

# **AFRICA ENVIRONMENT INFORMATION NETWORK**

## **IMPLEMENTATION STRATEGY**

**PHASE 1: 2003 – 2004**



FINAL DRAFT, Version 2.1

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## 1. Background

UNEP has prepared a framework proposal for the establishment of an Africa Environmental Information Network (AEIN) in response to a request by the African Ministerial Conference on Environment (AMCEN). AEIN is designed as a capacity building programme that aims to *harness and enhance access to information and knowledge* to support the management of Africa's environmental resources as assets for sustainable development. The overarching goal is to strengthen the capacity of African countries to use good quality *information on environmental assets* to make informed investment choices at national and sub-national levels, and manage these assets on a sustainable basis. A key objective of the initiative is to build capacity for establishing the essential data foundation needed to support country-level sustainable development initiatives, focusing on the *environmental aspects*.

The initiative is a direct outcome of the Africa Environment Outlook (AEO) preparation process which was mandated by AMCEN. At the launch of the first AEO during the 9<sup>th</sup> Session of AMCEN (Kampala, 1-5 July, 2002) Ministers endorsed the AEIN concept as a means for harmonising and promoting access to data in the Africa region, and acting as *“a basis for tracking environmental changes using quantitative indicators focusing on national needs.”*<sup>1</sup> In this respect AEIN is designed, first and foremost, to *build capacity for integrated environmental assessments and reporting at the national level*. As an outcome of this capacity building activity, AEIN will provide data and information support to the AEO process.

AEIN also responds to expressions of needs from African experts, policy makers, environmental managers and researchers. In this regard it is designed to enhance capacities at the national level for using modern information management tools to better characterise environmental resources and understand complex processes, as well as linkages among environment and development issues.

AMCEN serves as the platform for the implementation of the Environmental Component of the New Partnership for Africa's Development (NEPAD). Therefore, the AEO, endorsed during the 9<sup>th</sup> Session of AMCEN as *“a monitoring and reporting tool for sustainable environmental management, as well as [providing] a framework for national and sub-regional integrated environmental assessment and reporting”*, will therefore constitute one of the reporting mechanisms for NEPAD. To this end the AEIN initiative has also been designed to provide inputs in the implementation of NEPAD, the high-level pledge by African leaders to place the continent on a path of sustainable growth and development.

## 2. Highlights of the AEIN Framework

AEIN is designed as a multi-stakeholder and multi-tier network whose ultimate goal would only be achieved through effective collaboration among many varied initiatives, projects and programmes of various partners, as well as other windows of opportunity. The concept is founded on best practices and lessons learnt over the past decade developing environmental information systems. A *framework* approach has been advocated with the view to ensure that there is synergy among all the various activities. The success of the AEIN initiative will therefore depend, to a very large, on open and full cooperative arrangements with other key partners involved in environmental information

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<sup>1</sup> Kampala Declaration, 9<sup>th</sup> Session of the African Ministerial Conference on Environment, Kampala 1-5 July, 2002

systems development in the region. Partnerships, networking and collaboration at all levels of implementation are central to this.

The AEIN framework revolves around three key *platforms*, which define project activity areas:

❑ **An *integrated environmental assessment and reporting platform*:**

Capacity building for harnessing professional skills and methodologies for *analysing data* and generating *policy-oriented and targeted environmental information*, and for *integrating such information into sustainable development decision making*;

❑ **A *data development and exchange platform*:**

Supporting and catalysing *networking* and the development of the *infrastructure and support mechanisms* for a comprehensive and harmonised *national sustainable development data foundation*. The AEIN focus in this regard will be on *core datasets for integrated environmental assessments and reporting*;

❑ **An *information and communications technology (ICT) platform*:**

Building capacity to use information and communication technologies (ICT) to *manage and package data and information*, and to *facilitate access to information*, and also to *communicate* this information to decision makers at various levels of society, as well as the wider public, in user-friendly formats.

The framework is comprehensively elaborated in the “Proposal for the Establishment of an Africa Environment Information Network — Framework for Capacity Building in Integrated Environmental Assessments and Reporting in Africa”.

### 3. Objectives for Phase 1

The first phase of implementation (2003 – 2004) is essentially a proof of concept, focusing on the “core mandate” as contained in AMCEN’s Kampala Declaration in respect of the establishment of AEIN. In this regard the thrust of implementation within UNEP will be on ***integrated environmental assessment and reporting, leading to the production of AEO-2***.

One basic assumption regarding the phasing of AEIN implementation is that some elements of the programme may already be in place in several countries. On this basis the implementation strategy for Phase 1 assumes that ***some data exists in some form, somewhere***. The focus of activities therefore is to test this assumption, while implementing various pilot activities with respect to networking, establishment of mechanisms for harmonising information, development of core data sets, prototype products and information services, and appropriate tools and methodologies to support AEIN activities. Key issues to be addressed include:

- What are the issues relating to ***core data sets*** that need to be addressed?
- What organisational and institutional framework would be appropriate to deal with the coordination and implementations processes?
- What capacity would be required, and how would capacity needs be met?

The immediate goals for Phase 1 implementation are:

- a) To build capacity for the development and management of **core datasets for integrated environmental assessments and reporting** at the national level;
- b) To support and catalyse **institutional networking and capacities** related to the management of data and information at the sub-national, national, sub-regional, and regional levels.

Specific objectives will be:

- To assess the status of environmental information networking activities in respective African countries;
- To strengthen networking (data/information exchanges, knowledge/expertise sharing, etc.) at the national and sub-regional levels;
- To develop information management tools, collate data, and develop compendia and other data products from existing data sources;
- To develop quantitative indicators of environmental change for use in characterising emerging issues, and for assessing impacts of such changes on human vulnerability at national and sub-regional levels;
- To build capacity for using information management tools and methodologies for producing or (re-)packaging information for various target groups.

The concept of “**shared spaces**”, incorporating **institutional networking** and a **Data Exchange Platform**, is central to the AEIN strategy and will serve as the basis for implementing technical activities, as well as institutional strengthening, collaboration, and training. Activities are aimed at building a stronger foundation for the **production of AEO-2 in 2006**.

#### 4. Expected Outputs

The principal outputs expected from Phase 1 will be:

- Structures for managing the AEIN programme, including implementation guidelines and procedures, and an International Steering Committee
- National EIS status reports and AEIN implementation strategies for 12 pilot countries
- Environment information management tools comprising:
  - ◆ Directory/profiles of national institutions involved in the management of the environment and those dealing with hydrological hazards
  - ◆ Catalogue of information needs and reporting requirements for the Conventions
  - ◆ Catalogue of data and information resources
  - ◆ Directory of experts and facilities
  - ◆ Documentation (bibliographic) system
  - ◆ Clearing house mechanisms
- Guidelines/sourcebook for environment policy analysis
- Guidelines for harmonised State of Environment Reporting

- A set of environmental indicators
- Intermediate products and packaged technical information including:
  - ♦ Data compendia and related data products (thematic briefs, thematic vital graphics, etc.)
  - ♦ Policy briefs
  - ♦ Fact sheets
  - ♦ Thematic video scripts
  - ♦ Africa River basins information system prototype
- National State of Environment Reports for 12 pilot countries
- Scope and structure of AEO-2
- AEIN communication strategy
- Increased awareness among the high-level decision-makers on the Principles of the Aarhus Convention
- National Action plans for the implementation of Principle 10 in four countries
- Approved project plan for Phase II of the project

## 5. Activity Areas

### 5.1 *Enhancing Environmental Information Networking*

National-level partners will be assisted to develop and implement **National Environmental Information Portals**, the purpose of which is *to provide structured, comprehensive, coherent, accurate, current and validated/authorised information, and to facilitate access to key data and information resources on the environment and sustainable development* for a wide range of users. The process will involve assisting key national-level partners contributing to the integrated assessment and reporting process to build capacity to develop and maintain *institutional-level functional and operational databases*, with associated metadatabases, and integrating such databases within a national network of SOE data and information centres.

To facilitate the development of national portals, a **Data Exchange Platform**, which will serve as an *institutional and technical framework for harnessing and providing harmonised data and information deriving from different sources* in each country, will be established. The Platform will comprise collaborative arrangements and mechanisms, including standards, as well as information exchange agreements essential for the adoption of a *unified approach for the development, harmonisation, sharing and application of multi-source data at national level and sub-regional levels* (Figure 1).

The focus of activities will be on *core datasets for integrated environmental assessments and reporting*, while supporting and catalysing *networking* and the development of the *support mechanisms* for a comprehensive and harmonised national sustainable development data foundation. The outcome of activities will be an *institutional networking framework*, involving like-minded people and institutions having *a common cause and who share the same principles*, a supportive *information exchange policy* dealing with various information sharing issues incorporating the *Aarhus Principles on access to information*.

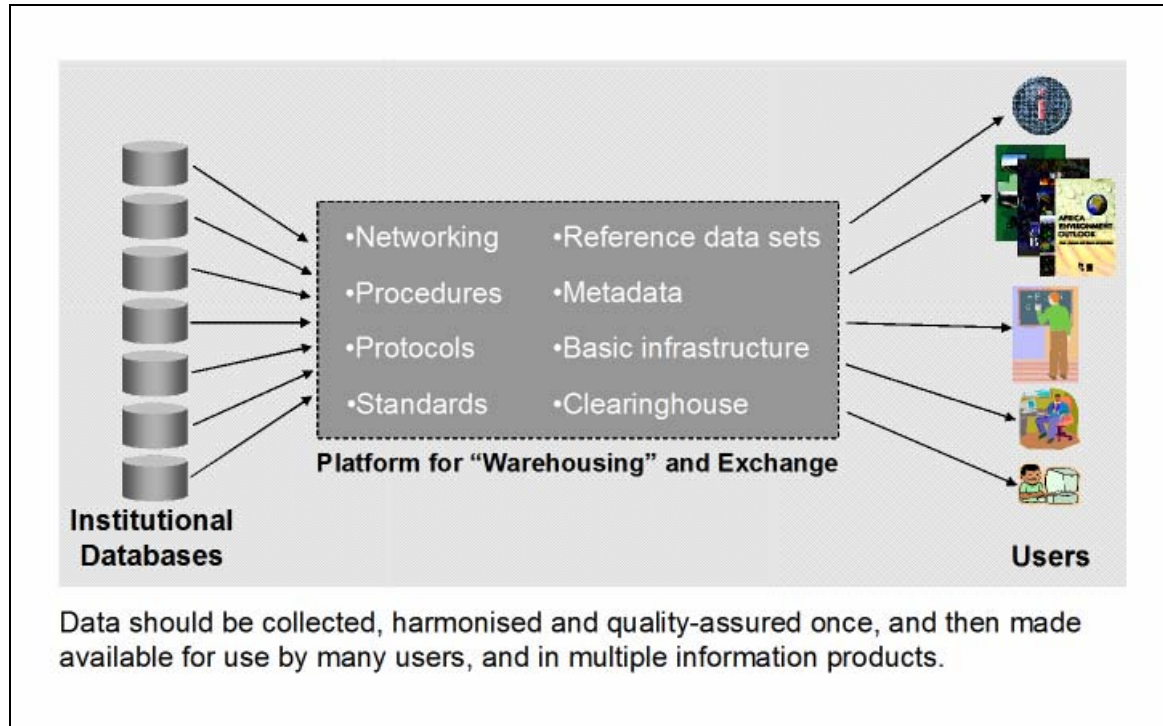


Figure 1: Data Exchange Platform — Vision

Thus, the broader objective of the Platform is to establish a foundation for the development of national Spatial Data Infrastructure (SDI) that would respond readily to national needs for comprehensive development information needs of the country. It is therefore hoped that national AEIN partners will make every effort to involve all potential stakeholders, especially those who may be involved in the implementation of various initiatives and projects on information management. Where a framework already exists, close collaboration will be established in order to create synergy.

