



# Integrated Environmental Assessment

Report on the Workshop  
for the National Reporting  
Toolkit (NRT)

9-12 December, 2013

Abu Dhabi, UAE



# Integrated Environmental Assessment



## Report on the Workshop

for the National Reporting Toolkit (NRT)

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### **Module Trainers**

Adel Farid AbdelKader, *UNEP-ROWA*

Ahmed Abdelrehim, *CEDARE*

Asma Ali Abahussain, *AGU*

László Pintér, *CEU*

Marc Levy, *CU*

### **Partners Presentations**

Clive Swan, *AGEDI-EAD*

Craig Mills, *UNEP-WCMC*

Jonathan Smith, *UNEP-WCMC*

Larissa Owen, *AGEDI-EAD*

Tamer Abdulkadir, *AGEDI*

### **Countries Presentations**

Abeer Albari, *Kuwait Environmental Public Authority*

Ameen Mohammed Qaid, *Environment Protection Authority, Yemen*

### **Support Training Topics Presentations**

Aymen Solyman, *CEDARE*

Ashbindu Singh, *UNEP (Former)*

Lindsey Harriman, *UNEP/GRID-Sioux Falls*





## Training Topics

- Module 1: GEO approach to integrated environmental assessment
- Module 2: National IEA process, design and organization
- Using GIS and Remote Sensing for Demonstrating Environmental Change
- Module 3: Developing an impact strategy for your IEA
- Module 4: Monitoring, data and indicators
- Module 5: Integrated analysis of environmental trends and policies
- Module 6: Scenario development and analysis
- Module VIA: Vulnerability and Impact assessment for Adaptation to Climate Change
- Module 7: Creating communication outputs from the assessment
- Module 8: Monitoring, evaluation and learning: For improvement and increased impact of the IEA process



# Workshop

for the National Reporting Toolkit  
(NRT)





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## Acronyms of Participating Organisations

<b>AGEDI</b>	Abu Dhabi Global Environment Data Initiative
<b>AGU</b>	Arabian Gulf University
<b>CEDARE</b>	Centre for Environment and Development for the Arab Region and Europe
<b>CEU</b>	Central European University
<b>CU</b>	Columbia University
<b>EAD</b>	Environment Agency - Abu Dhabi
<b>LAS</b>	League of Arab States
<b>UNEP</b>	United Nations Environment Programme
<b>UNEP/GRID-Sioux Falls</b>	United Nations Environment Programme Global Resource Information Database-Sioux Falls
<b>UNEP-ROWA</b>	United Nations Environment Programme Regional Office for West Asia
<b>UNEP-WCMC</b>	United Nations Environment Programme World Conservation Monitoring Centre



## Introduction

Abu Dhabi Global Environmental Data Initiative (AGEDI), Environment Agency Abu Dhabi (EAD), United Nations Environment Programme (UNEP) and The Centre for Environment and Development for Arab Region and Europe (CEDARE) organized the training workshop on Integrated Environmental Assessment (IEA) for the National Reporting Toolkit (NRT). The workshop was conducted in collaboration with Colombia University, Arabian Gulf University, Central European University and UNEP World Conservation Monitoring Centre (UNEP-WCMC).

The methodology underlying IEA has been pioneered, championed and used by a number of UNEP's flagship assessment reports to analyse the status and direction of the regional and global environment. UNEP defines IEA as the "process of producing and communicating future-oriented, policy-relevant information on key interactions between the natural environment and human society". As a key measure of Global Environment Outlook (GEO) success since the publication of the first global report in 1996, the GEO approach to environmental assessment and reporting has been adopted by an increasing number of countries and organizations at the regional, national and sub-national level.

The workshop training materials are based on UNEP's customized IEA training manual for the Arab Region which focuses on the "Driving Forces-Pressures-State-Impact-Responses (DPSIR) Framework", used for State of the Environment Reporting (SOER). The manual aimed to provide the participants with a greater understanding of the IEA process and hence to investigate how experts and institutions can best integrate the national assessment in innovative tools such as the National Reporting Toolkit (NRT) in the future.

The National Reporting Toolkit (NRT) is an online system, using templates to generate reports, which will increase the ease with which countries generate, verify and publish data, information and knowledge on the State of the Environment. The web-based system aims to display information related to nationally relevant needs and issues across environmental, social and economic domains.

## Workshop Objectives

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The purpose of the IEA Training Manual is to help build capacity for forward-looking Integrated Environmental Assessment (IEA) and reporting. The workshop has been designated to maximize the opportunity for networking and co-operation between participating experts. More particularly, the workshop main objectives are to :

1. Understand why the IEA approach is an effective way of developing policy relevant recommendations about the state of the environment and its interaction with human development.
2. Provide an overview of why the IEA process is important, how it is established and governed, who would participate and in what role. It gives advice on the allocation of resources, and explains the stages involved in setting up and implementing an IEA process.
3. Understand methods and strategies to position and deliver a national Integrated Environmental Assessment (IEA), so that it can have real impact on decision-making, environmental policy and practice at national and local levels.
4. Provide participants with a number of tools and techniques necessary to complete the data collection and indicator development aspects for an IEA.
5. Develop an understanding of how to use this framework to identify the drivers of human development and associated pressures that, along with natural processes, affect the state and trends of the environment.
6. Help to develop environmental scenarios and analyse them, either in terms of the impact they would have on existing policies, or the kinds of policies that would be needed in order for a particular scenario to unfold.
7. Guide participants through the communications processes, showing them how to get their messages to the audiences they want to reach.
8. Offer tools to help participants monitor and evaluate the effectiveness of their national or sub-national IEA.
9. Describe the process for addressing climate change in the context of other development priorities and ecosystems to help decision-makers move towards more sustainable development pathways and ecosystem resilience.

