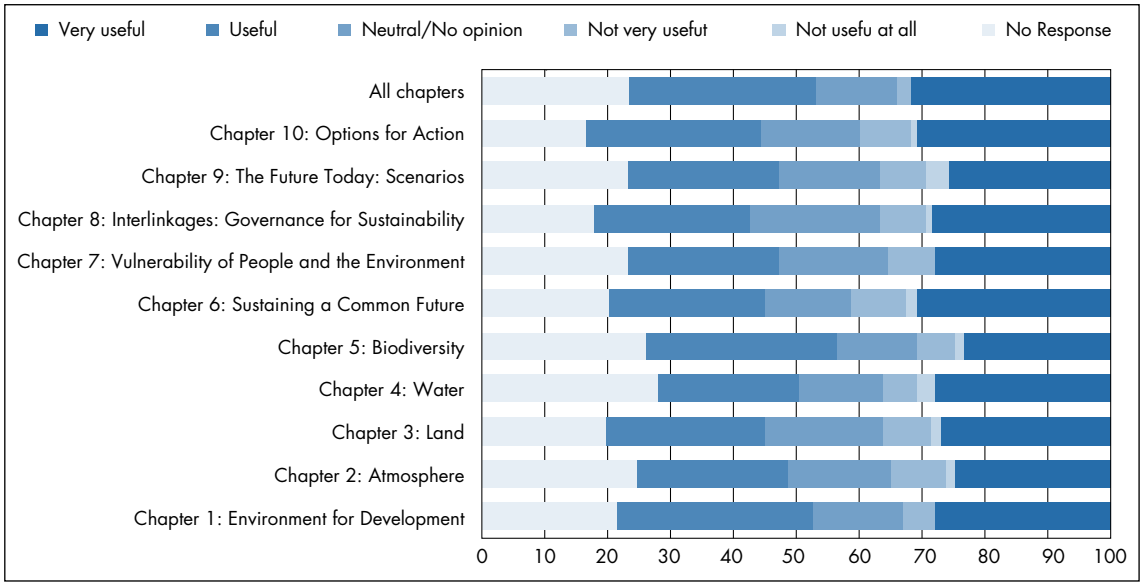
The group working on the interface between environment and development[39] placed a very high value on GEO-4, with 59% finding it to be *of great value* and 52% finding it *very useful* to their work. None found it *of slight* or *no value*, and only one found it not to be useful. Although the sample size was small and qualitative information lacking, this finding may indicate that in line with its intent, GEO-4 has succeeded quite well in addressing the needs of those working on the interface between environment and development.

Finding 17: Although preferences will differ depending on the interests of the reader, respondents have found all chapters more or less equally useful, with most rated as useful or very useful by between 40-50 per cent of the respondents. Perceptions of utility appear to be more positive when respondents consider the whole product, possibly because of its use as widespread use as an 'encyclopedia'.

Figure 3.15 shows an even spread in perceptions of utility of the different chapters in spite of the diverse perspectives and interests of respondents. Qualitative information shows that a large number of users were of the view that they did not know it well enough to comment on the merit of each chapter, hence the large number who did not respond.

[39] The result should be treated with some care as the number of respondents is small.

Figure 3.15 Users' rating of the usefulness of the GEO-4 Report chapters



3.5 Conclusions

In the absence of an explicitly articulated theory of change or desired outcomes it is not clear whether GEO-4 has been used as intended, or has been as influential as expected. The majority of users see the Report as a source of reference to be used as an 'encyclopedia' to justify or elucidate an argument, to highlight and confirm current trends and issues or to educate the next generation. This type of use rarely changes existing paradigms or leads to new policy narratives, although it helps to some extent to set policy agendas.

The Review has also shown that more needs to be done to increase the use and influence of GEO among a spectrum of influential stakeholders, especially in view of the increasingly crowded assessment and information landscape and changing global contexts. This is the case especially for the private sector, development sector and influential policy makers beyond the environmental constituency. Decision makers are now also more intent on seeking solutions and proposals for concerted action in which each actor can find their space. These are all important considerations in any revision of the niche GEO has to occupy in future.

4. FACTORS AFFECTING USE: RELEVANCE

4.1 Approach

This chapter reports on the relevance or 'salience' of GEO-4, which is one of the main factors that affect the extent of the use and influence of the Report. It focuses on the relevance of GEO-4 to its primary and secondary target audiences as seen through the eyes of the selected user groups, with the analysis guided by the GEO-4 objectives and project theory. It also locates GEO-4 in the global context with specific reference to the Global Environmental Assessment landscape.

As noted in Chapter 2, the qualitative input of the persons interviewed was of particular importance. They were targeted by the GEO efforts; around three quarters were involved in some role in the production processes. Any issues or challenges highlighted by this group were therefore likely to be magnified among those beyond this inner circle.

4.2 Relevance to users

4.2.1 Information on trends and issues: environment and development

Finding 18: GEO-4 is generally relevant to its target audiences in terms of providing an overview of (long-term) environment trends and issues at global level. Some groups such as government and developing countries feel better served than others such as the private sector and developed countries. The relevance sharply declines at regional and especially national level.

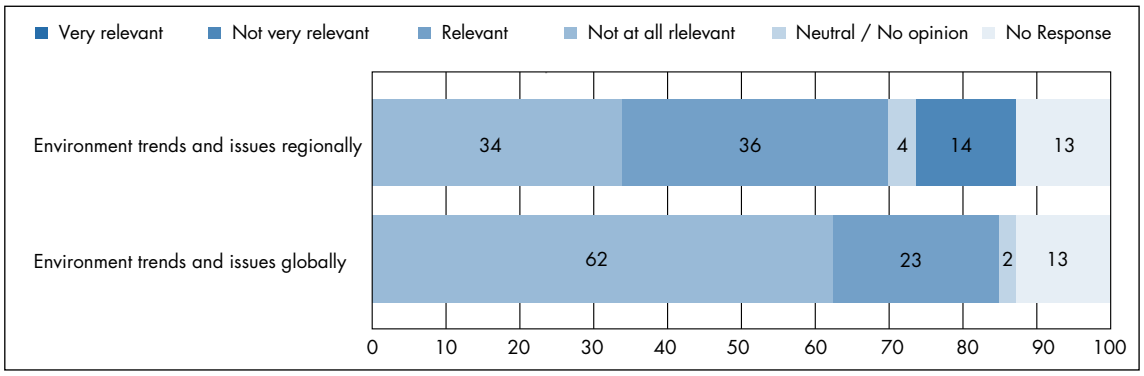
The majority (85%) of the persons interviewed were of the opinion that GEO-4 was *very relevant* or *relevant* in providing an overview of environment trends and issues at the global level (Figure 4.1). Those in government, or those who consider themselves practitioners, tend to be more positive about the extent to which GEO-4 provides relevant information on global environmental trends.[40] They particularly appreciate the comparative insights provided by a global assessments and the long-term perspective, making GEO a useful reference in their work.

Respondents based in developing countries are more positive than their counterparts in developed countries.[41] One plausible explanation raised by several respondents is that developing countries have capacity gaps in environmental reporting and thus rely on GEO as a source of information on trends. Another reason could be that developing country respondents value the bottom-up process used to generate the data, and thus attribute greater relevance to the Report. Private sector users are also positive about the relevance of GEO- 4 as a source of trends data, but stress that there is room for significant improvement because the report is not currently framed in a way that helps to make a business case.

[40] The mean for Government (M=4.86) was significantly higher (p<. 05) than the means for other affiliations. The mean for Practitioners (M=4.80) was higher (p<. 05) than the means for other types of work (policy, research).

[41] The mean for respondents from Developing Countries (M=4.83) was significantly higher (p<. 05) than the mean for developed countries.

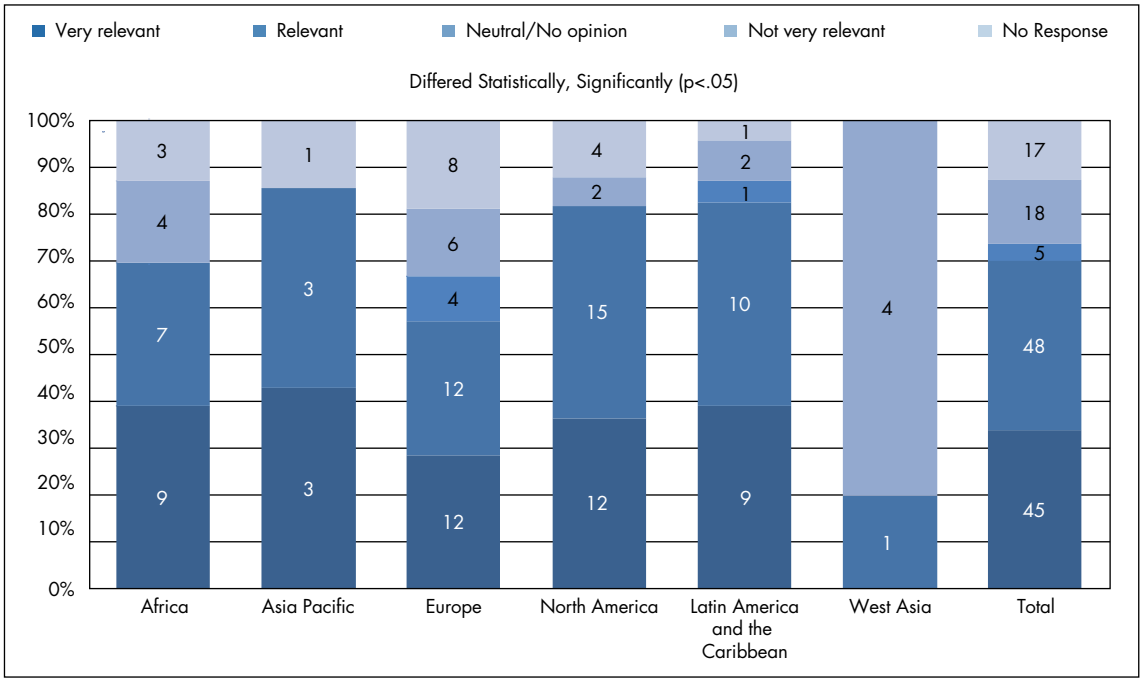
Figure 4.1 Respondents' ratings of the relevance of GEO-4 information at regional and global levels



The data confirm that GEO-4 has fulfilled the role of helping to put issues in a global and long-term perspective. It is less clear if it is a relevant source of information at the regional level, although 70 % of respondents agree that GEO-4 is relevant for informing them about trends and issues at the regional level. GEO is conceived as a global assessment, which limits its ability to focus on issues at the regional and country level. As a result, respondents generally indicate that the regional and country level data are insufficient or that the Report offers limited synergies between global, regional and national assessments.

Respondents in Europe and West Asia were less likely to agree that GEO provided relevant information about environmental trends at the regional level[42] (Figure 4.2). In the case of Europe, respondents pointed out that they have very strong regional and national environmental reporting systems and may not need GEO to cover the regional level and are instead using the 5-year state of the environment reports, and thematic and technical reports produced by the European Environment Agency.

Figure 4.2 Relevance of GEO to providing an overview of environmental trends and issues at regional level, by region



[42] The mean for Europe (M=3.88) and for West Asia (M=2.40) on this item was significantly lower (p<.05) than the means for other regions. However, the respondent group from West Asia is small (n=5) and thus the data may be more unreliable.

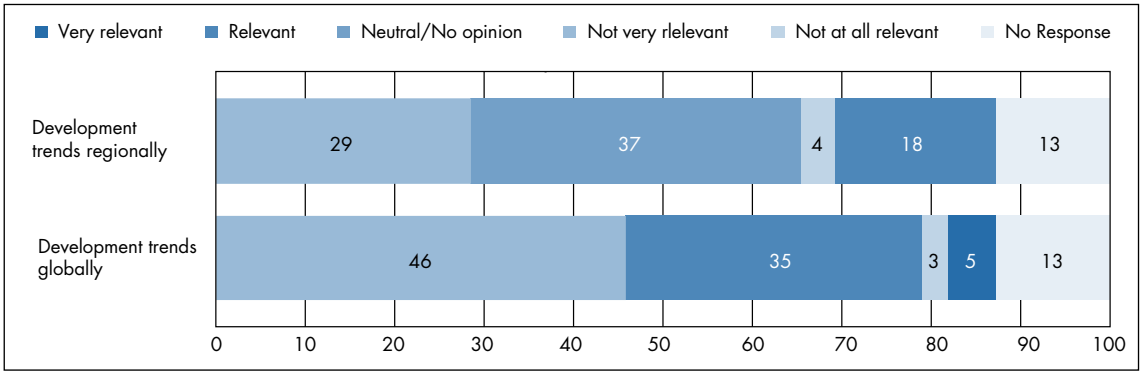
Among the different user groups, people who worked exclusively in development fields were less likely than others to say that GEO provides valuable environmental trend information at the regional level.[43] Although we do not have extensive data from those involved exclusively in development, one hypothesis emerging is that development practitioners require more in-depth local or regional information than is currently provided by GEO-4 in order to inform their programming or policy advocacy. The relevance of GEO to development issues and practitioners is further explored in the following finding.

Finding 19: According to nearly 80 per cent of users, GEO-4 provides relevant or very relevant information on development trends and issues as they relate to the environment at global level, leading to perceptions that GEO is 'moving in the right direction'.

The need for linkages between environment and development has been stressed in previous evaluations of global GEO reports. The GEO-1 and 2000 User Profile and Impact Study found that "Ninety-six percent of the respondents noted that there *should be a closer inter-linkage* with sustainable development in future editions of the GEO report"[44] [emphasis added]. According to the SWOT analysis conducted on GEO-3, CCs thought that "*a better link to development issues and social goals* could be achieved if there were clear policy questions to lead the analysis, more formal review and more time to connect the 1972-2002 retrospective and the 2003-2032 outlook"[45] [emphasis added] .

In this Review, the majority (79%) of respondents think that GEO-4 is *relevant* or *very relevant* in providing an overview of development trends and issues as they relate to development at the global level. About 65% also find that it is *relevant* or *very relevant* on development issues at the regional level.

Figure 4.3 Relevance of GEO-4 in providing information on development trends and issues as they relate to the environment at the global and regional levels



These figures support the intention of GEO-4 to address environment and development, as emphasized by its title. In their comments, several respondents confirmed that GEO is moving in the right direction. Nonetheless, comments provided by a few other respondents suggest that development issues are still not treated as extensively or thoroughly as environmental factors.

Note: One of the limitations of the data set for the Review is that it includes few international or national development organizations, which means that these figures must be interpreted with care.

[43] The mean for those involved only in the Development field (3.8) is lower ($p<.05$) than the means for those involved in the Environment field (3.9), those involved in Both field (4.1) and those users that fall into the category of Other (5.0).
[44] UNEP (2004c). Global Environment Outlook: User Profile and Impact Study, p.48.
[45] UNEP (2004d). Global Environment Outlook (GEO): SWOT Analysis and Evaluation of the GEO-3; Process from the Perspective of GEO Collaborating Centres, p.43.

"GEO reports are becoming more relevant concerning development issues, not only environmental issues. This is very important for poor countries. GEO should continue in this direction." *Practitioner working on the environment in government*

"GEO-4 has a better intersection between environment and development issues than the previous GEO reports." *UN agency representative, working on research in environment and development.*

"It is very important to have information on sustainable development when working in the environmental sector. GEO-4 provides this infomation. *Government researcher and practitioner working in environment and development.*

"I work as an environment adviser in (a bilateral international development agency), so the theme of GEO-4 (Environment for Development) could not have been more relevant!"

"Its relevance has increased over the years. Nowadays, the world is waking up to these issues and it is becoming more and more relevant." *Researcher in NGO focused on sustainable development*

"GEO-4 has too strong environmental focus. Even when the problems are originally environmental some of the answers can come from other sectors. GEO-4 doesn't include these perspectives." *Academic researcher primarly focused on environment and development*

"The information in GEO-4 is stronger on the environment pillar rather than development and social aspects." *Academic, primarly focused on environmental issues*

"While I believe that GEO is very relevant to environment and development interests, it is essentially an environmental report, developed and written through the lens of environmental researchers, not through the lens of devleopment practitioners or private sector players." *Private sector representative*

"GEO aspires to be relevant to the development agenda, and is well framed in that regard. However the information is not deep enough to provide development practitioners with the depth of information they need." *MEA focal point*

Finding 20: GEO has been less successful in integrating development practitioners and the private sector in the assessment process.

According to the research by Mitchell et al on the influence of Global Environmental Assesments, the relevance (or salience) of an assessment for a particular audience is lower among "additional audiences that were not initially demanding, involved in or an intended audience of the assessment."[46] In the case of GEO-4, this may explain the mixed perceptions of relevance for development and for private sector audiences. Although the GEO-4 Coordinating Team made efforts to engage more experts in development policy and practice in the process, more could be done. Participants in the process have been primarily data providers and users on the environment side. In the GEO-4 Self-Assessment Survey, 40% of the Working Groups felt that they lacked expertise on human development, poverty, and social sciences in their Group. Similarly, Working Group members recommended a better balance of policy, sciences (social and natural), academic and development expertise.[47]

A similar view has been offered by the private sector respondents. Although they were a small group in the Review sample, several key informants from this sector are in positions that engage with many major private sector companies and their experience and perspectives carry significant weight. All agreed that the absence of private sector participation in the GEO process means that the Report lacks the private sector perspective. As one respondent noted, "For GEO to be really useful for my work it needs to be framed through the lens of the private sector with products and examples that speak to the needs of industry."

[46] Mitchell et al (2006), p. 315.
[47] IUCN and UNEP (2008). Findings of the GEO-4 Self Assessment Survey, p. 13-14.

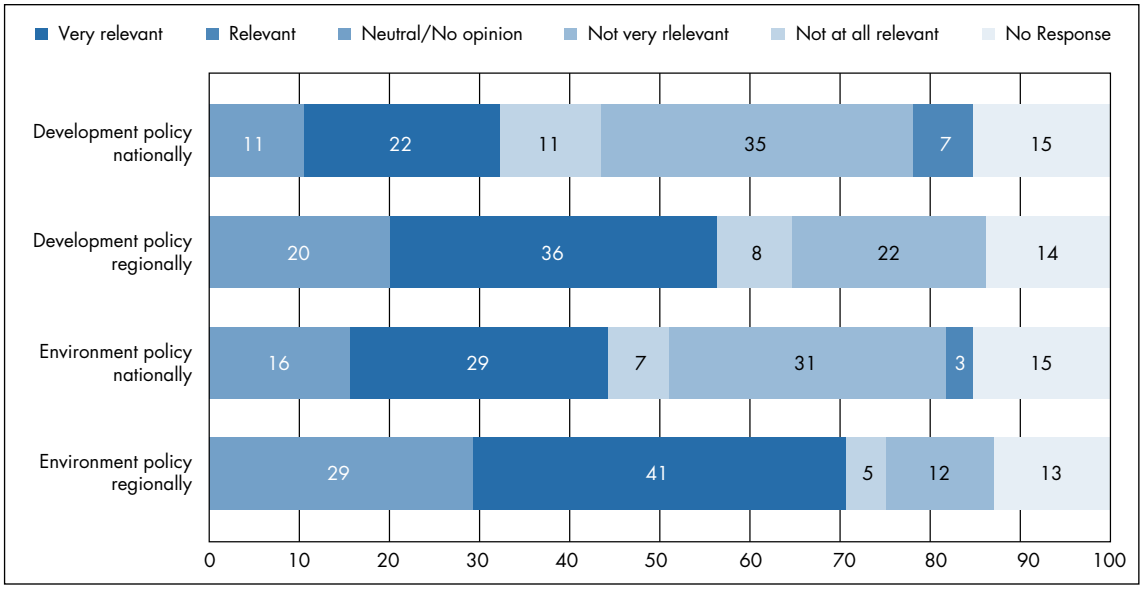
4.2.2 Policy relevance

Finding 21: GEO-4 is perceived to be relevant in guiding environmental and development policy, especially at global and regional levels. Its policy relevance declines at the national level due to its global orientation that makes the scope, level of detail and timeframes less useful for national and local purposes.

A total of 64% of persons interviewed had a positive rating for the policy relevance of GEO-4 as one of the characteristics of the quality of the Report. It is noteworthy that persons involved in policy making were significantly more positive than other users about the policy relevance of GEO-4.[48]

Approximately 70% of the persons interviewed indicated that GEO-4 was *relevant* or *very relevant* in providing information to guide environment policy at regional level. For guiding policy at national level this number is 45%. Similarly, for development policy slightly over half of the respondents indicated that GEO-4 was relevant at regional level, yet only one-third agreed that it was relevant for national development policy.

Figure 4.4 Respondents' rating of the degree to which GEO-4 provides relevant information for environment and development policy



Where GEO-4 was found to be policy relevant at regional or national levels, the following were given as reasons:

(i) The Report provides information on emerging issues with a long-term perspective;
(ii) The Report signals the main issues that should be the focus of policy;
(iii) The Report allows policy makers to put national and regional issues in a global perspective;
(iv) The Report provides international justification to national and regional policy makers when they want to pursue policies suggested in GEO-4.

The main limitation to the relevance of GEO for policy making at the regional and national levels is that its scope is both general and global. Policy makers need information and data at the country and regional levels, and GEO-4 is not meant to provide this kind of detailed data. As noted by Mitchell et al, "salience depends on decision-matching: ensuring that the scale and timing of

[48] The mean for those involved in policy making (M=4.67) is higher ($p<.05$) than the mean for those who are not involved in policy making (M=4.23).

information meets the needs of decision makers."[49] Global-scale data and knowledge may be useful for raising awareness of environmental issues but very useful in day-to-day decisions made in ministries at the national level.

A second main challenge is the timing of the Report. As some of the persons interviewed noted, important policy issues move quickly and by the time that GEO is published its information may already be dated. This is often inevitable due to the nature of the processes through which these types of large-scale assessments are conducted.

"If you just read the few pages in the GEO-4 – you will not have enough information about regions. Maybe it is relevant for discussing protocols at international conventions. For policy it acts as a framework, but for the purposes of making it relevant to the national context, the regional reports are more useful." *Academic, Southern Africa*

"It is very relevant for global policy issues but not at the regional level. At the national level GEO provides legitimacy to priorities that we set, when they are also highlighted in GEO-4." *Government policy maker, Europe*

"The report is very relevant to guide environment policy in our country – the decision making is based on it. Very relevant to identifying emerging issues like poverty and food security." *NGO representative, LAC*

"National policies are based on other documents, not on GEO-4." *Government development practitioner, LAC*

4.3 Relevance in the global context

In response to large-scale environmental problems, organized efforts to mobilize scientific information in support of decision making have become increasingly frequent. The period 2007-2008 saw a record number of Global Environmental Assessments in the field of environment and sustainable development, such as *Climate Change* 2007 – *Fourth Assessment Report,* published by the Intergovernmental Panel on Climate Change (IPCC); the *Environmental Outlook to* 2030, published by the OECD; *the Millennium Ecosystem Assessment (MA);* and the *International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD),* supported by UN Food and Agriculture Organization, the UN Development Programme, UNEP, and the World Bank.

Together these Global Environmental Assessments provide an extensive knowledge base on the current state of the environment and sustainable development.[50] They are widely used; only 5% of persons interviewed did not make use of other (global) assessment reports. GEO-4 is now only one assessment in the GEA landscape, although each assessment has distinctive characteristics in terms of its content and production process. In a comparison between GEO-4 and the three GEAs noted above,[51] the Netherlands Environmental Assessment Agency (PBL) identified the following as distinguishing features for GEO-4 (Table 4.1).

[49] Mitchell et al (2006), p. 316.
[50] The Millennium Ecosystem Assessment (MA) should be added to this list, as it was frequently referenced by respondents.
[51] Netherlands Environmental Assessment Agency (2008). *Lessons from global environmental assessment.* Bilthoven, PBL

Table 4.1 Features that distinguish GEO-4 from other Global Environmental Assessments conducted in 2007-2008

Characteristic	GEO-4
Spectrum between policy and science	Provides more of an analytical assessment such as the OECD Environmental Outlook, than the more scientifically oriented IPCC and IAASTD reports.
Methods and approaches	Synthesizes from existing work (in the way that IPCC report does), without seeking to achieve the same depth of study as is achieved in the reports by the IPCC.
Perspective on global issues	Views environmental problems from the perspective of poor countries.
Developing capacity for assessments	Has a secondary objective of development of research capacity to conduct assessments in developing countries.
Approaches to the future	Provides contrasting scenarios used to develop vision and strategic orientation.