In terms of data and information access, AEIN will use Internet technology to address the issue of *ownership and control* of information, which act as serious barriers to information flow among institutions around Africa, particularly those within the public sector. The concepts of *"information communities"* and *"shared spaces"* will enable collaborators to build **trust** and **confidence** among themselves, and promote **transparency** in information usage.

To start with, a "shared space" would be a *consensus-building forum* where members of the community would meet and hold discussions on *common issues* of interest. Partners will work towards creating a *common "place"* where people could go for *authoritative* information. They will create a *common directory containing validated, authoritative and secured* information that has been generated by various producers within the community, using harmonised standards and methodologies. The Internet will be used as the principal means by which producers of the information will put the *directory of information sources* online, setting up a "portal" to share the information with the rest of the world. Recognising the lack of appropriate infrastructure in some cases, or limitations in bandwidth, other means such as CD-ROM and hard copy directories will be produced.

Figure 2 illustrates the building blocks for creating shared spaces, for working together and sharing environmental information from common repositories, within the framework of AEIN.

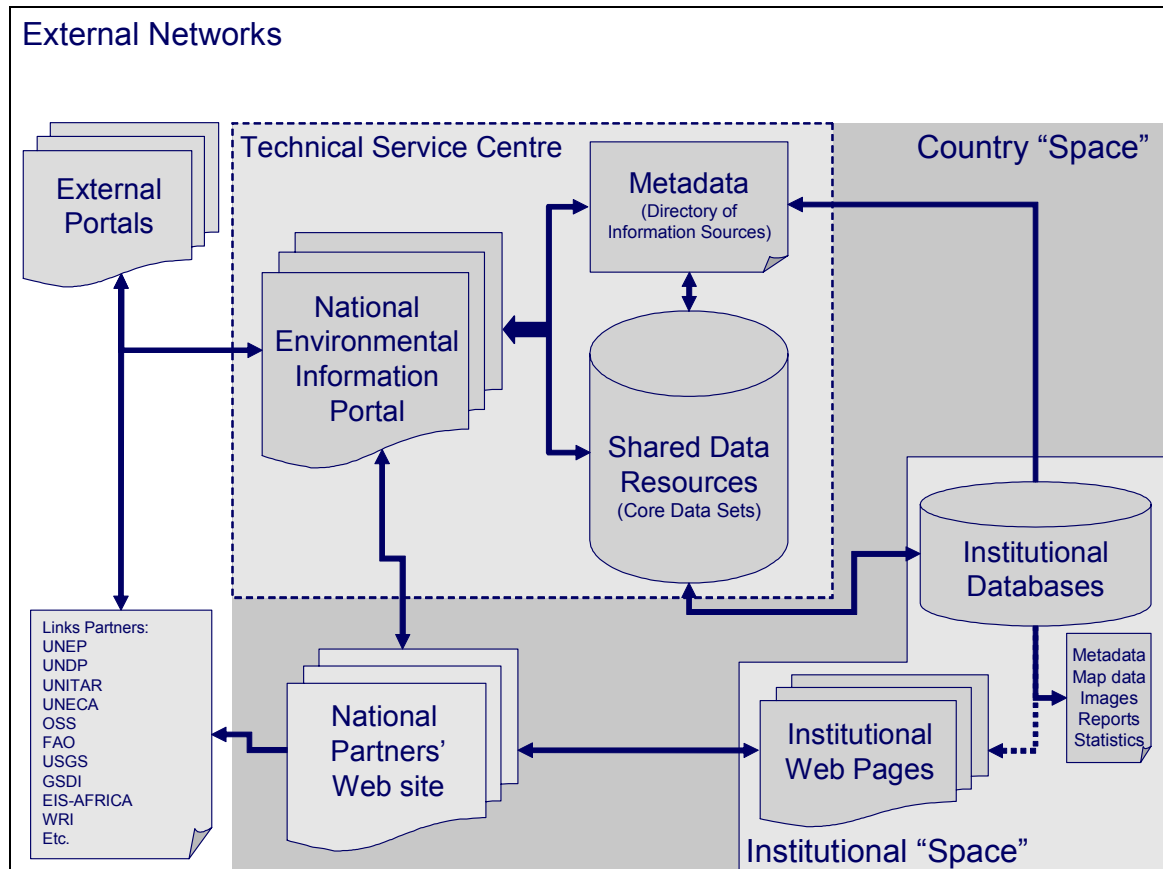


Figure 2: Shared "spaces" and information repositories

The first level of activity will be within the institutional "space" where the *capacity of partner institutions* that are identified as contributing directly to the integrated assessment and reporting process will be enhanced for the development and maintenance of operational databases that meet their own functional needs, as well as contributing to the *core data sets*. The second level of activities will support the development of a framework, or "*country space*", within which institutional "spaces" will be linked, with underlying structures for harmonisation, to create a *common information portal*. Each collaborating partner institution will have its own dedicated "space" where they will post their information, either for restricted use, or for open public access. Institutions will have equal visibility, and establish an Internet presence with their own identity through the portal. The public "spaces" would contain institutional information, data resources, information products, services, and technical resources such as available expertise.

*Metadata* on all available data resources will be captured, stored and maintained by the respective data custodian. A *clearing house mechanism* will be implemented to facilitate easy access to metadata that may be held at different locations. Where it is operationally impossible or ineffective to have a distributed metadatabase, the metadata will be stored within one central database and managed by a Technical Service Centre.

Links will be established with *external information networks*, including web sites and/or portals.

## 5.2 Enhancing Analytical Capacity

The core objective of AEIN is to build national-level capacity for integrating environmental information into decision-making and policy formulation. Capacity building activities in this respect focus on integrated environmental assessment and reporting, addressing *skills and methodologies for policy analysis, multi-scale/temporal data analysis*, and the *production of indicator-based national and sub-regional assessments and SoE reports*, and providing *inputs into the AEO process*. Tools and methodologies that have been developed within the SoE/AEO/GEO frameworks will serve as the basis for these activities.

Training will focus on quantitative and qualitative analysis of environmental trends and underlying driving forces, the evaluation of policies related to the environment, and the assessment of policy options in the context of integrated future scenarios.

## 5.3 Information Packaging and Dissemination

AEIN recognises three broad levels of decision-making at which information need to be targeted: the strategic (*policy-makers*), mid-level (*managerial*), and operational (*first-line “actors”*) levels. These “actors” require different degrees of detail of information (content), analysis and interpretation (context and relevance), and time frame (currency). The matrix below indicates the variety of *information products and services* that will be provided by AEIN for the various users at the different levels.

Decision-Making Level	Useful Information Types	AEIN Products/Services
<b>Policy-makers: Strategic</b> (Vision and the long-term policy objectives for sustainable development)	<ul style="list-style-type: none"> <li>♦ Forward-looking projections</li> <li>♦ Scenarios and policy options</li> <li>♦ What-if analyses</li> <li>♦ Status of implementation of policy objectives</li> <li>♦ Strategic environmental overviews/assessments</li> </ul>	<ul style="list-style-type: none"> <li>♦ Policy Briefs</li> <li>♦ Vital (summary) graphics</li> <li>♦ Specific decision-support applications</li> <li>♦ Thematic extracts</li> <li>♦ Executive seminars</li> </ul>
<b>Planning and implementing agencies: Tactical/Managerial</b> (Implementation of policy objectives, ensuring that available resources are used efficiently and effectively to achieve the set objectives.)	<ul style="list-style-type: none"> <li>♦ Scenarios and policy options</li> <li>♦ What-if analyses</li> <li>♦ Policy analysis/implications</li> <li>♦ Indicator-based trends</li> <li>♦ Comparative assessments</li> <li>♦ Medium-term forecasts</li> <li>♦ Special reports</li> <li>♦ Situation analyses</li> <li>♦ Status reports or updates</li> </ul>	<ul style="list-style-type: none"> <li>♦ Indicator-based environment and development reports at all levels</li> <li>♦ Issue-specific, indicator-based thematic reports</li> <li>♦ Thematic extracts</li> <li>♦ Vital (summary) graphics</li> <li>♦ Case studies</li> <li>♦ <i>InfoKiosks</i></li> </ul>
<b>First-line “actors”: Operational Control</b> (Use available facilities and resources to ensure that specific activities are carried out towards the attainment of policy objectives.)	<ul style="list-style-type: none"> <li>♦ Primary data</li> <li>♦ Thematic aggregations</li> <li>♦ situation reports</li> <li>♦ Operational information and procedures</li> <li>♦ Basic facts</li> <li>♦ Other “transactional-level” information</li> </ul>	<ul style="list-style-type: none"> <li>♦ Indicator-based assessment reports (SoE, AEO, etc.)</li> <li>♦ Environmental Data Compendia</li> <li>♦ Metadata bulletin and information catalogues</li> <li>♦ Datasets and databases</li> <li>♦ <i>InfoKiosks</i></li> </ul>

In addition to the targeted information products and services *generic products*, generated within consistent, harmonised and systematic assessment and reporting frameworks, will also be generated for the broader public. *National environmental information centres* will be strengthened with the view to *improving public access* to environmental information. Mechanisms for making information available over the internet, as well as

the provision of information access points at the community level using “tele-centre” outlets, will be implemented.

Capacity building will address the development and packaging of information products meeting requirements various “actors” to support the various levels of decision making.

## 6. Financing

Part funding for the start-up (Phase 1) of AEIN implementation has been provided by the governments of Ireland and Norway. Of the amount secured about 53% has been contributed by the former and 32% by the latter (see table below). This covers critical-path core activities setting up the appropriate project management structures, developing guidelines and procedures for implementation, developing environmental information management tools prototype products, such as national EIS status reports, data compendia, and SOE reports for 12 pilot countries.

Component	Cost (US\$)	% of Total	Cost Break-down		
			% Norway	% Ireland	% Other
Programme organisation and management	316,767	28.69	41.67	55.17	3.16
Enhancing environmental information networking	218,000	19.74	15.60	66.06	18.34
Enhancing analytical capacity	268,400	24.31	14.90	47.09	41.73
Enhancing capacity for information packaging and dissemination	301,000	27.26	48.17	47.84	10.80
Grand Total for Phase 1 (2 Years)	1,104,167	100	31.70	53.30	15.00

About 15% of the estimated budget is still unsecured. It is however expected that much of this will be in-kind contribution from other sources, opportunities for cost-sharing with various potential partners on complementary initiatives, or will be fund-raised by UNEP to complement the Irish and Norwegian funds.