## Venue and Participants

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The Workshop for the National Reporting Toolkit (NRT) was held from 9-12 December 2014 at the Radisson Blu, Yas Island, Abu Dhabi Hotel.

The workshop was attended by 62 participants representing Gulf cooperation Council (GCC), Jordan and Yemen, the workshop organizers: AGEDI, EAD, UNEP-ROWA and CEDARE as well as experts and stakeholders from academia (Columbia University, Central European University and Arabian Gulf University), relevant ministries, national institutions, international organizations, and NGOs.



Day

1

# Day 1

Monday 9 December, 2013

## Integrated Environmental Assessment

Workshop  
for the National Reporting  
Toolkit (NRT)

**Presenters:**

Mr. Ahmed Baharoon, *AGEDI-EAD*

Mr. Clive Swan, *AGEDI-EAD*

Dr. Ahmed Abdelrehim, *CEDARE*

Dr. Adel AbdelKader, *UNEP-ROWA*

Dr. Asma Abahussain, *AGU*

Ms. Lindsey Harriman, *UNEP/GRID-Sioux Falls*

Dr. Amyen Solyman, *CEDARE*



DAY

1

## Monday 9 December, 2013 Inauguration and Opening Speeches

The Inauguration Session of this four day workshop was held at the main meeting hall at Radisson Blu, Yas Island, Abu Dhabi Hotel. The workshop was inaugurated by Mr. Ahmed Baharoon, Managing Director Environment Agency - Abu Dhabi, Dr. Adel Farid Abdelkader, Regional Coordinator, UNEP Regional Office for West Asia, and Dr. Ahmed Abdelrehim, Regional Programme Manager, Knowledge Management Programme, CEDARE.

Mr. Ahmed Baharoon, (Managing Director, Environment Agency Abu Dhabi); welcomed the participants and highlighted the importance AGEDI places in working with its partners, members and stakeholders, to achieve a more sustainable future through 'best-impact' access to environmental and societal data. Mr. Baharoon placed special attention to the importance of taking this opportunity for networking and enhancing the cooperation among the participating experts.

He indicated that the lack of quality, quantifiable environmental data has proven a major hindrance to the global process of achieving sustainable development. Mr. Baharoon expressed his gratitude to workshop participants, CEDARE, UNEP and the partners' institutions, for their considerable efforts and excellent collaboration for this workshop.

**“This workshop is an important step forward towards filling the gaps of environmental information”.**

*Mr. Ahmed Baharoon, AGEDI-EAD*



Dr. Ahmed Abdelrehim, Regional Programme Manager, Knowledge Management Programme (KMP), CEDARE, thanked the United Arab Emirates for the full support it has given Egypt and the tremendous support that AGEDI has provided to CEDARE on behalf of Her Excellency, Dr. Nadia Makram Ebeid, Executive Director CEDARE. Dr. Abdelrehim also expressed his appreciation to the Abu Dhabi Environment Agency and the workshop's main partners: UNEP, Colombia University, Arabian Gulf University and the Central European University. He particularly thanked the participants, who took the time to attend, despite their busy schedules.

He explained that this workshop was in line with CEDARE's mission of "Teaming up with countries and institutions, to weave and balance economic, environmental and social priorities in policies and actions, for a more innovative, people-centred, inclusive and sustainable future, ingrained in the central principle of environment and development for human well-being".

**"The greater we know about our natural environment, the more we realize that we need to know".**

*Dr. Ahmed Abdelrehim, CEDARE*



**"We are building a process and providing institutional capacity building to support sound decision making".**

*Dr. Adel AbdelKader, UNEP-ROWA*

Dr. Adel AbdelKader, Regional Coordinator, UNEP Regional Office for West Asia (UNEP-ROWA), thanked the Ministry of Environment and Water - Dubai specially Ms. Aisha Al Abdooli, Undersecretary For Environmental Affairs Sector, AGEDI, League of Arab States (LAS), and CEDARE for their support to execute this training, on behalf of Achim Steiner, United Nations Under-Secretary General and Executive Director, UNEP, and Dr. Iyad Abumoghli, Regional Director and Representative for the UNEP Regional Office for West Asia (ROWA).

He welcomed the experts and highlighted the importance of Integrated Environmental Assessments (IEA) and State of Environment reports (SoE) in identifying environmental challenges and ways to manage them in a manner that formulates sound environmental decisions and policies, sound environmental management, as well as work plans for environmental planning that support international agreements.

Mr. Clive swan welcomed the participants and presented an overview of workshop administrative issues. He informed the participants about the services and facilities that were provided by AGEDI. Mr. Clive explained the daily logistical arrangements. He asked the participants to contact him, AGEDI or CEDARE team to clarify or facilitate any problems.

## Demonstration of the workshop online system

**Dr. Ahmed Abdelrehim, CEDARE**

Dr. Abdelrehim presented an overview of the workshop objectives highlighting the main tools provided to all participants and how these tools could be used throughout the workshop. He stressed on the fact that all the training materials and modules, downloaded on the tablets, were uploaded on the workshop web site and inserted in the flash memories

which were distributed to all participants. He indicated that this workshop was intentionally designated in a “techno-centric approach”, as a conscious effort to reduce the use of paper, in line with AGEDI, UNEP and Cedare’s conservation policies.

