GEO
Resource Book

A training manual on integrated environmental assessment and reporting

Module Overviews

UNEP

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This booklet summarizes the contents of *GEO Resource Book: A training manual on integrated environmental assessment and reporting*, developed through a collaborative initiative among the United Nations Environment Programme (UNEP), the International Institute for Sustainable Development (IISD) and more than 40 experts from around the world.

The manual is divided into eight modules as follows:

Module 1:   The GEO Approach to Integrated Environmental Assessment

Module 2:   IEA Process Design and Organization

Module 3:   Developing an Impact Strategy for your IEA

Module 4:   Monitoring, Data and Indicators

Module 5:   Integrated Analysis of Environmental Trends and Policies

Module 6:   Scenario Development and Analysis

Module 7:   Creating Communication Outputs from the Assessment

Module 8:   Improving the IEA Process and Increasing Impact through Monitoring, Evaluation and Learning

GEO Resource Book: A training manual on integrated environmental assessment and reporting can be downloaded from http://www.unep.org/geo or http://www.iisd.org/measure

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GEO Resource Book: A Training Manual on Integrated Environmental Assessment and Reporting

The Need for a GEO Resource Book

The year 2007 marks the twentieth anniversary of the release of *Our Common Future*, commonly known as the Brundtland Report. The need for building environmental considerations into decision making, a central theme in the Brundtland Report, is no longer a bold proposition, but a basic necessity. Without the ability to monitor and assess changing environmental trends and their interactions with human development, navigating the sea of global change would be reduced to reactive crisis management—hardly an effective way to tackle policy issues with such profound relevance for the planet.

Brundtland called not only for attention to the interactions between environment and development, but also for the need to consider the interests of future generations. This requires an ongoing effort to substantially strengthen our capacity to assess the range of possible futures and to create policies that take this knowledge into account. Addressing these needs is at the heart of this *Resource Book*.

The purpose of the *GEO Resource Book* is to help build capacity for forward-looking integrated environmental assessment (IEA) and reporting at the sub-global level. Users of the *GEO Resource Book* will:

1. understand the rationale for undertaking forward-looking, integrated environmental assessment using UNEP's Global Environment Outlook (GEO) approach;

2. understand the importance of mandate for an IEA, options for its governance structure and participatory process, and be able to construct an impact strategy;

3. be familiar with the conceptual and methodological aspects of carrying out the assessment, including the analysis of environmental trends and policies, and the study of policy options in the context of future scenarios;

4. be capable of organizing the process for producing physical and electronic outputs from the IEA; and

5. have the knowledge and skills to set up a monitoring and evaluation process focused on the IEA itself as part of a continuous learning process to improve the assessment.

For the purposes of this publication we defined IEA as *the process of producing and communicating future-oriented, policy-relevant information on key interactions between the natural environment and human society*. The methodology underlying IEA has been pioneered and championed by the Global Environment Outlook, UNEP's flagship assessment and reporting process on the status and direction of the global environment. GEO is a consultative, participatory, capacity building process and a series of reports, analysing environmental change, causes and impacts, and policy responses, providing information for decision making at global and sub-global levels. The GEO series aims to keep under review the state of the world's environment, identify emerging issues that require international attention and provide options for policy making and action planning.

Since the publication of the first global report in 1996, the GEO approach has been adopted by an increasing number of organizations at the regional, national and sub-national level. The *GEO Resource Book* draws on the growing body of experience gained through these initiatives.

Capacity building has been a key element of the GEO process, and training activities carried out by UNEP and its partners since the late nineties contributed to the wider adoption of IEA methods. In 2000, UNEP and the International Institute for Sustainable Development (IISD), a UNEP Collaborating Centre, jointly published a training manual that served as the basis for many training activities and as a basis for developing other regionalized training curricula.[1]

The need for updating the earlier IEA training manual became obvious for a number of reasons, including the evolution of the GEO methods, the need for more detailed and more easily customizable information on the environment and its interaction with human well-being, and the need to increase the effectiveness of capacity building. A 2004 meeting of the GEO Capacity Building Working Group discussed the criteria for more effective capacity building efforts shown in Box 1, and these criteria, along with additional guidance from UNEP and the GEO Capacity Building Working Group, inspired the development of the *GEO Resource Book*.

Box 1: Criteria for improving the effectiveness of IEA capacity building, as identified at the March 2004 meeting of the GEO Capacity Building Working Group in Geneva, Switzerland.

1. **Improve coordination** – Identify, monitor and, where possible, improve coordination and cooperation with similar capacity building initiatives, including other initiatives of UNEP.

2. **Utilize existing capacity** – Identify and improve the utilization of capacity that exists in current partner organizations and the GEO network.

3. **Promote innovation and diversity** – Embrace the diversity of capacity building and training approaches to assessment and reporting while maintaining the coherence and integrity of the GEO approach.

4. **Introduce innovative tools and methods** – Increase the effectiveness of capacity building by introducing novel tools and innovative, experiential and participatory training methods successfully used by partner organizations.

5. **Multi-level engagement** – Increase sustainability of impact by engaging capacity building audiences both on an individual as well as organizational level.

6. **Link capacity building to actual assessment and reporting** – Search for and create opportunities to connect capacity building and the actual production of GEO-compatible assessments and reports.

7. **Provide incentives** – Provide incentives to eligible organizations and experts where possible and warranted to maintain their interest in GEO assessment and reporting beyond training.

8. **Strengthen capacity to effectively communicate assessments** – Ensure capacity building strengthens the ability to design and implement communications strategies.

9. **Improve monitoring, evaluation and learning** – Ensure methods and mechanisms are in place to monitor, measure and, as required, report on the short- and long-term impacts of capacity building efforts.