## 7. Pilot Countries

It was suggested at AEIN start-up meeting held in Pretoria that considerations for the selection of countries for the first phase should include the following:

- i) There should be commitment from the countries;
- ii) There should be a balance in the capacity levels, i.e., the list should include countries that have capacity, countries that are on their way to achieving sufficient capacity, and those that presently have no capacity;
- iii) There should be geographic balance in the selection;
- iv) There should be a high probability for showing concrete results by the end of Phase 1.

As a general principle the operation of the AEIN process would endeavour to strengthen weak information structures and networks.

On the basis of the above, and in consultation with the AEO sub-regional Collaborating Centres, the following countries have been selected for Phase 1:

- i) Cameroon
- vii) Mauritius

- |               |                |
|---------------|----------------|
| ii) Egypt     | viii) Senegal  |
| iii) Ethiopia | ix) Seychelles |
| iv) Gabon     | x) Tunisia     |
| v) Ghana      | xi) Uganda     |
| vi) Lesotho   | xii) Zambia    |

The Pretoria meeting also urged Governments of candidate countries to show, through AMCEN, commitment to the principles of AEIN. To this end it a pre-requisite for the commencement of AEIN activities in the candidate country would be an official request by the interested country (a letter of interest) in adopting the AEIN concept as a framework for meeting the country's needs in environmental information management. In addition, the country would formally submit a national implementation strategy conforming to guidelines that would be issued by UNEP.

## **8. Activity matrix**

Core activities on various aspects of AEIN implementation are outlined in the activity matrix and work plan (Annex 1), with the associated institutional support and related training. The activities focus on the establishment of structures and the development of prototype products and services that can be used to engage decision makers to "test" their response to such outputs, and fine-tune them to suit their needs, or to develop new product concepts, policy-relevant applications, and services.

A comprehensive "roll out" plan for Phase 2 will be prepared at the end of the phase, on the basis of a comprehensive review process.

## **9. National implementation plans**

AEIN is a country-focused initiative. In this regard it is essential to align it to priority national needs in order to ensure ownership by countries. The effectiveness of the Network will depend very much on the extent to which the concepts and principles are internalised within partner institutions and adapted to their needs, as well as capacities. To this end it will be necessary for individual countries to articulate their priority needs at the very onset of implementation, in order to align the broader AEIN goals and objectives to these needs through multi-stakeholder processes.

Participating countries will be assisted to prepare comprehensive national strategies that aim to strengthen integrated environmental assessment and reporting, focusing on specific national priorities, within the framework of AEIN Programme Strategy. The strategies will also outline mechanisms for integrating environmental information into the mainstream of national sustainable development policy formulation, planning and decision making processes.

Teams of experts will be engaged to undertake thorough assessments of the environmental information system capacities and needs in the respective countries, and to propose actions necessary for strengthening the existing capacities for managing and improving access to environmental information for decision-making. The output of the assessment should provide a comprehensive overview of the environmental information situation in the respective countries, identifying activities in the country that are complementary to AEIN.

A strategy and investment plan for implementing a *national* AEIN programme, including filling critical gaps in capacity, and details of other appropriate interventions in each country, will be prepared. The strategy will also outline ways in which AEIN will complement and/or supplement existing capacities, and ways to enhance efficiency through closer cooperation among all stakeholders. Information from the assessment will also be used to update existing country environmental profiles or, where profiles have not been prepared previously, prepare new ones.

A detailed questionnaire for the assessment is indicated in Annex 2.

## 10. Institutional Framework for Coordination and Management

The Stakeholders' Meeting held in Pretoria endorsed the proposed institutional framework for coordination and management, i.e.,

- i) An International Steering Committee to oversee overall implementation
- ii) Regional coordination and management by UNEP
- iii) Sub-regional "clustering" for the purpose of coordination, using the existing network of AEO/GEO Collaborating Centres
- iv) National implementation framework comprising
  - ♦ National AEIN node
  - ♦ National Steering Committee
  - ♦ Forum of Stakeholders
  - ♦ Technical Committee
  - ♦ Working Groups
  - ♦ A network of Data Centres
  - ♦ Provision of technical services by entities with capacity to do so
- v) A network of partners to support or implement different aspects of the AEIN framework

### 10.1 Networking Framework

AEIN has been conceived as an integrated framework programme that will contribute to strengthening institutional capacities in managing and using *information related to sustainable development*. In this respect two aspects of the AEIN framework are recognised. Figure 3 illustrates the broad two sets of objectives of AEIN, and the linkages therein. The first set of objectives addresses *specific capacity building needs for the effective implementation of national, sub-regional, and regional assessment and reporting processes*. This refers explicitly to the AMCEN request and the AEO process for which AEIN has a specific "mandate". This is represented by the "*framework for integrated assessment and reporting*" block, with AMCEN as the apex organ of the network. Clustered together in that block are the institutions directly involved in these processes, with an indication of the relationships among them. This is essentially the existing AEO/GEO structure, with the addition of a national AEIN node.

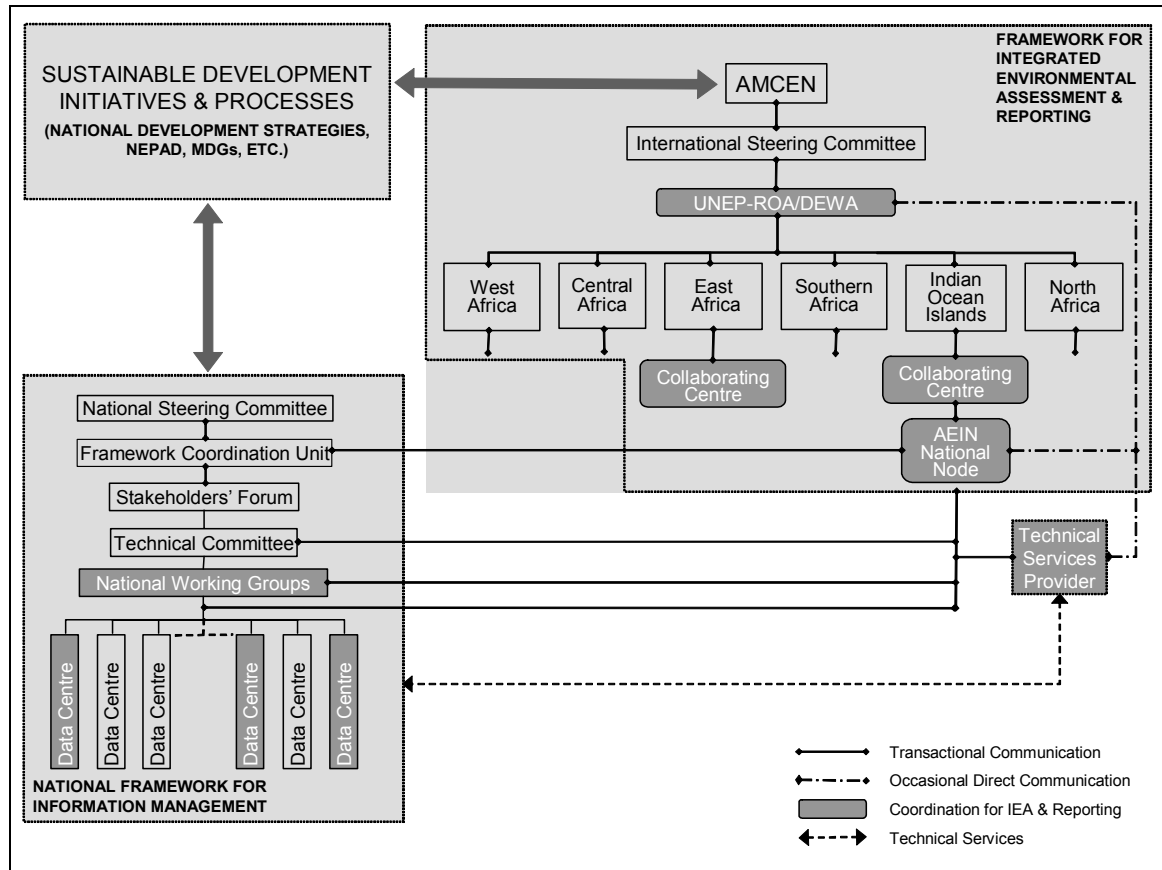


Figure 3: AEIN network structure and linkages to on-going initiatives

The second set of objectives relates to the broader issues relating to the *development and exchange of essential data and information needed for sustainable development* activities at the national level. This is represented by the “*national framework for information management*” block. This representation acknowledges the fact that there could be other structures at the national, as well as the sub-regional levels, which respond to various other initiatives, such as national committees that would become part of the SDI initiative in Africa, or other such initiatives and processes. Linkages will be made to such structures where they exist to reinforce the synergy between AEIN and structures that could contribute to and support the implementation of AEIN. In such cases it will not be presumed that the AEIN focal point (National Node) institution would necessarily play the lead role within the national framework for information management. AEIN national partners will identify and work with those institutions within such national frameworks who will make direct contributions to the achievement of the first set of objectives relating to *assessment and reporting processes*.

### 10.2 International Steering Committee

AEIN will be implemented with high-level political support and leadership through the work of an International Steering Committee (ISC) to be established by AMCEN. The ISC will provide policy guidance, monitoring of progress, coordinating with conventions and other initiatives, and provide liaison with donors.

It has been recommended by various stakeholders that the membership of the ISC should be drawn from key institutions including the following:

- i) AMCEN (mandatory)

- ii) NEPAD (mandatory)
- iii) The African Union (mandatory)
- iv) A representative of the donors (mandatory)
  - v) African Development Bank
  - vi) A representative of the sub-regional and regional groupings e.g. SADC, IGAD, UMA, ECOWAS, ECCAS, IOC, etc.
  - vii) Conventions, other international groupings, or UNEP as “coordinator”
  - viii) A representative of the UN agencies (e.g. FAO, UNDP, ECA)
  - ix) A representative of the private sector
  - x) Representative from national level (on rotational basis)

The ISC will report to and provide feedback from AMCEN through the UNEP-ROA.

The ISC will be assisted from time to time by an ad-hoc Technical Working Group, convened as required, to provide technical advisory services. Membership could be drawn from institutions including the following:

- i) African universities
- ii) Technical Regional Centres
- iii) EIS-AFRICA
- iv) Media representative, e.g., Network of African Environmental Journalists

### **10.3 Role of UNEP**

UNEP-ROA will provide political leadership and liaison with AMCEN as well as donors and linkage with the NEPAD process.

UNEP-DEWA will be responsible for technical implementation of AEIN. In this respect DEWA will be responsible for implementation and operational aspects of AEIN at the regional level, to the extent that it focuses on environmental assessments and reporting. This will involve overall coordination of programme activities, including day to day management (planning, monitoring, reporting), financial control, and technical supervision.

With respect to the broader framework, involving the development of a comprehensive data infrastructure and ICT elements, DEWA will ensure effective coordination with other environmental information initiatives in Africa, as well as the building and/or strengthening of partnerships with other partners and donors as may be appropriate.

### **10.4 Role of AEO/GEO Collaborating Centres**

Activities in countries will be coordinated and supervised at the sub-regional level by the AEO/GEO Collaborating Centres (CCs). This arrangement is to enhance effective harmonisation of activities and information within the respective sub-regions, and to ensure that national-level activities meet the state of environment reporting requirements of the sub-regions as well as the requirements for the AEO and GEO processes.