Dr. Amyen Solyman (Spatial Analysis Expert, CEDARE) presented the participants with a “guided tour” on the IEA workshop website ([gis.cedare.int/iea\\_uae](http://gis.cedare.int/iea_uae)), demonstrating how all workshop training materials are available and updated on the website, day by day.



*Dr. Ahmed Abdelrehim, CEDARE*



*Dr. Amyen Solyman, CEDARE*

## Expert presentations: day 1

### I. Module I: The GEO Approach to Integrated Environmental Assessment,

Dr. Adel AbdelKader, UNEP-ROWA

Dr. Adel AbdelKader highlighted that the objective of this module, which is to introduce the participants to the concept of Integrated Environmental Assessment (IEA) and the reporting approach based on the Global Environment Outlook (GEO) Process of the United Nations Environment Programme (UNEP). He explained that UNEP is a leading organization in assessing and sharing information for the state of the global environment, and highlights the important link between the state of environment and the state of human well-being.



Dr. Adel AbdelKader, UNEP-ROWA

He presented the participants with an overview of the IEA methodology and UNEP's activities in this area. The presentation aimed to give the participants: (i) a clear definition and understanding about the IEA (ii) how IEA knowledge and data can help decision makers to make appropriate decisions regarding environmental issues; (iii) skills on: monitoring, data gathering, data arrangement, and data transfer into information (iv) creating the knowledge to share with policy and decision-makers, (v) the importance of using various scenarios for

better decision-making, (vi) differences between effective assessment and ineffective assessment, (vii) the importance of using scientifically documented data and its analysis, (viii) the importance of utilizing modern technologies in state of the environment reporting, (ix) the importance of stakeholder participation from diverse sectors during the assessment process, and (x) the importance of being up-to-date with international and global environmental trends, and relate them to the regional level.

### Discussion

Questions were raised about the GEO structure, its frequency and applicability of the GEO approach to the national level SOE reporting. In response, Dr. Adel highlighted the need for monitored and clear steps that the countries should follow through the preparation of the assessment reports. He noted that building consensus, supporting regional and national issues with scientific credible data, political relevance and participatory approach in conducting the assessment are ways to convince stakeholders about environmental issue. Remarks were raised that conflicts are not only occurred from polluters, it can also come happened within public institutions.



Participants

Dr. Adel explained that a successful impact strategy has to focus on impacting the minds of decision-makers and stakeholders which can be a labor union, presets, ... basically anyone who can influence people's behavior.

## 2. Module 2: National IEA process design and organization

Dr. Asma Abu Hussain, AGU



Dr. Asma Abu Hussain, AGU

In her presentation Dr. Asma highlighted that this module on National IEA process design and organization, is based on UNEP's GEO approach to the IEA. It provides an overview of why the process is important, how it is established and governed, who would participate and in what role. It gives advice on the allocation of resources, and explains the stages involved in setting up and implementing a GEO-based IEA process. It gives a better understanding of the role and structure of the process, and the participant role in managing it. This module also explains how other modules in this resource book fit into the IEA process.

Dr. Asma highlighted that the main objectives of the IEA is to (i) involve policy-makers in order to secure their support for the process and its key findings and (ii) to facilitate the process of interaction based on a common methodology, fostering the key dialogue between science and policy.

She stressed that environmental assessments are not just a report, it's an important ongoing process. She discussed the data sources and highlighted the impact of stakeholder participation, focusing on the importance of diversity as an essential requisite during the process of collecting integrated data. Dr. Asma also discussed the differences between the IEA and the SOE reports, and explained the key attributes and the basic conditions required for a successful IEA process, through seven typical stages its activities and outputs.

## Discussion

Replying to questions about the frequency of the IEA process, Dr. Asma explained the reasons why annual state of environment reports will not be sufficient for sound decision-making, since changes that might take place in the environment cannot be detected on such a short time span. She also stressed that assessment reports are not only made for policy makers, and should communicate with the public, parliament ...etc.

Dr. Asma noted that integrated assessments should not only consider the current state of the environment, but also consider past and current situations and the policies that had led to this situation. She advised that in times of natural crisis, IEA reports should highlight the business as usual scenarios and what needs to be done in order to avoid this crisis in the future. We should also put some alerts to the policy makers about what might happen if the environment got degraded (precaution approach).

## 3. Using GIS and Remote Sensing for Demonstrating Environmental Change

### Lindsey Harriman, UNEP/GRID-Sioux Falls

Ms. Lindsey Harriman (Remote Sensing Research Scientist, UNEP/GRID-Sioux Falls) provided the participants with an overview on the UNEP /GRID office and the services provided in the GIS and remote sensing techniques. She also highlighted UNEP's "Atlas of our changing environment" series and the different levels that it works on, and how the Atlas plays an important role in making people understand the change in the environment in an easy manner, using visually representations of impacts. Ms. Harriman discussed the methodology and process of Atlas and how the images are generated, and noted that the biggest advantage about showing data through satellite imagery is that it has a temporal span so it could be shown over time.

In her presentation she demonstrated to the participants how to collect environmental data based on a cookbook produced by UNEP. She showed the different kinds of changes and what might be useful to detect by imageries and what might not be useful like (seasonal changes, defused change...etc). She showed the participants ways to find images and different satellites, and how to choose the type of satellite to take the image according to your needs. Participants were also exposed to technique on how to find the right bands, enhancing and annotating which helps to provide more contexts for the change and prepares images for publication.