1 Pintér, L., K. Zahedi and D. Cressman (2000). *Capacity Building for Integrated Environmental Assessment and Reporting. Training Manual.* Winnipeg: IISD for UNEP. http://www.iisd.org/pdf/geo_manual_2.pdf

It is recognized that capacity is multi-dimensional, particularly in an area as complex as an IEA which requires a multi-pronged approach. This may include a training component (face-to-face, distance learning, training-by-doing), but also additional measures such as staff exchanges, technical support or providing easy access to data. Therefore, the *GEO Resource Book* has to be seen in a broader context, as a key—but not the only—element in UNEP's IEA capacity building efforts.

The Audience

The target audience for the *GEO Resource Book* includes facilitators who construct IEA training curricula, and ultimately the participants in capacity building programs. The latter include primarily mid-level leaders and practitioners in public agencies, with overall responsibility for initiating and managing assessment and reporting processes. They may work on different scales, from national governments to states and provinces, municipalities or eco-regions. Many of them would have prior assessment or state of the environment reporting experience. Based on experience with previous training endeavours, IEA practitioners may also include representatives of non-governmental organizations, academics, students, media and experts from the private sector.

While a variety of technical specialists have a key role to play in IEAs, the *GEO Resource Book*, even with its extended content, provides only introductory coverage of some methods that would require extensive academic training. The emphasis is on the IEA system as a whole, and helping participants realize when and where to bring in specialist knowledge for maximum effect.

Contents

The *GEO Resource Book* builds on elements of the earlier IEA training manual, other teaching resources and experience with previous IEA initiatives, but there are also several significant differences.

Content is organized in eight modules as shown in Box 2. A modular design was chosen because capacity building needs vary, and often it is necessary and more effective to concentrate efforts on one or a few topics rather than on the entire IEA package. The intention is to provide maximum flexibility to audiences and facilitators in deciding what content is most relevant. The *GEO Resource Book* is the IEA "source code" that can be freely used as a library of ideas and materials that, over time, can evolve and integrate new concepts and ideas that arise ether from GEO or from the many other assessments that will be undertaken in future at the global or sub-global level.

The modules take participants through the IEA process, essentially treating IEA as an *institution* that organizations in charge of assessment and reporting processes need to

Box 2: GEO Resource Book modules

Module 1: The GEO Approach to Integrated Environmental Assessment

Module 2: IEA Process Design and Organization

Module 3: Developing an Impact Strategy for your IEA

Module 4: Monitoring, Data and Indicators

Module 5: Integrated Analysis of Environmental Trends and Policies

Module 6: Scenario Development and Analysis

Module 7: Creating Communication Outputs from the Assessment

Module 8: Improving the IEA Process and Increasing Impact through Monitoring, Evaluation and Learning

build. This will take the reader through questions related to setting up a process and securing the mandate to build an impact strategy, carry out the actual assessment, prepare information products and close the loop by reflecting on lessons learned throughout the process.

Each module is accompanied by a set of PowerPoint slides on a CD, and sample agendas that are intended to help course designers construct and run sessions of either an overview or comprehensive nature, or somewhere in between. Course designers are encouraged to modify and enrich the slide decks with regional case studies and other more locally relevant information.

Course Design and Delivery

Generally, a course based on the *entire GEO Resource Book* will *not* be offered in full (i.e., all modules in full detail), as it would require much more time in one block than a typical participant could devote to the program. The modules are cross-referenced and are designed to be delivered as individual modules or as a package. As a result, there is some repetition of key graphics and concepts across modules.

Figure 1: Illustrating the relationship between the Resource Book and Participant Workbook.
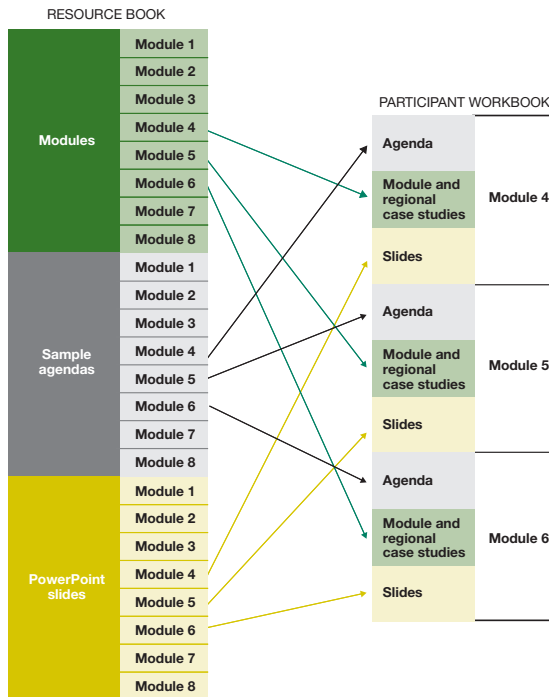
Figure 1 illustrates the relationship between the *GEO Resource Book* and the *Participant Workbook*. A *Participant Workbook* is a customized set of training materials based on the *GEO Resource Book* and selected by the facilitator, and possibly enriched with regional case studies. A participant workbook includes detailed agendas, core content and PowerPoint slides for the modules to be delivered. Other modules not covered need not be included. Course participants thus do not receive the entire *GEO Resource Book*, only the sections selected by the facilitator.

Effective IEA capacity building, as emphasized by some of the criteria shown in Box 1, should be an interactive process. The modules therefore are set up to include a series of didactic elements:

- concept presentations;
- discussion questions in breakout groups and/or plenary;
- case studies;
- role plays;
- problem solving group exercises; and
- plenary sessions at the end of the days to review key lessons learned, review any outstanding questions and explore concrete opportunities for practical application of the topics covered.

In some cases the facilitator may ask participants to read selected papers prior to or during the workshop.