Source: Netherlands Environmental Assessment Agency (2008). Lessons from global environmental assessments, p. 15-19.

Finding 22: A large majority of respondents (83%) confirmed that GEO-4 is of value in their specific area of work, with 29 per cent regarding it as of great value.

Figure 4.5 illustrates that most respondents found the GEO-4 Report adds value to their specific area of work, with 42% finding it of some value, 29% finding it of great value and 12% of slight value.

Finding 23: The GEO-4 Report characteristics – global, general and integrated – have conflicting effects on perceptions of the relevance of the Report.

Persons interviewed identified two features that make GEO-4 unique in the assessment landscape, and yet tend to both increase and decrease its relevance:

Its general, global, macro-scale approach. For 22 respondents this is what makes GEO relevant. They look for an overview of the main environmental issues at the global level and for the "bigger picture". GEO-4 provides a good "snapshot of the state of environment". They also look for macro-scale comparison among different regions and to links among different issues. In several cases they see GEO-4 as a complement to more specific assessments (regional or thematic). By contrast, for 17 other users these characteristics make GEO-4 irrelevant to their work. This is particularly true when the respondents' work focused on one specific subject or on one specific region or country, or when the work requires more in-depth information and substance. In these cases, GEO-4 is considered to be too general and superficial.

Its integrated approach to environment and development. This feature makes GEO-4 more relevant to some users, in particular when their area of work focused mainly on environment but with some secondary interest in development. For others GEO remains weak on the development side and respondents generally prefer to use other reports - such as the UNDP Human Development Report - when working on development issues.

These issues affect not only GEO-4, but also other GEAs. Global assessments tend to be rather far removed from the practice of national or regional policy-making and thus require further distillation and translation in order to achieve their policy relevance, as recently illustrated by the recent distillation of lessons from the GEAs by the government of The Netherlands.[52]

[52] Netherlands Environmental Assessment Agency (2008).

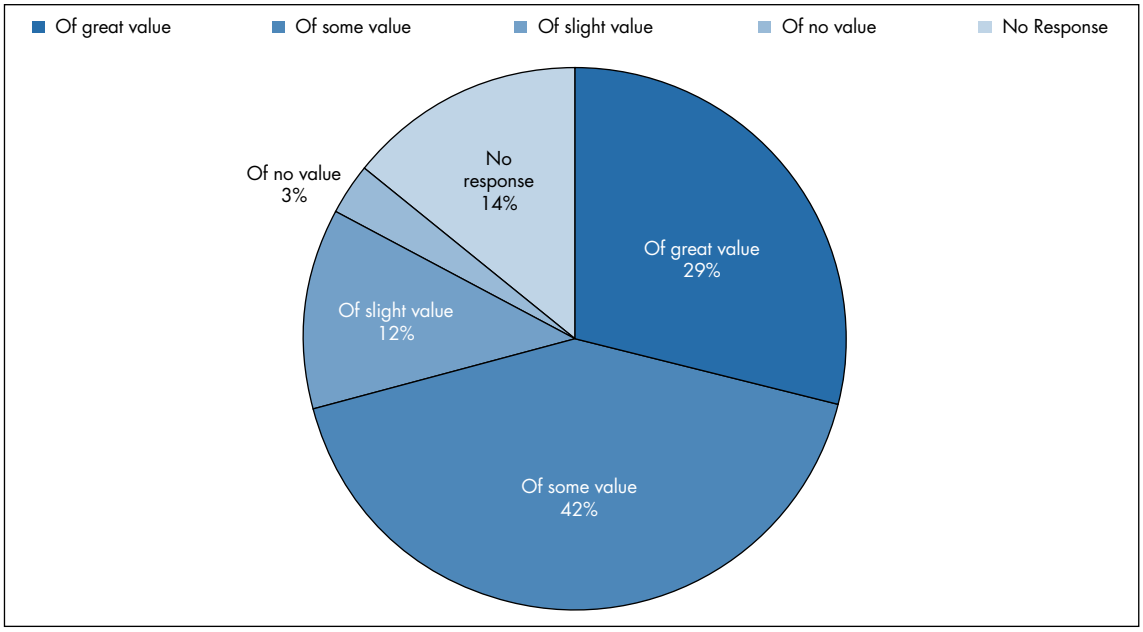
"In comparison to other very useful reports (for example the Report of the Intergovernmental Panel on Climate Change) GEO-4 is more complete. It deals with many issues. Even if less specific it provides more value because it allows a bigger picture concerning environment and sustainable development and makes useful links between different issues." *Government practitioner and policy maker working on the environment, West Africa.*

"I do not use GEO-4 on a daily basis in my work because my scope is national/regional. EEA reports provide the main framework and data source for work. But when I need information at the global level or some comparisons then the value added of GEO is much higher." *Government practitioner and policy maker working on the environment, Europe.*

"The added value of GEO-4 is mainly in its long term, global perspective." *Government practitioner and policy maker working on the environment, Europe*

"GEAs have rather limited value in everyday work because they are very macro scale." *UN agency practitioner and policy maker working on the environment.*

Figure 4.5 Respondents' rating of the value of the GEO-4 Report for their area of work



"There are some problems of repetition and coordination among different reports. There are more and more global and regional environmental assessments (even if more specific on a theme than GEO). With this boom, GEO is the loser because it is the most general. In particular in the case of Europe there are serious problems of repetition and coordination among the European environment reports (SOE 2005 prepared by the EEA and "Environment in Europe" prepared by UNECE) and GEO. Moreover, there were some logistic problems in the launch of the reports: GEO-4 was launched two weeks after the European report. The GEO-4 launch was weakened by the fact that there had been another launch two weeks before." *Policy maker working on the environment*

"GEO-4 hasn't been able to brand itself as well as the MA, to get its image out there. People know about the Millennium Assessment, but GEO seems to be flying under the radar." *Representative of NGO in environmental research*

"GEO should have its own niche in terms of UNEP's own data. If GEO is not doing this - producing its own data - then it needs to be very good at the synthesizing and compilation efforts. There is a lot of competition out there with other reports synthesizing stuff." *Representative of NGO in environmental research*

"The circumstances in which the GEO-4 Report was published have been unfavorable. It was published just before the fourth report of the IPCC and after the Millennium Ecosystem Assessment. They both deal - in much greater length and detail – with several of the issues that were also addressed in the GEO-4. For these issues, many people preferred to reference these other reports rather than GEO-4." *Independent consultant working on the environment*

Finding 24: The relevance of the GEO-4 Report at global level is confirmed by the guidance it is perceived to provide in support of the international environmental governance system and global development policy.

"IPCC and Millennium Ecosystem Assessment have been much better at working with target groups to define report objectives, which also serves to build constituency for the report." *Representative from NGO working in environmental research*

"The Millennium Ecosystem Assessment or the IPCC, or the Brundtland Report have had much more impact than GEO when they were released because they were the champions of some new concepts and they were clearly identifiable as such. These reports have a direct influence on policies for this reason. What GEO lacks is a personality." *Representative from an NGO working in environmental research*

"In the Millennium Ecosystem Assessment there is a message through it and a story that develops on the importance of ecosystems. GEO report tries to cover everything and it does not come through as a clear message to me." *Representative from UNEP focusing on environmental research*

Few would disagree that coordinated international action is essential to protecting Earth's climate, preserving its biodiversity and managing its marine and other common resources. A total of 70% of those interviewed indicated that GEO-4 was *relevant* or *very relevant* in providing information that could help support and improve the system of international environmental governance. Most (65%) also concurred that GEO helps to inform and support the Multilateral Environmental Agreements, although the Review had insufficient perspectives from MEA focal points. Respondents in the UN system indicated that their needs in tracking trends and issues often require more sector-specific, detailed information. GEO-4 is not the reference for this kind of information.

GEO assessments have also been relevant to international environmental summits, such as the World Summit on Sustainable Development (WSSD) in Johannesburg, which are intended as highly visible forums that advance global resolve on the environment. More than half (67%) of the respondents indicated that the GEO-4 Report provides relevant information for strategies towards the WSSD targets as well as the Johannesburg Declaration and Plan of Action (60%).

Respondents from developing countries are significantly more positive about GEO-4 contributions in these areas.[53] The reasons for this difference are not clear.

Approximately 69% of the interviewees found that GEO was relevant in providing guidance to global development policy due to its analysis of the linkages between environment and development, and its focus on the 'big picture framework'. Users in government were more likely to have a positive view of the information that GEO-4 provides as guidance in this area. They particularly value the comparative insights provided by the Report. There is no significant difference in perceptions on this aspect between respondents from the development and environment sectors.

[53] The means for respondents from developing countries (M=4.16 for WSSD targets and M=4.10 for Johannesburg Declaration POA) are significantly higher than the means for respondents from developed countries.

Although 62% of persons interviewed found that the GEO-4 Report provides information relevant to strategies to achieve the Millennium Development Goals, the level of detail is not seen as sufficient to be a major factor in such strategy development.

4.4 Facilitating factors and constraints

4.4.1 Facilitating factors

Finding 25: Key factors that enhanced the relevance of GEO-4 – and hence its potential for use – include:

(i) its unique global perspective that pays significant attention to the nexus between environment and development, highlighting developing country concerns and issues; and

(ii) user participation in the production process that provided for relevant formulation of contexts, priorities and issues.

The following were identified as the main factors that helped to enhance the relevance of GEO-4:

i. *Its unique focus on the global situation, with significant attention to developing country concerns and issues*. From the perspective of users GEO-4 is seen to provide a good overview of global trends and information, in particular serving as a good source of reference for developing countries that generally have fewer reliable sources of assessment data or expertise. External reviews (such as that of the Netherlands Environmental Agency) confirm that its uniqueness stems from its presentation of global environmental issues from the perspective of developing countries.

ii. *User participation in the assessment process*. In all questions concerning the relevance of GEO-4, participants in the production process provided as a group more positive answers than non-participants. This confirms the research findings by Mitchell et al that participation in the assessment enhances the salience of the assessment for the user groups and improves its relevance through the continuous interaction between the different groups of potential users such as scientists and policy-makers.

4.4.2 Constraints

Finding 26: Key factors constraining the relevance of GEO-4 – and hence its potential use – relate to the general, global nature of its content and to its production process. Specific challenges include:

(i) need to satisfy diverse, very broadly defined target audiences;

(ii) lack of clarity on the GEO objectives and desired outcomes;

(iii) finding the appropriate approaches to branding a global assessment and raising its profile amidst a proliferation of assessments aimed at more narrowly defined audiences; and

(iv) balancing the trade-offs inherent in an inclusive, participatory production process.

The following were identified as the main challenges related to the relevance of GEO-4:

i. *The multiple, broadly defined audiences in environment and development*. The research on GEAs suggests that ensuring an assessment's salience is much more challenging when it tries to influence multiple audiences. The GEO-4 Report was intended to reach a number of very broadly defined primary and secondary audiences (chapter 6) which according to many of the persons interviewed led to a number of inter-related challenges to its relevance:

- It was not obvious that GEO had clearly identified its intended audiences and had in place the strategies to reach them – including (influential) decision makers who were the primary target audience.

- The Report was structured to try to address a wide range of actors in environment and development. In doing so, it lost some of the characteristics that could increase its relevance. It was perceived to have become less innovative and cutting-edge, and somewhat 'watered down'.

- The Report did not appear to be framed with an eye towards decisions it was trying to influence in each of the target audiences.[54]

ii. *Target audiences that include multiple levels* (the global-to-local and the general-to-specific relevance gap). The stated GEO-4 target audiences cut across different levels although the Report focuses on trends information at global level. In spite of efforts to increase its relevance at sub-global level, the utility of its regional and national level information for regional and especially national level decision-making is still in question.

iii. *Inadequate clarity of objectives and expected outcomes.* The objectives for GEO-4 were perceived to be less clear than the objectives of the other GEA reports. Expected outcomes are also not clearly expressed. Several respondents noted that the MA and IPCC in particular clearly targeted their audiences and developed a product suited to them. For many of those interviewed, GEO-4 does not convey a clear message, express strong conclusions or champion a specific concept or approach, thus weakening its relevance in their eyes.

iv. *The need to brand GEO more sharply in the assessment environment.* Given the number of assessment reports produced in recent years, one of the challenges for UNEP is to become increasingly sharper in defining its GEO 'brand': What is it? What is it good at? What distinguishes it from other assessments?

v. *The need to balance the trade-offs inherent in the GEO process.* The participatory and inclusive production process allowed GEO-4 to take into consideration many different views, perspectives and sources of data. While this is likely to have increased the relevance of the product for those who participated, it takes significant time and hence limits the relevance of the Report with respect to emerging issues and the latest developments.

4.5 Conclusions

GEO-4 is perceived to compare favorably with other global environmental assessment reports in terms of the value that it potentially has for the work of its target audiences. Its information and guidance are especially relevant for the global environmental governance system. It also helps to place regional and national strategies in the larger global context.

In spite of the fact that for example the private and development sectors appear to be regarded as secondary audiences, there is a discrepancy between the inadequate attention to the needs of these sectors and the stated need to reach influential decision makers who can effect significant policy and strategy change. It remains a challenge to translate and apply the GEO-4 content at regional and especially at national levels. The timescale for its production also contributes to a relatively short shelf-life.

Most importantly, GEO's position is being challenged by the increasingly crowded global environmental assessment landscape. Maintaining its relevance will require careful definition of the unique characteristics of GEO and the niche that it should occupy given UNEP's strategies and role in the UN system. It will also require more precise identification and articulation of its objectives and expected outcomes, and of its primary and secondary target audiences based on the extent to which its global and environmental focus should be expanded to satisfy influential decision-makers at regional and national levels in environment *and* development.

[54] The exception may be the Summary for Decision Makers, although there are concerns about the process and eventual content produced in this document.

5. FACTORS AFFECTING USE: QUALITY

5.1 Approach

The brief by the Global and Intergovernmental and Multi-stakeholder Consultation defined the characteristics of GEO-4 as follows: GEO-4 aims to provide a "global, comprehensive, reliable, and scientifically credible, policy-relevant and legitimate up-to-date assessment of and outlook regarding the interaction between environment and society"[55]. To this set of requirements the GEO-4 Outreach and Engagement Strategy added the need to be "authoritative, multi-scale, and inclusive." The GEO-4 Self-Assessment Survey provided judgments on the quality of the working group products, using the criteria of "independence, credibility, scientifically-based, policy-relevant, delivered on time, and high quality." These dimensions of quality were used to refer to both the process and products of the assessment.

The overarching dimensions of credibility and legitimacy are thus crucial for analysis of the quality of GEO-4 and they are the primary focus of this chapter. This emphasis coincides with the research conducted by Mitchell et al, which identifies credibility and legitimacy as two key attributions of influential Global Environmental Assessments.[56]

The interviews conducted during the Review explored a variety of the characteristics that can be associated with these dimensions of quality. These are summarized in Table 5.1.

As noted in Chapter 2, the qualitative input of the persons interviewed was of particular importance. They were targeted by the GEO efforts; around three quarters were involved in some role in the production processes. Any issues or challenges highlighted by this group were therefore likely to be magnified among those beyond this inner circle.

Table 5.1 Analyzing the quality of GEO-4

Dimension	Characteristics
Credibility	The Report is comprehensive. It provides broad coverage of issues and is not too narrowly focused The data, theories, ideas, models causal beliefs and options in the report are true and accurate - the Report is perceived to be reliable The Report is considered to be a scientifically rigorous and authoritative resource The Report is considered to be up-to-date
Legitimacy	The Report is seen to be the result of a credible, rigorous and transparent process The Report is perceived to be independent of undue influences

5.2 User perspectives

5.2.1 General

Finding 27: Users from all target groups regard GEO-4 as an environmental assessment of high quality, although there are some significant areas of concern.

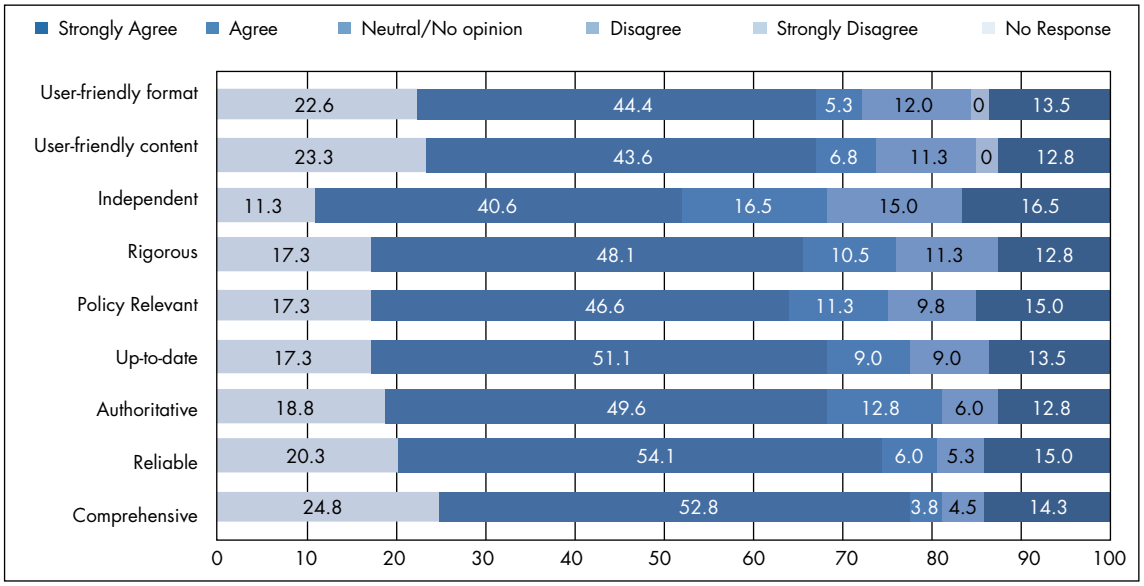
[55] UNEP (2005d). *Statement by the Global Intergovernmental and Multi-stakeholder Consultation of the fourth Global Environmental Outlook, held in Nairobi on 19 and 20 February 2005.* UNEP/GC.25/CRP.5, p.2.

[56] According to Mitchell et al (2006), *credibility* means that the target audiences are convinced that "the facts, theories, ideas models, causal beliefs and options contained in an assessment are 'true', or at least a better guide to how the world works than competing information." This means that users seek assurances of unbiased information and what they consider to be "credible" credentials. *Legitimacy* is more about the assessment process. It refers to the perceptions by audiences of an assessment process that is "fair", or the extent to which the assessment considered their values, concerns, and perspectives. The definitions are summarized or quoted from Chapter 11, Mitchell et al.

The GEO-4 Self Assessment Survey provided very positive judgments on the product quality, with over 90% of respondents of the opinion that their Working Group products were independent, credible, scientifically based and policy relevant. The ratings of the persons interviewed during this Review were somewhat less positive; for each criterion (Figure 5.1) with the exception of 'independence' at least 60 % agreed or strongly agreed that GEO met that particular criterion.

The extent to which these ratings are acceptable is a subjective judgment that depends on what the reader deems feasible for this type of work. The qualitative comments that provide the reasons for the opinions of those who were less positive is therefore of particular importance, and are discussed in the sections below.

Figure 5.1 User ratings of GEO-4 quality criteria



5.2.2 Credibility

Finding 28: The credibility of GEO-4 as a global environmental assessment is high in terms of its comprehensiveness, reliability and standing as an authoritative source of information. However, the Summary for Decision Makers is perceived to be less reliable than the Report.

In line with the framework for analysis, the credibility of GEO-4 was assessed in terms of the extent to which the potential users believed that the content was true and accurate (and hence reliable), comprehensive, authoritative and scientifically rigorous. A summary of the positive and negative factors associated with each criterion is provided in Table 5.2.

GEO-4 is perceived to provide a comprehensive overview of the state of the environment at global level. Over 75% of the respondents *agreed* or *strongly agreed* that GEO-4 met with this criterion (Figure 5.1), pointing out that it addresses the main issues, articulates the problems and identifies interconnections between them. Users in NGOs and UN agencies were generally less positive than the other groups. Their reasons centered on the need for prioritization (this is further discussed below in the finding on legitimacy) and the perception that it does not do enough to incorporate a pro-poor approach or address economic incentives. For others, the fact that it is comprehensive means that it loses depth, thus limiting its utility.

GEO-4 is generally considered to be reliable. More than 70% agreed or strongly agreed that the Report was reliable (Figure 5.1). Reasons given were the inclusive multi-stakeholder process, the trust in the GEO team, the UNEP label, the reliable data sources and thorough analyses, and the fact that it is well referenced (Table 5.1). The SDM was perceived to be much less reliable; 70% of persons interviewed *disagreed* with the statement that it was reliable (see below). Consistent access to quality data at the regional level and among CCs continues to pose challenges and has led to

perceptions of variable quality across chapters, products or geographical data sets, for example, the reliability of regional data were questioned more often than those at global level.

GEO-4 is considered to be authoritative. Almost 70% of the persons interviewed believed that GEO-4 was authoritative (Figure 5.1). Those in NGOs and the private sector were more likely to regard GEO as authoritative than the other groups.[57] A prevalent view was that the proposals for action were too timid or too general to provide clear guidance to different actors.

"Yes, definitely, it is credible. The UNEP label is important in this regard. I've also worked closely with the GEO team. I know how rigorously they check their facts and the lengths they go to present a balanced picture." *Government representative working primarily in development, Europe*

"I also think the multi-stakeholder process has a lot to do with it (credibility) – using a network of experts from the grassroots level upwards in countries and regions." *Government representative working primarily in development, Europe.*

"The text of the report is consistent with main international issues, conventions, trends. All the main issues are there." *Government representative working in environment and development, West Africa*

"The report carries the credibility of the UN stamp - and can hide behind it. It carries weight." *UNEP representative*

"One expects quality and rigor in a document of a global nature. But that requires it to be neutral, like vanilla, unbiased." *UNEP representative*

GEO-4 is considered to be as up-to-date as global assessment processes allow. The majority of persons interviewed (69%) also regard GEO-4 is up-to-date. The production processes of comprehensive global assessments are lengthy and even more so when designed to be as inclusive and rigorous as for GEO-4. Although the content is usually based on the most recent data available, some may be quickly outdated (for example the state of the Arctic sea-ice) - even by the time of publication. This is an inevitable situation unless special measures are taken to ensure the integration of up-to-date information, something that is not possible with the current process and static format of GEO-4. Other GEO reports fill this gap to some extent.

The frequency of publication of GEO reports was not considered as part of the Review.

Finding 29: The credibility of GEO-4 is seen as less favorable in terms of its scientific rigor due to the lack of capacity and mandate to control data sources, perceived differences in data quality across chapters and the need for negotiations during the production process, in particular during the development of the Summary for Decision Makers.

Only 65% of the respondents indicated that GEO was scientifically rigorous – a surprisingly low rating in the opinion of the Review team, given the care taken by the GEO Coordinating Team to engage a diversity of experts, obtain data from credible sources and establish extensive consultative and peer review processes. Those with a positive view of the scientific rigor indeed noted that GEO-4 reflected the use of the best available intellectual resources, was consistent with scientific standards and methodologies and was subject to a thorough fact-checking and review process. Concerns stemmed from the following (refer also to Table 5.2). Although some are inherent to this type of process, others warrant special attention in the next version of GEO:

- Variations across chapters and different products, partly due to data quality. Although the Collaborating Centers are reputable sources of information, it would be impossible for UNEP (or anyone) to exercise control over the data and agendas that could be at play. Some respondents were of the view that CC data quality of collaborating centres was inconsistent, an issue that could not be checked by the Review team;

[57] The Means for those with no affiliation (M=4.20), private sector (M=4.12), and NGO (M=3.95) were significantly higher (p<.05) than the means for the other user groups.

- The need for synthesis and for accessibility to a broad audience, both of which are perceived to diminish rigor;
- The GEO-4 process, which required negotiation that is seen to have affected the scientific rigor of the products, in particular the Summary for Decision Makers. The latter is widely regarded as a negotiated text in which some government representatives had a much stronger voice than others (see below).[58]

Respondents in North America, Europe and Latin America and the Caribbean were significantly less likely to regard GEO-4 as scientifically rigorous.[59] Latin America and Caribbean respondents pointed out the limitations due to the political influence that certain influential countries brought to bear on the GEO-4 process – in particular on the Summary for Decision Makers – and the need to 'water down' some conclusions in order to be 'politically correct.' European and North American respondents pointed out the same problems and also identified methodological issues on data collection and collation such as data coming from a large number of very different sources, the large number of people involved in the process, different levels of quality and scientific rigor per chapter.