## Discussion

Questions were raised about the practicality of using the Remote sensing in environmental assessment and the possibility of having a spatial signature to detect affected vegetation. Ms. Harriman highlighted that the most effective ways they do the atlases is to demonstrate the most apparent changes in the clearest ways. She added that one of Atlases is distributed to schools to make the new generations aware of what is going on and how they can help. She explained that depending on the areas of study you can choose the satellite you can use.

## 4. National IEA Process- Case Study

### Dr. Ahmed Abdelrehim, CEDARE

Dr. Ahmed Abdelrehim's presentation provided an overview on the process of developing a state of the environment reporting at the national level, and explained to the participants the purpose of the report. Dr. Abdelrehim presented the participants with a case study from Egypt in the area of state of the environment reporting, to share lessons learnt, challenges and constraints faced during the execution of the first SOE, Egypt report. Dr. Ahmed Abdelrehim explained the case study project and its stages: (i) the purpose of the report (Policy development, Public awareness, Performance assessment, scientific benchmark and education), (ii) showcased the conflict of interest between public institutions and the political pressures that had effected the execution of the report, (iii) the stages that took place to execute the report in a short time span and with limited data resources, (iv) the interrelations between different institutions and the kind of cooperation they provided, (v) provided a methodology of the report formulation, (vi) an overview on the development process of the GEO from GEO to GEO 5; (vii) the process of prioritization of environmental issues and the development of the report structure.



*Consaltation Meeting - Development of the SOE report*

## Discussion

In response to questions from the floor he highlighted that stakeholder participation and interaction was very important in the report, for knowledge and experience exchange in different fields. The contribution of different public institutions ensured the credibility and legitimacy of the report and prevented conflicts between institutions. He also stressed on the importance of the existence of political will, to sustain the process of developing the national SOE reports. He explained that sustainable trained human resources capable of conducting the assessment are a key factor in successful IEA process.



*Participants*

## 5. Online National SOE Reporting Process, Dr.Amyen Solyman, CEDARE



Dr.Amyen Solyman, CEDARE

Dr. Amyen Solyman explained that the online national SOE reporting system is a tool that provides networking between different authors, reviewers and the body responsible for the report execution. He presented the participants with the different components of the system and how to use it in uploading documents, pictures, graphs and editing of the documents and information. He highlighted that all the uploaded information (graphs, images, figures, tables etc.) exist in a database, created for each chapter per se. He highlighted that the system is a customized system that could be adjusted to with the requirements of each institution.

### Discussion

In response to the questions from the floor Dr. Solyman clarified that this system is made to facilitate the flow of data and information for the SOE reporting. He explained that the SOE on-line system is a good example of the need to have an integrated system that collects the information from various on-line processes such as the NRT system which is a more integrated system. He highlighted that the usage of these systems is very useful in the management of the SoE and other assessment reports. Dr. Abdelkader also commented that there are many components of the online reporting systems and what has been presented here is how to manage the process of communicating with the authors.

Dr.Amyen explained the several constraints that these system could face and ways to overcome these challenges.



Day

2

# Day 2

Tuesday 10 December, 2013

## Integrated Environmental Assessment

Workshop  
for the National Reporting  
Toolkit (NRT)

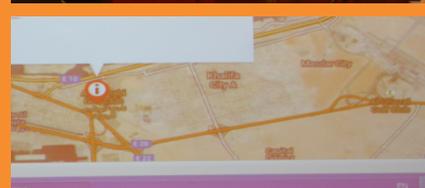
**Presenters:**

Dr. László Pintér, *CEU*

Dr. Asma Abahussain, *AGU*

Dr. Amyen Solyman, *CEDARE*

Dr. Ashbindu Singh, *UNEP (Former)*



DAY

2

Tuesday 10 December, 2013

### I. Module 3: Developing an Impact Strategy for your IEA

Dr. László Pintér, CEU

Dr. László's presentation on the module entitled "Developing an Impact Strategy for IEA", focused on methods and strategies that deliver an impact-oriented national Integrated Environmental Assessment (IEA) that will assist the decision-making process, and enhance environmental policy at the national and local levels.

**The session aimed to build the capacities of the participants by focusing on:**

- The ability to articulate the reasons for conducting an Integrated Environmental Assessment.
- Understanding the political context for implementing the results of an IEA and how are changes made in policy and practice in the country.
- Moving beyond awareness of the importance of impact and communications to develop strategies to achieve impact.
- Increasing recognition of who to reach and how that will affect how to undertake the process.
- Recognizing that a meaningful impact is a dynamic result, requiring an ongoing strategy which is much more than a single product at the end of an assessment.



Dr. László Pintér, CEU

Dr. László's presentation covered the impact of Science on Policy and vice versa, and discussed the Impact Process at length. The presented module covered the following: "What is an impact strategy?"; "When do you prepare an impact strategy?", as well as "Why would you need an impact strategy?", followed by important considerations for an impact strategy, and important steps for building an impact strategy.

The presentation was followed by an exercise for the participants on "Setting the Stage for an Impact Strategy" in which participants were encouraged to interact and discuss the context of a previous national assessment in their country with others around their table.

## Group Discussions

**Group 1:** fisheries assessment in Abu Dhabi, population growth and the increasing demands of fish. The group claimed that there is overfishing and the policies was not able to control the fishing seasons and methods. The Environmental Agency is managing the fishing process with fishermen and limits the type and quantity of fishing tools and they use for fishing and limit the fishing areas to better conserve the fisheries. As an example of good prompt response from government, these procedures had a positive impact on the number of fish species.