Included with the sample agendas and PowerPoint slides is a guide for interactive course design and delivery.

The margins of each module contain symbols for the facilitator and participants to more readily identify discussion questions, participatory exercises, and information for which a specific PowerPoint slide has been created.

 – discussion question

 – PowerPoint slide and number

 – participatory exercise

Course facilitators should formally and informally gather participant feedback throughout a course. In order to help the process, a sample evaluation form is included on the CD for daily and for overall course evaluations.

Module 1 Overview: The GEO Approach to Integrated Environmental Assessment

Module 1 introduces the integrated environmental assessment (IEA) and reporting process based on the Global Environment Outlook (GEO) of the United Nations Environment Programme (UNEP). It demonstrates the IEA approach is an effective way of developing policy-relevant recommendations about the state of the environment and its interaction with human development.

The module describes UNEP, its mandate to keep the global environment under review, and how the GEO process fulfils this mandate. The goal of the GEO process is to ensure that environmental problems and significant emerging issues receive appropriate, adequate and timely consideration by governments and other stakeholders. As part of the GEO initiative, UNEP helps practitioners learn how to carry out integrated environmental assessments at regional and national levels.

IEA undertakes a critical, objective evaluation and analysis of data and information designed to support decision making. It applies expert judgment to existing knowledge to provide scientifically credible answers to policy-relevant questions, indicating where possible the level of confidence. IEA provides a participatory, structured approach to linking knowledge and action. Over time, GEO has developed an increasingly integrated approach to environmental assessment and reporting. It asks the questions seen in Figure 2.

For *GEO-1*, *GEO-2000* and *GEO-3*, UNEP's integrated environmental assessment was carried out using the **D**rivers-**P**ressure-**S**tate-**I**mpact-**R**esponse (DPSIR) framework. In *GEO-4*, scheduled to be released in the fall of 2007, the conceptual framework has been modified. Module 1 describes the differences between this new framework and the original DPSIR framework.

GEO products include:

- global assessments (*GEO-1*, *GEO-2000* and *GEO-3*);
- regional and sub-regional reports;
- technical reports; and
- educational products.

Figure 2: Key questions to be answered within the IEA Framework.

5. What actions could be taken for a more sustainable future?

4. Where are we heading?

3. What is being done and how effective is it?

2. What are the consequences for the environment and humanity?

1. What is happening to the environment and why?
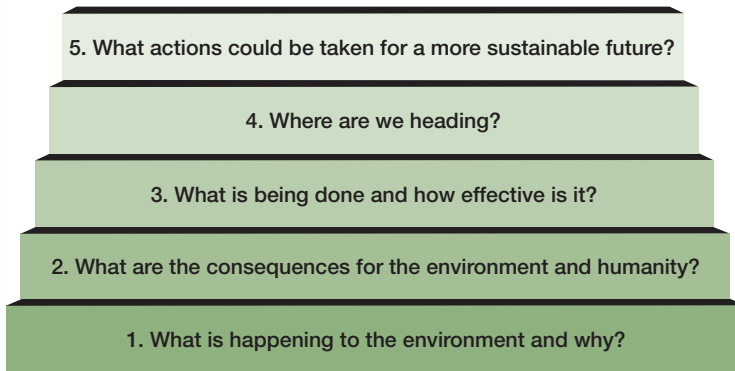
The module concludes by providing examples of three sub-global GEO assessments: the Africa Environment Outlook (a regional assessment); the Bhutan national environmental assessment; and the assessment carried out for Mexico City. These examples show how the processes started and were carried out, their main results and how they have been followed up.

Module 2 Overview: IEA Process Design and Organization

Module 2 Content
- IEA process features
- Overview of the IEA process
    - Objectives and importance
    - Basic conditions for initiating an IEA process
    - General structure of the IEA process
    - The role of participation in the IEA process
    - Stages of the IEA process

Integrated environmental assessment (IEA) is a way of analysing and communicating environment-society interactions.[2] A national IEA is complex and dynamic, and requires careful planning. Module 2 provides the rationale for and describes the process, gives advice on the allocation of resources, and explains the stages involved in setting up and implementing a GEO-based IEA (see Figure 3). The user's role in participating or managing the IEA process is explained, along with how other modules in the resource book fit into it.

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2   For more details regarding GEO and the integrated environmental assessment, see Modules 1 and 5.

Figure 3: Stages of the sub-global IEA process. For more information, see Module 2 of the GEO Resource Book.

STAGES | ACTIVITIES | OUTPUTS

PROCESS MONITORING, EVALUATION AND LEARNING

Stage 1
Start-up
(4–6 weeks)

*Secure legal mandate for environmental assessment and reporting.
*Identify a local technical team within the lead agency.
*Develop a basic outline for conceptual framework and process, capacity, time and resources required.
*Hold start-up meetings to discuss, adjust and finalize the process and instituttional arrangements.
*Secure commitment for resources and in-kind contributions.

*MOUs reviewed.
*Conceptual framework

Stage 2
Institutional set-up
(1–3 months)

*Define roles and responsibilities of the political and technical partners.
*Establish mechanisms of coordination among partners and collaborating institutions.
*Define an institutional framework.
*Discuss the elements for the impact strategy.
*Prepare a stakeholder map.

*MOUs signed.
*Institutional framework.
*Stakeholders' map.

Stage 3
Scoping and design
(2–4 weeks)

*Clarify methodological issues.
*Establish geographic boundary and detailed timeline for producing the report.
*Identify key environmental issues.
*Identify indicators, data requirements and sources of information.
*Draft an outline of the report.
*Identify the target audience.
*Develop the impact strategy.
*Discuss the elements for a communications and outreach strategy.

*Design document (including annotated structure or outline).
*Impact strategy.