Even language was seen to be a factor with the potential to affect the credibility of the Report as it tries to straddle the diverse needs of target audiences. Some were of the opinion that the Report was written in a general language that may make it more accessible to the public, yet could lead to imprecise articulation and hence a lack of scientific rigor. Others indicated the contrary – that the language was much too technical and thus inaccessible to policymakers or to the general public.

Table 5.2 Positive and negative user perspectives with respect to credibility factors

Credibility Factors	Positive Perspectives	Negative Perspectives
Comprehensiveness	Contains the main issues Articulates the problems Identifies interconnections between problems/ issues	Level of detail is insufficient in certain thematic areas
Reliability	Emerged from a multi-stakeholder process involving different disciplines and agencies, as well as extensive peer review Well referenced information and data Good processes for analyses Trust in the GEO Coordinating Team UNEP label	Perceptions of political influence in the development of the Summary for Decision Makers
Authoritative	UNEP label Many diverse players involved in its production Government endorsement	Not sufficiently detailed and geographically specific Not sufficiently policy focused Too timid in proposals for action
Scientific rigor	Uses best available intellectual resources Consistent with scientific standards and methodologies Subject to thorough fact checking and review process	Process involves negotiation which tends to compromise rigor Scientific rigor is diluted to make report more accessible to different audiences Rigor varies across chapters and across products; particular concern about the Summary for Decison Makers

[58] A few respondents noted that the Summary for Decision Makers was not intended to be 'scientifically rigorous' but was instead to provide a generally accepted, negotiated text.

[59] The means of North America (M=3.90), Europe (M=3.66), South America (M=3.52) are significantly lower ($p<.05$) than means for the other regions.

Up-to-date	Information is based on most recent statistics available in countries As updated as one can expect for this type of assessment – other global processes face the same challenges	Process factors affect how up-to-date the Report can be – peer review takes time It is a 'static' report and thus not up to date when published; evolving situation renders some data obsolete It is difficult to integrate up-to-date information given the current process and format

5.2.3 Legitimacy

Finding 30: The balance between scientific integrity and political representation has been difficult to maintain and is reflected in the user views on legitimacy. There are significant concerns about the independence of the production process, with specific reference to the Summary for Decision Makers. This was more marked among those (i) with policy making as primary function, and (ii) who participated in the production process.

GEO-4 is generally regarded as the result of a credible, rigorous and transparent process with one exception – its independence. More than ever before the production process for GEO-4 involved the scientific community as well as government representatives, requiring a balancing act between scientific and political agendas. As noted by Mitchell et al, "the choices that must be made regarding what to analyze and what to omit—and the implications of those choices—are inherently, if not always explicitly, political. Not surprisingly then, audiences evaluate an assessment's legitimacy before accepting its claims."[60] They tend to judge legitimacy based on who participated (or did not participate) in decision-making processes. The participation of policy makers may increase the legitimacy of the product for that group, but reduce its legitimacy for others if there is a perception that policy makers' views were integrated at the expense of scientific rigor or without NGO participation, for example.

The persons interviewed therefore offered mixed views on the extent to which the Report (which included the SDM) was *independent:* only 52% *agreed* or *strongly agreed* that it was, while 15% disagreed (Table 5.3). Those with research as primary function were the most positive about its independence; 60% either *agreed* or *strongly agreed* that it was independent while 13% disagreed. Among the other groups these figures were 50% and 29% respectively. Policy makers were somewhat less positive. Only 46% *agreed* or *strongly agreed* compared to 54% who did not. The percentages who disagreed were 14% and 17% respectively. Participants in the GEO-4 process were also somewhat more negative than those who did not participate. Of the participants, 50% *agreed* or *strongly agreed*, while 6% disagreed with the statement that the report was independent. Among the non-participants these figures were 41% and 19% respectively.

Qualitative information confirmed the widely held perception that the SDM content in particular was modified due to pressure from certain government delegations, and questioned the role and effectiveness of UNEP as neutral broker in this process. Main concerns expressed were:

- The assessment process allowed for delegations to negotiate the document or influence the conclusions on the basis of their political agendas.
- Data are provided by country-based agencies who control what to share and where to put emphasis. These decisions may be influenced by political agendas.
- The fact that it was a UNEP document among some respondents meant that it had to satisfy an intergovernmental audience and therefore would have to strive to the lowest common denominator in order to be politically acceptable.
- The process may be in danger of perpetuating 'group-think' if care is not taken to include experts from diverse perspectives, and to integrate dissenting positions into the Report.

[60] Mitchell et al (2006), p. 321.

The GEO-4 Self-Assessment Survey referred to the same difficulties and recommended the articulation of a clearer role for the consultation process, better preparation to avoid a recurrence and tighter management by UNEP in subsequent assessments.

Table 5.3 Positive and negative user perspectives with respect to legitimacy factors

Legitimacy Factors	Positive Perspectives	Negative Perspectives
Credible, rigorous and transparent process	Process perceived to have been designed with scientific quality as a foremost objective Process managed in a transparent, consultative manner Credible scientific expertise engaged throughout the production process, with cross-checks by peers	Countries control the data provision, and choices about what they share may be influenced by political agendas Process may be in danger of perpetuating 'group-think' if care is not taken to include experts from diverse perspectives, and to integrate dissenting positions into the Report
Independence	UNEP is seen as a neutral party and thus 'honest broker'	GEO process in general allows for too much negotiation on conclusions, during which some country delegations are allowed to be more influential than others SDM process in particular allowed certain country delegations to exert influence on the basis of political agendas The fact that it is a UNEP report means that it has to satisfy a variety of political actors, and hence strive towards the lowest common denominator in an effort to be politically acceptable

5.3 Facilitating factors and Constraints

5.3.1 Facilitating factors

Finding 31: Key factors determining the credibility and legitimacy of GEO-4 are:

(i) the combined effect of the engagement of an extensive network of experts, the transparent multi-stakeholder process, substantive peer review mechanisms and the GEO team's commitment to data quality;

(ii) the reputation and weight of UNEP as a neutral UN body; and

(iii) the comprehensive articulation of key issues and problems and the interconnections between them in order to establish 'the bigger picture' at global level.

The main factors that have had a positive effect on the credibility and legitimacy of GEO-4 have been discussed in preceding sections and summarized in Tables 5.2 and 5.3.

5.3.2 Constraints

Finding 32: Key factors perceived to have had a negative effect on the quality of GEO-4 are:

(i) ongoing challenge of trying to meet the needs of diverse audiences;

(ii) perceptions that the independence of the Summary of Decision Makers' process was compromised;

(iii) perceptions that the production process potentially allows government interference in the provision of data sets, determining what should be included in the assessment, and in the shaping of conclusions.

The main factors that have had a negative effect on the credibility and legitimacy of GEO-4 have been discussed in preceding sections and summarized in Tables 5.2 and 5.3.

5.4 Conclusions

GEO-4 is generally regarded as a Report of high quality, albeit with some caveats that will require attention in next versions of GEO. The transparent and well structured multi-stakeholder process, network of experts and Collaborating Centers, and impressive peer review mechanisms and GEO Coordinating Team's focus on data quality and fact checking are especially noted for their contribution to the credibility and legitimacy of GEO-4. At the same time the production of the Summary for Decision Makers raised widespread concerns about its scientific credibility and independence, and the extent to which UNEP is able to safeguard the quality of its GEO products.

This emphasizes the importance of the efficient and ethical management of the complex production process and the need to retain the comparative advantage presented by the network of Collaborating Centers and expert contributors. It also highlights the need to have a 'light' yet credible production process that pays particular attention to those steps that balance the need for scientific rigor with the needs of, and ownership by a diversity of target audiences.

6. FACTORS AFFECTING USE: REACHING AUDIENCES

6.1 Approach

The reach of the Report is an obvious factor influencing its use and impact. The extent to which the *content* resonated with the target audiences is discussed in chapters 4 and 5. Chapter 6 focuses on the extent to which the targeted audiences were reached, by answering the following questions:

- Who were the target audiences?
- What mechanisms were employed to reach them?
- How well targeted audiences were made aware of the Report and to what extent did they have convenient access to its information?
- What were the main factors facilitating and constraining the reach of GEO-4 and what are the implications for future efforts to reach target audiences?

The scope of the Review was too limited to determine the reach of the Report among broadly defined, randomly selected audiences. Instead, the interview sample was based on the contact list managed by the GEO team. An attempt was made to balance the obvious bias in this sample through a survey conducted among the global community of practice of the UNDP Environment and Energy Practice Area[61] as well as Internet searches for references to GEO in English, Spanish and French.

As noted in Chapter 2, the qualitative input of the persons interviewed was of particular importance. Most of them were specifically targeted by the GEO efforts over the years; around three quarters were involved in some role in the production processes of the various versions. Any issues or challenges highlighted by this group were therefore likely to be magnified among those beyond this 'inner circle'.

6.2 The intended reach of GEO-4

Finding 33: In spite of an explicit focus on policymakers, the target audiences for GEO-4 were as diverse and as broadly defined as for its predecessors. This presented the GEO team with significant challenges during the implementation of outreach and engagement strategies.

In the statement by the Global Intergovernmental and Multi-stakeholder Consultation[62] outlining the scope and process of GEO-4, there is little mention of target audiences. The statement explicitly noted that policymakers' needs had to be addressed through a summary document. Policymakers and civil society were to benefit:

> *"… the aim of the fourth Global Environment Outlook production process should be to generate an integrated assessment report of the world environment … for interacting with policy-makers and civil society and analyzing critical environmental issues."*

The GEO-4 Outreach Working Group interpreted this brief during the process of designing the Outreach and Engagement Strategy[63] as targeting '…the sectors of government, business and civil society whose primary mandate deals with environmental, social and cultural dimensions of sustainability'[64]. They identified the target audiences in greater detail:

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61 The Review team hoped that the survey among the nearly 1 000 strong Environment and Energy Practice Area of UNDP – who were generally not involved and worked on the interface between development and environment - would shed additional light on the extent of reach, but the low number and quality of responses yielded few insights.

62 UNEP (2005d). Statement by the Global Intergovernmental and Multi-stakeholder Consultation on the fourth Global Environment Outlook, held in Nairobi on 19 and 20 February 2005. UNEP/GC.23/CRP.5, 22 February 2005. Meeting attended by eighty governments and more than 100 other stakeholders.

63 UNEP/DEWA (2005). Fourth Global Environment Outlook (GEO-4): Outreach and Engagement Meeting – Conceptual Summary. 17-18 October 2005. Document provided by DEWA.

64 Ibid, p. 4.

- UNEP Governing Council/Global Ministerial Environment Forum, UNEP Committee of Permanent Representatives, actors in select intergovernmental governance processes, the MEA Secretariats and Conference of Parties (COPs) and policy advisors in relevant government ministries, including ministries of environment and foreign affairs. The GEO-4 team confirmed these 'policymakers' as the *primary target audience* for GEO-4.
- As *secondary audiences*: UN agencies and UN Sustainable Development processes, other government ministries and agencies, IGOs, NGOs, civil society, the scientific community, the media, the private sector, and the general public.[65]

The comprehensive and general nature of the GEO assessments supports the notion that they are written for a broad, rather vaguely defined constituency. They serve as reference documents for those who can use them; specified target audiences include nearly everyone. Yet lessons from previous GEO reports emphasized the need to "be more effective with conventional environment constituencies" and to "specifically target and engage new constituents – private sector, development agencies (social and economic), policy institutions and NGOs"[66].

This did not help to narrow down the constituency and it was clear that the GEO-4 Coordinating Team faced a considerable challenge in this regard - even though it had to focus primarily on 'policymakers'. The literature confirms that the assessment-audience relationship is critical to the influence of the assessment,[67] and more complex in the case of trans-national assessments. The concerns, perspectives, knowledge, data and assumptions of groups initiating a global environmental assessment often differ markedly from those of other groups whose collaboration is needed to solve environmental problems. Thus the broader and more diverse the target audiences, the more difficult it is for the product to 'speak to' their concerns and interests and the greater the potential that their acceptance of the assessment will be influenced by a range of 'non-scientific' political, social and economic factors.

The GEO-4 Outreach and Engagement Strategy and Implementation Plan developed by the Outreach Working Group showed the intent to map and focus on those actors and processes seen to be relevant and influential in each of the targeted audiences. This approach was not brought to fruition. The Review team was informed that the Working Group could not fully implement its proposed strategies due to inadequate resources.

The contact list used by the GEO-4 Coordinating Team to engage and communicate with its constituency highlights the diversity of the targeted groups and the priorities for engagement. The largest group consisted of government representatives, with the second largest group consisting primarily of NGOs and also some private sector organizations (grouped together). The list had representatives from all targeted groups, including many major actors.

There were also important gaps – among others Ministries other than those of the environment, for example, development planning, trade and industry, finance, the private sector (although organizations such as the World Business Council on Sustainable Development were regarded as key intermediaries), the development sector (major INGOs such as Oxfam, Care International) and specialized media in for example the financial, trade and development sectors.

As can be expected, the constitution of the interview sample – drawn from the contact list, partly randomly and partly purposefully – indicates that UNEP's conventional constituency remains predominant: According to their own information 62% worked in the environment, 10% in development and 13% in both.

6.3 Mechanisms employed to expand GEO's reach

Finding 34: The GEO-4 Coordinating Team gave higher priority than any of its predecessors to targeted outreach and engagement activities. A variety of engagement, communication and dissemination mechanisms were employed with varying success.

[65] The primary and secondary target groups differed slightly between various documents, with youth in particular an explicit target in some.
[66] Ibid, p. 3.
[67] Mitchell et al (2006), p. 313.

Finding 35: The early termination of the Outreach and Engagement Strategy led to loss of momentum in the deliberate and systematic targeting of intended audiences.

The GEO-4 team initiated, through the Outreach Working Group, an ambitious strategy that called for a clearer definition of the target audiences, a deeper understanding of their needs, the use of persuasive messages reflecting the values of each audience and their effective engagement during and after the production phase.[68] The strategy was established in response to lessons learned during earlier GEO productions. With inadequate resources to pursue novel and tailor-made strategies for each audience, momentum was lost which led to the early termination of its implementation.

Table 6.1 Mechanisms employed to reach potential users

Mechanism	Key elements
GEO-4 production process	Expanded network of Collaborating Centers (54 compared to 35 for GEO-3) and individual experts, coupled to a multi-stakeholder development process with inclusion of government focal points; engagement of high level consultative group. Extensive process of engagement, combining bottom-up (CCs; experts) and top-down (high level consultations with policymakers) processes. Authors included environmental scientists as well as development experts. Government nominations of focal points facilitated engagement at policy level.
Complementary hard copies	2 000 copies of Report distributed; more of SDM. Fewer copies distributed than for GEO-1 (12 700) and GEO-2000 (16 500); greater dependence on Internet access.
Commercial sales	Commercial availability of the Report. From 500 per month after launch to fewer than 20 per month.[69]
Internet dissemination	Full Report or parts of it can be downloaded in three of the UN languages; SDM available in six languages. Full or partial Report downloads from the Internet totaled nearly 1.4 million over nine months.[70]
Media strategy and product launch	Elaborate launch of GEO-4 accompanied by extensive media strategy; series of global and regional launch activities in more than 40 cities world-wide, including in the eight One UN pilot countries and at UN headquarters. Generated significant media interest, with TV documentaries, interviews on UN and other radio stations, articles on front pages of prominent newspapers. Press clippings indicate references all over the world during and just after the launch. Level of interest dropped off quickly after the launch, but a Web search at the time of the Review yielded 33 media references (some dated from the launch) aimed at promoting the Report and raising awareness on relevant issues.[71]
Ongoing UNEP Communications	Distribution of hard copies during 2008 at key events (COPs, training sessions, high level forums). Several ad hoc events, including training where the report was distributed. Use of GEO 'ambassadors' but no systematic follow-up.

6.4 The Actual reach of GEO-4

6.4.1 Creating awareness

Finding 36: Full or partial Report downloads from the Internet totaled nearly 1.4 million over nine months compared to fewer than 3 000 hard copies distributed or sold.[72]

Finding 37: In spite of the employment of a variety of engagement, communication and distribution

68 Ibid.

69 Numbers provided by Earthprint Ltd, UK, 24 October 2008.

70 A caveat is that this data could not be verified and there has not been any tracking of the type of user who has downloaded all or parts of the Report. These were the only Web statistics available, as the required software for more systematic tracking of a variety of data was not yet operational. The current web statistical reporting system does not provide cumulative data from all mirror sites, including the profile of downloads. This was already noted in the 2004 GEO User Profile and Impact Study.

71 This data could not be verified and there has not been any tracking of the type of user who has downloaded all or parts of the Report.

72 Ten media references in English, 14 in Spanish and 9 in French - some dating from the time of the launch.

mechanisms, perceptions among key informants are that it is unlikely that GEO-4 has managed to penetrate important secondary UNEP/GEO audiences – the private sector, development sector, powerful government Ministries and specialized media[73].

Finding 38: In line with the intent to focus on the primary target audience, GEO engaged policymakers in numbers larger than ever before in production and outreach processes, although they remained primarily from the environment sector.

Finding 39: Opportunities to reach the academic sector have not been optimized. A notable exception is the collaboration with the Partnership Program of African Universities (MESA), which indicates the value obtainable if UNEP units and programs are successfully mobilized in support of GEO.

Finding 40: Promotion of GEO-4 after its launch has been done ad hoc, primarily through distribution of the report at environmental events and forums.

The reach of GEO-4 is assumed to be dependent on (i) the extent to which people in the different target audiences were made aware of GEO-4 and (ii) the extent to which the information was accessible once they are aware of its existence.

The vast majority of respondents in this Review knew about GEO primarily due to their involvement or contact with previous GEOs. The rest were reached by UNEP communications (19.5%), colleagues' recommendations (9.8%), web searches (6.8%) and the media (2.3%). However, it was impossible for the Review to obtain an objective measure of the extent to which people are aware of GEO-4. Conventional communication and dissemination methods were used to create awareness. In addition, the GEO process also engaged more than a thousand individuals and nearly 60 partner organizations.

The Review team therefore searched for signals that efforts had been made to reach those outside the conventional UNEP/GEO (environmental) constituency. The following provide some (proxy) indications:

Reaching developing countries

Many more individuals from developing countries were engaged in the GEO-4 production process than for earlier versions. A significant number of those interviewed were however concerned that the communication and dissemination strategies were not adequate to reach the audiences in their countries. This view was especially prominent among developing country representatives and was confirmed by qualitative comments on the accessibility of the report.

Reaching the private sector, the development sector, specialized media and influential Ministries

Private sector representatives were invited to the consultation meetings and the WBCSD were approached as key interface with the private sector, but according to those involved, the private sector responses were generally disappointing. It is likely that incentives for engagement were lacking.

There was no specific strategy to reach out to the development sector, although some selected organizations were invited to engage in the production process. According to GEO team comments, not many were interested in participating, possibly due to a lack of incentives for this voluntary activity.

Although the launch received significant media coverage across the world, specialist media for example in the trade, finance, economic or development sectors were not engaged.

[73] The latter two groups were not defined as a specific target group, but is implicit in the primary target group of 'policymakers' and the secondary target group of 'media'. They are likely to be critical for any efforts to bring about considerable policy and strategy change. This reinforces the view that the GEO target groups should be more explicitly and carefully articulated, for example identifying influential actors and processes – whether they are to be reached via UNEP's primary environmental constituency, or directly through its own engagement processes.

Hard copies of the Report were distributed primarily to those who participated in the production process and at key events linked to the environment sector.

The UNEP website references GEO under its 'resources for policymakers' but not for other groups, for example the private sector, emphasizing the lack of a deliberate focus on these non-traditional audiences.

Reaching civil society and the youth

The Web research yielded significant references from policy-makers (52% of those found in English), but few references from civil society (18% of those found in English). A number of French and Spanish on-line communities (blogs) hosted by civil society organizations promoted and referred to parts of GEO-4. Links to the report are overwhelmingly found on the websites of UNEP partner agencies and only rarely on civil society websites.

Since the launch in October 2007, Internet downloads and commercial sales have now dropped and show that GEO-4 is fading from public memory. Ongoing or new opportunities to reach audiences are not being exploited. There have been few follow-up activities, with some notable exceptions in terms of workshops held in India and Nairobi in conjunction with the DEWA capacity building team.

Internet statistics for strategic management were not available and it is therefore not clear who downloaded (parts of) the report. In spite of a large number of downloads, the success of Internet searches will be limited by the availability of the report only in PDF format on the UNEP website (although it is available in other formats from partners). This is further discussed in section 6.5.

Reaching the academic sector

Key informants were of the view that opportunities to create awareness of GEO-4 in the academic sector for teaching and research purposes have not been optimized. Although it is not possible to check this assertion, a notable exception is the effort in UNEP's Mainstreaming Environment and Sustainability in African (MESA) Universities Partnership Program, where 90 universities across Africa have been made aware of and are using GEO products, including the GEO-4 Report, for curriculum development.

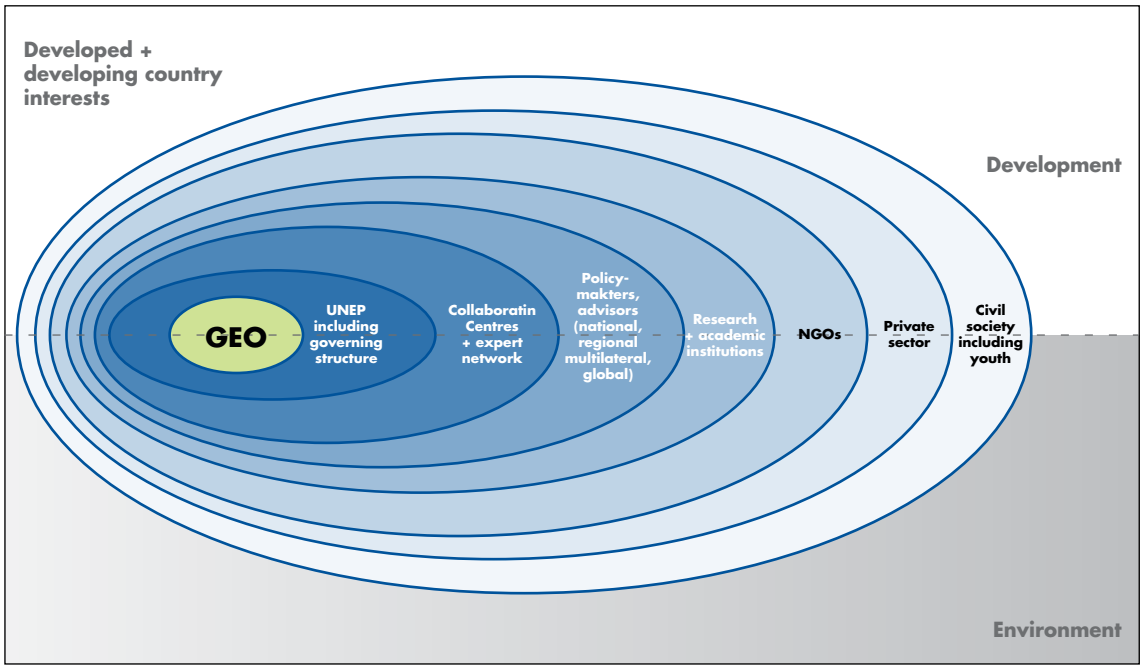
Promoting GEO at regional, national and local levels

A number of respondents from Collaborating Centers and involved in the writing of GEO-4 believe that more could have been done to mobilize them to promote GEO-4 at regional and national levels.

Role of the capacity building initiative

The most significant effort aimed at continuing to create awareness in between GEO Reports (apart from sub-global GEO reports) is likely to be the capacity building initiative. Who exactly participates in its activities will determine the type and extent of the outreach and the success in expanding awareness of GEO-4. This has not been studied during the Review.