The CCs will provide implementation support for network development at the sub-regional level, promoting vertical and horizontal networking, including inter-governmental institutions, NGOs, and international organisations operating in the sub-region and involved in environmental information management. They will elicit support, mobilise expertise and facilitate short-term consultancies to provide technical assistance for countries in the respective sub-regions to support implementation efforts, plan and organise workshops and training activities related to common sub-regional issues.

The CCs will also be responsible for facilitating information sharing/exchange at the sub-regional, preparing sub-regional reports, and co-ordination with other information projects in the sub-region.

### **10.5 *AEIN National Node***

AEIN is, first and foremost, a national-level capacity building process. It is therefore expected that each participating country will formally designate a National Node that will take the leadership role in articulating priority national issues and needs, and drive the process. The institution so designated should have a clear mandate with respect to environmental assessments and reporting. The functions of the Node will focus on co-ordinating AEIN activities, building consensus and promoting dialogue among agencies, and providing environmental information services to the broad user community.

Specifically, the AEIN Node institution will be responsible for the implementation of all AEIN activities in the country, including financial management, any planning and logistical arrangements, reporting to the respective government and bilateral donors, and serving as the national contact point for AEIN with other regional and international information networks. A memorandum of understanding will be established between UNEP, through the respective CC, and the Node institution.

The National Node will designate a National Coordinator for the AEIN programme, who will have full responsibility for managing network activities at the national level, including overall co-ordination, day to day management, supervision of short-term consultants, and for transactions between the country and other partners, including UNEP.

### **10.6 *National implementation framework***

Each National Node will establish a support structure appropriate to their respective circumstance to support the implementation of AEIN. Where there is an existing structure at the national level it is strongly recommended that, to the extent possible, AEIN activities should be undertaken within such frameworks.

#### **10.6.1 *National Steering Committee***

A **National Steering Committee** provides a high-level and/or political leadership, and demonstrates policy-level government commitment. It would also ensure that national priorities and the need to respond to policy-makers remain a key objective of environmental information management activities, and are reflected and addressed in the AEIN implementation process. The Committee should facilitate the establishment of linkages with on-going environment and sustainable development initiatives in the country.

### *10.6.2 AEIN Data Centres*

Institutions that hold data and information identified as **critical** for the management of the environment will constitute *AEIN Data Centres*, and will be designated as such. They will have the responsibility for the efficient management and maintenance of the relevant data and information, as well as facilitating access to environmental data and information resources. Memoranda of understanding will be established between AEIN Data Centres and National Nodes to formalise relationships, and to provide a framework for managing such relationships.

### *10.6.3 Environmental Information Working Group*

To assist with the technical as well as thematic information management issues the AEIN National Node will establish an *Environmental Information Working Group*. The main function of the Working Group will be to assist the National Node in identifying and addressing cross-cutting technical and operational information management issues, particularly with regard to integrated environmental assessments and reporting.

### *10.6.4 National-level support mechanisms*

The range of activities envisaged within AEIN requires considerable levels of technical knowledge as well as skills which may not always be available or adequate within partner institutions. Therefore, building on the theme that AEIN will work within existing structures and initiatives, as well as making use of existing capacity within Africa, national-level implementation will make use of local experts, organisations, private-sector service providers, to provide technical backstopping services. Such services will include training, data management functions (capture, conversion, updating, maintenance, analysis, etc.) that are *not core to environmental assessments*, and Internet-related services.

## **10.7 Role of partners**

It is expected that several on-going initiatives will contribute to and benefit from AEIN, in particular on-going national SDI initiatives, as well as sub-regional and regional information management programmes. The over-arching principle is that AEIN will build upon existing structures at the different levels. The focus will be to create a synergy using these structures to support the production of targeted outputs, making sure that the implementation process takes into account existing initiatives, and that the linkages to the outputs of AEIN are clear. To the extent possible AEIN will collaborate with existing initiatives, build upon them, work within existing structures, partnerships and networks, where appropriate and practicable, and make use of existing capacity within Africa.

To formalise relationships and facilitate collaboration agreements will be established with organisations implementing such initiatives.

## **11. Monitoring and Impact Assessment**

The AEIN implementation process will be monitored both at the national, sub-regional and regional levels. Implementation will be evaluated taking into consideration peculiar individual country situations, using standard process monitoring and impact indicators within the broad AEIN framework.

The AEIN programme will be subject to a joint review by AMCEN (Executive Committee??), UNEP, the International Steering Committee, concerned donors, and

collaborating international organisations. There will be a review meeting at least once a year, the first such meeting being held twelve (12) months after the start of full implementation. Documentation for such review will include:

- Quarterly progress reports
- Any implementation problem diagnostic reports
- Any on-going evaluation reports required by donors/funding agencies
- Working groups thematic reports
- National Steering Committees meetings reports
- Training reports

AEIN is expected to have a significant impact on decision making processes in respect of the management of the environment at the national, sub-regional, as well as regional levels. Institutions will be strengthened and their capacity to manage environmental information enhanced. Decision-makers will gain more confidence in the data and response to emerging issues faster as the data/information becomes more readily accessible and reliable. By achieving agreement on harmonised guidelines and implementation procedures, the willingness to share and the capacity to use data and information will be enhanced. A number of indicators against which to measure and assess impact will be established by the end of the first year of implementation.

An independent review and evaluation will be commissioned at the end of the first two years of implementation.

### ***11.1 Suggested process indicators***

- AEIN proposal finalised and published in English and French
- AEIN implementation plan and guidelines published in English and French
- Number countries who have signed up at Ministerial level to participate in AEIN
- Implementation structures established and functional and national, sub-regional and regional levels
- Number of participating national institutions in compliance with AEIN guidelines and procedures
- Number of institutions adopting AEIN procedures and technical tools
- Number of participating international partners
- Number of signed and functional data and information exchange agreements, MoUs and protocols
- Amount of data (types, country coverage, volume) identified within international organisations for which exchange agreements are successfully negotiated
- Amount of data (types, country coverage, volume) identified within international organisations successfully transferred (repatriated) to countries of origin

- Number of agreements with secretariats (number) of MEAs on the harmonisation of information management and reporting for respective conventions/treaties
- Number of national web sites and data portals with harmonised interfaces
- On-going maintenance of national web-sites and data portals
- Number of clearinghouse nodes created
- On-going maintenance of clearinghouse
- Number of searches on clearinghouse network
- Number of data/information exchange transactions (e.g., requests, releases, downloads from portals, etc.) recorded by participating institutions
- Number and quality of applications based on new methodologies and tools
- Number of and quality of different types of information products

### ***11.2 Impact indicators***

- Increased/improved access to information
- Increase in the number of institutions (national and international) participating in AEIN
- Number of decision and actions attributable to the use of AEIN tools, procedures, data and information products
- Adoption of common frameworks for reporting on MEAs

## AEIN Phase 1 — Activity Matrix (2003 -2004)

Objective(s)/Output(s)	Time-frame	Core Activities	Institutional Support	Related Training Activities	Responsibility/Partners
<b>PROGRAMME MANAGEMENT AND ORGANISATION</b>					
<b>Start-up, stakeholder consultations and consensus building</b>  <b>Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Project management structure</li> <li>▪ Launch of implementation process</li> <li>▪ Sub-regional consultations</li> <li>▪ Sub-regional start-up workshops</li> <li>▪ National-level implementation arrangements</li> <li>▪ Implementation guidelines and procedures</li> </ul>	Jan '03	Set up a project management structure at UNEP/DEWA and prepare a project plan			DEWA/CCs
	Feb – May '03	Undertake consultations with Collaborating Centres to identify sub-regional experts to carry out assessment of existing capacities  Prepare AEIN implementation guidelines and procedures  Select Phase 1 countries  Establish national implementation structures			DEWA/CCs
	Feb – May '03	Sub-regional start-up workshops			DEWA/CCs
	Mar '03	Start-up consultative meetings to launch the implementation process			DEWA CCs
<b>Programme coordination, monitoring and evaluation:</b>  <b>Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Steering Committee meeting(s)</li> <li>▪ Project management skills</li> <li>▪ Programme impact assessment</li> <li>▪ Implementation plan for Phase 2</li> </ul>	Jul '03 – Dec '04	Identify qualitative and quantitative indicators to assess programme performance, both in terms of the implementation process as well as impact  Undertake continuous monitoring and evaluation on the basis of agreed progress indicators to assess progress, and identify capacities gaps and needs at national, sub-regional, and regional levels  Implement and manage a proactive and ongoing feedback process involving contributors and network partners to ensure continued support and buy-in	Technical assistance: <ul style="list-style-type: none"> <li>▪ Project management</li> <li>▪ Financial management</li> </ul>	Process/project management skills to ensure sustainability and timeliness of the AEO process	UNEP-ROA/AMCEN Private-sector management firms
	Dec '03 Dec '04	International Steering Committee meetings			DEWA/ROA
	Oct – Dec '04	Undertake an evaluation of programme implementation and impact  Prepare implementation plan for			EIS-AFRICA

Objective(s)/Output(s)	Time-frame	Core Activities	Institutional Support	Related Training Activities	Responsibility/Partners
		Phase 2			
<b>ENHANCING ENVIRONMENTAL INFORMATION NETWORKING</b>					
<b>Assessment of information management capacity and data resources</b> <b>Deliverables:</b> <ul style="list-style-type: none"> <li>▪ National EIS status report</li> <li>▪ National AEIN implementation plans</li> <li>▪ Inventories of information resources</li> <li>▪ Profiles of institutions and facilities dealing with hydrological hazards</li> </ul>	Mar – May '03	Assess the status of EIS and networking activities in participating countries, including existing institutional capacities, and identify capacity as well as awareness raising needs	Support the establishment of the appropriate institutional framework for managing environmental information		National level partners CCs EIS-AFRICA
		Prepare national AEIN implementation plans			
	Sept – Dec '03	Identify existing national, as well as “expatriate”, reports and documents on the environment, natural resources, and sustainable development initiatives, statistics and spatial data resources in the country			EIS-AFRICA
		Identify and document statistical and spatial data resources existing at the sub-regional level		Sub-regional training on environmental information management tools	CCs
		Negotiate access/transfer agreements for “expatriate” data and information resources (i.e. allow UNEP/ CCs/ country institutions to validate and use data at national and sub-regional level)	Provide assistance (funds and expertise) for the identification of “expatriate” and possible transfer data resources and document datasets		DEWA EIS-AFRICA
		Provide support (funding and technical assistance) for data rescue activities [where necessary]	Procure and install information management tools (computer hardware, appropriate software, and accessories — data documentation, archiving, cataloguing, GIS/data viewers, database management, document/ bibliographic data management software, etc.)		
	Mar – May '03	Engage a consultant to undertake an assessment and profiling of institutions and facilities dealing with hydrological hazards			UNEP/DEPI, ROA