Stage 4
Planning
(4–6 weeks)

*Define activities in the process, assign responsibilities and identify expected outputs.
*Allocate financial and human resources.
*Review and adjust the impact strategy and define indicators of impact.
*Develop a communication and outreach strategy.
*Establish a monitoring and evaluation system.

*Implementation plan.
*Adjusted impact strategy.
*Communication and outreach strategy.

Stage 5
Implementation
(10–12 months)

*Validate priority environment/development issues and their connection according to the IEA framework.
*Collect, process and analyse data and information.
*Present and discuss preliminary results with relevant partner organizations.
*Write draft report, organize peer review and finalize report based on feedback.
*Translation and publication (hardcopy, CD, website, etc.).

*Report and complementary results in different media.

Stage 6
Communication of results and outreach
(1–2 months)

*Promote different IEA products and messages.
*Organize interviews with the media.
*Organize presentations for stakeholders.

*Report and complementary products in the public domain.

Stage 7
Monitoring, evaluation and learning
(1–2 months)

*Evaluate the process.
*Identify lessons learned.
*Evaluate the impact of the process in terms of contribution to policy planning, capacity building and public awareness.

*IEA impacts and recomendations for the future.

Module 2 is useful not only for IEA managers, but also for professionals in private or public sectors who are responsible for conducting environmental assessments in an integrated and participatory manner.

Module 2 will describe the following aspects of the IEA process:

- securing institutional commitment;
- identification of stakeholders and defining their roles;
- instruments for conducting the process;
- allocation of required resources (time, human, financial); and
- interactive process design and its benefits.

A key feature of the GEO approach is the participation and interaction of different experts and stakeholders. This module will show how to identify relevant stakeholders and their roles. Additionally, it outlines approaches for participation, which will enhance the capacities of the stakeholders to lead similar processes elsewhere.

Module 3 Overview: Developing an Impact Strategy for your Integrated Environmental Assessment

Module 3 Content
- Understanding impact
  - What is an impact strategy?
  - When do you prepare an impact strategy and who is responsible for it?
  - Why do you need an impact strategy?
  - Understanding issue attention cycles
- Model for an impact strategy
  - Attributes of impact strategies and traditional communications activities
  - Steps in building an impact strategy
  - Case studies of assessments that had impact

Module 3 focuses on methods to position and deliver a national IEA so that it can have real impact on environmental policy and practice, not only at the national level, but also at a regional level.

Why bother with developing an impact strategy?

In 1997, David Shenk coined the phrase "data smog," referring to the 3 000+ information messages that an average person in the United States received on a daily basis.[3] Imagine now, 10 years later, the volume of information the average person must process, and what decision-makers must sort through each day. Simply providing yet another report to your senior bureaucrats and political leaders won't be enough to ensure that they read your findings, let alone act upon them.

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3   Shenk, D. (1997). *Data Smog: Surviving the information glut*. New York: HarperCollins.

Module 3 describes the steps to engage the right people to respond to your work. This impact process takes time; and involves a real emphasis on being clear and strategic in identifying the changes that should occur as a result of your assessment. The process focuses on building relationships with key people, finding out what they know already and what they need to know. That understanding is the basis to seek out and create the opportunities to get your messages across, to generate dialogue, and gain the attention and support of those who may have appeared non-responsive to your work in the past.

The primary output of this module should be an outline of an impact strategy for the IEA report. At the end of this module, you will have a good understanding on how to have a real impact on decision making.

Figure 4: Model for an impact strategy. For more information, see Module 3 of the GEO Resource Book.
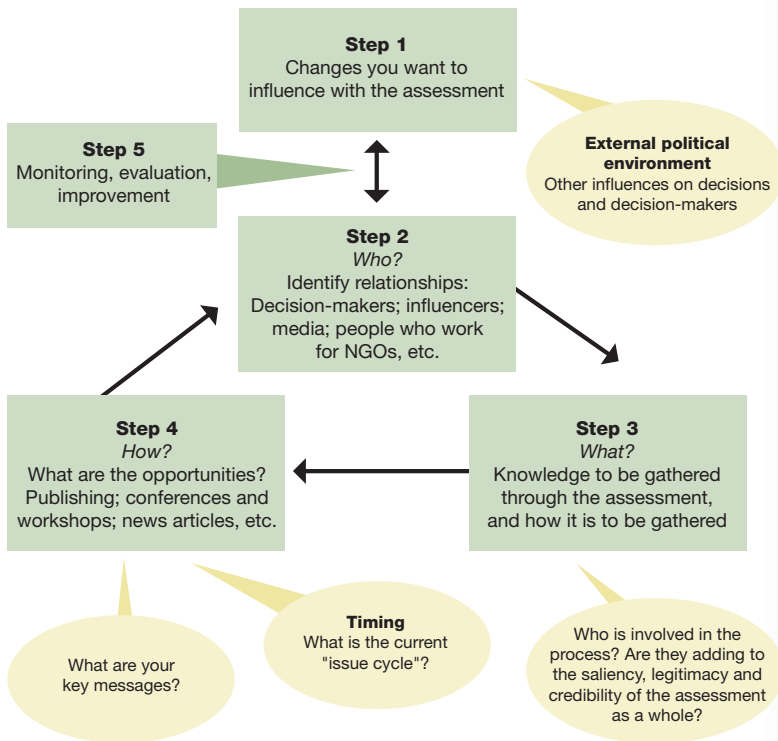
Source: IISD 2004

Module 4 Overview: Monitoring, Data and Indicators

Module 4 Content
- Developing data for integrated environmental assessment
- Information systems
  – Data
  – Monitoring and data collection of environmental trends and conditions
  – Data compilation
  – GEO Data Portal
- Indicators and indices
- Data analysis
  – Non-spatial analysis
  – Spatial analysis