Figure 6.1 Perceptions of the extent to which GEO-4 has reached target groups*



*The darker the shading, the more likely the penetration of the target group by GEO-4

"UNEP has done an exceptional job in marketing and making available the report at events. Their launch was very professional!" *Government representative, Europe*

"Outreach was always seen as a peripheral issue in GEO. Previous GEOs focused only on the media. This time we tried to change that." *UNEP staff member with extensive GEO experience*

"At the national level I received only one copy, and this was in English. This discourages many people to try and read GEO-4 because the majority of people do not speak English. UNEP should have sent copies in French." *Government nominee, West Africa*

"It is easy to access. It is always on the desk next to me! It is also on the website, easy to access when out of the office. But universities should be better used to get the word out." *Research Centre representative, South East Asia*

"GEO is not nearly as well known as some other assessments. The outreach could be better in terms of letting them know it existed." *NGO representative, North America*

"Although the launch of the report was covered in the press, there were no follow up … to keep the interest going. Many people working in the environment and development fields are not aware of its existence." *Government representative, Southern Africa*

"They do not consider the communications aspects early enough in the process and don't make these communication aspects a high enough priority. They need a different way to get the right information at the right time to the right people." *Research Institute representative, North America*

6.4.2 Accessibility

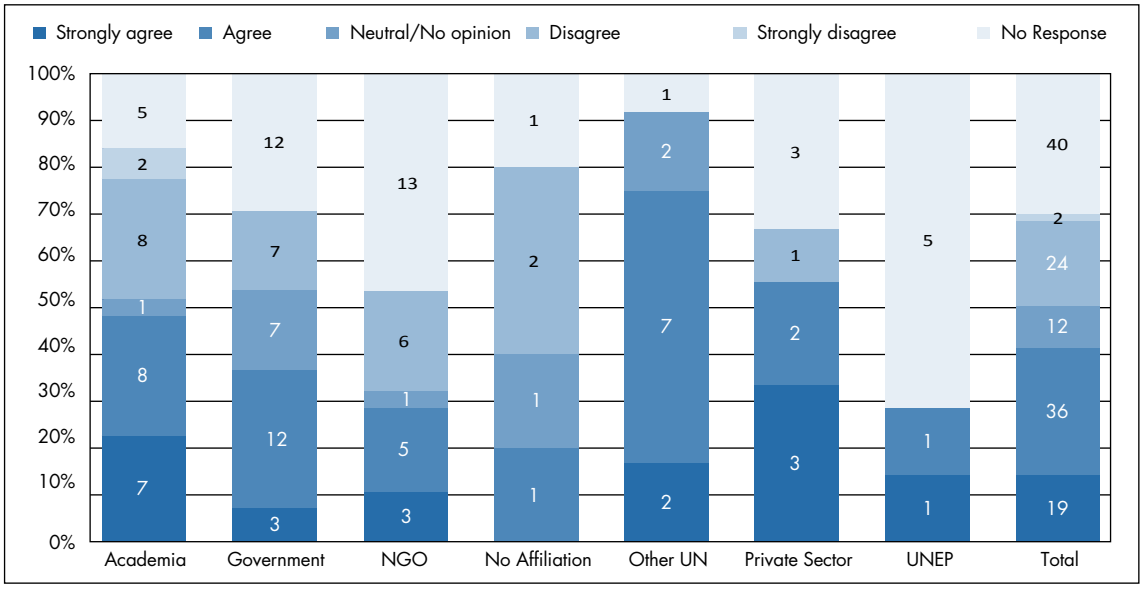
Finding 41: Fewer than half of the persons interviewed believe that GEO-4 is readily accessible to their peers who have not participated in the production process.

Finding 42: Developing country respondents were significantly less sure than developed country counterparts that their peers were aware of GEO-4 or that they would have ready access to the products if so. Reasons given are that too few hard copies are in circulation there, that length of the Report is intimidating, that the format is inappropriate for the target audiences and that Internet access is inadequate.

A total of 70% *agreed* or *strongly agreed* (almost all those involved in the GEO-4 process) that the Report was readily accessible to them[74], yet only 41% believed that it was readily accessible to their peers. This was a general perception among the user groups (Figure 6.2). Qualitative analysis showed a concern that potential users were either not aware of the Report or it was not readily accessible to them.

This was especially pronounced among respondents from developing countries (Figures 6.3 and 6.4)[75]. Interview comments highlighted concerns about the availability of hard copies, the unwieldy, intimidating format of the comprehensive Report and Internet access. Sufficient Internet download data were not available, but several respondents expressed concern that download time in some developing countries was expensive and that systems often become unstable when large documents are downloaded. Eighty eight percent of Reports sold commercially went to US and European customers; only around 5% went to developing regions.

Figure 6.2 Perceptions of the accessibility of the GEO-4 Report to respondents' peers in developed and developing countries



[74] This is no surprise as complementary copies had been sent to participants in the GEO-4 process.

[75] The mean for those from developing countries (M=4.05) is higher ($p<.05$) than the mean for those who are from developed countries (M=4.60) in terms of accessibility for themselves, and similarly for their peers, where for developing countries M=3.14 and for developed countries M=3.83.

Figure 6.3 Perceptions of the accessibility of the GEO-4 Report to respondents in developing and developed countries

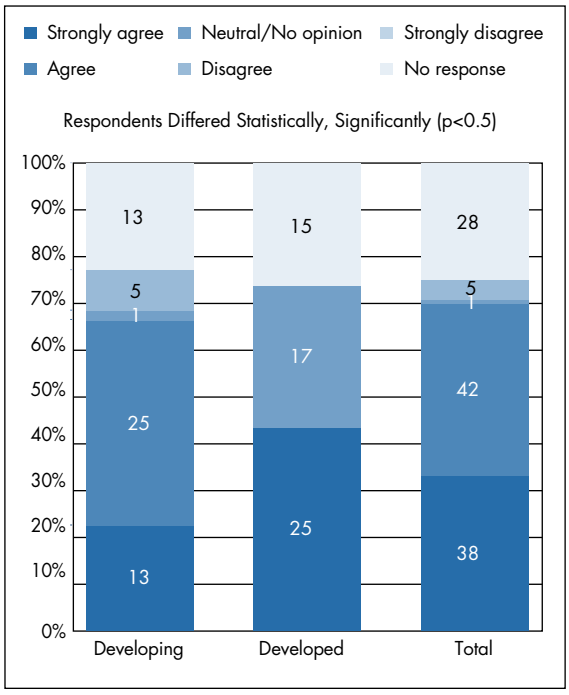
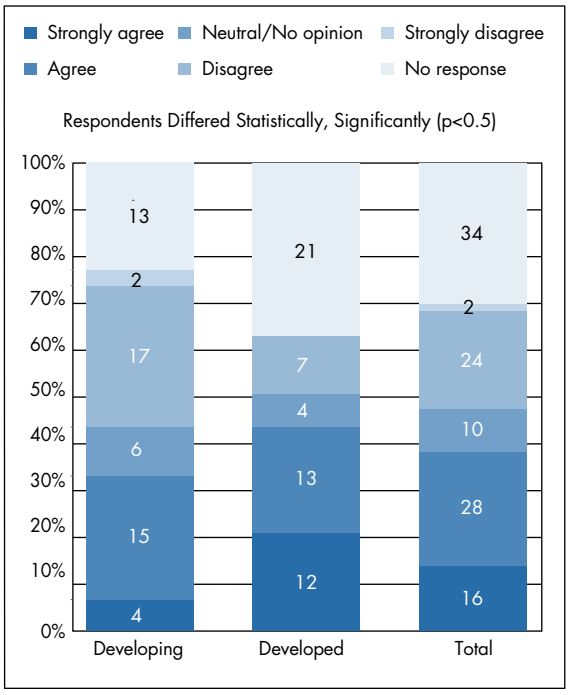


Figure 6.4 Respondents' perception of the accessibility of the GEO-4 Report information by their peers, by target audience



Finding 43: Respondents involved in policymaking were significantly more positive about the accessibility of the GEO-4 Report than those whose primary activities were in other areas. This was in large part due to the availability of the Summary for Decision Makers as a user-friendly, tailor-made product that was widely distributed in hard copy and also available in six languages on the Internet.

There was a significant difference in opinion about the accessibility of information between those engaged in policymaking as their primary responsibility and the other groups. The policymakers believed more than the other groups that the assessment information was readily accessible to their peers. Reasons given are the availability of the concise SDM, including in six UN languages on the UNEP website, and the wide distribution of complementary copies.

The Internet search found 37 references to GEO-4 in the policymaker category (captured in Annex IX), by far the highest of all user groups, although the references were mostly from multilateral agencies and not from national government documents or events (the main instances in this category of use have been captured in Figures 3.8 and 3.9). The references focused on GEO-4 as a source of credible data, highlighted their own involvement in its development process or, in a few cases, called for commitment or action from others based on GEO-4 content.

Finding 44: GEO-4 is generally regarded as user-friendly in content and format, although significant improvements can be made.

The user-friendliness of the Report is also a factor affecting the accessibility of the Report. Around 67% of the respondents indicated that the GEO Report is user-friendly in terms of content and format. The layout is generally considered to be logical and user friendly, with clear and useful graphs, tables and pictures that are used. The summaries at the beginning of each chapter are also found to be useful. Its length is perceived to make it less accessible to anyone who is not an expert or short of time. Some respondents noted concerns about the language – viewed as too technical and scientific – and comparability across GEO assessments given that trends over time cannot be easily determined. A few respondents reported that the Report is too difficult to read because of the very small font size (GEO-3 was considered better from this point of view).

6.5 Facilitating factors and Constraints

Finding 45: The reach of GEO-4 has been determined by the extent to which:

- **(i) outreach and engagement strategies have been tailor-made for well defined target audiences, and appropriately implemented;**
- **(ii) influential stakeholders, in particular from new audiences, were successfully engaged in the production (writing and consultative) processes;**
- **(iii) the products (or parts thereof) were readily accessible through the Internet and through the 'new media' in formats and languages that facilitate search and social sharing opportunities;**
- **(iv) the initial success of the media strategy and launch was followed up by systematic efforts to give GEO-4 profile during influential processes and events;**
- **(v) the media, including the new and specialist media, were mobilized to promote GEO; and**
- **(vi) UNEP divisions and programs and 'champions' from the networks of Collaborating Centers and authors were deployed to promote GEO-4.**

Some of these factors are discussed in more detail below.

Finding 46: Inadequate conceptualization and definition of target audiences continue to stymie efforts to expand GEO's reach.

The Global Intergovernmental and Multi-stakeholder Consultation that guided the design of GEO-4 stated explicitly that it had to inform policy responses that could address as early as possible environmental problems "of wide international significance". [76] Current understanding of how science or research influences policy confirms the need to be strategic and systematic in targeting potential users of the knowledge.[77] [78] This becomes a challenge when the scope of the assessment is as broad as that of GEO-4. Evenly targeting and engaging those with the power to take action on a significant scale becomes imperative. For the GEO-4 outreach to be successful it had to reach influential government and intergovernmental decision-makers involved in policymaking and implementation at national, regional and global levels.

Finding 47: The GEO-4 production process is perceived to be an effective mechanism to reach key actors among targeted audiences, but incentives to participate may be lacking among 'non-traditional' GEO constituencies.

Mitchell et al[79] determined that it is to a large extent the *process of interaction and co-production of knowledge* among stakeholders that determines whether a global environmental assessment will be influential. Decision-makers tend to listen to the findings of assessments in which they were involved. Current understanding of how policy is influenced also confirms that long-term dialogues between participants provide opportunities for mutual education thus creating a process through which science shapes politics and politics shapes science, influencing each to better understand the other.

Engaging them in a credible process of interaction is therefore considered to be one of the most effective strategies to reach influential actors. Although very few significant differences in perspectives were found between those who have participated and those who have not, more detailed analysis of the effects of the different roles in the process is needed. But it is very likely that those organizations and individuals engaged throughout the process are more likely to use the results and be better champions for GEO. It is therefore of some concern that there may not be adequate reasons and incentives for newly targeted constituencies to participate in the GEO production process.

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76 UNEP (2005d). UNEP/GC.23/CRP.5, 22 February 2005.

77 Spilsbury, M.J. and Nasi, R. (2006). The Interface of Policy Research and the Policy Development Process: Challenges Posed to the Forestry Community. *Forest Policy and Economics*, Elsevier. Vol. 8 (2) Pages 193-205.

78 Spilsbury, M.J. and Kaimowitz, D. (2000). The influence of research and publications on conventional wisdom and policies affecting forests. Unasylva 203, p 3-10.

79 Mitchell et al (2006), pp 14; 324.

Finding 48: Internet access to the products in several languages has been a cost-effective way to increase the reach of the GEO-4 among all target groups, although there are concerns about limitations in some developing countries.

Around 70% of respondents who provided comments noted that access to documents on the Internet, especially when available in several languages, was a very important factor in determining the accessibility to the report. Responses from developing countries signal that downloading the full document may be expensive and difficult where download speeds are slow and systems are unstable. The number of downloads per month reached a high of 414 466 in October 2007 and has since then steadily declined to 56 529 in June 2008[80], yet it remains the most effective mechanism to extend the reach of the GEO products.

Finding 49: GEO-4 has not yet mobilized the full power of the Internet, the 'new media' and mobile communications to increase awareness of and access to the GEO products. The reach to civil society and the youth is likely to have been the hampered most by this factor.

The GEO-4 Outreach and Engagement Strategy included a significant emphasis on the use of technology, but this was not exploited. The GEO site is reportedly one of the most popular sites on the UNEP website[81]. It is quite easy to find and access the Report by chapter or full document, yet it presents only PDF copies that are often cumbersome to download when Internet connectivity or bandwidth are limited. Its availability as an e-book in HTML/XML[82] format will significantly increase finding and accessing figures, graphs and titles.

The Report is currently available in this format on the Encyclopedia of Earth (http://eoearth.org), for example. This is likely to provide more web-based dissemination of GEO-4 than UNEP.[83] It lends itself better for use in social networking services that employ social bookmarking links, or exploration of the potential of wikis, blogs and other modern communication tools.[84] A dynamic website will attract more users. For example, if UNEP's Google Earth atlas showed examples of environmental change and degradation it could be linked to relevant chapters of GEO-4.

The fact that statistics on the Report's dissemination via Internet and market reach were not readily available[85] means that an opportunity may have been missed to use such data for strategic decision-making.

Finding 50: Although widely regarded as successful, the launch of GEO-4 was not followed by consistent action to encourage continued interest in the Report, presenting a substantial challenge to UNEP to sustain awareness and interest in its flagship product.

The launch of GEO-4 led to comprehensive media coverage worldwide. Each launch highlighted areas of importance in that region, increasing the relevance to the local audiences. As can be expected for this type of publication, in the absence of further efforts to stimulate periodic interest (apart from distribution of hard copies at ad hoc events) Internet downloads and book sales have steadily declined.[86] This is a terrain where ownership of GEO by UNEP units and programs including DCPI, as well as the expert networks around GEO, can play a significant role in continuing to act as champions.

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80 Latest available figure from UNEP DCPI Internet Unit; other tracking data not available.

81 UNEP (2007g). UNEP Annual Report 2006, p. 77.

82 Reference was found in the launch strategy to have an XML version on the Website at the time of the launch, but it appears not to have been followed through.

83 An informal Google 'image search' reveals that eoearth provides significantly more images of GEO-4 than the UNEP-GEO site. The cover and one stress-response diagram is usually found from the UNEP-GEO site, while most of the other tables and diagrams can only be found through other links like eoearth.

84 A quick search for references on blogs revealed some presence of GEO-4 on five blogs.

85 The Review team was informed that apart from basic download numbers no other web hosting statistics were available for http://www.unep.org/geo/geo4/media/ and its derivative URLs, for example, number of unique visitors and visits, pages, hits and bandwidth, countries, hosts, robots and spider visitors, visit duration, file type, pages-URL viewed, connections from search engines, links from external pages and search key phrases.

86 The Review team was informed that no resources were available for this purpose after the launch.

"It may sound like a small thing, but in working with policy makers and vying for their attention the quality of the graphics does make a difference. The report was able to lay out information in a simple way which was fantastic. The overall framework is good; it's very user-friendly, so much that we employ it as a key framework for our work". *Canadian university representative*

"It is a big book, written in fine print. Decision makers have so many books and papers that such a big book can scare them…. The SDM is useful but there are not enough copies circulating in the country." *Government representative, Latin America and the Caribbean.*

"It is well advertised and the GEO portal is user friendly if you do not wish to buy the book." *UN representative, South East Asia*

"Universities are crucial for they train the next generation. Now they are not aware of GEO, especially the Francophone ones…. The French version should be available at approximately the same time as the English one, otherwise whole regions are excluded." *NGO representative, West Africa*

"The report would be more accessible if there were more 'fiches techniques' or policy briefs derived from the report. The report is expensive, so UNEP cannot distribute it extensively. For this reason it is important to have good distribution lists, targeting not only the Ministry of Environment but also others." *NGO representative, Europe*

6.6 Conclusions

The GEO-4 Coordinating Team deserves credit for placing more emphasis than its predecessors on reaching its diverse secondary audiences as well as its primary audience of policymakers, in the latter instance with considerable success. The deployment of various mechanisms to reach the wide range of broadly defined target audiences yielded good results, especially in terms of number of Internet downloads, although its potential and that of the new or specialized media was not fully tapped. In spite of the need for reliable global and regional data in which to position national policies and strategies, ensuring awareness and accessibility of GEO in developing countries remains a challenge.

The main concern remains the inadequate identification and articulation of target audiences, with reach and engagement strategies to match. Too little attention was paid to finding effective mechanisms to engage (or help the environmental constituency to engage) influential actors outside the government environmental policy domain, for example in the private sector, the development sector, the specialized media and policymakers in finance, trade and development planning. The lack of cohesive and concerted action within UNEP to use and promote the use of GEO weakens its impact as well as its potential to support the MTS and UNEP's role in the UN system and more broadly.

7. CONSIDERATIONS FOR THE STRATEGIC MANAGEMENT OF GEO

7.1 Issues

In this chapter we highlight issues and factors affecting the use and potential influence of GEO at strategic level and operational level. Not surprisingly, many of these issues are mirrored in the lessons learned in the UNEP Medium Term Strategy (MTS)[87]. The MTS sets out the areas in which UNEP aspires to have influence and impact, namely in climate change, disasters and conflicts, ecosystem management, environmental governance, harmful substances and hazardous wastes, and resource efficiency. It articulates the following vision for UNEP in the medium term:

> *"The leading global environmental authority that sets the global environmental agenda that promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and that serves as an authoritative advocate for the global environment."*

Also in the MTS, GEO's role is established as the following: "*The GEO process provides the knowledge base through which* UNEP *will strengthen the understanding of the inter-linkages between environmental change, development and human well-being and bridge environment-development policy processes*".[88]

The way in which GEO is conceptualized and integrated into the work of UNEP will determine its contribution to what UNEP is setting out to achieve:

- *Improving environmental governance* – GEO can help to close the gap between science, and effective and informed policy and governance, thereby helping to build stronger more effective institutions at national and regional levels, and to position UNEP as a key and essential player in the global governance agenda.

- *Strengthening internal coherence, programmatic integration and influence of UNEP's program* – GEO can provide a unifying platform for UNEP's programs and associated stakeholders to more effectively analyze, debate and use the collective knowledge of trends in environment and sustainable development in a concerted and focused way to achieve the Mission of UNEP.

- *Informing the poverty and sustainable livelihoods' global agenda and action*. Despite the rhetoric and the belief that environment and development are inextricably linked in achieving sustainable development, environment and development programming too often takes place in isolation from each other. Evaluations of multilateral, UN and bilateral organizations have repeatedly pointed to the need to be better integrate environmental sustainability programming with development programming.[89] The 'Delivering as One' message of the current UN reform process sets the stage for GEO, the HDI and other human development assessments such as the State of the World's Children by United Nations Children's Fund to work more together for more unified programs and actions across the UN family.

As the flagship publication of UNEP, GEO should thus be the foundational knowledge product in support of its vision, informing and helping to direct its actions and those of its primary constituencies. It should be designed, produced, made available and promoted in a manner that will influence those processes and people most able to effect significant change.

The following are only three of the most important challenges that will need to be addressed by future GEOs:

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87 UNEP (2008). Medium Term Strategy (MTS) – 'Environment for Development' – 2010-2013, Final Draft.

88 Ibid. paragraph 26.

89 Most recently highlighted in Environmental Sustainability: An Evaluation of World Bank Group Support – Evaluation Summary (IBRD and the World Bank 2008) and the Evaluation of the Role and Contribution of UNDP in Environment and Energy (UNDP 2008).

Scale and scope

One of the most important aspects of GEO is that its scale and scope is global. This is a strength according to users: It provides an integrated overview of the environment and its interface with development, giving the global 'bigger picture' as well as a macro scale comparison between different regions. It complements specific regional and thematic studies and assessments within and external to UNEP. It puts national and regional issues in a global perspective and provides international justification for policies. In essence it has been designed to improve governance on the interface between environment and development among those working at transnational or global level.

It is also seen to be its main weakness, especially according to users working in one area, region or country. Its broad scope and scale contributes to the sense that GEO-4 does not have a clear 'storyline' and, as a result, is perceived to lack 'personality': As assessments proliferate, the most general easily becomes the least visible[90]. Influence is more difficult to achieve when addressing many 'issue domains' at the same time, and working with ill defined audiences. Assessments gain influence with lower-scale decision-makers by "localizing their knowledge" and bring opportunities to put new issues on the global agenda. Potential users are also more likely to ignore assessments where the scale of informational resolutions does not suit their needs, and thus to many potential users it appears to be too general and superficial, requiring further distillation to be policy relevant at national or sub-national level. It does not focus sharply on a particular issue, express strong conclusions or champion a specific (new) cause. Some users speculate that some of its potential to get across hard-hitting messages has been watered down due to a production process with so many actors that compromise was inevitable.

All this has contributed to GEO's struggle to reach and build a powerful constituency beyond its primary environmental constituency. Yet GEO-4 is being used, and it has the potential to influence in the 'enlightenment' mode of policy influencing,[91] where ideas percolate over time without direct relevance to policy decisions, achieving influence in important ways by altering the language of policy-makers and their advisors. Such change might be less decisive and more subtle, but could be powerful as it emerges over a longer period of time[92]. The question is whether UNEP desires its flagship product to lead to more direct and dynamic change.

Timing

The impact of an assessment depends in part on when it is conducted relative to an issue domain's development. Society's attention to most issues exhibits long periods of relative stability, punctuated by shorter episodes of rapid change.[93] Assessments conducted in the early stages may not lead to immediate and direct policy change (although audiences are more likely to accept an assessment's framing of an issue that has received little previous attention). On the other hand an assessment conducted at more mature stages of an issue domain – a more likely situation in GEO – is unlikely to transform fundamentally the way in which audiences conceptualize a problem. Instead it may be used as a resource to identify, evaluate or support a particular policy option[94].

Environmental trends change slowly. As user comments showed, focusing on similar messages each time, with data that is seen as outdated relatively quickly, is likely to diminish GEO's influence. A stronger focus on cutting edge work that can mobilize world action on important emerging issues could prompt more direct and dynamic change. The future scenarios have been well received among users, and using these to establish firm proposals for achieving a sustainable world will automatically put the spotlight on emerging concerns at the cutting edge of the environment-development intersect.

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90 Mitchell et al (2006), Chapter 11

91 Weiss, C. H. (1977). Research for Policy's sake: The Enlightenment Function of Social Research. Policy Analysis, 3, 4: 531-545

92 Lindquist, E. A. (2001). Discerning Policy Influence: Framework for a Strategic Evaluation for IDRC-supported Research. Document prepared for the Evaluation Unit, IDRC and Neilson, S. (2001). IDRC-supported Research and its Influence on Public Policy. Knowledge Utilization and Public Policy Processes: A literature review. Evaluation Unit, IDRC.

93 Mitchell et al (2006), p. 310.

94 Ibid.

For practical reasons emerging issues may best be tackled through a portfolio of complementary products that are released more frequently during the interval between one GEO and the next, as intended with the annual UNEP Year Book.

Targeting audiences for maximum influence and impact – the private and development sectors

Although GEO-4 has done well in reaching policy makers and research organizations in the environmental constituency, influential groups in the private sector, development sector and key governmental sector Ministries were not targeted and reached. In future the primary *and* secondary audiences need to be defined more sharply in terms of who among these groups play key policy influencing roles, and what formats and style the findings need to be in to help influence policy.

The literature confirms that weak targeting of audiences is one of the factors most likely to diminish the chance that an assessment will be used. According to Mitchell et al, assessment influence is relational and depends on the assessment-audience relationship[95]. This is important especially when assessments are transnational or global, as the concerns, perspectives, knowledge and assumptions of those producing it may differ markedly from those of potential users. The power and interests of actors will also differ between contexts. Whether assessments are accepted by any particular audience therefore depends on a range of political, social and economic factors and not only on the science.