Objective(s)/Output(s)	Time-frame	Core Activities	Institutional Support	Related Training Activities	Responsibility/Partners
<b>Network development and data exchange mechanisms</b>  <b>Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Information working groups</li> <li>▪ Information exchange principles and guidelines</li> <li>▪ Cooperation and partnership agreements (MOUs)</li> <li>▪ Information access procedures and mechanisms</li> <li>▪ Environmental information management tools: <ul style="list-style-type: none"> <li>♦ Directory of institutions, experts and facilities</li> <li>♦ Metadatabases</li> <li>♦ Documentation (bibliographic) system</li> <li>♦ Clearing-house</li> <li>♦ Data tools</li> <li>♦ Catalogue of data and information resources</li> </ul> </li> </ul>	Apr – Jul '03	Undertake evaluation and harmonisation of SoER/AEO/GEO data tools, and select appropriate tools to be used at national, sub-regional, regional and levels ( <b>within the AEIN framework</b> )		Organise metadata training for CCs, consultants and national institutions	DEWA/CCs Sub-regional data Technical Service Centres (TSCs)
	Jun – Dec '03	Publish the AEIN framework (in English and French) for use as a common approach (platform for partnership and collaboration) for the development of technical and institutional capacity for harnessing information for sustainable development in Africa by all stakeholders			UNEP, EIS-AFRICA
		Establish Information Working Groups to address specific information management/exchange issues at national and sub-regional levels			EIS-AFRICA USGS/EDC
		Designate and establish Network of SOE Data Centres	Facilitate networking among <b>core environmental data</b> producers and users		National level partners CCs
		Establish MOUs and data exchange agreements with data custodians (including international partners)	Support for on-going consensus-building activities among stakeholders on crucial technical and institutional issues relating to use and provision of the datasets through seminars, meetings and workshops		National level partners CCs EIS-AFRICA USGS/EDC
		Establish core data sets on the basis of requirements SoE, AEO, MEAs, NEPAD, MDGs, Jo'burg Plan of Action			National level partners CCs EIS-AFRICA
		Establish mechanisms for regular communication between organisations in support of network development	Enhance capacity of network partners to communicate on transactional basis, and to exchange and share data, information and knowledge on the state of the environment in Africa in the context of sustainable development		National level partners CCs DEWA

Objective(s)/Output(s)	Time-frame	Core Activities	Institutional Support	Related Training Activities	Responsibility/Partners
		Facilitate the development of a data exchange policy at the sub-regional level	Augment staff and budget resources at CCs to support coordination and networking at sub-regional level	<ul style="list-style-type: none"> <li>Sub-regional training in networking skills</li> <li>Awareness training on legal issues and frameworks with respect to public access to information, copyrights, liability, etc.</li> </ul>	CCs DEWA
	Sep '03 – Jun '04	Catalogue data and information resources and capture metadata	♦ Provide technical assistance for the development of common meta-database		National level partners Sub-regional centres DEWA/CCs
		Develop framework and procedures for harmonising documentation systems	Technical assistance, funds (facilitation)		UNEP
		Define and implement a physical data/information exchange platform		Refer CountrySpace, DEPHA, SDI concepts/approaches	DEWA/GRID-Nairobi
		Establish and maintain appropriate metadata <u>delivery mechanisms</u> , including metadata catalogues (CD-ROM format) and electronic network to facilitate accessibility, e.g., online catalogues, clearinghouse, etc.	Technical assistance, funds (facilitation)	Refer CountrySpace, DEPHA, SDI concepts/approaches	National and sub-regional Data Centres, international partners
<b>ENHANCING ANALYTICAL CAPACITY</b>					
<b>Environment and sustainable development policy analysis and indicator framework development</b>  <b>Deliverables:</b> <ul style="list-style-type: none"> <li>Guidelines/sourcebook for environmental policy analysis</li> <li>Criteria for selecting indicators</li> <li>Agreement on environmental indicators</li> </ul>	May – Nov '03	Review and assess existing SoER indicators for selected key issues  Assess availability of data to establish the indicators/indices and establish procedures for dealing with data gaps		Sub-regional and in-country training for national experts and personnel from key institutions on: <ul style="list-style-type: none"> <li>identification of emerging issues for early-warning</li> <li>integrated analysis of environment and sustainable development policies</li> </ul>	DEWA
	Jul '03 – Feb '04	Establish expert working groups on priority environmental issues and themes to be responsible for the process of indicator development	Facilitate activities of working groups		DEWA CCs/consultants WRI
		Undertake a sample survey of environmental policies and strategies on the basis of recommendations in AEO Chapter 5 (Policy Responses, Analysis and Action)			DEWA/ROA/UNDP

Objective(s)/Output(s)	Time-frame	Core Activities	Institutional Support	Related Training Activities	Responsibility/Partners
		Develop systematic and problem-solving frameworks for the integrated analysis of environment and sustainable development policies, and indicator framework	Strengthen capacity for environment and sustainable development policy analysis: <ul style="list-style-type: none"> <li>▪ Establish environmental policy units</li> <li>▪ Provide technical assistance, information, and other (existing) materials for early-warning assessments</li> </ul>	Executive seminars/workshops for decision makers on: <ul style="list-style-type: none"> <li>▪ Environmental policy analysis/ strategy development</li> <li>▪ Scenario development</li> <li>▪ Use of information in policy making and decision making</li> <li>▪ Assessment of emerging issues and early warning</li> </ul>	DEWA/ROA UNDP
		Develop guidelines and a sourcebook on environmental policy analysis			DEWA/ROA/UNDP
	Oct '03 – Jun '04	Analyse existing data sets for the purpose of generating [integrated] national environmental indicators on the basis of requirements SoE, AEO, MEAs, and the relevant environmental goals/objectives of NEPAD, MDGs, Jo'burg Plan of Action	Provide guidelines and methodologies on data collection and analysis, scenario development	Sub-regional and in-country training on: <ul style="list-style-type: none"> <li>▪ assessment of policy options, problem-solving</li> <li>▪ scenario development and policy options for action</li> <li>▪ integrated assessments and state of environment reporting methodologies, tools and processes (analytical frameworks and indicator development — on the basis of the AEO/GEO model)</li> <li>▪ identification and selection of indicators, data requirements</li> <li>▪ harmonisation of methods for data collection/analysis and integration</li> <li>▪ modelling</li> <li>▪ quantitative and qualitative analysis of environmental trends and underlying driving forces</li> <li>▪ development of policy options and scenarios</li> </ul>	DEWA UNDP CCs



Objective(s)/Output(s)	Time-frame	Core Activities	Institutional Support	Related Training Activities	Responsibility/Partners
<b>ENHANCING CAPACITY FOR INFORMATION PACKAGING AND DISSEMINATION</b>					
<b>Reporting framework and product development</b> <b>Deliverables:</b> <ul style="list-style-type: none"> <li>▪ Guidelines for SoER</li> <li>▪ Guidelines for harmonised reporting on MEAs</li> <li>▪ Common framework for documenting information sources</li> <li>▪ Information product design guidelines</li> </ul>	Jun – Sept '03	Hold consultations with CBD and UNFCCC secretariats on approaches to harmonisation of reporting  Prepare a catalogue of reporting requirements for the MEAs, with technical guidelines on reporting objectives/requirements  Undertake information needs assessments for harmonised reporting on MEAs			Convention secretariats GRID-Arendal ENFO Dublin UNEP
		Develop guidelines for incorporating reporting processes into one harmonised framework for SoE, AEO and MEAs: <ul style="list-style-type: none"> <li>♦ National reports/communications</li> <li>♦ Thematic reporting</li> <li>♦ National Strategies and Action Plans</li> <li>♦ Information exchange (Clearinghouse Mechanisms)</li> <li>♦ Integrated assessment and reporting (AEO and Global Environmental Outlook report)</li> <li>♦ Data issues</li> <li>♦ Institutional framework issues</li> <li>♦ Capacity development</li> </ul>			Convention secretariats GRID-Arendal ENFO Dublin UNEP
		Organise policy-level consultative workshops to gain consensus on priority environmental issues in the respective countries and sub-regions, and the kind of products that would be most appropriate and useful, as well as to create awareness of state of environment reporting methodologies, tools and processes		Sub-regional training of trainers and harmonise reporting approaches  Sub-regional training on policy-oriented information products development and (re-) packaging	CCs GRID-Arendal ENFO-Dublin

Objective(s)/Output(s)	Time-frame	Core Activities	Institutional Support	Related Training Activities	Responsibility/Partners
<b>Assessment and reporting</b> <b>Deliverables:</b> <ul style="list-style-type: none"> <li>▪ National SOEs</li> <li>▪ AEO 2006 Consultative Process               <ul style="list-style-type: none"> <li>♦ Agreement on issues</li> <li>♦ Report scope and structure</li> <li>♦ Identification of data themes</li> </ul> </li> </ul>	May '03	Organise first consultative and conceptual planning meeting to agree on the main messages/focus for AEO 2006 (including agreement on the guidelines and TOR), and agree on the structure of the chapters			DEWA ROA CCs
	Jun '03	Prepare/review guidelines for SOE reporting at sub-national, national, and sub-regional levels			EIS-AFRICA
	Jun '03 – Jun '04	Produce SOEs for selected countries	Provide technical assistance to support the production of national SOEs and related products, including management of the related processes	Sub-regional training in reporting, communication and managing the SOE/AEO processes	ENFO-Dublin
<b>Communicating and exchanging environmental information:</b> <b>Deliverable:</b> <ul style="list-style-type: none"> <li>▪ Awareness</li> <li>▪ Communication strategy</li> <li>▪ Packaging of technical information:-               <ul style="list-style-type: none"> <li>♦ Policy briefs</li> <li>♦ Vital graphics</li> <li>♦ Fact sheets</li> </ul> </li> <li>▪ Physical electronic network</li> <li>▪ Dissemination and outreach</li> </ul>	Apr '03	Organise a policy-level workshop on Principle 10 of Aarhus Convention			UNEP-DEPI ENFO-Dublin
	Sep '03 – Sep '04	Promote the use of the adopted indicators as a basis for reporting on environmental issues and for use in integrated assessments			DEWA
	Jul – Sep '04	Develop, publish and disseminate information products, and provide related services	Provide support for the development and provision of targeted information services	♦ Executive seminars/workshops on prototype AEIN products for decision makers	GRID-Arendal ENFO
	Sep '03 – Jul '04	Develop and implement national environmental information portals permitting users to access environmental data and information via the internet for different applications  Set up public access points at the community level using "tele-centre" outlets for making environmental information available over the Internet ( <i>Info Kiosks</i> )	Strengthen existing national environmental information centres to package environmental information and to improve public access to such information  Provide reliable internet connectivity for designated AEIN Focal Points and partner institutions and a country-wide network linking partner institutions (AEIN Data Centres)	♦ Training in information production, dissemination, and communication skills and techniques  ♦ In-country training to improve proficiency and enhance productivity of key national-level personnel from partner institutions to use IT and Internet resources for their own internal functions, and to communicate with others	GRID-Arendal ENFO
	Jun '04	Publish and distribute information on environmental information sources			ENFO GRID-Arendal