A steady increase in reporting on environmental trends and performance during the past decade reflects the need to strengthen the evidence base for policy making. Despite efforts to compile and analyse environmental information more systematically, important data gaps continue to exist. Interest in fine-tuning monitoring and data collection systems to reflect the real needs of society and decision-makers is now part of the mainstream.
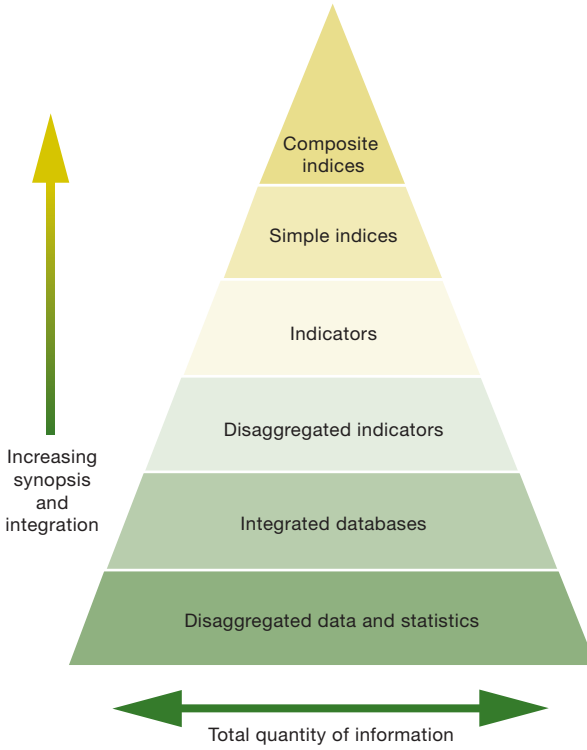
Module 4 addresses how to collect, process, store and analyse data, with a particular focus on spatial date collection and the GEO Data Portal.

With data in hand, the next step will be to convert the data so it can be used in decision making. Indicators and indices help us package data into a form that speaks to a relevant policy issue (see Figure 5). The module offers the basic building blocks of indicators and indices, including frameworks, selection criteria and elements of a participatory indicator selection process. It also provides examples of indicators, including the GEO core indicator set.

Once you have developed indicators, you will need to derive meaning from them. What trends, correlations or spatial relationships are revealed through the data? To answer these questions, it is important to be familiar with various non-spatial and spatial analysis techniques.

Reliable data and appropriate indicators are critical to the process, because poor information can lead to poor decisions. At the same time, information needs to speak to the intended audience in a relevant way. Otherwise, the most well-developed indicators could have limited impact.

Figure 5: Relationship among data, indicators and indices. For more information, see Module 4 of the GEO Resource Book.

Composite indices

Simple indices

Indicators

Disaggregated indicators

Integrated databases

Disaggregated data and statistics

Increasing synopsis and integration

Total quantity of information

Source: Australia Department of the Environment, Sport and Territories 1994

Module 5 Overview: Integrated Analysis of Environmental Trends and Policies

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Module 5 Content
- Spatial, temporal and thematic context
- Analytic framework for SoE and policy analysis
- Step 1: What is happening to the environment and why?
- Step 2: What are the consequences for the environment and humanity?
- Step 3: What is being done and how effective is it?

Integrated analysis of environmental trends and policies is core to IEA. The integrated analysis described in Module 5 helps answer the following three questions:

1. What is happening to the environment and why?

2. What are the consequences for the environment and humanity?

3. What is being done and how effective is it?

Using the GEO-4 analytic approach to the Drivers-Pressure-State-Impact-Response (DPSIR) framework (see Figure 6), Module 5 walks you through IEA starting with an assessment of the state and trends of various aspects of the environment. The DPSIR framework will help you understand the direct pressures on the environment from human activities and natural processes, and also the higher-level drivers of these pressures via human development. Through this analysis you will see that changes in the state of the environment lead to impacts on specific ecosystem services, which can affect human well-being. In order to assess the effectiveness of society's responses to these problems, IEA analyses policies directed at the mitigation and restoration of the environment, and adaptation by humans to the environmental impacts that do take place.

You will see in Module 5 that the above analysis is a participatory process leveraging the array of perspectives offered by stakeholders. This process includes identifying priority environmental and sustainability issues, specific indicators representing these issues and relevant policy targets for their improvement.

In the analysis of impacts, Module 5 goes beyond what was conveyed in the earlier IEA training manual. Insights are also gleaned from the Millennium Ecosystem Assessment on how changes in the state of the environment can impact on the services provided by ecosystems and how changes in these services impact on human well-being. The module provides a glimpse into the emerging field of environmental valuation which provides advanced techniques for quantifying the economic costs and benefits of changes in ecosystem services and human well-being.

The analysis of policy responses focuses on identifying existing policies and analysing them for their effects and their effectiveness. This involves the following steps:

a. Understanding the issue to see what is happening to the environment, why and what are the impacts.

b. Conducting a policy instrument scan to identify the mix of policies influencing the environmental issue, and how effective the mix has been.

c. Performing a policy gap and coherence analysis to determine if relevant policies are in place and are focused on the most important drivers and pressures.