If UNEP is to lead or facilitate concerted action at global or transnational level it has to have as a main focus identifying and reaching those *processes and people that are the most powerful drivers of change.* For example, with respect to the private sector, UNEP already has a significant programmatic activities focus on industry and the private sector (for example DTIE Chemicals). The Review indicates that they have had little engagement in the process of GEO-4. It is clear that more needs to be done to integrate private sector initiatives across its programmatic work, in particular industry and business sector leaders, business schools, financial institutions, standard setting bodies and so on.

It is therefore important to do what is possible to ensure that the assessment has a good chance to be used. GEO-5 will require a more deliberate focus than GEO-4 on influential processes at national and trans-national levels, and with the private sector and development community and on those actors most likely to be influential within them. Ideally their needs and challenges should be well understood and they should be engaged in shaping the products that best meet their needs. This will require adjustments to the GEO content and process as well as improved production and dissemination strategies. GEO-4 has made progress with the broad-based intergovernmental consultative process which has yielded many lessons on what works and what does not. It will be important to draw from current assessment literature and experiences, including well regarded and used development products such as the Human Development Report.

Managing trade-offs to ensure salience, credibility and legitimacy

An assessment's influence flows to a great extent from the process through which it creates knowledge.[96] Stakeholder participation creates ownership of the information. Furthermore, failure to influence particular audiences often reflects a failure to address salience, legitimacy and credibility convincingly among those on both sides of the North/South divide, the scientist/policy-maker divide or the local/global divide.[97]

This has also emerged during the Review analysis of user perceptions of UNEP's efforts to ensure an assessment with all three these attributes. As the tactics to promote one attribute often undermine another, trade-offs are needed. Assessments organized by scientists often aim to maximize credibility by involving only the most respected scientists and attempting to isolate the process from political influence. This may have little influence if it does not address

95 Mitchell et al (2006), p. 313.
96 Ibid.
97 Ibid.

those questions most salient to key users groups. Legitimacy may be fostered by including stakeholders who are brought in because they represent the views of audiences the assessment has to influence, but this may then decrease the scientific credibility with other scientists, and potentially with decision-makers. Increasing participation intended to increase salience and legitimacy can also increase credibility by providing access to local knowledge and data.

The extent and manner of stakeholder involvement in the design, development and dissemination of the assessment is therefore critical. GEO-4 has implemented an impressive process to include diverse stakeholders and balance the three attributes, but has also demonstrated that tensions can easily arise, resulting in perceptions of loss of credibility, salience or legitimacy. A study by the Netherlands Environmental Agency confirms the 'delicate balance between a quality assessment and the participation of stakeholders'.[98] Over-involvement can lead to the promotion of special interests, but too little participation can lead to a study that lacks relevance for policy. Engaging stakeholders is also not a panacea. What matters is the quality of the process, from problem definition to efforts to help potential users understand and incorporate new information into their decisions. The GEO process has over time built a broad constituency of environmental organizations and experts committed to GEO, all engaged in co-producing the knowledge. This is a critical strength of GEO and one that should be safeguarded and used to champion GEO after its production.

The GEO-4 experience has shown that the 'bottom-up' scientific process combined with a 'top-down' political consultative process is cumbersome and can lead to unresolved tensions. It is difficult to maintain a balance between scientific integrity and political representation. UNEP needs to mediate and negotiate within and between scientific as well as policy communities – an inherently political process. The process also faces other challenges. Data and information tend to become outdated and less relevant to emerging issues. Accommodating the wide range of actors makes it lose some of what would make it relevant, leading to perceptions of it being 'watered down' less innovative and cutting edge. And for GEO-4 the participants have been primarily in the environmental arena in spite of efforts to draw in development actors.

7.2 Summary of factors determining use and influence

The main factors determining the influence of assessments, drawn from the Review and confirmed by literature studies are listed in Table 7.1. The list is not meant to be comprehensive and should be seen as indicative for the purpose of contributing to the ongoing discussions on the future shape, scope and purpose of GEO. [99]

[98] Netherlands Environmental Assessment Agency (2008)[97] Ibid.

[99] Based in part on Mitchell et al (2006) as well as Perkins, N. I. (2008). Factors affecting Research 'Influence' – a Literature Review. IDS. Provided at seminar on Research Communication – Why and Now? University of Copenhagen, May 8, 2008.

Table 7.1: Factors affecting the influence and impact of GEO-4, their implications and options in designing future generations of GEO

Factors	Impediments to influence	Drivers of influence	Implications for UNEP/GEO	Examples of choices to be made[100]
Supply side				
Scale[101]	• Global focus – too general for especially national level engagement; not relevant to level at which most people operate. • Covering many issue domains, promoting use among many target audiences. Leads to format most people cannot digest. • Leads to an unclear 'storyline', no 'personality'. Messages are not strong and it does not champion a specific (new) cause.	• Provides global, macro perspective within which to position or direct policies and strategic plans. • Puts regional, national perspectives and plans in larger context. • Clarifies global priorities and areas for concerted transnational or global action.	• Indispensable instrument for understanding and tracking global trends and future possibilities with regards to the environment – and relating these to development: UNEP's mandate and GEO's niche. • Provides good platform for assessment of how well countries and regions perform compared to global needs and trends. • Need to consider whether and/or how to move closer to regional and national interests for more relevance and use at those levels.	• Narrow down scale of annual assessment to focus on selected issue domains / topics – unwise in view of mandate. • Provide more guidance for national and regional levels by focusing content on their needs - without sacrificing transnational/global interests. • Provide additional products, or link better to existing assessments at regional and national levels.
Timing[102]	• Five year production interval and long production process do not make for ready alignment with policy needs ('policy window') in any particular issue domain. • Trends do not change fast enough to support shorter production interval – too much repetition. • Data easily seen as outdated, replaced by others if intervals are too long. • Not linked to key environmental or development milestones that can increase its profile.	• Five year intervals reasonable for keeping environment under review.	• Could move to shorter production intervals, but may be unwise due to slowly changing nature of data. • Longer intervals also not desired due perceptions of outdated data. • Could enhance alignment with policy windows if able to better forecast, address and promote emerging areas of concern.	• Speed up production process to increase chances of using 'policy windows'. • Shorten production interval to ensure more updated information, relevance to user needs. • Keep production interval the same (or slightly longer), with additional products that satisfy client needs. • Link publication to key milestones in the environment/development nexus. • Focus much more on emerging issues, predictions.

[100] Not intended to be comprehensive, but an indication of the types of choices that need to be made when considering various options for GEO-5.
[101] Mitchell et al (2006).
[102] Molas-Gallart, J. and Tang, P. (2007). Policy and Practice Impacts of ESRC funded research – case study of the SRC Centre for Business Research, ESRC. Quoted in Perkins, N.I. (2008) and in Lindquist, E. A. (2001). Discerning Policy Influence: Framework for a Strategic Evaluation for IDRC-supported Research. Document prepared for the Evaluation Unit, IDRC .

Factors	Impediments to influence	Drivers of influence	Implications for UNEP/GEO	Examples of choices to be made[100]
Intent	• Some comment that GEO objectives are not clearly articulated. • Expected outcomes are not clearly articulated; no theory of change. Lack of agreement on key elements of logic.	• Assessment intent (GEO objectives) clearly focused on policy influence. 'Projects intended to have policy influence are more likely to achieve this'.[103]	• GEO should move to be more results-based in its articulation, setting of targets. Would benefit from well developed theory of change which will facilitate tracking of progress and evaluation.	• Consider developing a clear project theory of change for GEO-5, with clear outcomes and *if/then* logic.
Targeting of audiences	• Intended audiences too broad, unspecified and diverse. • Strategies not implemented with adequate persistence draw in new constituencies (although policymakers to greater extent), powerful actors; exacerbated by perceptions of too high turnover among actors involved in consultative process. • Motivation or incentives for engagement of new constituencies (private sector, development sector, powerful ministries, global policy regimes, UNEP units) not appropriate or adequate. • No effort to adapt content to target audiences, except for policymakers.	• Outreach and Engagement Strategy established to improve targeting.	• If assessment is to be aimed primarily at traditional UNEP constituency – environment sector – special targeting of other audiences may be perceived as too resource-consuming. • Need to determine whether UNEP/GEO influence is to focus on strengthening the traditional environment constituency to then inform and influence other decision-makers. • If use and influence is to be increased among non-traditional sectors or influential groupings, special efforts need to be made. • Engagement in the production process may be the best available vehicle to interest actors in GEO.	• Strengthen the traditional environment constituency in order to spread the influence further. • Better define target audiences – if necessary by narrowing them down. • Increase new audience participation in Collaborating Centres/expert network. • Mobilize UNEP networks to reach the new audiences – i.e. limiting UNEP's own effort. • Develop a strategy with adequate resources allocated to target and reach especially new audiences in structured and systematic way.

[103] Neilson, S. (2001).

Factors	Impediments to influence	Drivers of influence	Implications for UNEP/GEO	Examples of choices to be made[100]
Reaching audiences – engagement, communication and dissemination	• Inadequate translation of assessment information for key audiences/non-traditional constituencies – gap between (primarily environment) scientists as authors, and private sector, finance/trade regimes, development sector, UN and UNEP. • Mixed success – policymakers positive but influential individuals/policy organizations not necessarily reached. • Lack of practical case studies, proposed solutions offered, especially for non-traditional constituencies – scientists often unwilling to supply ready made solutions[104]. Inadequate attention to sharpening main messages for key audiences – using their lens on issues. • Initial outreach and engagement strategy terminated; communication strategy and follow-up after launch inadequate to reach non-traditional audiences. • Inadequate use of new technologies, CC and expert networks for dissemination. • Tracking of interest such as Internet downloads not done and used to inform strategies.	• Expertise of outreach and engagement working group. • Stronger effort to engage policymakers and new constituencies in the production process. • Intergovernmental consultative process as well as authors engaged policymakers to greater extent than before. • Character of the assessment - given UNEP mandate - may require broad, general audience. • Developing country participation in production process enhanced its relevance, legitimacy, possibly its credibility (if their perspectives enriched the product – not tested). • Better use of Internet for more cost-effective access.	• Need for a concerted outreach and engagement strategy beyond traditional communication actions or product launch if non-traditional audiences are to be reached. • Role of Collaborating Centers network and production process in inspiring potential users. • Content tailor-making for key audiences need to be weighed against an overall assessment from which each audience can distil content according to their own needs. • Extent to which outreach, engagement, communication and dissemination becomes embedded in UNEP compared to GEO effort in collaboration with external experts. • Extent to which new technologies can be applied to facilitate access, without impeding developing countries.	• Conventional communication strategy, with main focus on the launch of the product. • Outreach and engagement strategy that works with target audiences from the start according to principles of how policies are influenced. • Focusing efforts on CC and expert network plus consultative process – as in GEO-4.

[104] Policy-research interaction discussed in: Sumner, A. and Harpham, T. (2008). Forthcoming. The Market for 'Evidence' in Policy Processes: The Case of Child Health in Andra Pradesh, India and Viet Nam. European Journal of Development Research. Quoted in Perkins, N.I. (2008).

Factors	Impediments to influence	Drivers of influence	Implications for UNEP/GEO	Examples of choices to be made[100]
Role and type of coordinating body[105]	• UNEP seen by minority as an essentially political body that has to negotiate between parties, and hence has to aim for the lowest common denominator. • Perceptions of relatively low profile of GEO in communicating UNEP or GEO 'brand' and achievements.	• UNEP (UN) label as 'neutral body' seen as standing for credible processes and scientific integrity.	• UNEP to ensure in the processes it conducts that its profile as an impartial body is maintained / strengthened? • UNEP needs to be prepared to provide a strong voice for, and stand by its principles/values/role it wants to play in the world? • Need to consider the extent to which GEO can be used to better define its own or UNEP's 'brand'. For example, develop a GEO 'brand' by including other related products.	• UNEP/GEO facilitates, and is essentially led in terms of content and process by the constituency engaged in developing GEO. • UNEP/GEO acts as the undeniable leader, prepared to stand firm in the face of difficult decisions/situations, based on its set of principles (for example, the balance between scientific rigor and political agendas). • GEO profile is entirely connected to the main assessment. • The GEO 'brand' is connected to a well developed portfolio of those products that build on the main assessment.
Assessment attributions – credibility, legitimacy[106]	• Credibility of the assessment somewhat compromised in terms of scientific rigor due to negotiated settlement around the SDM, the need to satisfy diverse audiences, and uncertainties around data source quality.	• GEO regarded by high percentage of stakeholders as credible and legitimate due to extensive and transparent writing and consultation process, peer review mechanisms, UNEP's reputation, articulation of key issues and their interconnections.	• Trade-offs need to be considered when dealing with interests of different stakeholders – especially balancing scientific rigor with issues of legitimacy, salience and other aspects of credibility.	• Decisions to be taken on all aspects determining credibility and legitimacy. Primarily dependent on type of stakeholders and process used for authoring and buying into/endorsing the assessment. Requires decisions such as between 'light' and 'heavy' processes, 'top-down' or 'bottom-up' approaches or a combination.

105 Role of branding discussed in: Coe, J., Luetchford, M. and Kingham, T. (2002). Id21: tracking routes towards impact, IDS, Brighton. Quoted in Perkins, N.I. (2008).
106 Refer to analysis in Mitchell et al (2006).

Factors	Impediments to influence	Drivers of influence	Implications for UNEP/GEO	Examples of choices to be made[100]
Assessment attributions – salience / relevance[107]	• Salience of the assessment has been compromised by the inability to reach effectively beyond traditional audiences – such as the private sector and the development sector. • Unclear to what extent 'hands' of traditional audience has been strengthened in order to reach non-traditional audiences. • Salience compromised by global focus – inability to reach national and regional levels effectively. • Content perceived as not focusing adequately on solutions, the way forward – which is now more needed than problem analysis. • Not found to be relevant enough to UNEP and UN constituencies.	• Salience of the assessment has been good for traditional GEO audiences and for policymakers, and for developing countries. • Salience has been good with regards to international environmental governance and global development policy.	• Key aspect is the close linkage between the scale and scope of the assessment, the targeting of audiences and the extent to which the content has been tailor-made for specific audiences. • Role and internalization of GEO in UNEP needs attention, as well as in the UN system.	• One assessment product that tries to speak to various audiences. • Portfolio of assessment products built around the central assessment (product), each speaking to a particular audience – including UNEP. • Focus on case studies, solutions, the "what now" aspect, and the formation of global and transnational alliances for action.
Demand side				
Institutional receptiveness[108]	(Not considered in any depth by this Review) • Developed country institutions seem to find the assessment less useful due to availability of own reliable and tailor-made data sources. • Unsure to what extent engaged organizations have capacities, inclination and influence to use results to effect change.	(Not considered in any depth by this Review) • Developing country institutions appear more appreciative and in need of the data and information. • Network of Collaborating Centres is a valuable asset given the expertise and commitment to GEO.	• Need to understand whether institutional factors that may affect uptake need to be considered, especially in terms of targeting and engaging non-traditional audiences. • Should determine and internalize the extent to which the Collaborating Centres network is a valuable asset for UNEP and GEO.	• None proposed.
Personal receptiveness	(Not considered in any depth by this Review) • Unsure to what extent individuals with capacities, interest and power have been engaged and retained as part of the production process.	(Not considered in any depth by this Review) • Great value in network of individuals with appropriate expertise and commitment to GEO.	• Need to understand the extent to which individuals need to be targeted, for example, specific individuals with influence in policy processes or business strategies. • Need to determine and internalize value of the individual experts participating in the GEO process.	• Format preferences for different users/ target audiences of GEO products, for example, main reports, policy briefs (paper and electronic 'one screen'). • A user needs survey could be included early in the process.

[107] Ibid.
[108] Discussed in Sumner, A. and Harpham, T. (2008, forthcoming) and Coe et al (2002). Quoted in Perkins, N.I. (2008).

Factors	Impediments to influence	Drivers of influence	Implications for UNEP/GEO	Examples of choices to be made[100]
Technology	• Lack of Internet access or savvy in developing countries may limit accessibility. • Modern technology has not been used to its full extent.	• Availability of GEO on the Internet in several languages has increased accessibility dramatically.	• Need to determine the extent to which new Internet and communication technologies can be deployed to ensure greater accessibility to GEO across the world. • Working through partners may be cost-efficient but hands over control to them.	• Employ new technologies to increase accessibility and user-friendliness. • Work through partners to ensure maximum accessibility.
External				
Context	(Not considered in any depth by this Review) • National and international discourses might limit the space for GEO uptake. • Proliferation of assessments likely limits GEO influence – not always seen as the preferred reference.	(Not considered in any depth by this Review) • National and international discourses currently favors emphasis on the environment and on environment for development.	• Need to consider and strengthen GEO's niche / comparative advantage in the growing assessment landscape. • Need to understand what will make GEO more prominent as a source of reference.	• Establish and strengthen GEO's niche and comparative advantage among the assessments. • Determine gap market better filled by GEO. • Determine linkages between assessments for mutual benefit.

8 LESSONS FROM THE REVIEW

8.1 Lessons

The Review has highlighted the following issues and lessons for consideration by UNEP management when designing future versions of GEO:

GEO and the UNEP Medium Term Strategy

There are a number of important factors affecting the use of GEO at the strategic and operational level. Not surprisingly, many of these factors resonate with the lessons learned in the UNEP Medium Term Strategy, which sets out the following vision for UNEP in the medium term:

"The leading global environmental authority that sets the global environmental agenda that promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and that serves as an authoritative advocate for the global environment." [110]

In order to achieve that vision, consideration has to be given to how GEO will contribute to the following high level issues in the way it is shaped, managed and followed up:

- Improving environmental governance – GEO can contribute to close the gap between science, policy and to effective and informed governance, thereby helping to build stronger more effective institutions at national and regional levels, and to position UNEP as a key and essential player in the global governance agenda.
- Strengthening internal coherence, programmatic integration and influence – GEO can provide a unifying platform for UNEP's programs and associated stakeholders to more effectively analyze, debate and use the collective knowledge of trends in environment and sustainable development in a concerted and focused way to fulfill the Mission of UNEP.
- Informing the poverty and sustainable livelihoods global agenda and action. Despite the rhetoric and the belief that environment and development are inextricably linked in achieving sustainable development, environment and development programming too often take place in isolation from each other. Evaluations of multilateral, UN and bilateral organizations have repeatedly pointed to the need to better integrate environmental sustainability programming with development programming. The 'Delivering as One' message of the current UN reform process sets the stage for GEO, the Human Development Report and other assessments such as the State of the World's Children to work more together for more unified programs and actions across the UN family.

Factors affecting the use and influence of GEO-4

The following have been found to be the main factors affecting the use and influence GEO-4 (not including external factors that cannot be controlled):

- On the supply side: the scale, scope and timing of the assessment; the approaches for targeting audiences; the engagement, communication and dissemination strategies to reach these audiences; the role and type of the coordinating body (UNEP); the assessment attributions – credibility, legitimacy and salience.
- On the demand side: institutional and personal receptiveness, and the availability and extent of use of technology.

The key factors are addressed in greater detail in the following sections.

Refining the niche of GEO

1. UNEP has a unique and timely opportunity within the current UN Reform process to reposition itself to be the leading environment partner for development agencies, governments and NGOs that seek to achieve sustainable development goals. With its current aspiration to be

[110] Ibid. paragraph 26.

an assessment process that focuses on 'environment for development' GEO requires a clear elucidation of what leads to sustainable development, who the key actors are and how an assessment process can contribute to achieving those goals. It then needs to position itself further up the 'impact pathways' to engage with the key players that can make that change happen. Engagement of data providers and environment specialists is essential but not sufficient to establish the legitimacy it needs with the development community and the private sectors – both key stakeholders in using assessment information to influence decisions and policies.

2. The proliferation of assessments requires occasional reconsideration of the intent and objectives of GEO to ensure that it fills a space that best utilizes UNEP's as developed over the past decade. Linkages with complementary assessments such as the Human Development Report, the World Development Report and others should be considered in order to optimize resources.

3. Management of the repositioning of GEO and engaging the full range of necessary stakeholders further along the GEO impact pathway/result chain/value chain requires a range of skills and capacities beyond the essential assessment and administrative skills. Policy influence analysis, policy mapping, communication and outreach, relationship management, private sector engagement are some examples of the capacities that need to be resourced and supported if future GEOs are to achieve this repositioning along the impact path.

4. Finally, GEO due to its mandate, format and content lends itself to be used overwhelmingly as a reference source for general awareness raising, research and teaching. This type of use appears to best characterize GEO's current niche in the current environmental assessment landscape. It should be recognized that this type of use rarely leads to new policy narratives and significant policy change.

Establishing, using and monitoring the 'impact pathways' to increase use and influence

5. Efforts should be concentrated beyond ensuring quality and relevance. Outcomes that are explicitly articulated as part of the 'impact pathways' can help clarify target audiences, the assumptions underpinning the production and resource allocation strategies, and outreach strategies beyond general dissemination for greater impact.

6. Good data management is imperative if the monitoring of progress towards the achievement of outcomes is to be used to determine strategies to encourage use and influence of the product. This requires systems that enable the systematic tracking of key aspects over time, such as an updated database of targeted users, detailed Internet tracking mechanisms, and evolutionary data across GEO products.[111]

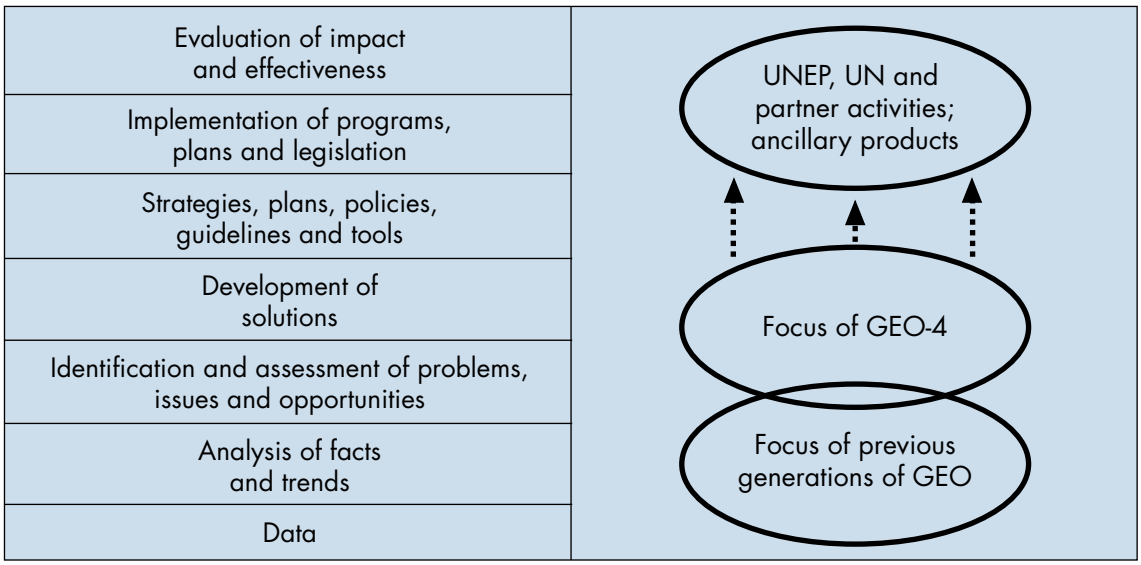
Types of use and the implications for influence and impact

7. GEO-4 has been used for diverse purposes – overwhelmingly for information and awareness raising, research and teaching, but also for policy work, informing integrated assessments and development practice as well as private sector initiatives. Most of the types of use point to the dominance of the 'enlightenment' function of assessment information – educating current (and future) decision makers in a manner that may over time lead to some change in policy and strategy, although seldom to new policy narratives.

8. As the mandate of GEO will always place it in a specific position on the 'knowledge value chain' (Figure 6.5), ancillary products tailor-made for specific target audience needs and the different types of use by UNEP, the UN system and other partners will need to move its utility and potential for influence up the value chain.

[111] In GEO-4 the lack of an updated database and contact information and Internet tracking data one year after the launch of GEO-4 have inhibited the monitoring of such progress.

Figure 6.5 GEO-4 'knowledge value chain'



9. Depending on the aspirations of UNEP, the potential influence of GEO can be extended through leadership by UNEP's policy group in establishing a network that can define the policy implications of the data and information emerging from GEO. Some of the most influential activities would include the assessment of the progress of countries in meeting the obligations of international agreements and conventions.