## Implementation Schedule

	2003												2004											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
<b>PROGRAMME MANAGEMENT AND ORGANISATION</b>																								
<b>Start-up, stakeholder consultations and consensus building</b>																								
<i>Project management structure</i>	■																							
<i>Launch of implementation process</i>		■																						
<i>Sub-regional consultations</i>			■	■																				
<i>Implementation guidelines and procedures</i>			■	■	■																			
<i>Sub-regional start-up workshops</i>			■	■	■																			
<b>National-level implementation arrangements:</b>																								
<i>National implementation plans</i>			■	■	■	■																		
<i>National implementation structures</i>						■	■																	
<b>Coordination and management:</b>																								
<i>International Steering Committee meetings</i>												■												■
<i>Co-ordination</i>		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Operational control</i>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<b>Monitoring and evaluation:</b>																								
<i>Programme implementation indicators</i>											■													
<i>Programme impact assessment</i>																						■	■	■
<b>ENHANCING ENVIRONMENTAL INFORMATION NETWORKING</b>																								
<b>Assessment of information management capacity and data resources</b>																								
<i>National EIS status reports</i>			■	■	■	■																		
<i>Inventory of information resources</i>			■	■	■	■																		
<i>Institutional profiles (hydrological hazards)</i>											■													
<b>Network development and data exchange mechanisms</b>																								
<i>Data exchange principles and guidelines</i>												■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Cooperation and partnership agreements (MOUs)</i>												■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Information access procedures, mechanisms and tools:</i>																								
<i>Directory of institutions, experts and facilities</i>												■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Metadatabases</i>																						■	■	■
<i>Documentation (bibliographic) system</i>																						■	■	■
<i>Clearing-house</i>																						■	■	■
<i>Data tools</i>				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<i>Data catalogues</i>																						■	■	■

	2003												2004											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
<b>ENHANCING ANALYTICAL CAPACITY</b>																								
<b>Policy analysis and indicator framework development</b>																								
<i>Guidelines/sourcebook for environmental policy analysis</i>																								
<i>Criteria and framework for selecting indicators</i>																								
<i>Agreement on environmental indicators</i>																								
<b>Management and collation of core data sets</b>																								
<i>Data working group</i>																								
<i>Database creation</i>																								
<i>Data "packages" (national, sub-regional)</i>																								
<i>Data products</i>																								
<b>INFORMATION PACKAGING AND DISSEMINATION</b>																								
<b>Reporting framework and product development</b>																								
<i>Guidelines for SoER</i>																								
<i>Guidelines for harmonised reporting on MEAs</i>																								
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<i>Information product design guidelines</i>																								
<b>AEO 2006 Consultative Process</b>																								
<i>Agreement on issues</i>																								
<i>Report scope and structure</i>																								
<i>Identification of data themes</i>																								
<i>National state of environment reports</i>																								
<b>Communicating environmental information:</b>																								
<i>Communication strategy</i>																								
<i>Awareness</i>																								
<i>Physical electronic network</i>																								
<i>Packaging of technical information</i>																								
<i>Dissemination and outreach</i>																								

**AFRICA ENVIRONMENT INFORMATION NETWORK**  
**ASSESSMENT OF INFORMATION MANAGEMENT CAPACITY**  
**AND DATA RESOURCES**

**Inventory Questionnaire Part 1:**  
**NETWORKING AND INFORMATION MANAGEMENT CAPACITY**

*This questionnaire is part of an assessment of the status of environmental information management and networking capacity in Africa. It will serve as the basis for establishing a comprehensive inventory on environmental information resources as part of the development of a data foundation in support of environmental reporting processes. Your responses to the questions below will assist in establishing the current status of environmental information networking in your country, and the needs that have to be addressed in order to make environmental information management and networking more functional and efficient in your country, within the framework of the Africa Environment Information Network (AEIN).*

*One copy of this form should be completed per organisation or unit within the organisation as may be appropriate.*

**Section 1: Contact Details**

1. **Name of person completing questionnaire:** *Moheeb Abdl-Sattar Ebrahim*
2. **Tel**(Country-City-Number)*(202)5256452*
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5. **Acronym:**
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11. **Web site:** *www.eeaa.gov.eg*
12. **Head of organisation:***(Prof./Dr./Mr./Mrs./Ms.) Dr.*
13. **Designation:***Mohamed Sayed Khalil*
14. **Direct Tel. No.** (Country-City-Number)*(202)5256445*
15. **Email:***khalil@eeaa.gov.eg*

**Section 2: Networking and Partnerships**

1. **How could your organisation contribute most effectively to AEIN?**
  - a) Establish a national network with all the governmental agencies concerned with environmental data collection
  - b) Issue the national state of environment report.
  - c) Access the African environmental information network to share, disseminate and exchange environmental information between the concerned thirteen African countries.
2. **What are the three key things that you would expect from AEIN?**
  - a) To build capacity for using information management tools and methodology for producing or packaging information.
  - b) To develop information management tools and collect data from existing data sources.
  - c) To strengthen networking (data/information exchange), knowledge/expertise sharing at the national and sub regional level.

3. *Please provide details of the environment and sustainable development information networks, steering groups or committees with which your organisation is involved:*

Network, steering group or committee	Coordinate	Facilitate	Participate	Support
a) Blue Plan Project	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) CAPMAS	<input type="checkbox"/>	<input type="checkbox"/>	✓	
c) CEDARE	✓	<input type="checkbox"/>	✓	<input type="checkbox"/>
d) IDSC	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. *Estimate how many organisations regularly provide data or information to your organisation. Provide details of the most important of these as follows:*

Organisation	Data or information provided	Formal agreement/MoU	
a) Ministry Of Health	Environmental Indicators	<input type="checkbox"/> yes	✓no
b) Ministry Of Agriculture And Land Reclamation	Environmental Indicators	<input type="checkbox"/> yes	✓no
c) Ministry Of Water Resources And Irrigation	Environmental Indicators	<input type="checkbox"/> yes	✓no

5. *Estimate how many organisations regularly receive data or information from your organisation. Provide details of the most important of these as follows:*

Organisation	Data or information received	Formal agreement/MoU	
a) Information And Decision Support Center (IDSC)	statistical data	✓ yes	<input type="checkbox"/> no
b) CAPMAS	statistical data	<input type="checkbox"/> yes	✓no
c) Ministry of communication and information technology	statistical data	✓ yes	<input type="checkbox"/> no
d) CEDARE	environmental data	✓ yes	<input type="checkbox"/> no
e) Ministry Of Agriculture And Land Reclamation	environmental data	<input type="checkbox"/> yes	✓ no

6. *Your organisation may also share other resources, for example expertise and facilities. Provide details of the most important of these as follows:*

Organisation	Nature of cooperation	Formal agreement/MoU	
a) Ministry Of Agriculture And Land Reclamation	Expertise	<input type="checkbox"/> yes	✓no
b) Information And Decision Support Center (IDSC)	Facilities	✓yes	<input type="checkbox"/> no
c) Ministry of communication and information technology	Expertise	✓yes	<input type="checkbox"/> no
d) CEDARE	Facilities	✓yes	<input type="checkbox"/> no
e) CAPMAS	Facilities	<input type="checkbox"/> yes	✓no

7. *Please provide details of any partnerships that are being planned in the near future:*

Organisation	Proposed cooperation
a) National authority for remote sensing and space sciences	Training and purchasing satellite images
b) UNDP	To design a web site to enhance environmental knowledge for undergraduate students

### Section 3: Institutional Description

1. **Which of the following best describes your organisation (tick all that may apply)?**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Governmental | <input type="checkbox"/> Local authority |
| <input type="checkbox"/> Semi-governmental       | <input type="checkbox"/> Private         |
| <input type="checkbox"/> Academic                | <input type="checkbox"/> Research        |
| <input type="checkbox"/> Non-governmental        | <input type="checkbox"/> Non-profit      |
| <input type="checkbox"/> Other (please specify): |  |

2. **What is the mandate of your organisation (add extra sheets if necessary)?**

- Formulating environmental policies
- Preparing the necessary plans for environmental protection and environmental development projects, following up their implementation, and undertaking pilot projects.
- The agency is the national authority in charge of promoting environmental relations between Egypt and other states, as well as regional and international organizations.

3. **At what levels does your organisation operate (tick all that may apply)?**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> International           | <input type="checkbox"/> Sub-regional            | <input checked="" type="checkbox"/> National   |
| <input type="checkbox"/> State (or similar)      | <input type="checkbox"/> Provincial (or similar) | <input type="checkbox"/> District (or similar) |
| <input type="checkbox"/> Local government (City) | <input type="checkbox"/> Other (please specify): |  |

4. **Is your organisation providing information to support any the following (please tick all that may apply):**

**National Plans and Strategies**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> National Environmental Action Plan  | <input checked="" type="checkbox"/> National Conservation Strategy             |
| <input checked="" type="checkbox"/> Integrated Coastal Management Plans | <input checked="" type="checkbox"/> Soil Conservation Management Plans         |
| <input checked="" type="checkbox"/> Sustainable Forest Management Plans | <input checked="" type="checkbox"/> Integrated Water Resource Management Plans |
| <input type="checkbox"/> Other (please specify)                         |  |

5. **Regional/sub-regional agreements and International Conventions:**

- |   |  |
|---|--|
| <input type="checkbox"/> Lusaka Agreement                                   | <input type="checkbox"/> Nairobi Convention  |
| <input type="checkbox"/> Abidjan Convention                                 | <input checked="" type="checkbox"/> Bamako Convention                                  |
| <input type="checkbox"/> Algiers Convention                                 | <input type="checkbox"/> Agenda 21   |
| <input checked="" type="checkbox"/> Convention on Wetlands                  | <input checked="" type="checkbox"/> Convention on Biological Diversity                 |
| <input checked="" type="checkbox"/> Framework Convention on Climate Change  | <input checked="" type="checkbox"/> Convention to Combat Desertification               |
| <input checked="" type="checkbox"/> Migratory Species of Wild Animals       | <input checked="" type="checkbox"/> CITES <sup>2</sup>                                 |
| <input checked="" type="checkbox"/> International Tropical Timber Agreement | <input checked="" type="checkbox"/> Convention on the Prior Informed Consent Procedure |
| <input checked="" type="checkbox"/> Convention on the Law of the Sea        | <input type="checkbox"/> Habitat Agenda  |
| <input checked="" type="checkbox"/> Kyoto Protocol                          | <input checked="" type="checkbox"/> Montreal Protocol                                  |
| <input checked="" type="checkbox"/> Persistent Organic Pollutants           | <input type="checkbox"/> Other (please specify)  |

<sup>2</sup> Convention on International Trade in Endangered Species of Wild Fauna and Flora

6. Please indicate any other programmes or projects that your organisation reports to, which may be relevant to this survey:

- a) none
- b)
- c)

#### Section 4: Information Management

1. What are your organisation's/unit's core environmental information management functions (please tick all that may apply)?