**Group 2:** Discussions revolved around the increase in rural areas, and increased waste degradation in the coastal zones in Yemen. Through the discussion, it was found that resource degradation is the reason behind the high levels of poverty in the city and this is because of overuse of the natural resources in the villages which led to migration of its inhabitants to the cities, adding extra pressure. The Prime Minister of Yemen requested an assessment for the current situation, and following the assessment results, changes were made in the constitution, which led to the formulation of new and more effective policies.



Group Discussions

## Sanaa Environmental Outlook

### Mr. Ameen Mohammed Qaid, Environment Protection Authority, Yemen

Mr. Ameen shared practical insights on the process of formulating the Sanaa Environmental Outlook, and lessons learnt. He explained the different types of scenarios that were used in the report, and the key objectives of report: (i) identifying data and information gaps, (ii) providing an assessment for the state of the environment and its relation with the inhabitants, (iii) formulating an official document containing the key issues, challenges and opportunities in Sanaa (iv) serving as a credible reference for decision makers to improve environmental management and promote sustainable development and sustainable livelihoods, especially for the poor.

The process of formulating the report also resulted in strengthening the capacity of the local council in the capital and districts, policy and decision-makers, non-governmental organizations, the private sector, and the local community. An important outcome of this SOE report was that it led to the government taking action in changing the master plan for Sanaa, which did not take environmental planning into consideration.

**Exercise:** Participants were split into groups and assigned the task of selecting a specific environmental issue and answering the question: What would you like to see changed or done differently as a direct result of your assessment?



Group Discussions

## Group Discussions

**Group 1:** opted to discuss the increase in waste, per capita. The change selected was the reduction of waste per capita. Participants in this group highlighted that they need to impact the Ministry of environment and water, municipalities and private sector the public and the media. They stated that the data needed to be collected is the number of inhabitants in the area of study and the amount of waste produced. They indicated that they can get this information through the concerned authorities and the supreme council for statistics. They suggested that there is a need for awareness campaigns for the inhabitants to reduce the amount of waste produced per capita, reduce waste from the source through the implementation of laws on suppliers to reduce the packing materials on their products and increase the percentage of recycling and reuse through law implementation.

**Group 2** chose to discuss the problem of bad odor from sewage pumping stations. The change selected was: a reduction in the number of sewage pumping stations which will reduce the bad odor. Participants in this group indicated that the bodies they need to impact are the municipalities and other institutions concerned with sewerage, agricultural institutions, electricity, institutions, etc. They also stated that the data needed is the population figures impacted by the offensive odor of the sewages.

## Session Outputs

### Participants gained knowledge on:

- Articulating reasons for doing an Integrated Environmental Assessment, including but also beyond mandated requirements;
- Understanding the political contexts and how changes are made in policy and practice;
- Ability to develop real strategies and communication tactics to achieve impact;
- Increased recognition of who is the target audience;
- Recognition that impact requires more than the production of a report at the end of the assessment;
- Recognizing that strategic positioning and planned communications interventions are essential components and should be undertaken in parallel with all stages of the assessment;
- Participants acquired the skills and knowledge to be capable of having a real impact on decision-making;
- They see communications as an essential component of their reports that should be undertaken in parallel with all stages of the process.

## 2. Module 4: Monitoring, Data and Indicators

Dr. Asma Ali Abahussain, AGU



Dr. Asma Abu Hussain, AGU

This module, presented by Dr. Asma, aimed to provide the workshop participants with a solid foundation on the tools and techniques necessary to complete the data collection and indicator development aspects for an IEA, through a series of presentations, readings, examples and exercises. The session focused on communicating to the participants how the fundamental role of knowledge gained from data, to our understanding of environmental issues, and for communicating information to policy-makers and other groups in society.

**“Relevant and accessible information, based on sound and credible data, is a cornerstone of integrated environmental assessment. Without a strong evidence base, government, civil society and the public at large are not in a position to make informed decisions that take environmental and human well-being issues into account”.**

*Dr. Asma Abu Hussain, AGU*

### Participants were exposed to the following processes

- The basic building blocks of indicators and indices, including frameworks, selection criteria, and elements of a participatory indicator selection process
- Data, indicators and indices and how they form an interlinked information system that is key for the implementation of integrated environmental assessment
- Practical exposure to information tools, with special emphasis on monitoring, data and indicators.
- Key concepts, techniques, benefits and constraints in areas of monitoring, data collections, indicator and indices and analysis.
- The importance of a participatory approach when developing an IEA in general, and its data and indicator components in particular.

Dr. Asma provided the participants with an introduction on indicators' framework, developing data for IEA, information systems, indicators and indices and data analysis, and why they are important in formulating the state of environment reports. She focused on the importance of reliable data and well-chosen indicators, and explained how critical this is, because poor information can ultimately lead to poor decisions.

The important role of indicators in summarizing the state of the environment, prioritizing our issues and giving an early warning was also demonstrated to the workshop participants, as well as the process of translating data into knowledge, and how this assists the decision-making process.

Dr. Asma presented the participants with an overview on GIS as an important tool, demonstrating its usefulness and effectiveness to collect, overlay and represent data on the ground. She discussed the relation between data and its users and how transferring data into indicators and indices can be useful and easier for users. She also shared with the participants, ways to integrate the indicators with the DPSIR framework.

## Discussion

In reply to questions regarding data availability and accuracy, Dr. Asma stated that there is an issue in the data availability in the Arab region and that there are not many reliable credible sources especially for the researchers.