Defining, targeting and reaching audiences

10. People in general, and those in advisory, decision and policy making positions in particular, are constantly flooded with information. They demand and require strategies that help them to cope and distil what is needed with as little effort as possible. To meet those demands GEO has to be known, regarded as authoritative and reliable, be readily accessible and presented in a user-friendly format. A key requirement appears to be the need for content to speak as directly as possible to the needs of users in a particular sector or subsector in a 'language' that resonates with them. The lens through which content is designed and presented is therefore of the utmost importance and requires the engagement of representatives from that sector from the beginning to help shape the content and outreach strategies, as has been done with the SDM. Target audiences that are too broadly defined and too diverse therefore present significant challenges, and opportunities for product use and influence will be easily missed.

11. In future the primary *and* secondary audiences need to be defined more sharply in terms of who among these groups play key policy influencing roles, and what formats and style the findings need to be in to help influence policy.

12. Even where GEO production and outreach processes concentrate efforts on its 'primary' target audience(s), they have to be well defined and accounted for in the design and production processes: Policy makers in the environment arena have different needs to those in development planning. Those engaged in international environmental governance are different to those working at national level. Developing country needs may be different from those in developed countries. As one product cannot satisfy everyone, this situation strengthens arguments for a foundational assessment product that is supplemented by a range of tailor-made products, from policy briefs to substantive documents such as the SDM. Partnerships and the use of modern technologies and the new media can help relieve the strain on UNEP resources in the production and dissemination of such materials.

13. Trade-offs in terms of use and influence have to be carefully considered when producing an assessment without strategies and resources to ensure that it continues to have a profile

over its lifetime. The shelf-life of an assessment can be short if other competitive sources of information exist, thus limiting its branding and strategic value to its organization.

Reaching and influencing specific audiences: Policy makers

14. Engaging policy makers in the production process and providing a tailor-made product to suit their needs can have a marked effect on their buy-in and use of the assessment information. It can also lead to challenges when political agendas are used to manipulate focus and content. This requires at all times good management of the production and consultation processes and the weighing of benefits and disadvantages when dealing with the potential tension between scientific credibility and political relevance and buy-in.

15. If audiences are as broad-based as those for GEO inevitably will be, concentrated efforts to target specific sub-groups to increase potential impact will be useful. In this context it makes sense to target those processes, organizations and individuals that are the most influential. In the policy sector this will mean considering how best to ensure that GEO reaches the drivers of multilateral environment agreements *and* moves beyond the environment constituency to influence critical processes as well as key organizations and individuals engaged in, for example, economic and social development, trade, finance and development planning at international and regional levels but also to some extent at national level. A critical decision is whether to work through UNEP's environment constituency or to increase efforts to target audiences beyond this group.

16. By all accounts the network of Collaborating Centers provides GEO with a unique expertise base and provides a model for the mobilization of external resources to support the work of UNEP. This concept can be further enhanced through the engagement of additional policy centers across the world that could help design and translate the assessment information for specific policy processes and actors. UNEP's Division of Environmental Policy Implementation (DEPI) is well positioned to play a pivotal role in this effort.

Reaching specific audiences: Influencing the next generation

17. The youth may need to become a primary target audience for GEO in future as they are of obvious importance and potentially one of the easiest to reach. Networks of curriculum developers provide fertile opportunities, as demonstrated by UNEP's Mainstreaming Environment and Sustainability in African (MESA) Universities Partnership Program where 90 universities across Africa have been made aware of GEO-4. Further opportunities exist through UNEP's Tunza initiative, attracting the interest of specialized media for the youth, dynamic websites[112] and exploiting new Internet technologies will help in these efforts. An e-book in HTML/XML format will facilitate access to figures, graphs and titles and will lend itself better for use in social networking services or the exploration of the potential of wikis, blogs and other modern communication tools.

Reaching specific audiences: The private sector

18. The private sector is a key actor in environmental policies and strategies, and they present good opportunity for a range of side-products aimed at sector and sub-sector needs. For relevance the targeted products should be developed with them, using their 'lens' on the content, providing relevant case studies, offering possible solutions and areas for action, publicizing the effort at important global and regional business forums, benchmarking business with regard to their performance, linking with initiatives such as the Global Reporting Initiative and social accounting, and the Green Economy. This could significantly enhance the influence of GEO. Products can take many forms, from simple case studies and briefing notes to substantive publications with policy implications similar to the SDM.

[112] For example, UNEP's Google Earth atlas with examples of environmental change and degradation could be linked to relevant chapters of the GEO-4 Report.

19. The use of GEO is weakened when the products are not fully owned and used by staff in UNEP. GEO findings can provide significant direction to the MTS and thematic plans, and alignment and collaboration between UNEP sub-programmes in using GEO will help to achieve the objectives of the Medium Term Strategy. A lack of incentives and focus on their input from an early stage in the design were some of the obstacles identified to the participation of key UNEP divisions. DEPI, DTIE and the MEA secretariats could lead in the production of such ancillary product designs in conjunction with the GEO team. This will create more synergies between UNEP products and establish a product portfolio that reinforces the MTS thematic objectives based on the GEO frameworks and data.

8.2 User suggestions

A list of suggestions by the persons interviewed during the Review for the improvement of the next GEO is provided in Table 8.1.

Table 8.1 List of user suggestions for the improvement of GEO

Aspect	User Suggestions for the improvement of GEO
Focus and scope	• Users encourage GEO to keep working at the interface between environment and development. Within this interface, there is a need to improve in the identification of priorities, main issues, and primary audiences. • GEO could also consider focusing on fewer issues, but giving them more in-depth coverage. Try to do less, but better.
Considering different audiences	• Make the product more tailored to specific user groups or at least prepare targeted summaries for each user group, including not only a summary of the report but also a few practical guidelines on how to use the information provided (for example a "what YOU can do" section). This could also help make the report shorter and more action-oriented if the main audience consists of policy makers. • Add more specific recommendations for each of the intended user groups. • Include practical examples, best scenarios, case studies, comparing different countries and regions to increase relevance for countries, in particular for practitioners and decision makers. • Publish compendiums (methodological, statistical, and regional) to the main report or regional/thematic summaries.
Participation	• The relevance of key themes selected for inclusion in GEO will be influenced by the selection of people participating in the process. The increased participation of country or regional experts might also increase the relevant choice of topics for these levels. • Increase participation in the process from countries, especially small island developing states and developing countries (such as creating multidisciplinary teams for each country instead of a single focal point, making sure that the focal point is well selected and willing to participate), regional organization and environmental agencies, non-environmental experts, non-traditional experts (such as civil society, private sector). This would increase their interest, their buy-in and the relevance of the report to them. This would also mean obtaining more and better data from the countries and the regions and from the non-environmental sector. • More carefully choose the people to represent countries and the experts working on the chapters. This also depends on the balance that GEO wants to have in terms of scientific rigor and broad representation.
Capacity building	• Improve follow up at the regional level by providing some pre-training for people participating in the process such as national and regional workshops on data collection, and providing support to building databases, and re-establish GEO fellows.

Aspect	User Suggestions for the improvement of GEO
Dissemination, outreach, branding	• GEO needs to be more known among its users. Only if people are aware of it they can think it is relevant for them. • GEO needs to better brand itself with a clearer a stronger message coming out of it. • Need for more dissemination campaigns, more targeted, showing a clear message coming from GEO. • Improve GEO dissemination at the country level, through environmental networks or through UNEP's regional and country offices. • Finding more interactive ways of distributing and using the report such as CD-ROM, interactive software, You Tube videos and the Internet. • UNEP also needs to pay attention to the timing of the production of the next GEO in order to reduce the risk of stealing each other's scene (with respect to other Assessment reports). • Try to work more in synergy with other Assessments.
Format	• Bigger and darker type font. • Include an Executive Summary plus Summaries for user groups, for example, teachers. • Print in booklets, installments, or chapter by chapter to avoid the intimidating big book. • Rethink the report as an electronic document for use on line plus CD-ROM. Add an addendum or interim report every year to keep report up-to-date. • Print a companion booklet with graphs, maps; consider a regional compendium. • Ensure consistency from one GEO to the next, make data comparable using same measures, frameworks, methodologies, update instead of repeating or ignoring previous data and information, highlight changes in situation from previous report.
Regional and national focus	• Include more information and better data from the countries. Also include better selection of national focal points. • More consultations with players and stakeholders at the national and sub regional levels. • Develop better links with statistical agencies and institutes in each country. • Include more case studies to better articulate national and regional experiences. • More dissemination and more participation of regional experts and environmental agencies. • More pages in the report for regions.
Reduce political influence	• Reduce space for interference from governments.
Ensure scientific rigour	• Introduce clearer mandates for quality assurance, for example, a central reviewer who is viewed as neutral. • Improve quality and transparency of data collection, more references to the sources of data, ensure that the latest scientific evidence is included, as well as important information from other highly respected reports such as IPCC.

Annex I - UNEP and GEO Mandates, Vision, and Objectives

UNEP's vision[1]	UNEP's mandate[2]	UNEP's objectives[3]	UNEP's Implementation strategies[4]	GEO overall objective[5]	GEO specific objectives[6]
To be the leading global environmental authority that sets the global environmental agenda, that promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and that serves as an authoritative advocate for the global environment.	Keeping the world environmental situation under review. Catalyzing and promoting international cooperation and action. Providing policy advice and early warning information, based upon sound science and assessments. Facilitating the development, implementation and evolution of norms and standards and developing coherent inter-linkages amongst international environmental conventions. Strengthening technology support and capacity in line with country needs and priorities.	Strengthen the ability of countries to integrate climate change responses into national development. Minimize environmental threats to human well-being from the environmental causes and consequences of conflicts and disasters. Countries utilize the ecosystem approach to enhance human well-being. Environmental governance at country, regional and global levels is strengthened to address agreed environmental priorities. Minimize impact of harmful substances and hazardous waste on the environment and human beings. Natural resources are produced, processed and consumed in a more environmentally sustainable way.	Sound science for decision-makers: early warning, monitoring and assessment. Awareness-raising, outreach and communications. Capacity-building and technology support. Co-operation, coordination and partnerships. Sustainable financing for the global environment.	Provide access to the best scientific knowledge for international environmental governance and the mainstreaming of environmental concerns into social and economic sectors, and in support of internationally agreed environmental goals. Facilitate the interaction between science and policy through a multi scaled and multi-dimensional integrated assessment process and products of high legitimacy, credibility and utility. Build geographic and gender-balanced partnerships and capacity for environmental assessments.	

1 UNEP (1997). Nairobi Declaration on the Role and Mandate of UNEP. United Nations Environment Programme, Nairobi.
2 UNEP (2008). Proposed Medium-term strategy 2010-2013. Governing Council of the United Nations Environment Programme UNEP/GCSS.X/8, United Nations Envrionment Programme, Nairobi.
3 Ibid.
4 Ibid.
5 UNEP (2005c). Statement by the Global Intergovernmental and Multi-stakeholder Consultation on the fourth Global Environment Outlook, held in Nairobi on 19 and 20 February 2005. UNEP/GC.25/CPR.5.
6 UNEP's website. http://www.unep.org/GEO/About/Background/ Accessed on October 27th 2008.

Annex II - Terms of Reference (TORs)

GEO-4 INITIAL IMPACT REVIEW

Background

The fourth *Global Environment Outlook: Environment for development* (GEO-4) report was launched by UNEP on 25 October 2007. This flagship report is aimed at fulfilling the UNEP mandate to keep under review the environmental situation and ensure that emerging environmental problems of wide international significance receive appropriate and adequate consideration by governments[7]. Produced by UNEP together with 54 partners, including collaborating centers, GEO-4 is the result of a four-year intergovernmental consultative and multi-stakeholder process that started in February 2003 with the adoption by the UNEP Governing Council/Global Ministerial Environment Forum (GC/GMEF) requesting the release of the report by 2007. About 400 scientists and policy experts were directly involved in the research and drafting of the report and more than 1 000 experts reviewed various drafts.

The GEO-4 assessment, which includes both the report and process, incorporates the broader UNEP objective to build capacity at global and sub-global levels in environmental assessment and reporting.

The GEO-4 objectives are to:

- Provide a global, comprehensive, reliable and scientifically credible, policy-relevant and legitimate up-to-date assessment of and outlook regarding the interaction between environment and society.
- Assess the state-and-trends of the global environment in relation to the drivers and pressures, and the consequences of environmental change for ecosystem services and human well-being as well as on progress and barriers towards meeting commitments under multilateral environmental agreements.
- Assess inter-linkages between major environmental challenges, and their consequences for policy and technology response options and trade-offs, and assess opportunities for technology and policy interventions for both mitigating and adapting to environmental change.
- Assess challenges and opportunities by focusing on certain key cross-cutting issues, and on how environmental degradation can impede progress, with a focus on vulnerable groups, species, ecosystems and locations.
- Present a global and sub-global outlook, including short-term (up to 2015) and medium-term (up to 2050) scenarios for the major societal pathways, and their consequences for the environment and society.
- Assess environment for human well-being, focusing on the state of knowledge regarding the effectiveness of various approaches to overarching environmental policies.[8]

The Ninth Special Session of the UNEP Governing Council/Global Ministerial Environment Forum adopted Decision GCSS.X/5 in March 2008 requesting the Executive Director to present to the 25th Session of the Governing Council in February 2009, among others.[9]

- Options for the possible development of a scientifically credible and policy-relevant global assessment of environmental change and its implications for development, including a cost analysis and an indicative benefit analysis for each option."

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7 UNGA (1972). General Assembly Resolution 2997. United Nations, New York.

8 UNEP (2007). The GEO-4 Process. *Global Environmental Outlook 4: Environment for Development.* United Nations Environment Programme. Nairobi.498-499.

9 UNEP (2009). Global Environment Outlook: environment for development. Council decision UNEP/GCSS.X/5/7b, United Nations Environment Programme, Nairobi.

The preparation of the Initial Impact Review outlined in this TOR is, therefore, a follow up to the GCSS.X decision and previous GEO-related resolutions. Its findings will feed into the drafting of a report on the options for future global assessments to be presented at the 25th Session of the UNEP Governing Council.

Review objectives

The objectives of the Initial Impact Review are to:

- Assess the extent to which the GEO-4 report (main report and Summary for Decision Makers) reached its intended target audience groups (intended users) following launch in October 2007 and ongoing distribution and commercial sale.
- Identify and assess actual uses, and to the extent feasible, influence of the GEO-4 report (data, findings, communication products) in relation to intended use. This includes also the identification of unintended use;
- Determine the initial impact of GEO-4 as measured against intended use.
- Provide suggestions (from users) for improvements that would strengthen use of global assessment products in future.

This Review of User Impacts constitutes one part of an Overview of the Performance of GEO-4 that also contains a summary of results of a GEO-4 Self Assessment Survey carried out by Vital Research LLC and IUCN.

Scope

The review will identify and consider impact achieved over the period from the launch and the period up to 12 months thereafter.

The GEO-4 outreach strategy included media and strategic engagement activities, as well as internal and external presentations on the report, print media, radio, television and multimedia. It may be appropriate to consider the GEO-4 intergovernmental consultations, particularly the final meeting in September 2007 during which governments and scientists debated the issues and endorsed the Summary for Decision Makers (GEO-4 SDM) as part of this outreach strategy.

The Review will focus on GEO-4 report, including the GEO-4 Summary for Decision Makers report and not other GEO related products. It will include sampling of users from the stated target audience groups of GEO-4 which are:

- Policymakers – especially UNEP's governing bodies
  - including other UN agencies (such as FAO, UNESCO, ECOSOC[10]), International Agencies and Donors. Others to consider:
  - Regional and National Governments, Conventions, and UNEP staff
- Scientists (research)
- NGOs
- Civil society, including business / private sector
- Media, including multimedia
- Public (could include education and academia)
- Youth

[10] ECOSOC, particularly the Division for Sustainable Development. For example, CSD-16 documents at http://www.ubn.org/eas/sustdev/documents/docs_csd16.htm reflect some of the policy impacts of the report to date.

Methods

Mixed methods will be used for the Review including:

Mapping of Causal pathways

The Review will start by identifying causal pathways of GEO-4, based on explicit statements of planned and purposeful intended use by the GEO Team, DEWA, key collaborating partners[11].

Where explicit, these statements of intended use will set out hypotheses of use and influence of GEO-4 which will, in turn, help to inform the design of the sample of interviews. Where intended use is not explicit, the Review Team will attempt, within reason, to reconstruct hypotheses to inform data collection.

Previous data on user groups

Previous studies will be used to assist in identifying possible user groups and uses. For example, Global Environment Outlook: User profile and Impact Study undertaken in 2001, and the 2006-7 GEO Self Assessment Survey both identify users groups and uses[12].

Interviews

The main method for assessing the impact of GEO-4 through its targeted users will be interviews with a broad representative sample of users. UNEP DEWA (GEO team) will be expected to provide the Reviewers with an up to date list of users, contact details (title, affiliation, phone number, email, addresses).

WWW search

Interviews will be complemented by a web based analysis of use and referencing of GEO-4. This is expected to assist in determining use and verifying actual user groups. UNEP's distributor SMI can provide user profile of GEO-4 reports distributed for free and sold. No user data exists of the many 100,000s of copies of GEO-4 downloaded as PDF from www.unep.org.

E-mail survey (optional)

A broader email survey of GEO-4 users may be also considered (if time and resources allow) to assess the use of the GEO-4 findings (global or sub-global) or of the adoption or application of the GEO process or conceptual framework. In this case, care will be taken to manage potential bias of respondents who may have been engaged in the assessment process, but who can also provide valuable insights into the preliminary impact of GEO-4.

Conduct and Management of the Review

The Review will conducted by a Review Team consisting of two lead evaluators and two-three supporting evaluators. The lead evaluators will work under the overall supervision of UNEP DEWA and designated staff. The lead evaluators should be recognized senior evaluation experts with expertise in environmental issues and governance, and global assessment products that generate policies/strategies, knowledge and information.

The Review will be led by consultants Nancy MacPherson and Zenda Ofir. They will be responsible for the design and conduct of the Review, and overall quality and delivery of the Review report. The supporting evaluators will primarily be involved in conducting interviews.

UNEP DEWA staff Salif Diop and Susanne Bech will oversee the Review and provide inputs to the design, advice during implementation, and will be responsible for providing up to date contact lists of users to the Review Team. UNEP DEWA and its GEO Team staff will be consulted in the development of the interview questionnaire(s).

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[11] Note: Examine the Statement on GEO-4 adopted by Governments and other stakeholders in February 2003, which outlines the scope and objectives of the assessment.

[12] In addition to intended user groups, unintended user groups can also be considered. For example, bloggers were not considered as a target group but blogs have appeared on GEO-4 findings.

The UNEP Evaluation Office will provide feedback and advice to the GEO staff on the design of the Review and the draft report.

Work plan of review outputs and deliverables
The Review will commence July 1, 2008, first draft to be ready by October 10, 2008 and report completed by November 15, 2008.

This will be close to one year after the release of the GEO-4 in order for findings of the review to feed into the addendum on "Options for a potential global assessment" (Report to GC.25) and possibly the review report (or a review summary) attached as an information document to the addendum.

Final editing, layout and printing (responsibility of UNEP) will occur in November and December 2008. The review report, with option for limited printed copies, will be distributed through web. Review summary/key findings/lessons learned sheet printed and distributed especially for the Governing Council to be held in Nairobi, February 16-20, 2009.

Annex III - The Review Matrix

Key Issues	Key Evaluation Questions	Sub-questions	Sources
1. Relevance of the Report	**1. To what extent is the global GEO-4 Report (and SDM) relevant to the mission, objectives and needs of potential users, and to critical processes?**	1.1 To what extent do the target audiences regard the Report/SDM as relevant to their mission, objectives and needs? And to critical processes in the environment arena? 1.2 How do the different chapters/content issues weigh up in meeting their requirements? 1.3 How well does the relevance of this Report/SDM compare to other assessments known to the target audiences? 1.4 What are/were the main factors constraining or facilitating the relevance of the Report/SDM? How do these affect the intended impact pathway / theory of change?	1.1 Interviews, Self-assessment 1.2 GEO Report; User/CC/GEO team interviews 1.3 GEO Report; User/CC/GEO team interviews; Key global and regional assessments (e.g. MA/IPCC) 1.4 User/CC/GEO team interviews; Self-assessment; proposed impact pathway/theory of change
2. Quality of the Report	**2. To what extent is the Report/SDM regarded as of sufficient quality to be a legitimate, credible source of information?**	2.1 To what extent do the target audiences regard the Report/SDM as legitimate, credible, authoritative, up to date, comprehensive (or any other definition of quality that may emerge?) 2.2 How do the different chapters/content issues weigh up in meeting these requirements? 2.3 How well does the quality of the Report/SDM compare with other relevant assessments known to the target audiences? 2.4 What are/were the main factors constraining or supporting the quality of the Report/SDM?	2.1 User/CC/GEO team interviews, Self-assessment 2.2 GEO Report; User/CC/GEO team interviews 2.3 GEO Report; User/CC/GEO team interviews; Key global and regional assessments (e.g. MA/IPCC) 2.4 User/CC/GEO team interviews; Self-assessment; proposed impact pathway/theory of change
3. Reach of the Report	**3. To what extent has the GEO-4 Report/SDM reached its intended audiences?**	3.1 Have the target audiences for the Report/SDM been clearly identified? 3.2 Are these target audiences appropriate given GEO's objectives and expected outcomes? 3.3 To what extent has the Report/SDM been available and accessible to the target audiences? 3.4 Were the strategies and mechanisms used to reach each of the target audiences effective? 3.5 Were any unintended target audiences reached? 3.6 Did the reach of the report improve compared to previous GEOs? 3.7 What are the main factors fostering or constraining efforts to reach the target audiences?	3.1 GEO planning documents/brochures; Previous GEO assessments; Self-assessment; User/GEO team interviews 3.2 GEO Report / related products / communication materials; User/CC/GEO team interviews; Self-assessment 3.3 User/CC interviews 3.4 User/CC/GEO team interviews; Self-assessment 3.5 Surveys, user interviews with snowball sampling 3.6 User/CC/GEO team interviews; Previous GEO assessments; Self-assessment 3.7 User/CC/GEO team interviews; Self-assessment; proposed impact pathway/theory of change

Key Issues	Key Evaluation Questions	Sub-questions	Sources
4. Use of the Report	**4. To what extent has the Report/SDM been useful and used by the targeted user groups?**	4.1 To what extent does each target audience recognise the Report/SDM as useful? And of value to their work? 4.2 How can the utility of the Report/SDM be enhanced? 4.3 To what extent have the target audiences used the Report/SDM? For what purposes? 4.4 Is the actual use in line with the intended use? 4.5. Are there unintended uses following from the Report/SDM and/or its production processes? 4.6 How have the patterns of use changed – if at all - since previous user assessments? 4.7 What are/were the main factors fostering or constraining use of the Report/SDM?	4.1 User/CC interviews; UNDP EE survey; UNEP survey; Self-assessment 4.2 User/CC interviews; UNDP EE survey; UNEP survey; Self-assessment 4.3 User/CC interviews; UNDP EE survey; UNEP survey; Self-assessment 4.4 GEO planning documents/brochures; User/CC team interviews; UNDP EE survey; UNEP survey 4.5 User/CC team interviews; UNDP EE survey; UNEP survey 4.6 User/CC/GEO team interviews; Self-assessment; Previous GEO team assessments; UNDP EE survey; UNEP survey 4.7 User/CC/GEO team interviews; Self-assessment; proposed impact pathway/theory of change
5. Influence of the Report	**5. To what extent has the Report/SDM been able to bring about change?**	5.1 Are there any signs that the Report/SDM has had any influence (e.g. through improved policies, legal frameworks and practices; strengthened linkages between environmental assessment and policy-making; etc.?) 5.2 Is the observed influence, if any, in line with what was intended? 5.3 Are there any indications that this Report/SDM has had more influence compared to previous assessments? 5.4 What are/were the main factors fostering or constraining the influence of the Report/SDM?	5.1 User/CC interviews; UNDP EE survey; UNEP survey; Self-assessment 5.2 GEO planning documents/brochures; User/CC/GEO team interviews; UNDP EE survey; UNEP survey; Self-assessment 5.3 User/CC interviews; UNDP EE survey; UNEP survey; Self-assessment; Previous assessments 5.4 User/CC/GEO team interviews; Self-assessment; proposed impact pathway/theory of change

Annex IV - Summary of Review Approach and Methodology

PURPOSE OF THE REVIEW

1. Assess the extent to which the GEO-4 report had reached its intended target groups;
2. Identify and assess the actual use of the report in relation to intentions,
3. Determine the impact to date against intentions; and
4. Provide suggestions for improvements that would strengthen the use of global assessment products in future.