- |  |  |
|--|--|
| <input type="checkbox"/> Data gathering                              | <input type="checkbox"/> Reporting                                 |
| <input type="checkbox"/> Data collation                              | <input type="checkbox"/> Data warehousing                          |
| <input type="checkbox"/> Library and archiving                       | <input type="checkbox"/> Dissemination                             |
| <input checked="" type="checkbox"/> Data interpretation and analysis | <input checked="" type="checkbox"/> Visualisation/Decision-Support |
| <input type="checkbox"/> Other (please specify)                      |  |

2. What is the geographic coverage for these activities (please tick all that may apply)?

- |  |  |
|--|--|
| <input type="checkbox"/> Sub-regional            | <input type="checkbox"/> Trans-boundary          |
| <input checked="" type="checkbox"/> National     | <input type="checkbox"/> State (or similar)      |
| <input type="checkbox"/> Provincial (or similar) | <input type="checkbox"/> District (or similar)   |
| <input type="checkbox"/> Local                   | <input type="checkbox"/> Other (please specify): |

3. Who are the major users of your environmental information (please tick all that may apply)?

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> My organisation (internal) | <input checked="" type="checkbox"/> National government |
| <input type="checkbox"/> International agencies                | <input type="checkbox"/> Private sector                 |
| <input type="checkbox"/> Provincial/district administration    | <input type="checkbox"/> Non-governmental organisations |
| <input type="checkbox"/> Other (please specify)                |   |

4. Does your organisation have an information strategy?  yes  no

5. Does your organisation have a data policy or mechanism, including data exchange?  yes  no

6. How does your organisation grant access to environmental information?

- |   |   |
|---|---|
| <input type="checkbox"/> Unrestricted public access   | <input type="checkbox"/> Unavailable for external use |
| <input checked="" type="checkbox"/> Limited by policy | <input type="checkbox"/> Adhoc/informal/selective     |
| <input type="checkbox"/> By individual request        | <input type="checkbox"/> Other (please specify) ..... |

7. Where access is granted what policy applies (tick one)?

- |   |  |
|---|--|
| <input type="checkbox"/> Charged at market value  | <input type="checkbox"/> Charged on full cost-recovery basis |
| <input type="checkbox"/> Charged at cost of media | <input type="checkbox"/> Adhoc                               |
| <input type="checkbox"/> Free to most             | <input checked="" type="checkbox"/> Free to all              |
| <input type="checkbox"/> Other (please specify)   |  |

8. *Where access is granted, in what formats are the data available (please tick all that may apply)?*

- Hardcopy                       Floppy disk                       CD-ROM                       Email  
 Internet (FTP)                       Magnetic tape                       DAT                       Private network  
 Other (please specify):

9. *Has the information/data been fully documented to assist external users?*     yes                       no10. *What are the main uses of the data/information you provide?*

- Decision support                       Planning/zoning                       Operations  
 Management                       Policy formulation                       Licensing  
 Monitoring compliance                       Enforcement of regulations                       Research  
 Other (please specify)

11. *Indicate whether your organisation/unit manages or uses/needs any of the following information in fulfilling its functions:*

		Manages	Uses	Needs
a) <b>Land use</b>	Forestry	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Agriculture/livestock	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Fisheries	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Nature conservation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Tourism	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Water	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Mining	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Energy	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Transport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Urban planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other (please specify): _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) <b>Ecosystems</b>	Forest	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Woodland/scrub	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Grassland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Freshwater	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Coastal and marine	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Dryland/desert	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Highland/mountain	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other (please specify): _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) <b>Species/genes</b>	Mammals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Birds	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Reptiles/amphibians	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Fish	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Insects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Other invertebrates	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Plants (higher/lower)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Other (please specify): corals _____		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
d) <b>Social/economic</b>	Sustainable development	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Land tenure and property	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Demography and population	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Policies, plans and laws	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Public administration and governance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Trade and industry	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other (please specify): _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

e) <b>Physical features</b>	Hydrology	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Geology	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Soils	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Topography	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Climate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Other (please specify): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

---

### Section 5: Capacity in Environmental Information Management

1. How many staff members in your organisation/unit are trained in the following areas at the levels indicated?

	Post graduate	Graduate	Diploma	Short course	Total
a) Data collection/monitoring					
b) Data entry/quality-assurance		2			2
c) Data analysis	2	3			5
d) Technical writing		1			1
e) Graphic design/publishing		2			2
f) Communications		4			4
g) Management information systems		6			6
h) Geographic information systems		2			2
i) Remote sensing	1	2			3
j) Database development	1	2			3
k) Systems management		4			4
l) Internet access/web-site		1			1
m) Other technical assistance					

2. Which are the top three areas of environmental information management skills would you like to add to you staff?

- Performance Tuning
- 
-

### Section 6: Computing Environment and Communication

This section should be completed by your systems administrator.

Name: Khalid Hassan Sadek

E-mail: kh\_sadek@hotmail.com

1. Indicate what facilities your organisation owns or has access to — in good working order. (Please tick all that may apply):

a) Computers

System <sup>3</sup>	Operating System	Number	Processor	Memory	Hard Disk Capacity
Server	Windows 2000 Server	4	Intel – Xeon	1.G.B.	2*36 G.B., 4*73 G.B. / 3*36 G.B.
Server	Windows 2000 Server	9	PII – PIII	256 - 512 M.B.	2*9 G.B. / 5*18 G.B.
Server	Windows 2000 Server	1	PIV	512 M.B.	3*36 G.B.
Workstation	Windows 2000 Server / prof.	7	PIII	256 – 512 M.B	2*9 G.B. , 1*36 G.B.
Desktop	Windows 2000 Professional	450	PII/PIII/PIV	32 - 128 M.B.	6 - 40 G.B.
Laptop	Windows 2000 professional	25	PII/PIII/PIV	128 – 256 M.B.	4 - 30 G.B.

2. Local Area Network

yes  no Number of users: 450

Network Operating System:

**Windows XP/2000 /NT Server**

yes  no

Novell NetWare

yes  no

UNIX

yes  no Version:

Linux

yes  no Distribution:

Other (please specify): \_\_\_\_\_

3. Telecommunication and networking

Telephone

yes  no

Fax

yes  no

total: 1

Do staff members have individual e-mail accounts

yes  no

total: 33

Internet access points

yes  no

total: 200

4. Internet access and bandwidth

Dial-up (normal phone line)

yes

no

Max. Speed:

Dial-up (ISDN)

yes

no

Dial-up (DSL)

yes

no

Type:

Direct access (leased line)

yes

no

Data Rate : 256 kb/s

Fibre optic network

yes

no

Microwave/Radio link

yes

no

Satellite link

yes

no

5. Data input/output

Digitising tables

yes

no

total/size: 6 / A0

Scanners

yes

no

total/size: 2 / A0 , 2 / A4

Plotters

yes

no

total/size: 4 / A0

Laser printers

yes

no

total/size:200 / A3 and A4

Colour printers

yes

no

total: 8 A3 and A4

Other (please specify): \_\_\_\_\_

\_\_\_\_\_

<sup>3</sup> Please indicate if Server, Workstation, Desktop or Laptop

6. **Applications software**
- |                       |   |                             |                            |
|-----------------------|---|-----------------------------|----------------------------|
| Office productivity   | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | type/version: MS Office XP |
| Desktop publishing    | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | users: 2                   |
| Graphics/presentation | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |                            |
| HTML editing          | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | type: front page/ Interdev |
| Internet client       | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | type/version: Iexplorer 5  |
| Web server            | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | type/version: IIS / 5      |
| Statistical/modelling | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | users: 2                   |

Other (please specify): \_\_\_\_\_  
 \_\_\_\_\_

7. **Database management systems**

- |        |   |  |           |
|--------|---|--|-----------|
| Access | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no            | users: 30 |
| xBASE  | <input type="checkbox"/> yes            | <input checked="" type="checkbox"/> no | users:    |
| Oracle | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no            | users: 45 |

Other (please specify): \_\_\_\_\_

8. **Geo-data processing**

- |                                 |   |                             |           |
|---------------------------------|---|-----------------------------|-----------|
| GIS                             | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | users: 20 |
| Mapping                         | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | users: 10 |
| Image processing                | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | users: 6  |
| Global Position System services | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | users: 20 |

Other (please specify): \_\_\_\_\_

9. **Communication/Groupware**

- |  |   |  |                             |
|--|---|--|-----------------------------|
| Directory services (shared address book, staff lists etc.) | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no            | users: 400 Win2000 Server   |
| Shared calendar (meeting schedules, events etc.)           | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no            | users: 10 name/version:     |
| News   | <input type="checkbox"/> yes            | <input checked="" type="checkbox"/> no | users: name/version:        |
| Lists with publications, projects, reports, datasets etc.  | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no            | users: 10 name/version: IHH |

Other (please specify): \_\_\_\_\_

10. **Miscellaneous**

- |                   |   |                             |             |
|-------------------|---|-----------------------------|-------------|
| Library           | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | books: 7000 |
| Photocopier       | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | total: 2    |
| In-house printing | <input type="checkbox"/> yes            | <input type="checkbox"/> no |             |

Other (please specify): \_\_\_\_\_  
 \_\_\_\_\_

11. **In the order of priorities, which are the three facilities that your organisation most needs to acquire or strengthen (please add extra sheets if necessary)?**

- Building an information network incorporating all our relevant participants in Egypt
- Supporting the network infrastructure
- Capacity Building

---

**Section 7: External Communication**

1. **Does your organisation use any of the following external information sources/services regularly? If yes, which one(s) and how often (e.g. 5 times a week)?**

- |   |   |                             |
|---|---|-----------------------------|
| a) Web sites and gateways of national and international organisations | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| Source/service: www.unep.org .....                                    | Frequency: 5 .....                      |                             |
| Source/service: www.epa.gov .....                                     | Frequency: 5 .....                      |                             |
| Source/service: www.who.int/en.....                                   | Frequency: 5 .....                      |                             |

- b) Newsgroups, discussion forums:  yes  no  
Service:.....Frequency:.....  
Service:.....Frequency:.....  
Service:.....Frequency:.....
- c) Search engines, directory services or metadata indices  yes  no  
Service:hazard.com/msds.....Frequency: 5 .....
- Service:.....Frequency:.....  
Service:.....Frequency:.....

2. ***In which format do you mainly retrieve information from the internet? Please state percentages of total information retrieval?***

- Texts, reports
- Tables, charts
- Cartographic data, maps (editable or non editable)
- GIS or remote sensing data sets 8fully processed or for further processing
- Other (please specify): \_\_\_\_\_

**AFRICA ENVIRONMENT INFORMATION NETWORK**  
**ASSESSMENT OF INFORMATION MANAGEMENT CAPACITY**  
**AND DATA RESOURCES**

**Inventory Questionnaire Part 2:**  
**ASSESSMENT OF DATA AND INFORMATION RESOURCES**

*This questionnaire is part of an assessment of the status of environmental information management and networking capacity in Africa. It will serve as the basis for establishing a comprehensive inventory on environmental information resources as part of the development of a data foundation in support of environmental reporting processes. Your responses to the questions below will assist in establishing the current status of environmental information networking in your country, and the needs that have to be addressed in order to make environmental information management and networking more functional and efficient in your country, within the framework of the Africa Environment Information Network.*

*One copy of this form should be completed per organisation or unit within the organisation as may be appropriate.*

**Section 1: Contact Details**

1. **Contact person: Moheeb Abdul-Sattar Ebrahim**      2. **Position: General Director of Systems, Programs and Operation**
2. **Tel (Country-City-Number)(202)5256452**      3. **Email: moheeb\_sattar@eeaa.gov.eg**

**Section 2: Data/Information Sources**

1. **What is the source of data/information (tick all that may apply):**

- |   |   |
|---|---|
| <input type="checkbox"/> Primary research                             | <input checked="" type="checkbox"/> Routine data collection |
| <input checked="" type="checkbox"/> Acquired from other organisations | <input type="checkbox"/> Public domain                      |
| <input type="checkbox"/> Mixture                                      | <input type="checkbox"/> Other (please specify):            |