Figure 6: Simplified analytic framework for integrated environmental assessment and reporting. For more information, see Module 5 of the GEO Resource Book.
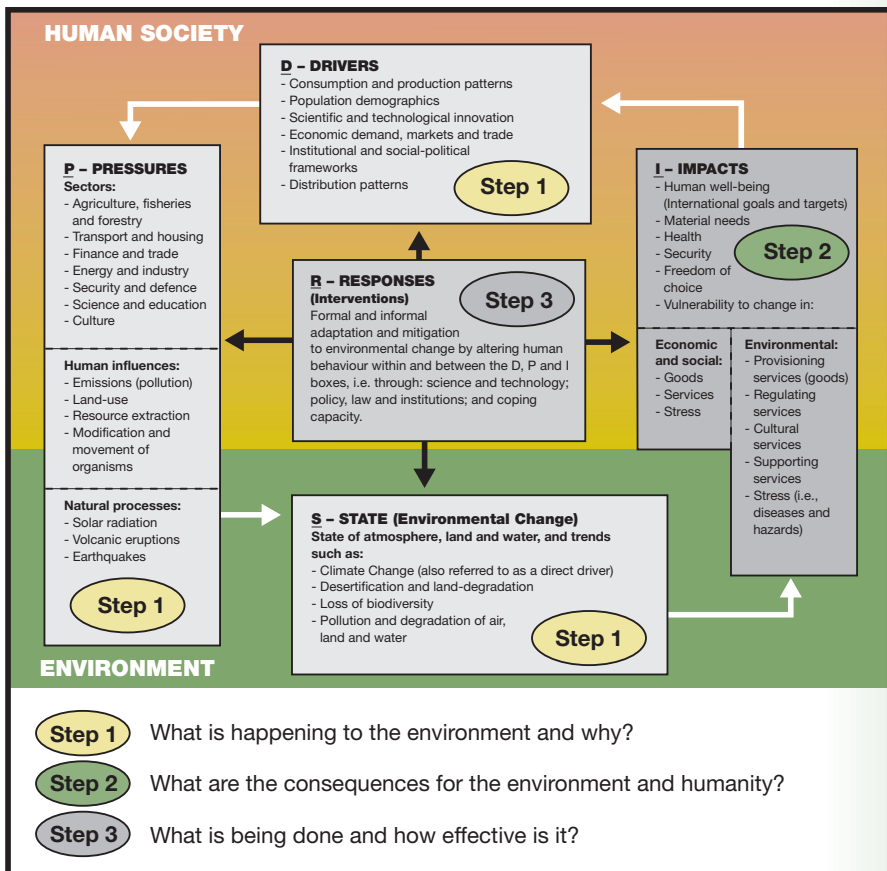
Module 6 Overview: Scenario Development and Analysis

Module 6 will help you develop scenarios and analyse them, either in terms of the impact they would have on existing policies, or the kinds of policies that would be needed in order for a particular scenario to unfold. The module provides the basis for an entire process for developing and analysing scenarios.

A scenario is not a prediction of what the future will be. Rather it is a description of how the future might unfold. Scenarios explore the possible, not just the probable, and challenge users to think beyond conventional wisdom. They support informed action by providing insights into the scope of the possible. They also can illustrate the role of human activities in shaping the future, and the links among issues, such as consumption patterns, environmental change and human impacts.

Scenarios were first used formally after World War II as a method for war game analysis. Their value was quickly recognized, and the use of scenarios for a number of other strategic planning applications developed. Today, scenario development is used in a wide variety of different contexts, ranging from political decision making to business planning, and from global environmental assessments to local community management.

There are hundreds of examples of scenarios developed during the last 30 years or so. A small number are selected in this module to illustrate the range of scenarios that have been developed, from specific country/regional exercises to global visions of the future, covering a range of time frames from 10 to 100 years. The illustrations in this module are the Mont Fleur scenarios for South Africa; the GEO-3 scenarios; and the Intergovernmental Panel on Climate Change (IPCC) scenarios.

A range of processes has been used to produce scenarios. We can distinguish among these according to three overarching themes: project goal; process design; and scenario content. Goals might include raising awareness, stimulating creative thinking and gaining insight into the way societal processes influence one another. A usual overriding goal is to support decision making, either directly or indirectly. Process design addresses aspects such as scope and depth of the analysis, the degree of quantitative and qualitative data used, and choices among stakeholder workshops, expert interviews or desk research. Scenario content focuses on composition of the scenarios (i.e., on the variables and dynamics in a scenario and how they interconnect).

While many different processes have been used to develop and analyse scenarios, most involve steps similar to ones used in this module, although emphasis on particular steps varies. The steps used in this module are shown in Figure 7.

Figure 7. A snapshot of the scenario process. For more information, see Module 6 of the GEO Resource Book.
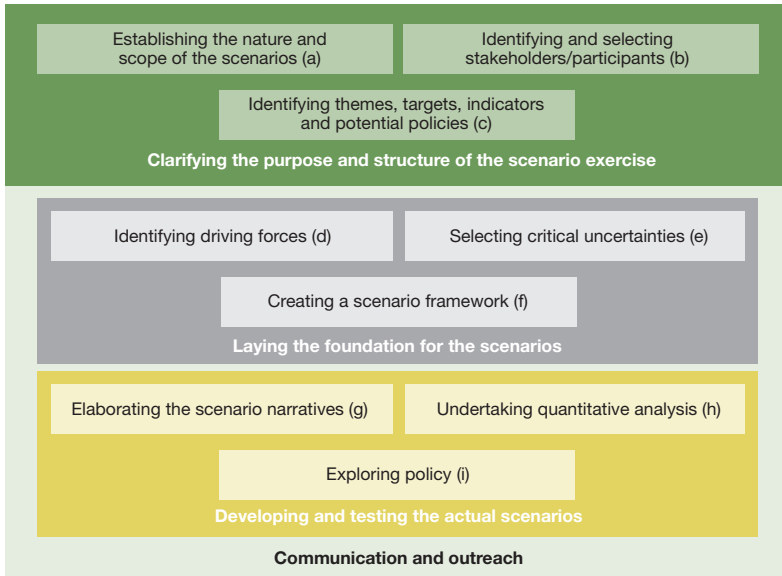
A full scenario process would ideally involve going through each of the above steps. In many cases, however, the scenario development will be nested within an overall IEA and reporting process. Thus, to the extent possible, the scenario development should be pursued in concert with the other components of this process, such as those described in Modules 4 and 5 of the *GEO Resource Book*. Furthermore, we often avoid developing completely new scenarios, particularly in a national-scale GEO-type process. Instead, scenarios at the national level or below are developed based on existing scenarios at a higher level (e.g., global and regional scenarios developed for GEO).