THE REVIEW DESIGN

- Partial use of conceptual framework and findings of study on determining the influence of Global Environmental Assessments, with reference to
  - Deductive search for diverse examples of use and influence for variety of user groups, coupled to limited inductive data gathering and analysis
  - Requires user perspectives on salience, credibility and legitimacy from variety of well defined user groups.
  - Process analyzed as important contributing factor, but only where clear effect on use or influence is indicated.
- Based on project logic and theory of change
- Primarily qualitative, although use of mixed methods
- Focused through Review matrix.
- User groups
  - Policy makers (UNEP Governing Council; regional and national governments; UN agencies; international conventions; international agencies (donors)
  - scientists and academia
  - non-government organisations (NGOs)
  - private sector organizations

QUALITY ASSURANCE

Focus on triangulation and validation strategies
Systematic analysis of qualitative information, including quantification
Statistical rigor in quantitative analyses
Conducted in line with accepted evaluation practice

DATA COLLECTION METHODS

1. *Document analysis*
   Used to develop GEO-4 project theory and inform methodology choices; Includes all relevant information documents found on GEO website; GEO-4 strategy documents; contact lists; tracking data; and background documents on policy influencing and global environmental assessment reviews.

2. *Development of project theory*
   In the absence of explicit project theory or theory of change, the project theory was retrospectively developed in close collaboration with GEO-4 Coordinating Team members. The "theory of action" (GEO strategy) as well as the theory of change informed the methodology development, and some of the key underlying assumptions were tested during the Review.

3. *Stakeholder and user group identification*
   Preliminary identification of stakeholder groups, followed by identification and mapping of the user groups who were to be engaged in sampling strategy.

4. *Sampling strategy*
   A combined stratified random and stratified purpose sample of 141 respondents was finally targeted for interviews. They were drawn from a sampling frame of approximately 1506 people which comprised UNEP contact lists and the GEO-4 publisher's order list.

5. *Informant and key informant interviews*
   Structured interview schedule was used to interview respondents telephonically in English, French or Spanish. Data was captured in a central data-base and subjected to quantitative and qualitative analysis. Semi-structured interviews conducted with selection of key informants.

4. *Surveys*
   Two online surveys with some basic questions about GEO-4 usage were used. One survey was posted on the UNEP intranet; the other posted to the UNDP Energy & Environment listserv.

5. *Web-based research*
   Google search engines used to identify references to GEO-4 in English, French and Spanish, analyze nature of reference and user group making them. Searches also carried out on websites of major media outlets, MEA and environmental meetings, and sites of UN organizations linked to environment.

6. *Validation strategy*
   - Triangulation – cross-checks between methods (interviews, surveys) and sources (documents, perceptions of variety of user groups; key informants)
   - Circulation of draft report for comment, considered in re-drafting
   - Testing of preliminary findings with UNEP representatives.

ETHICAL CONSIDERATIONS

Guarantee of confidentiality of informant contributions.

REVIEW PROCESS

PHASE 1: PREPARATION – SCOPING AND FOCUSING THE REVIEW (July 2008)
(i) Clarification of Terms of Reference
(ii) Establishment of Review Team
(iii) Document analysis / desk review
(iv) Methodology development

PHASE 2: CONDUCTING THE REVIEW (10 August-17 October 2008)
(i) Interviews with purposefully and randomly selected informants
(ii) Web based research
(iii) Limited user surveys
(iv) Limited triangulation - methods and sources

PHASE 3: ANALYSIS AND REPORT WRITING (20 October- 14 November 2008)
(i) Inductive data analysis
(ii) Distillation of lessons, good practice and recommendations
(iii) Submission of draft report 27 October
(iv) Meetings at UNEP HQ for validation and verification
(v) Submission of final report 14 November

PHASE 4: USE OF THE REVIEW
(November 2008-February 2009)
(i) Input into conceptualization of GEO-5
(ii) Report to GC meeting, February 2009

DATA ANALYSIS

Quantitative data and qualitative information used in an integrated manner for triangulation and deepening of understanding of key issues.

Qualitative information systematically and inductively analyzed for emerging patterns; in some cases quantified after coding.

GEO- 4 USER IMPACT REVIEW:
INTERVIEW GUIDE

Introduction

UNEP is undertaking an Initial Impact Review of the fourth Global Environment Outlook: Environment for Development (GEO-4) Report launched by UNEP on 25 October 2007 (more information in the annex to this report).

The Review was launched as a result of a UNEP Governing Council decision and other GEO-related resolutions. Its findings will feed into a report on the options for future global assessments to be presented at the 25th Session of the UNEP Governing Council in February 2009.

The Review focuses only on the global GEO-4 Report (including the GEO-4 Summary for Decision Makers) and not other GEO related products.

Your participation in this important Review is greatly appreciated. Note that your response will be confidential and only an aggregate of scores and summary of responses will be reported.

A. Identification and Profile

Interviewer to complete the following:

Name	
Position	
Affiliation (division/department and/or organization)	
City	
Country	
Region	
Gender	☐ Male ☐ Female

i. Please check the category which best describes your affiliation

☐ Government agency or department
☐ Academic institution (teaching or research)
☐ NGO - environment/development/both:
☐ Private Sector
☐ UNEP
☐ Other UN Agency
☐ Individual without any affiliation
☐ Other – please specify

ii. Please select what best describes the nature of your work (multiple possibilities can be marked)
Research –

☐ primarily focused on environmental issues
☐ primarily focused on development
☐ other areas - please specify

Teaching –

☐ primarily focused on environmental issues

☐ primarily focused on development

☐ other areas - please specify

Practitioner (implementation) -

☐ focused on environmental issues

☐ focused on development

☐ other areas - please specify

Policy maker –

☐ primarily focused on environmental issues

☐ primarily focused on development

☐ other areas - please specify

Other –

☐ please specify

iii. Were you a participant in the production of GEO-4? ☐ Yes ☐ No

iv. If yes – then please indicate in which role:

☐ Collaborating Centre

☐ Government nominee

☐ GEO Fellow

☐ High Level Consultative Group

☐ Capacity Building – GEO Training

☐ Other - please specify

☐ Expert Chapter Group participant

☐ MEA Focal point

☐ GEO-4 Reviewer

☐ Outreach and Engagement

☐ Data Group

B. Section 1: Your familiarity with UNEP and GEO

		Very familiar	Somewhat familiar	Slightly familiar	Not at all familiar
1.1	**How familiar are you with the mandate of UNEP?**				
1.2	**How familiar are you with the GEO-4 Report?** *If not familiar, the interview will be terminated.*				
1.3	**Do you (or did you) have a copy of the GEO-4 Report?** ☐ Yes ☐ No				
1.4	**How did you become aware of the GEO-4 Report?** ***(allow multiple possibilities)***				

☐ Participated in the GEO-4 process

☐ Made aware through earlier GEO processes or reports

☐ Colleagues

☐ Media

☐ UNEP communications

☐ Web search

☐ Other – please specify

1.5	**How did you obtain your copy?** ***(allow multiple possibilities)***
	☐ Complementary copy sent by UNEP
	☐ Complementary copy received at an event (e.g. conference)
	☐ Bought it
	☐ Downloaded from the Web
	☐ From a colleague
	☐ Other – please specify
1.6	**For how many years have you been aware of the existence of GEO?** ☐
1.7	**Have you received any previous global GEO reports (GEO 1-3)?** ☐ Yes ☐ No

B. Section 2: Relevance of the GEO-4 Report

2.1 In your opinion, how relevant is the GEO-4 Report to the following:

	Not at all relevant	Not very relevant	Relevant	Very relevant	Neutral / No opinion
2.1.1 Providing an overview of ENVIRONMENT trends and issues					
(i) At global level	☐	☐	☐	☐	☐
(ii) At regional level	☐	☐	☐	☐	☐
2.1.2 Providing information to guide ENVIRONMENT POLICY					
(i) At regional level	☐	☐	☐	☐	☐
(ii) At national level	☐	☐	☐	☐	☐
2.1.3 Providing an overview of DEVELOPMENT trends and issues as they relate to the environment					
(i) At global level	☐	☐	☐	☐	☐
(ii) At regional level	☐	☐	☐	☐	☐
2.1.4 Providing information to guide DEVELOPMENT POLICY					
(i) At global level	☐	☐	☐	☐	☐
(ii) At regional level	☐	☐	☐	☐	☐
(iii) At national level	☐	☐	☐	☐	☐
2.1.5 Providing information that can help improve INTERNATIONAL ENVIRONMENTAL GOVERNANCE	☐	☐	☐	☐	☐
2.1.6 Providing information for strategies towards the WSSD TARGETS	☐	☐	☐	☐	☐
2.1.7 Providing information for strategies towards the JOHANNESBURG DECLARATION AND PLAN OF ACTION	☐	☐	☐	☐	☐
2.1.8 Providing information for strategies towards the MILLENNIUM DEVELOPMENT GOALS (MDGs)	☐	☐	☐	☐	☐
2.1.9 Providing information that can INFORM AND SUPPORT the Multilateral Environment Agreements (MEAs)*	☐	☐	☐	☐	☐
2.1.10 Identifying major EMERGING ISSUES	☐	☐	☐	☐	☐
2.1.11 BUILDING CAPACITY in producing integrated, good quality assessments at national or regional level?	☐	☐	☐	☐	☐

* Note: List of MEAs is attached in the Annex for your reference.

2.2 What suggestions do you have to improve the relevance of the global GEO report for use at regional or global level?

B. Section 3: Usefulness of the GEO-4 Report

	Not at all useful	Not very useful	Useful	Very useful	Neutral / No opinion
3.1 How useful has the GEO-4 Report been in providing information of direct use in your work?	□	□	□	□	□

3.2 Please explain your answer in question 3.1.

3.3 Are there any specific parts (for easy reference see list below) of the GEO-4 Report that have you found particularly useful?

	Not at all useful	Not very useful	Useful	Very useful	Neutral / No opinion
Chapter 1 – Environment for Development	□	□	□	□	□
Chapter 2 – Atmosphere	□	□	□	□	□
Chapter 3 - Land	□	□	□	□	□
Chapter 4 – Water	□	□	□	□	□
Chapter 5 – Biodiversity	□	□	□	□	□
Chapter 6 – Sustaining a Common Future - regional priority issues	□	□	□	□	□
Chapter 7 – Vulnerability of People and the Environment	□	□	□	□	□
Chapter 8 – Inter-linkages – Governance for Sustainability	□	□	□	□	□
Chapter 9 – The Future Today – scenarios	□	□	□	□	□
Chapter 10 – Options for Action	□	□	□	□	□
All chapters (i.e. the whole document as source of information on the bigger picture beyond sector interests)	□	□	□	□	□
Other (e.g. sub-sections of the report)	□	□	□	□	□

3.4 What approaches, topics or issues are missing from, and should be included in the Report that would make it more useful to you – for example in terms of scope (balance of development and environment); content; and coverage (regional/thematic)?

B. Section 4: Using the GEO-4 Report

4.1 For what purposes (if any) have you used the GEO-4 Report? Please provide brief examples and insights on how exactly this was done, using the broad categories below as starting point. If you have not used it - why not?

Possible uses could include for example:

□ Research and academia
(e.g. data references for research; comparative studies, scenarios; research and justifying research funding; academic work – teaching, lectures, presentations; authoritative reference, etc.)

□ Conducting integrated assessments
(e.g. regional assessments; national assessments; city assessments, etc.)

□ Policy work - advocacy, development, legislation, implementation, etc.
(e.g. developing policy at global, regional or national level; lobbying governments for change; preparing policy briefs; reviewing legislation – see question 4.2)

- ☐ Information, awareness raising
  (e.g. broad overview of environmental issues, status, trends; awareness raising activities; writing articles, etc.)
- ☐ Development practice
  (e.g. implementation of environment or development programmes (for example their design, developing baselines, monitoring, evaluation, lessons learned, etc.).
- ☐ Private sector initiatives
  (e.g. their planning, design, monitoring, evaluation, industry standards, etc.)

4.2 If you have used GEO for policy work, at what stage of the 'policy cycle' have you done so? (Stages given below; refer to the Annex for more information on the 'policy cycle')

- ☐ Not applicable
- ☐ Problem identification (assessment of problems that need to inform the policy)
- ☐ Agenda setting (development of the policy agenda; advocacy of policy issues)
- ☐ Policy research (research on policy, and research informing policy)
- ☐ Policy negotiation (multi-stakeholder negotiations before and/or after policy negotiations)
- ☐ Policy formulation (including participation in drafting and advisory committees)
- ☐ Policy implementation (including building capacity for implementation and guiding policy implementation processes and initiatives)
- ☐ Policy enforcement (including legislation and implementation of strategies to enforce compliance)
- ☐ Policy accountability (monitoring of implementation and compliance)
- ☐ Policy evaluation (assessment for i.a. their effectiveness and efficiency, as well as assessment of the processes to arrive at the policy)
- ☐ Policy review (reviewing policies for improvement using research, monitoring and evaluation)
- ☐ Other – please specify

4.3 In your experience, has the GEO-4 Report had a significant profile among your peers? ☐ Yes ☐ No

4.4 Do you know of others who have used it? ☐ Yes ☐ No

4.5 If so, please provide us with the context and their contact details if you can.

B. Section 5: The Results and Influence of the GEO-4 Report

5.1 Please provide us with a brief insight into those case(s) where you or others of whom you are aware have used GEO-4 Report information most effectively. In other words, where has the content of GEO-4 clearly had (or contributed to) results or influence, and what were these?

Can you easily provide us with relevant documents, reports, articles, etc. to illuminate this vignette/brief summary - or how else can we access relevant information?

5.2 Do you know of others who have made an impact through the GEO-4 Report?
□ Yes □ No

5.3 If so, please provide us with the context and if possible, their contact detail

B. Section 6: Quality of the GEO-4 Report

6.1 To what extent do you agree with the following statements?

	Strongly Agree	Agree	Disagree	Strongly disagree	Neutral/ No opinion
In my view the GEO-4 Report is					
– Comprehensive	□	□	□	□	□
– reliable	□	□	□	□	□
– authoritative	□	□	□	□	□
– up-to-date	□	□	□	□	□
– policy-relevant	□	□	□	□	□
– scientifically rigorous	□	□	□	□	□
– independent	□	□	□	□	□
– user-friendly in terms of content	□	□	□	□	□
– user-friendly in terms of format	□	□	□	□	□

6.2 Please provide reasons for your assessment in 6.1 (any aspect).

6.3 What do you suggest should be done to improve the quality of the global GEO report in future?

B. Section 7: Accessibility of the GEO-4 Report

7.1 To what extent do you agree with the statement below?

	Strongly Agree	Agree	Disagree	Strongly disagree	Neutral/ No opinion
In my experience the GEO-4 Report has been readily accessible to me	□	□	□	□	□
In my experience the GEO-4 Report has been readily accessible to my peers	□	□	□	□	□

7.2 Please give reasons for your answer in 7.1.

7.3 What strategies would you suggest to help UNEP ensure that the global GEO report reach its target audiences effectively and (cost)-efficiently?

B. Section 8: Overall Value Added of the GEO-4 Report

8.1 How valuable has the GEO-4 Report been to your work?

□ Of great value

□ Of some value

□ Of slight value

- ☐ Of no value
- ☐ Not applicable

8.2 How does the GEO-4 Report compare with other assessment reports that you have used in terms of value added to your work?

- ☐ Better
- ☐ About the same
- ☐ Worse
- ☐ Don't use other assessment reports

8.3 Please provide a reason for your response to 8.2.

8.4 If relevant, please provide examples of other assessment report(s) that have added more value to your work than GEO-4.

These could include for example the:

- ☐ Millennium Ecosystem Assessment (MA)
- ☐ Report of the Intergovernmental Panel on Climate Change (IPCC)
- ☐ Global International Waters Assessment (GIWA)
- ☐ World Water Assessment Programme – World Water Development Report
- ☐ State and National Assessments
- ☐ Land Degradation Assessment in Drylands (LADA)
- ☐ Africa Environmental Outlook
- ☐ Arab Environmental Outlook
- ☐ Assessment of Water Management in Agriculture (FAOSTAT)
- ☐ International Assessment of Agricultural Science and Technology for Development (IAASTD)
- ☐ Southern African Environmental Outlook
- ☐ Other global assessment reports (please specify)
- ☐ Other regional assessment reports (please specify)

8.5 What can be learnt from other global or regional assessment reports that may help improve the next global GEO report?

8.6 What other suggestions do you have to improve the next global GEO report?

8.7 Are there any other comments or suggestions you would like to add given the context of our discussion?

THANK YOU FOR YOUR VALUABLE TIME

Annex VI - Persons Interviewed

Name		Position	Organisation	City	Country
Africa					
Henry	Aryamanya-Mugisha	Executive Director	National Environment Management Authority (NEMA)	Kampala	Uganda
Samuel	Ayonghe	Head of Department	University of Buea	Buea	Cameroon
Thomas Anatole	Bagan	Former Assistant of the Technical Advisor for the Environment	Ministry of Environment, Habitat and Urbanism	Cotonou	Benin
Marion	Cheatle	Deputy Director	Division of Early Warning and Assessment, UNEP	Nairobi	Kenya
James Emmons	Coleman	Environment and Natural Resources Officer	Environmental Protection Agency (EPA)	Monrovia	Liberia
Jameson	Dukuza Vilakati	Unknown	Swaziland Environment Authority, Ministry of Tourism, Environment & Communications	Mbabane	Swaziland
Fatma Salah	El Din El Mallah	Director	Dept. of Environment, Housing and Sustainable Development, League of Arab States Technical Secretariat	Cairo	Egypt
Rosa Emma Mamaa	Entsua-Mensah	Deputy Director General – Research and Development	Council for Scientific and Industrial Research (CSIR)	Accra	Ghana
Sara	Feresu	Professor	Institute of Environmental Studies, University of Zimbabwe	Harare	Zimbabwe
Peter	Gilruth	Director	Division of Early Warning and Assessment, UNEP	Nairobi	Kenya
Elizabeth	Gowa	Environment Management and Assessment Consultant	Independent consultant	Nairobi	Kenya
Pascal Valentin	Houenou	Coordinator	Network for Environment and Sustainable development in Africa (NESDA)	Abidjan	Côte d'Ivoire
Etienne	Kayengeyenge	Independent consultant, IUCN Focal Point	n/a	Bujumbura	Burundi
Patricia	Made	Independent Journalist, Editor and Researcher	n/a	Harare	Zimbabwe
Patrick	Milimo	Consultant	Initiative Inter-African Bureau for Animal Resources (IBAR)	Nairobi	Kenya
Jean-Marie	Minani	Professeur chargé de l'Environnement	Département des études d'impact environnemental Office Rwandais de Gestion de l'Environnement	Kigali	Rwanda
Evans	Mungai Mwangi	Lecturer	Chiromo Campus School of Biological Sciences, University of Nairobi	Nairobi	Kenya
Dali	Najeh	Directeur Général de l'Environnement et de la Qualité de Vie	Ministry of environment and sustainable development	Tunis	Tunisia

Name		Position	Organisation	City	Country
David Samuel	Njiki Njiki	Executive Secretary	Interim Secretariat of NEPAD Environment Component (SINEPADIENV)	Dakar	Senegal
Nick	Nuttall	Spokesperson	Office of the Executive Director, UNEP	Nairobi	Kenya
Betty	Nzioka	Deputy Director	National Environment Management Authority (NEMA)	Nairobi	Kenya
Akpezi	Ogbuigwe	Head	Environmental Education and Training, UNEP	Nairobi	Kenya
Rudi	Pretorius	Director Information Manager	Department of Environmental Affairs and Tourism	Pretoria	South Africa
Alioune	Sall	Executive Director	African Futures Institute	Pretoria	South Africa
David	Simpson	Editor	Division of Communications and Public Information (DCPI), UNEP	Nairobi	Kenya
Yawo Jonki	Tenou	Water and Environment Management Engineer - Natural Risks Management	Division Prévention et Lutte contre la Pollution, Direction de l'Environnement	Lome	Togo
Ibrahim	Thiaw	Director	Division of Environmental Policy Implementation (DEPI), UNEP	Nairobi	Kenya
Benon Bibbu	Yassin	Environmental Officer	Environmental affaires department	Lilongwe	Malawi
Shepard	Zvigasa	Programme Manager	Zero Regional	Harare	Zimbabwe
Asia Pacific					
Mozarahul	Alam		Bangladesh Centre for Advanced Studies	Dhaka	Bangladesh
Mike	Co	Knowledge and Communication Manager	Clean Air Initiative for Asian Cities Center	Manila	Philippines
Liu	Kan	Doctoral Candidate	Peking University – Graduate School	Shenjen	China
Pradyumna	Kumar Kotta	Consultant	South Asia Co-operative Environment Program (SACEP)		India
Akira	Ogihara	Coordinator, Programme Management Office	Institute for Global Environmental Strategies	Hayama Kanagawa	Japan
Eric	Quincieu	Freelance	Eco 4 the World	Singapore	Singapore
Clarice	Wilson	Programme Associate	Institute of Advanced Studies, United Nations University	Yokohama	Japan
Europe					
Hussein	Abaza	Chief	Economics and Trade Branch, Division of Technology, Industry and Economics, UNEP	Geneva	Switzerland
Anna	Ballance	Policy Advisor	Department for International Development	London	UK
Ivar	Baste	Director	Environment Management Group (EMG) Secretariat, UNEP	Geneva	Switzerland
Brook	Boyer		Multilateral Diplomacy and International Affairs Management Programme, UNITAR	Geneva	Switzerland
Susan	Brown	Manager	Global and Regional Policy, WWF International	Gland	Switzerland
Philip	Bubb	Senior Programme Officer	Ecosystem Assessment Programme, UNEP	Cambridge	UK

Name		Position	Organisation	City	Country
Maurizio	Cancelmo	Director	OPEN (Observatoire Permanent de l'Environnement)	Torino	Italy
David	Dent	Director	International Soil reference and Information Centre(ISRIC)	Wageningen	The Netherlands
Idunn	Eidhem	Deputy Director General – International Relations	Ministry of Environment	Oslo	Norway
Jaroslav	Fiala	National Expert - Project Manager	Air and transport – European Environment Agency	Copenhagen	Denmark
Miriam	Galt	Senior Consultant/Director	Bee Successful Ltd.	Pitlochry, Perthshire	Scotland, UK
Paola Massyel	Garcia	PHD Student	University of Plymouth	Plymouth	UK
Matthew	Gubb	Coordinator	SAICM secretariat, Chemicals Branch, Division of Technology, Industry and Economics (DTIE), UNEP	Geneva	Switzerland
Katrin	Hallman	Information Officer	Swedish Environmental Protection Agency, International Secretariat	Stockholm	Sweden
Robert	Hamwey	Senior Expert –Trade	United Nations Conference on Trade and Development (UNCTAD)	Geneva	Switzerland
Toby	Hodgkin	Director	Global Partnerships Program, Biodiversity International, CGIAR	Rome	Italy
Andrzej	Jagusiewicz	Chief Inspector	Inspectorate of Environmental Protection	Warsaw	Poland
Klaus	Jakop	Research Director	Environmental Policy Research Centre, Berlin Free University	Berlin	Germany
Mikkel	Kallesoe		Sustainable Ecosystems Program, World Business Council on Sustainable Development (WBCSD)	Geneva	Switzerland
Bruno	Kestemont		Statistic Belgium	Brussels	Belgium
Marcel	Kok	Deputy Director	Netherlands Environmental Assessment Agency (PBL)	Bilthoven	Netherlands
Fred	Langeweg	Project Leader GEO4	Netherlands Environmental Assessment Agency (PBL)	Bilthoven	Netherlands
Festus	Luboyera	Program Officer	Compliance Program, Climate Change Secretariat (UNFCCC)	Bonn	Germany
Monika	MacDevette	Deputy Director	World Conservation Monitoring Centre, UNEP	Cambridge	UK
Kokine	Mikhail	Secretary	Working Party on Environmental Monitoring and Assessment, United Nations Economic Commission for Europe (UNECE)	Geneva	Switzerland
Marya	Minova	Expert	Energy efficiency and environment directorate	Sofia	Bulgaria
Bedrich	Moldan	Professor and Senator	Charles University Environmental Center		Czech Republic
David	Morgan	Head of Scientific Support Unit	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) - Secretariat	Geneva	Switzerland