With regards to the indices the panel commented that the available indices may have some errors as the indicators that formulate the index might be different from one country to another depending on social and cultural heritage.

## Session Outputs

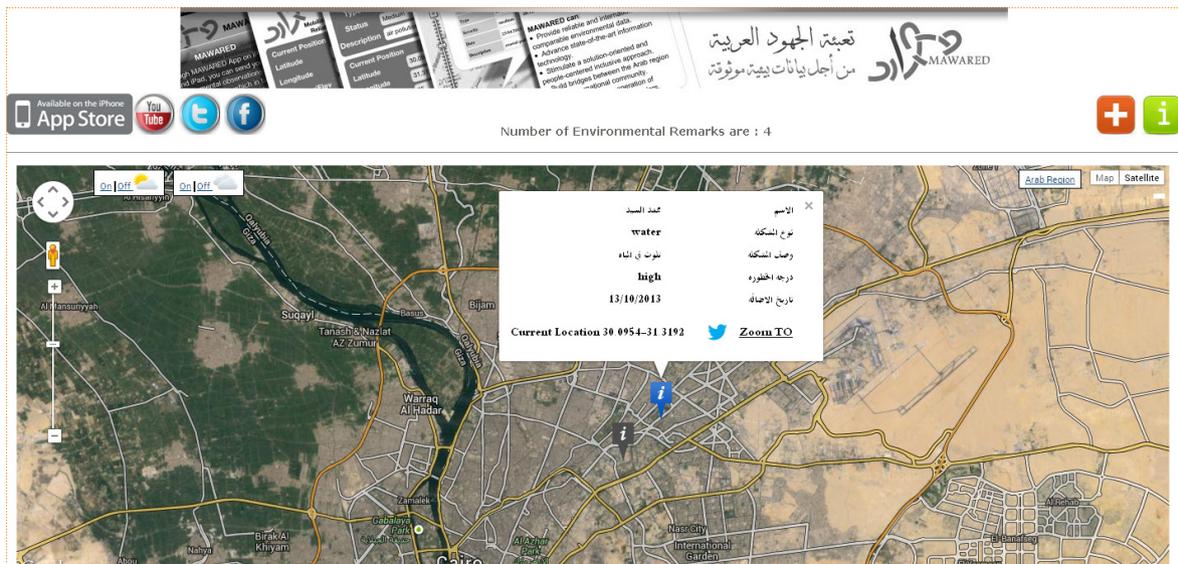
- A sound understanding of the roles and uses of data, indicators and indices in integrated environmental assessment;
- Know-how on developing strategies for collecting and validating data;
- Understanding how indicators and indices are developed and used;
- Analytical skills to analyze indicators and indices based on outcomes;
- Ability to communicate and present statistical and map-based data visually

### 3. National and regional EIS

Dr. Amyen Solyman, CEDARE

Dr. Amyen Solyman demonstrated how Environmental Information Systems (EIS), has become a major resource in environmental analysis and reporting, highlighted GIS's ability, as major part of any EIS system, to present a very immediate and visual message regarding environmental issues and management. He added that GIS is not only a storage and analysis tool, but it is also a very powerful visual and universal language. Dr. Amyen explained that EIS systems are of great value to environmental managers, and can exist as standalone data management systems, and can perform analysis of complex data. Simulations and models can be presented in a EIS and GIS to help predict potential impacts and future changes under current management programmes or environmental conditions.

Practical examples of GIS's capabilities were demonstrated to the workshop participants, through: (i) the Vulnerability map of Egypt, in which Dr. Amyen showed the participants how vulnerability mapping applications can provide information that can be useful in the prevention and preparedness of disaster management, and develop a contingency plan for the most affected population.



MAWARED Interface

Dr. Amyen also made a demonstration on Cedare's "Mobilizing Arab-Wide Action for Reliable Environmental Data" (MAWARED), which is a social networking application, designed to respond to the region's need for precise and up-to-date data, while connecting and bringing the voice of a large number of citizens, through a citizen's environmental reporting system. MAWARED consists of two mutually reinforcing components: 1. Arab Environmental Data Bank; 2. Arab Citizens Observatory.

Dr. Solyman also presented another environmental information system, a prototype of the Syria Environmental Information Management System, which CEDARE in collaboration with the Syrian Ministry of the Environment launched, to gather available knowledge on natural resources and environmental data into one information repository. Participants were shown how the system facilitates analysis and monitoring of data, and supports informed decisions on natural resources use and management in Syria. Dr. Solyman explained that the system could allow the Ministry of Environment employees to add data that immediately reflects on maps and can also formulate statistical information on different levels and sectors.

## Discussion

In response to the questions from the workshop participants, Dr. Amyen highlighted that the use of these applications is an easy way to find data as all the information needed is placed in a data base, connected to the location of the maps. With regards to MAWARED, Dr. Abdelrehim had added that the system encourages the public participating in the decision making process.

## 4. Emerging trends in indicators and indices

### Dr. Ashbindu Singh, UNEP (Former)

Dr. Ashbindu's presentation revolved around how analyzing the STATE and TRENDS of the environment is central to IEA. He explained to the participants the art and science of indicators, and their relation within the context of DPSIR framework. Mr. Ashbindu's presentation also provided the participants with a general overview of the main environmental indicator initiatives, the different types of environmental indicators, their general characteristics, and the methodology for constructing indices, as well as a model approach and general thumb rules to take in consideration when developing indices. He explained to the participating experts how indices make it easier to interpret complex information on a wide range of topics, and how indices are often used to assess and compare performance against benchmarks, and also used as a tool to inform policy.