GEO-4 considers four plausible futures looking out to the year 2050: Markets First; Policy First; Security First; and Sustainability First. These scenarios explore how current social, economic and environmental trends may unfold and the implications for the environment and human well-being. The scenarios are defined by different policy approaches and societal choices. In Markets First, the private sector, with active government support, pursues maximum economic growth as the best path to improve the environment and human well-being. Policy First assumes government, with active private and civic sector support, initiates and implements strong policies to improve the environment and human well-being, while still emphasizing economic development. In Security First, government and the private sector compete for control in efforts to improve, or at least maintain, human well-being for mainly the rich and powerful in society. Sustainability First presumes that government, civil society and the private sector work collaboratively to improve the environment and human well-being, with a strong emphasis on equity.

Module 7 Overview: Creating Communication Outputs from the Assessment

Module 7 Content

- Choosing what to produce
  - Target group(s)
  - Content
  - Budget
  - Formats
  - Consider your channels
- How do we do it?
  - Print products
  - Electronic/digital products
  - Visual presentation of data in the IEA
- Reaching out with the outputs of the IEA
  - Dissemination
  - Approach the media
  - Communicating sustainability: long-term approaches

There are many techniques and products to communicate the results of a GEO-style IEA. Module 7 guides you through the communications process, showing how to get the messages to the audiences you want to reach.

Before producing the main report and other products, a series of important decisions need to be made. Identify the target audiences to be better able to shape your message and select the right content and, later, the right presentation format. By carefully considering available resources including budget, you can make better decisions about which products will be most beneficial.

Decide what kinds of information products best suit your message and target audience. There are printed materials (e.g., popular reports, flyers, posters, brochures); electronic (e.g., websites, CD-ROMs); and visual (e.g., photos, graphics, maps), each with their advantages and disadvantages. Module 7 discusses the strengths and weaknesses of different channels. It also provides guidance on how to go about approaching the media.

In addition to written materials, this module gives concrete suggestions about ways to express your message visually.

Effective production and dissemination require good planning and organization. You need to evaluate internal and external resources to best meet your needs. Not everything can be produced in-house; often it is best to use external services for services such as cartography, web design, editing and printing.

Finally, the module provides advice on building long-term communication strategies.

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The following list summarizes common steps in the production of a printed IEA report.

- **Specifications.** Rough specifications on organization of the publication, size, design guidelines and sometimes a dummy report.

- **Contents.** Production of text, as well as choosing graphics and pictures. At this stage it is important not to forget any elements like picture text, references and headings.

- **Translation.** (If needed.)

- **Pre-design.** Can be useful to test the design in order to be able to make revisions before developing all the contents.

- **Layout.** Wrap all the content in the design chosen.

- **Proofreading.** This is the last chance to make revisions before the report goes to the printers.

- **Test print.** You should always ask for a test print in order to get rid of the last mistakes, correct colours, identify missing elements, etc.

- **Print.** Now your major concern is to make sure the printed report is ready on time, according to quality expectations and within budget.

- **Quality control.** Quality control should occur throughout the whole production process.

Figure 8. Covers from a variety of GEO reports.
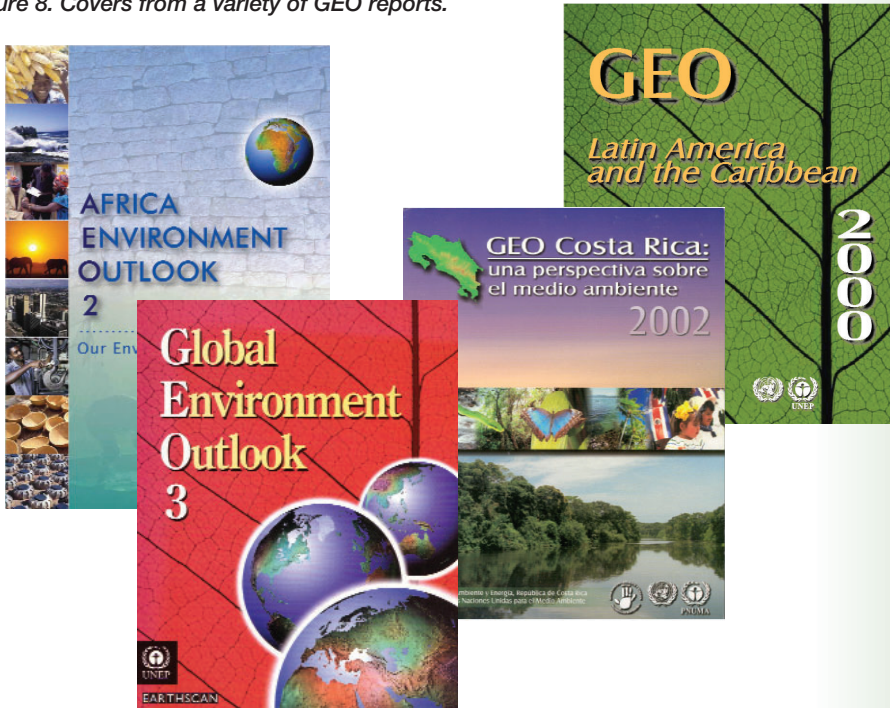
Module 8 Overview: Improving the IEA Process and Increasing Impact through Monitoring, Evaluation and Learning

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Module 8 Content
- Foundation of effective monitoring and evaluation
- Framework, attributes and measures
- Self-assessment matrix
- Improvement opportunities

How do we know whether the assessment is useful and used, rather than just sitting on a shelf? Module 8 offers tools to help you monitor and evaluate the effectiveness of your IEA.