Name		Position	Organisation	City	Country
Ndegwa	Ndiang'ui	Senior Scientific Affaires Officer	Secretariat of the United Nations Convention to Combat Desertification	Bonn	Germany
Lennart	Olsson	Unknown	Centre for Sustainable Studies, Lund University	Lund	Sweden
Franz	Perrez	Head of Section	Global Affaires Section, Swiss Federal Office for the Environment	Bern	Switzerland
Nicolas	Perritaz	Senior Scientific Officer	Federal Office for the Environment (FOEN)	Bern	Switzerland
Véronique	Plocq Fichelet	Executive Director	SCOPE (Scientific Committee on Problems of the Environment)	Paris	France
Peter	Prokosch	Managing Director	GRID Arendal (Global Resource Information Database)	Arendal	Norway
Ulrika	Richardson	Manager	UNDP		Turkey
Alistair	Rieu-Clarke		Help Center for Water Law Policy and Science, University of Dundee	Dundee	United Kingdom
Vladmir	Ryabinin	Senior Scientific Officer	Joint Planning Staff for World Climate Research Program	Geneva	Switzerland
Barbara	Schaefer		Division KIII4(UN, Cooperation with Developing and Emerging Countries), Federal Ministry for the Environment, Nature Conservation and Nuclear Safety	Berlin	Germany
Martin	Schaefer	Previously GEO Fellow	Previously University of Karlsruhe	Unknown	Germany
Frederik	Schutyser	Project Manager	European Environment Agency	Copenhagen	Denmark
Hans Martin	Seip	Professor Emeritus and Senior Researcher	CICERO (Centre for International Climate and Environment Research Oslo), University of Oslo	Oslo	Norway
Nino	Sharashidze	Deputy Head	Department of Sustainable Development, Ministry of Environment Protection and Natural Resources	Tblisi	Georgia
Tracey	Smith	Author, Writer , Broadcaster	Downshift Week, Book of Rubbish Ideas	London	UK
Susan	Steinhagen		Biodiversity & Ecosystems Services / Asia Pacific Task Force, UNEP Finance Initiative (FI)	Geneva	Switzerland
Jose	Tarazona	Researcher	Spanish National Institute for Agriculture and Food Research and Technology	-	Spain
Ronald	Van Hees	Individual with no affiliation	n/a	Unknown	Belgium
Peter	Weesie	Professor	Science and Society Group, Faculty of Mathematics and Natural Sciences, University of Groningen	Groningen	The Netherlands
North America					
Jackie	Alder	Senior Research Associate	Fisheries Centre, University of British Columbia	Vancouver	Canada
Jane	Barr	Associate	Commission for Environmental Cooperation, International Institute for Sustainable Development (IISD)	Montreal	Canada

Name		Position	Organisation	City	Country
Nicholas	Bertrand	Program Officer	Focal point for Business, Convention on Biological Diversity	Montreal	Canada
Ellen	Bromberg	Principal	Watershed International LLC	Milwaukee, Wisconsin	USA
Don	Brown	Associate Professor	Pennsylvania Consortium for Interdisciplinary Environmental Policy, Pennsylvania State University	State College, PA	USA
Amy	Cassara	Senior Associate	World Resources Institute	Washington DC	USA
Munyaradzi	Chenje	Senior Program Officer	UNEP	New York	USA
Deborah	Clow	Secretary	Air command and Staff college, Maxwell Air Force Base	Arlington, Virginia	USA
Nancy	Colleton	President	Institute for Global Environmental Strategies	Arlington, Virginia	USA
Sylvie	Côté	Senior Policy Advisor	International Affairs Branch, Environment Canada	Ottawa	Canada
Chuck	Dull	Assistant Director of Engineering Geospatial Applications	U.S. Forest Service	Washington DC	USA
Raul	Figueroa Diaz	Coordinator de Cuentas Ambientales	Instituto Nacional de Estadistica Geografia e Informatica (INEGI)	Mexico City	Mexico
Thomas	Hammond	Program Manager, Biodiversity	Commission for Economic Cooperation	Montreal	Canada
Laura	Hernandez	Unknown	Centre for Studies on Water	Mexico City	Mexico
Robert	Höft	Environmental Affairs Officer -Scientific Assessment	Secretariat for the Convention on Biological Diversity	Montreal	Canada
Nate	Hultman	Assistant Professor	School of Foreign Service, University of Maryland	Maryland	USA
Carol	Hunsberger	PHD student	Department of Geography and Environmental Studies, Carleton University	Ottawa	Canada
Usman	Ifthikar	Policy Advisor on Environment	MDG Support Team, UN Millennium Project, Poverty Group, UNDP	New York	USA
Justin	Kitzes	Adjunct Researcher for National Accounts/Manager to research and Standards	Global Footprint Network	Oakland, CA	USA
Peter	Koefoed Bjornsen	Program Manager and Policy Officer	Global Environment Facility	New York	USA
Evan	Lloyd	Director of Program	Commission for Environment Cooperation	Montreal	Canada
Gyde	Lund	Forest Consultant	Forest Information Services	Gainesville, FL	USA
Caroline	Marrs	Independent Development Consultant	n/a	Ottawa	Canada

Name		Position	Organisation	City	Country
Elizabeth	McLanahan	International Affairs Specialist	Office of International Affairs, National Oceanic and Atmospheric Agency (NOAA)	Washington DC	USA
Ana Rosa	Moreno Sanchez	Professor	Public Health Dept., Medecine Faculty, The US-Mexico Foundation for Science	Mexico City	Mexico
Adil	Najam	Professor	Boston University	Boston, MA	USA
Kieran	Noonan Mooney	Program Assistant	Secretariat for the Convention on Biological Diversity	Montreal	Canada
Charles	Packer	President	Cherrystone Management Inc	Ottawa	Canada
Bruce	Potter	President	Island Resources Foundation	Washington DC	USA
Dave	Renee	Principal Project Leader	National Renewable Energy Laboratory (NREL)	Golden, Colorado	USA
Evelia	Rivera-Arriga	Coordinadora del Area de Manejo de Ecosistemas Costeros	Centro de Ecologia, Pesquerias y Ocea	Campeche	Mexico
Yosu	Rodriguez	Unknown	Centro de Investigacion en Geographia	Mexico City	Mexico
Rick	Ross	Executive Director	Canadian Water Resources Association	Lethbridge	Canada
Dale	Rothman	Research Associate	International Institute for Sustainable Development (IISD), and University of Denver	Winnipeg	Canada
Salvador	Sanchez-Colon	Director	Consultoria Ambiental y Estadistica	Mexico City	Mexico
Jorge	Soberon	Professor and Senior Scientist	National History Museum and Biodiversity Research Centre, University of Kansas	Lawrence, KA	USA
Meredith	Soule	Research Advisor	USAID/EGAT/ESP/IRB	Washington	USA
Marc	Sydnor	President of Wind revolutions; PHD Student	Wind Revolutions; Gund Institute for Ecological Economics, Korbel School of International Studies	Denver, CO	USA
Luisa	Tan Molina	President MCE2 and Principal Research Scientist (MIT)	Molina Center for Energy and the Environment (MCE2), Massachusetts Institute of Technology	La Jolla, CA; Cambridge, MA	USA
Hanneke	VanLavieren	Programme Officer	United Nations University International Network on Water, Environment and Health (UNU-INWEH)	Hamilton	Canada
Kati	Wenzel	Research Manager	Focal point for Business, Convention on Biological Diversity	Montreal	Canada
Latin America and Caribbean					
Delver	Baez	Consejero	Club de Jovenes ambientalistas		Nicaragua
Salisha	Bellamy	Director of Land Administration	Ministry of Agriculture		Trinidad and Tobago

Name		Position	Organisation	City	Country
Mauricio	Cabrera Leal	Assistant Director	Institute of Hydrology, Meteorology and Environmental Studies of Colombia (IDEAM)	Bogota	Colombia
Guillermo	Castro Herrera	Associate Academic Director	Fundacion Ciudad del Saber	Panama	Panama
Emma Leticia	Diaz Lara	Directora de Recursos Hidricos	Secretaria de planificacion de la presidencia SEGEPLAN	Guatemala	Guatemala
Keisha	Garcia	Consultant	Cropper Foundation		Trinidad and Tobago
Raul	Garrido Vasquez	Economist	Direccion de Medio Ambiente, Ministerio de Ciencia Tecnica y Medio ambiente	La Havana	Cuba
Fernando	Gast	Director	Instituto de Investigacion de Recursos Biologicos	Bogota	Colombia
Eduardo	Gudynas	Director	CLAES Latin American Center for Social Ecology	Montevideo	Uruguay
Sandra	Hacon	Project Manager	Fiocruz News Agency/ENSP	Rio de Janeiro	Brazil
Lorna	Inniss	Deputy Director	Coastal Zone Management Unit, Ministry of Housing, Lands and the Environment	St Michael	Barbados
Franklin	McDonald	Coordinator	UWI Mona Campus	Kingston	Jamaica
Maria Guadalupe	Menedez de Flores	Especialista Cooperacion y Proyectos	Direccion general de Cooperacion y Asuntos Internacionales Ambientales, Ministerio de Medio Ambiente y Recursos Naturales	San Salvador	El Salvador
Jean Max Dmitri	Morris	Assistant au Directeur	Direction de Promotion des ressources pour l'Environnement et le Développement Durable, Ministère de l'Environnement	Porte au Prince	Haïti
Stella	Navone	Professor	Faculty of Agronomy, University of Buenos Aires	Buenos Aires	Argentina
Marco Octavio	Ribera	Coordinator	Liga de Defensa del Medio Ambiente	La Paz	Bolivia
Marisabel	Romaggi	Professor	Andrés Bello University	Santiago	Chile
Alvaro	Sapag Rajevic	Executive Director	Comisión Nacional del Medio Ambiente	Santiago	Chile
Amrikha	Singh	Environmental Officer	Environmental Unit, Ministry of Family, Youth, Sports and the Environment	Bridgetown	Barbados
West Asia					
Mohammed Saif	Al-Kabani	Director of Environment and Sustainable Development	Ministry of Environment and Climate Change	Muscat	Oman
Mahnaz	Fadimi	Unknown	Bahrain Women's Association	Manama	Bahrain
Fatima	Frutan	Head of Environment Program	Bahrain Women's Association	Manama	Bahrain
Yousef	Meselmani	National Project Director – Climate Change Project (UNDP)	General Commission for Environment Affaires	Damascus	Syria
Najib	Saab	Editor in Chief; Secretary General	Environment & Development (Al-Bia Wal-Tanmia); Arab Forum for Environment and Development	Beirut	Lebanon

Annex VII - Desk Study References

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Annex VIII - List of Findings

Finding 1: A very high percentage (92%) of persons interviewed had used the GEO-4 Report. The number is likely to have been influenced by the sampling strategy used for the Review.

Finding 2: Most of the non-users were from UN agencies. Qualitative information showed that the most positive and active users were in the government, academic and research sectors. Thirty per cent of persons interviewed in UN agencies and around 10 per cent of those in government, the private sector and UNEP had not used GEO-4.

Finding 3: In spite of the high percentage of GEO-4 users among those interviewed, 48% were concerned that the profile of GEO-4 was not high enough among their peers who had not been engaged in GEO production processes.

Finding 4: Among those interviewed, the GEO-4 Report has been (by far) most frequently used as source of reference - to raise general awareness of environmental issues and trends (57%) at global level and to a lesser extent at regional level, and to inform research and teaching (59%). The implications of this type of use for the niche GEO occupies in the assessment landscape should be well understood.

Finding 5: With some notable exceptions GEO-4 is generally perceived and used as one of a number of data or information sources rather than as a preferred or vital source.

Finding 6: Around 40 per cent of persons interviewed purport to have used GEO-4 to inform policy – primarily to identify policy problems and set policy agendas. Few examples were provided where it was used to frame and guide policies or strategies.

Finding 7: Developing country respondents were more likely to use GEO than respondents from developed countries. Developing countries often do not have such well established and reliable services and developed countries tend to rely more heavily on their own data sources and analysis services.

Finding 8: Qualitative information indicates that the penetration and use of GEO-4 remains low among most of its secondary audiences, in particular among the private and development sectors and very likely also among influential policy makers in sectors such as finance, development planning, trade and industry.

Finding 9: The use of the GEO-4 Report among UN agencies, including in UNEP, appears to be low, primarily due to their use of other data sources more relevant for their purposes. Key informants indicated lack of ownership and incentives to engage in GEO processes as main reasons.

Finding 10: Google searches on the Internet in three languages yielded more than a 100 references to GEO-4. While just over a third of references were in the policy domain, several references appeared in civil society network blogs.

Finding 11: Respondents from government and academic institutions found the GEO-4 Report to be more useful for their work than respondents from other user groups. The scope and format of the Report lends itself to in an academic environment, while the Summary for Decision Makers has enhanced its utility for policy makers.

Finding 12: Nearly three quarters of respondents perceived the GEO-4 Report useful or very useful for their work. Those who participated in its production were more positive than those who had not done so.

Finding 13: The number of respondents involved in the production of GEO-4 who found the Report of value in their work correlated well with the numbers who found it to be useful. More than 70 per cent agreed that it is either useful and/or valuable.

Finding 14: The Report appears to be filling a gap for people working in development and even more so for those working on the interface between development and environment.

Finding 15: The environment sector clearly remains GEO's main constituency although it has to some extent proved its utility and value to those working in development. Respondents working in development found the Report of significantly less value to their work than those working in the environment.

Finding 16: Of all three groups, those working in both environment and development valued GEO-4 most and also found it to be the most useful for their work.

Finding 17: Although preferences will differ depending on the interests of the reader, respondents have found all chapters more or less equally useful, with most rated as useful or very useful by between 40-50 per cent of the respondents. Perceptions of utility appear to be more positive when respondents consider the whole product, possibly because of its use as widespread use as an 'encyclopedia'.

Finding 18: GEO-4 is generally relevant to its target audiences in terms of providing an overview of (long-term) environment trends and issues at global level. Some groups such as government and developing countries feel better served than others such as the private sector and developed countries. The relevance sharply declines at regional and especially national level.

Finding 19: According to nearly 80 per cent of users, GEO-4 provides relevant or very relevant information on development trends and issues as they relate to the environment at global level, leading to perceptions that GEO is 'moving in the right direction'.

Finding 20: GEO has been less successful in integrating development practitioners and the private sector in the assessment process.

Finding 21: GEO-4 is perceived to be relevant in guiding environmental and development policy, especially at global and regional levels. Its policy relevance declines at the national level due to its global orientation that makes the scope, level of detail and timeframes less useful for national and local purposes.

Finding 22: A large majority of respondents (83%) confirmed that GEO-4 is of value in their specific area of work, with 29 per cent regarding it as of great value.

Finding 23: The GEO-4 Report characteristics - global, general and integrated - have conflicting effects on perceptions of the relevance of the Report.

Finding 24: The relevance of the GEO-4 Report at global level is confirmed by the guidance it is perceived to provide in support of the international environmental governance system and global development policy.

Finding 25: **Key factors that enhanced the relevance of GEO-4 – and hence its potential for use – include:**

(i) its unique global perspective that pays significant attention to the nexus between environment and development, highlighting developing country concerns and issues; and

(ii) user participation in the production process that provided for relevant formulation of contexts, priorities and issues.

Finding 26: **Key factors constraining the relevance of GEO-4 – and hence its potential use – relate to the general, global nature of its content and to its production process. Specific challenges include:**

(i) need to satisfy diverse, very broadly defined target audiences;

(ii) lack of clarity on the GEO objectives and desired outcomes;

(iii) finding the appropriate approaches to branding a global assessment and raising its profile amidst a proliferation of assessments aimed at more narrowly defined audiences;

(iv) balancing the trade-offs inherent in an inclusive, participatory production process.

Finding 27: **Users from all target groups regard GEO-4 as an environmental assessment of high quality, although there are some significant areas of concern.**

Finding 28: **The credibility of GEO-4 as a global environmental assessment is high in terms of its comprehensiveness, reliability and standing as an authoritative source of information. However, the Summary for Decision Makers is perceived to be less reliable than the Report.**

Finding 29: **The credibility of GEO-4 is seen as less favorable in terms of its scientific rigor due to the lack of capacity and mandate to control data sources, perceived differences in data quality across chapters and the need for negotiations during the production process, in particular during the development of the Summary for Decision Makers.**

Finding 30: **The balance between scientific integrity and political representation has been difficult to maintain and is reflected in the user views on legitimacy. There are significant concerns about the independence of the production process, with specific reference to the Summary for Decision Makers. This was more marked among those (i) with policy making as primary function, and (ii) who participated in the production process.**

Finding 31: **Key factors determining the credibility and legitimacy of GEO-4 are**

(i) the combined effect of the engagement of an extensive network of experts, the transparent multi-stakeholder process, substantive peer review mechanisms and the GEO team's commitment to data quality;

(ii) the reputation and weight of UNEP as a neutral UN body; and

(iii) the comprehensive articulation of key issues and problems and the interconnections between them in order to establish 'the bigger picture' at global level.

Finding 32: **Key factors perceived to have had a negative effect on the quality of GEO-4 are**

(i) the ongoing challenge of trying to meet the needs of diverse audiences;

(ii) perceptions that the independence of the Summary for Decision Makers' process was compromised;

(iii) perceptions that the production process potentially allows government interference in the provision of data sets, determining what should be included in the assessment, and in the shaping of conclusions.

Finding 33: **In spite of an explicit focus on policymakers, the target audiences for GEO-4 were as diverse and as broadly defined as for its predecessors. This presented the GEO team with significant challenges during the implementation of outreach and engagement strategies.**

Finding 34: **The GEO-4 Coordinating Team gave higher priority than any of its predecessors to targeted outreach and engagement activities. A variety of engagement, communication and dissemination mechanisms were employed with varying success.**

Finding 35: **The early termination of the Outreach and Engagement Strategy led to loss of momentum in the deliberate and systematic targeting of intended audiences.**

Finding 36: **Full or partial Report downloads from the Internet totaled nearly 1.4 million over nine months compared to fewer than 3 000 hard copies distributed or sold.**

Finding 37: **In spite of the employment of a variety of engagement, communication and distribution mechanisms, perceptions among key informants are that it is unlikely that GEO-4 has managed to penetrate important secondary UNEP/GEO audiences – the private sector, development sector, powerful government Ministries and specialized media.**

Finding 38: **In line with the intent to focus on the primary target audience, GEO engaged policymakers in numbers larger than ever before in production and outreach processes, although they remained primarily from the environment sector.**

Finding 39: **Opportunities to reach the academic sector have not been optimized. A notable exception is the collaboration with the Partnership Program of African Universities (MESA), which indicates the value obtainable if UNEP units and programs are successfully mobilized in support of GEO.**

Finding 40: **Promotion of GEO-4 after its launch has been done ad hoc, primarily through distribution of the report at environmental events and forums.**

Finding 41: **Fewer than half of the persons interviewed believe that GEO-4 is readily accessible to their peers who have not participated in the production process.**

Finding 42: **Developing country respondents were significantly less sure than developed country counterparts that their peers were aware of GEO-4 or that they would have ready access to the products if so. Reasons given are that too few hard copies are in circulation there, that length of the Report is intimidating, that the format is inappropriate for the target audiences and that Internet access is inadequate.**

Finding 43: **Respondents involved in policymaking were significantly more positive about the accessibility of the GEO-4 Report than those whose primary activities were in other areas. This was in large part due to the availability of the Summary for Decision Makers as a user-friendly, tailor-made product that was widely distributed in hard copy and also available in six languages on the Internet.**

Finding 44: **GEO-4 is generally regarded as user-friendly in content and format, although significant improvements can be made.**

Finding 45: **The reach of GEO-4 has been determined by the extent to which:**

(i) outreach and engagement strategies have been tailor-made for well defined target audiences, and appropriately implemented;

(ii) influential stakeholders, in particular from new audiences, were successfully engaged in the production (writing and consultative) processes;

(iii) the products (or parts thereof) were readily accessible through the Internet and through the 'new media' in formats and languages that facilitate search and social sharing opportunities;
(iv) the initial success of the media strategy and launch was followed up by systematic efforts to give GEO-4 profile during influential processes and events;
(v) the media, including the new and specialist media, were mobilized to promote GEO; and
(vi) UNEP divisions and programs and 'champions' from the networks of Collaborating Centers and authors were deployed to promote GEO-4.

Finding 46: Inadequate conceptualization and definition of target audiences continue to stymie efforts to expand GEO's reach.

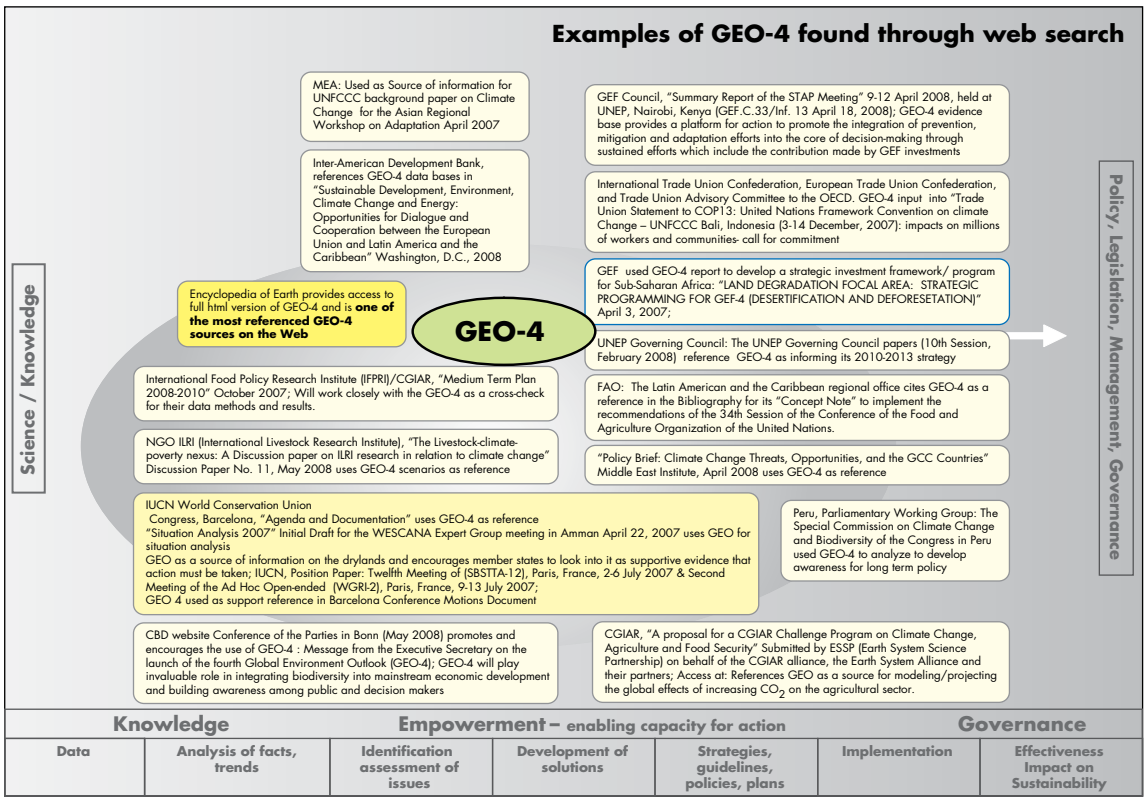
Finding 47: The GEO-4 production process is perceived to be an effective mechanism to reach key actors among targeted audiences, but incentives to participate may be lacking among 'non-traditional' GEO constituencies.

Finding 48: Internet access to the products in several languages has been a cost-effective way to increase the reach of the GEO-4 among all target groups, although there are concerns about limitations in some developing countries.

Finding 49: GEO-4 has not yet mobilized the full power of the Internet, the 'new media' and mobile communications to increase awareness of and access to the GEO products. The reach to civil society and the youth is likely to have been the hampered most by this factor.

Finding 50: Although widely regarded as successful, the launch of GEO-4 was not followed by consistent action to encourage continued interest in the Report, presenting a substantial challenge to UNEP to sustain awareness and interest in its flagship product.

Annex IX - Snapshot of Web References to the GEO-4 Report (October 2008)



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