2. **If not primary research, please indicate the original source(s):**

3. **Form/type of data (tick all that may apply):**

- | <b>Hard-copy formats:</b>                              | <b>Audio-visual formats:</b>                         | <b>Electronic formats:</b>                                  | <b>Other:</b>                                |
|--|--|---|--|
| <input checked="" type="checkbox"/> Books/reports      | <input checked="" type="checkbox"/> Sound recordings | <input checked="" type="checkbox"/> Word processor files    | <input type="checkbox"/> Mixture             |
| <input checked="" type="checkbox"/> Forms/notes/tables | <input checked="" type="checkbox"/> Photographs      | <input checked="" type="checkbox"/> Spreadsheet             | <input type="checkbox"/> Other digital files |
| <input checked="" type="checkbox"/> Pictures           | <input checked="" type="checkbox"/> Video/film       | <input checked="" type="checkbox"/> Database                | Please specify:                              |
| <input type="checkbox"/> Card index                    |  | <input checked="" type="checkbox"/> GIS coverage            |  |
| <input checked="" type="checkbox"/> Maps               |  | <input checked="" type="checkbox"/> Remotely sensed imagery |  |

**Other (please specify):**

4. **What do you consider to be the limitations of your data/information for environmental management and sustainable development planning? (Tick all that may apply):**

- |   |  |  |
|---|--|--|
| <input checked="" type="checkbox"/> Age of data set | <input checked="" type="checkbox"/> Scale            | <input checked="" type="checkbox"/> Resolution |
| <input checked="" type="checkbox"/> Completeness    | <input checked="" type="checkbox"/> Quality/Accuracy |  |

---

**Section 3: Access Procedures****1. Which of the following best describes access to the data (tick one)?**

- Unrestricted       Restricted to some  
 Restricted to most     Unavailable for external use

**2. Where access is provided, which of the following applies (tick one)?**

- Free                       Free to most               Free to some               Charged

**3. Where charges are made, how are these determined (optionally tick one)?**

- Cost recovery       Cost plus overhead       Market value

**4. Where access is provided, in what formats are the data available (tick any which apply)?**

- Hardcopy       Floppy disk               CD-ROM               Email  
 Internet (FTP)     Magnetic tape               DAT                       Private network

Other (please specify):

**5. Has the dataset been documented for external users?                       yes                       no****6. Where access is provided, briefly describe the recommended access procedures:**

1. The requesting individual / firm submits a written request regarding the specified dataset.
2. This request should be approved by the head of Information And Computer Center.
3. The required dataset is handled to the requesting individual / firm in the suitable media.

**Section 4: Data Sets**

1. Please complete the following table for **digital** data sets held by your institution. Make copies of the table and use for data themes with many variables (e.g., climate, soils, etc.) and information not indicated here.

TYPE OF DATA	THEME/PARAMETER	SOURCE FORMAT	COVERAGE				FREQUENCY	LAST UPDATE	SCALE(S)	PRODUCT FORMAT			
			LOC	PROV	NAT'L	OTH				<input type="checkbox"/> Map	<input type="checkbox"/> Tables	<input type="checkbox"/> Reports	<input type="checkbox"/> Other
Physiography/Topography	Contour Shape file / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other			<input checked="" type="checkbox"/>		No	2000	1M	<input checked="" type="checkbox"/> Map	<input type="checkbox"/> Tables	<input type="checkbox"/> Reports	<input type="checkbox"/> Other
	Spot Shape file / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input checked="" type="checkbox"/> Map	<input type="checkbox"/> Tables	<input type="checkbox"/> Reports	<input type="checkbox"/> Other
Soils		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map	<input type="checkbox"/> Tables	<input type="checkbox"/> Reports	<input type="checkbox"/> Other
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map	<input type="checkbox"/> Tables	<input type="checkbox"/> Reports	<input type="checkbox"/> Other
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map	<input type="checkbox"/> Tables	<input type="checkbox"/> Reports	<input type="checkbox"/> Other
Surface geology	Coverage / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other					No	1999	250K	<input checked="" type="checkbox"/> Map	<input type="checkbox"/> Tables	<input type="checkbox"/> Reports	<input type="checkbox"/> Other
Structural geology	Coverage / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other					No	1999	250K	<input checked="" type="checkbox"/> Map	<input type="checkbox"/> Tables	<input type="checkbox"/> Reports	<input type="checkbox"/> Other
Climate		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map	<input type="checkbox"/> Tables	<input type="checkbox"/> Reports	<input type="checkbox"/> Other
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map	<input type="checkbox"/> Tables	<input type="checkbox"/> Reports	<input type="checkbox"/> Other

TYPE OF DATA	THEME/PARAMETER	SOURCE FORMAT	COVERAGE				FREQUENCY	LAST UPDATE	SCALE(S)	PRODUCT FORMAT	
			LOC	PROV	NAT'L	OTH					
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other							<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other		
Surface water		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other							<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other		
Wetlands		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other							<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other		
Groundwater		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other							<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other		
Hydro-geology	Coverage / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other		<input checked="" type="checkbox"/>			NO	1999	2 million	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
Satellite imagery	1- Spot5 multispectral	<input type="checkbox"/> Map <input type="checkbox"/> Tables <input checked="" type="checkbox"/> Other		<input checked="" type="checkbox"/>			NO	1997 2002	Resolution 20 Meters	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
	2- Spot5 panchromatic	<input type="checkbox"/> Map <input type="checkbox"/> Tables <input checked="" type="checkbox"/> Other						1997 2002	1:50000 20 m	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
	3- Utm TM Multispectral	<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other		<input checked="" type="checkbox"/>			NO	1982 1998	1: 100000 30 m	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
Aerial photographs		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	

TYPE OF DATA	THEME/PARAMETER	SOURCE FORMAT	COVERAGE				FREQUENCY	LAST UPDATE	SCALE(S)	PRODUCT FORMAT		
			LOC	PROV	NAT'L	OTH				<input type="checkbox"/> Map	<input type="checkbox"/> Tables	
Fisheries		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other							<input type="checkbox"/> Map	<input type="checkbox"/> Tables		
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other							<input type="checkbox"/> Reports	<input type="checkbox"/> Other		
Land cover	Greater Cairo / Geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other	<input checked="" type="checkbox"/>					2002	1:50k	<input checked="" type="checkbox"/> Map	<input type="checkbox"/> Tables	
Land use	Greater Cairo / Geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other	<input checked="" type="checkbox"/>					2002	1:50k	<input checked="" type="checkbox"/> Reports	<input type="checkbox"/> Other	
Land capability		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map	<input type="checkbox"/> Tables	
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Reports	<input type="checkbox"/> Other	
Forestry		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map	<input type="checkbox"/> Tables	
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Reports	<input type="checkbox"/> Other	
Wildlife		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map	<input type="checkbox"/> Tables	
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Reports	<input type="checkbox"/> Other	
Population	Shape / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other			<input checked="" type="checkbox"/>			NO	1996	50k	<input checked="" type="checkbox"/> Map	<input type="checkbox"/> Tables
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other									<input checked="" type="checkbox"/> Reports	<input type="checkbox"/> Other
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other									<input type="checkbox"/> Map	<input type="checkbox"/> Tables
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other									<input type="checkbox"/> Reports	<input type="checkbox"/> Other
Roads	Shape / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other			<input checked="" type="checkbox"/>			NO	1985	250k	<input checked="" type="checkbox"/> Map	<input type="checkbox"/> Tables
											<input checked="" type="checkbox"/> Reports	<input type="checkbox"/> Other

TYPE OF DATA	THEME/PARAMETER	SOURCE FORMAT	COVERAGE				FREQUENCY	LAST UPDATE	SCALE(S)	PRODUCT FORMAT	
			LOC	PROV	NAT'L	OTH					
Railroads	Coverage / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other		<input checked="" type="checkbox"/>			NO	1999	250k	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
Boundaries	Shape / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other			<input checked="" type="checkbox"/>		NO	1996	50k	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
	Shape / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other		<input checked="" type="checkbox"/>			NO	1996	50k	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
	Shape / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other	<input checked="" type="checkbox"/>				NO	1996	50k	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
District capitals	Shape / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other					NO	1996	50k	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
Major settlements		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other			<input checked="" type="checkbox"/>					<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
Urban areas	Shape / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other					NO	1999	250k	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
Region capitals		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Reports <input type="checkbox"/> Other	
Crop types/distribution	Rice production in wadi and delta / geographic	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other		<input checked="" type="checkbox"/>			YES	2004	50k	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Tables <input checked="" type="checkbox"/> Reports <input type="checkbox"/> Other	

TYPE OF DATA	THEME/PARAMETER	SOURCE FORMAT	COVERAGE				FREQUENCY	LAST UPDATE	SCALE(S)	PRODUCT FORMAT	
			LOC	PROV	NAT'L	OTH					
Crop production	Wheat production Governorate Shape / geographic	<input type="checkbox"/> Map <input checked="" type="checkbox"/> Tables <input type="checkbox"/> Other							<input checked="" type="checkbox"/> Map <input checked="" type="checkbox"/> Reports	<input type="checkbox"/> Tables <input type="checkbox"/> Other	
Livestock distribution		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other							<input type="checkbox"/> Map <input type="checkbox"/> Reports	<input type="checkbox"/> Tables <input type="checkbox"/> Other	
Species distribution		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other							<input type="checkbox"/> Map <input type="checkbox"/> Reports	<input type="checkbox"/> Tables <input type="checkbox"/> Other	
Ecosystems	Shape red sea	<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other							<input checked="" type="checkbox"/> Map <input type="checkbox"/> Reports	<input type="checkbox"/> Tables <input type="checkbox"/> Other	
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other							<input type="checkbox"/> Map <input type="checkbox"/> Reports	<input type="checkbox"/> Tables <input type="checkbox"/> Other	
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other							<input type="checkbox"/> Map <input type="checkbox"/> Reports	<input type="checkbox"/> Tables <input type="checkbox"/> Other	
Tourism	Shape	<input checked="" type="checkbox"/> Map <input checked="" type="checkbox"/> Tables <input type="checkbox"/> Other	<input checked="" type="checkbox"/>				NO	1996	50k	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Reports	<input type="checkbox"/> Tables <input type="checkbox"/> Other
Water	Shape	<input checked="" type="checkbox"/> Map <input checked="" type="checkbox"/> Tables <input type="checkbox"/> Other	<input checked="" type="checkbox"/>				NO	1996	50k	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Reports	<input type="checkbox"/> Tables <input type="checkbox"/> Other
Pollution	Shape	<input checked="" type="checkbox"/> Map <input checked="" type="checkbox"/> Tables <input type="checkbox"/> Other	<input checked="" type="checkbox"/>				NO	1996	50k	<input checked="" type="checkbox"/> Map <input type="checkbox"/> Reports	<input type="checkbox"/> Tables <input type="checkbox"/> Other
		<input type="checkbox"/> Map <input type="checkbox"/> Tables <input type="checkbox"/> Other								<input type="checkbox"/> Map <input type="checkbox"/> Reports	<input type="checkbox"/> Tables <input type="checkbox"/> Other

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