In Module 8, you will learn to develop a monitoring and evaluation plan, based on seven questions:

1. What is the purpose of the evaluation?

2. Who will use the evaluation results?

3. Who will do the evaluation?

4. What evaluation framework is practical?

5. What needs to be monitored and evaluated?

6. What are the steps to develop a self-assessment matrix?

7. How can you use the evaluation to enhance a learning culture that keeps improving your IEA process?
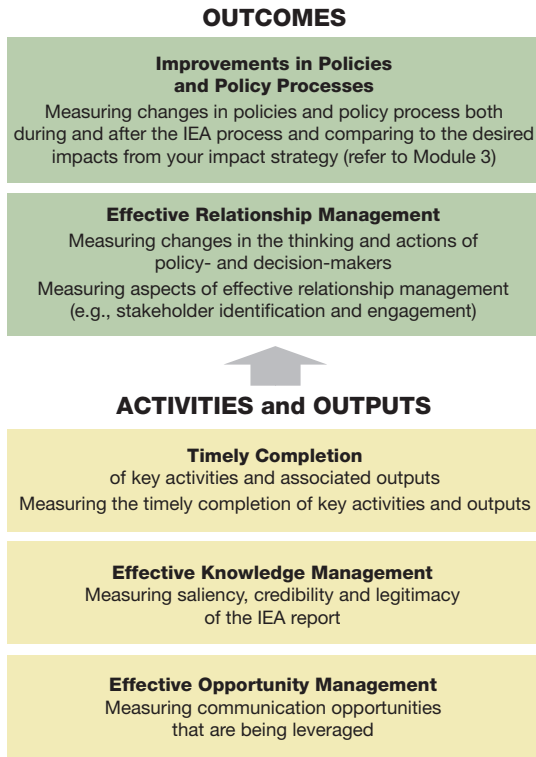
Module 8 promotes an improvement-oriented evaluation that aims to increase the effectiveness of your IEA process by feeding lessons learned into the next cycle. Learning plays a central role. It shapes the monitoring and evaluation process, and connects knowledge creation to policy making.

Module 8 will help you to make sure that your IEA has an evaluation component and will show you a way to design an effective evaluation that keeps improving your IEA process.

As part of designing an effective evaluation, you will develop measures to monitor and evaluate key outcomes from your IEA (see Figure 9)—relating to the change statement from your impact strategy and the important relationships you need to manage to achieve impact (see Module 3). You will also develop measures to monitor the timely completion of key activities and outputs of your IEA process—relating to the important knowledge you will generate in your IEA and the opportunities you need to leverage in order to effectively communicate the results of your IEA to your target audiences.

For Module 8, you need to be familiar with the stages for developing an IEA (see Module 2) and your impact strategy (see Module 3).

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Figure 9. Framework for monitoring and evaluating the National IEA Process. For more information, see Module 8 of the GEO Resource Book.

OUTCOMES

**Improvements in Policies
and Policy Processes**
Measuring changes in policies and policy process both
during and after the IEA process and comparing to the desired
impacts from your impact strategy (refer to Module 3)

Effective Relationship Management
Measuring changes in the thinking and actions of
policy- and decision-makers
Measuring aspects of effective relationship management
(e.g., stakeholder identification and engagement)

ACTIVITIES and OUTPUTS

Timely Completion
of key activities and associated outputs
Measuring the timely completion of key activities and outputs

Effective Knowledge Management
Measuring saliency, credibility and legitimacy
of the IEA report

Effective Opportunity Management
Measuring communication opportunities
that are being leveraged

A Final Thought

As this quick journey through the *GEO Resource Book* illustrates, integrated environmental assessment requires continuous learning and improvement. Ideally, IEAs are not one-off exercises but integrated, ongoing elements of environmental and sustainable development governance. That is how real learning can take place.

IEAs can play several roles in governance. They can:

-   help realize past successes and failures and their underlying causes;

-   improve our understanding of the connections between environment and human well-being and anchor policy making in facts on the ground;

-   increase awareness of interactions among the many global and local forces of environmental change and facilitate cross-scale coordination; and

-   build capacity to recognize the challenges ahead and help articulate key environmental targets and policy options to achieve them.

Realizing the potential of IEAs in improving governance and decision making not only requires effective assessment tools, but also meaningful engagement with audiences through a participatory assessment process. The duality of process and products is an essential feature of the GEO approach to IEA.

While capacity can be built through training exercises, true capacity will emerge through the process and practice of actually conducting an IEA. The practitioner community is already large, built through the comprehensive GEO process, its many sub-global applications and other related assessment initiatives. UNEP, along with its other partners in IEA capacity building, will continue to support and maintain a network of practitioners to share experiences and to learn together.
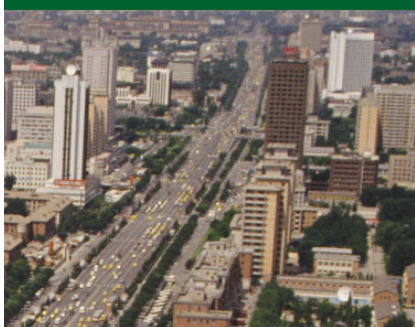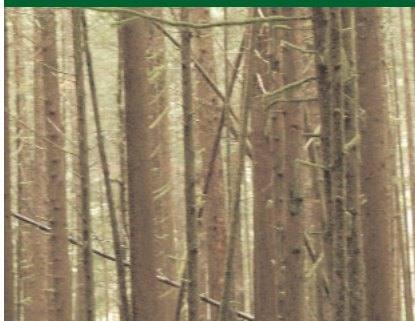
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