Dr. Ashbindu Singh, UNEP (Former)

Mr. Ashbindu explained the challenges that can be faced, for example: if indices are poorly developed and communicated, indices can relay misleading information, leading to inappropriate policy decisions. Participants were also exposed to concepts related to Evolving Conceptual Frameworks and Goal- Setting, and were shown how goal-setting, with clear quantitative targets, can stimulate political action.

"The most difficult thing in life is to discover the obvious"

*Mahbub ul Haq (Father of UNDP Human Development index)*

## Discussion

Mr. Ashbindu highlighted that every country is different, and that is the reason why every country should have its own framework but sometimes in developing countries there are common indices that have to be applied like poverty index. Each country must have its own goals and targets it doesn't have to follow the global goals and targets.

## 5. Module 5: Integrated Analysis of Environmental Trends and Policies

### Dr. Asma Ali Abahussain, AGU

In her presentation Dr. Asma highlighted that she will discuss the policy analysis. She had given an overview on the definition of policies. She highlighted that Integrated analysis of environmental trends and policies is one of the core elements of integrated environmental assessment (IEA). The integrated analysis described in this module helps answer the following three questions: (1) what is happening to the environment and why? (2) What are the consequences for the environment and humanity? (3) What is being done, and how effective is it? She indicated that in order to answer these questions, IEA analysis on environment and human well-being trends and dynamics should be based on the drivers-pressures-state-impacts-responses (DPSIR) framework.

She reviewed different kinds of policies and policy making processes and their actors. She had indicated that policymaking is a long-term, interactive, and multi-stakeholder process to develop a framework to implement a certain policy, and to evaluate and modify its implementation on a regular basis. She explained the 5 Steps in the Analysis of Existing Policies and the value of indicators in policy making and its potentials.

## Discussion

In response to questions from the floor, Dr. Abahussein stressed that the environmental aspects should be a core component in the development plan of any country. Moreover, that we have to send a clear message to decision and policy makers that a sustainable development process won't be reached if the environmental aspect is ignored. Dr. Adel Abdelkader had also commented that we need to enforce the green economy in the development process. He gave a brief understanding on the concept of green economy.

## Launch

### Arab Region: Atlas of our Changing Environment

The United Nations Environment Programme (UNEP) and the Abu Dhabi Global Environmental Data Initiative (AGEDI), supported by the Environment Agency - Abu Dhabi (EAD) launched The Arab Region: Atlas of Our Changing Environment.

The launch was inaugurated by a panel consists of Mr. Ahmed Baharoon, AGEDI-EAD, Dr. Adel Farid Abdelkader, UNEP-ROWA, Dr. Asma Ali Abahussain, AGU, Dr. Ahmed Abdelrehim, CEDARE, Dr. Ashbindu Singh, UNEP (Former), Ms. Lindsey Harriman, UNEP/GRID-Sioux Falls and Ms. Larissa Owen, AGEDI-EAD



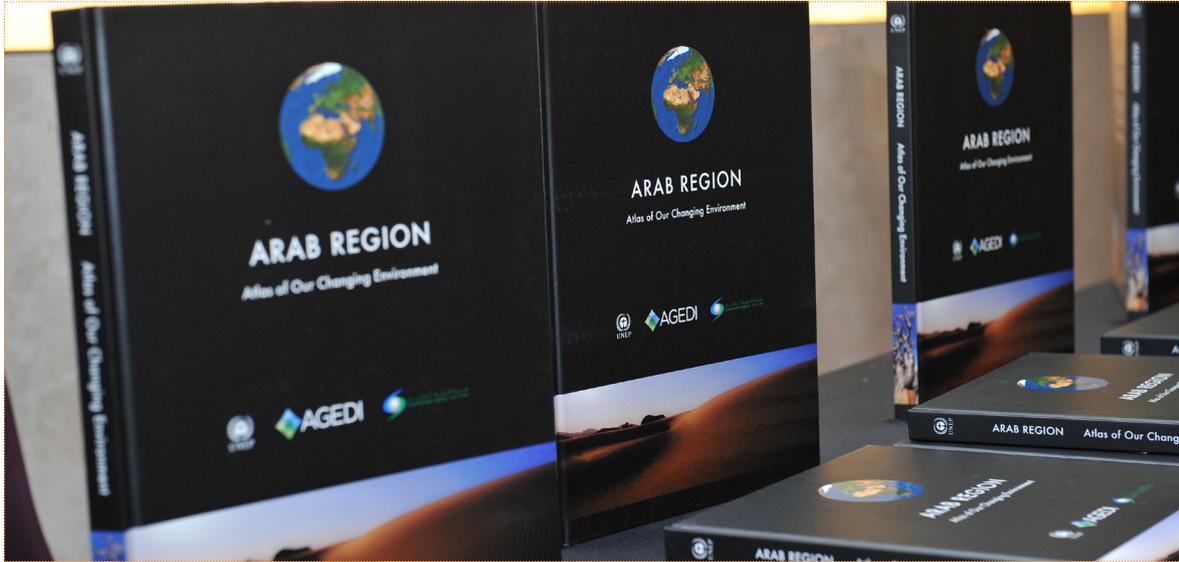
Atlas Launch Panel

DAY  
2

Tuesday 10 December, 2013

Several presentations were made to highlight the environmental change that has taken place at more than 80 locations across the Arab region, using a combination of on-the-ground photographs, current and historical satellite images, with a narrative based on extensive scientific evidence.

In reply to questions related to the next steps, Dr. Abdelkader explained that more applications are underway with cooperation with Agedi and cedare. He gave examples of current development of information hub and environmental tracking and monitoring systems.



Hard and digital copies of the Atlas were distributed during the Launch



DAY

3

# Day 3

Wednesday 11 December, 2013

## Integrated Environmental Assessment

Workshop  
for the National Reporting  
Toolkit (NRT)

**Presenters:**

Mr. Clive Swan, *AGEDI-EAD*

Mr. Tamer Abdulkadir, *AGEDI*

Mr. Jonathan Smith, *UNEP-WCMC*

Mr. Craig Mills, *UNEP-WCMC*

Dr. Ahmed Abdelrehim, *CEDARE*

Dr. Marc Levy, *CU*

Dr. László Pintér, *CEU*



WEDNESDAY 11 DECEMBER, 2013

DAY

3

## I. Introduction to the National Reporting Toolkit

Mr. Clive Swan, AGEDI-EAD

Mr. Swan gave an overview on AGEDI and the history of the Organization. He briefly demonstrated the activities of AGEDI in the environmental information field. He gave an overview on the cooperation with UNEP to improve the quality and quantity of environmental information. Mr. Clive highlighted the aims and objectives of the NRT. He highlighted that AGEDI is trying to provide a web based reporting tool to assist governments to produce their SoE reports using an integrated reporting system.



Slide form Mr. Clive's presentation

## 2. National Reporting Toolkit GIS Tools

Mr. Tamer Abdulkadir, AGEDI

Mr. Abdulkadir gave an introduction about the National Reporting Toolkit (NRT), and how it can fit within the State and Impact of the DPSIR framework. Participants were shown the “value-added” of the National Reporting Toolkit (NRT), and how it adds an “interactive integrated dimension” to State of the Environment Reporting, by its features: (i) Web-based, (ii) a dynamic interface that allows frequent updating; (iii) environmentally friendly (paperless); (iv) advanced GIS modeling and functionalities; (v) User-interactive, user-centric, responsive; (vi) Multi-lingual capacities in one single report. This was followed by an overview of the main building blocks of the National Reporting Toolkit (NRT).

**Participants were presented with the following concepts:**

1. Why do we need unified data standards? Data validation, Data processing, Reporting Format
2. What types of Standards? collection criteria and methods (reliable data sources), coverage areas, accuracy, frequency of collection, spatial & attribute specifications & formats
3. The future outlook of the National Reporting Toolkit at the business level and technical level  
On the Business Level: (i) wider geographical extent, (ii) more parameters and data sources, (iii) sophisticated scenarios, (iv) automated data feeds from environmental sites, (v) Real-time geo-processing; (vi) advanced simulations & scenarios, (trend analysis, mock-up, force-driven, etc).

### Discussion

In reply to questions regarding the usefulness of the system and its applicability at the national level within its existing infrastructure, Mr. Tamer Abdulkadir explained to the participants the advantages of NRT, in its capacity as a web-based application, which is flexible and dynamic. He highlighted that the NRT is about turning data into knowledge, and is “user-centric” in the sense that the user can extract the information needed and has the added advantage of being multilingual in one single report. Mr. Abdulkadir highlighted that the NRT is not designated to solve environmental problems; but rather, it is an important tool to complement the whole assessment process.

### 3. National Reporting Toolkit - Next steps

**Mr. Jonathan Smith, UNEP-WCMC**

**Mr. Smith presented the main aims and objectives of the NRT, including:**

1. Provide a web-based State of Environment reporting application
2. Provide users a choice of charts and graphs to use for developing State of Environment report
3. Assist countries to produce a “digital national State of Environment report”
4. Enable countries to collaborate together towards the development of a “digital regional state of environment report”
5. Develop a user-focused state of environment (SOER) application, sensitive to the interaction between environment & cultural/social issues
6. Online application to: upload data, edit the draft report, correct errors, and reduce time taken to produce state of environment reports
7. Administrators determine what data is shared or included for national & regional reporting but not publically available (e.g. the location of rare fauna/flora species)
8. Easier to develop State of Environment Reports using templates, build capability and capacity through help guidance notes and examples

Mr. Smith highlighted that UNEP’s job was to build a prototype and the objective was to take raw data to create indicators and add narratives. By doing this actual environmental information that is based on good evidence and good data could be taken into action. He showed a video on how NRT can be used. He discussed the future plans to better develop the NRT and make it better, simpler and faster.

### 4. National Reporting toolkit

**Mr. Craig Mills, UNEP-WCMC**

Mr. Craig explained the many advantages of the NRT system. He highlighted that there are different types of assessments but they commonly have a common set of activities (collect data, do analysis, figure out indicators...) that need to be implemented to enable the process.

## Discussion

In response to the questions from the floor Mr. Craig highlighted that sharing data that might be restricted for some intuitions is one of the big challenges that is faced in many projects. He stated that the institutions can use the NRT not only as a data sharing mechanism but also to create assessment reports.

### 5. Module 6: Scenario development and analysis

**Dr. Ahmed Abdelrehim, CEDARE**

Dr. Abdelrehim explained to the participants how this module will help to gain a better understanding on how to develop scenarios and analyze them, either in terms of the impact they would have on existing policies, or the kinds of policies that would be needed in order for a particular scenario to unfold. The module provides the basis for an entire process for developing and analyzing scenarios.

In his presentation, Dr. Ahmed had given a historical background on the scenarios and its definition, why do we need them, types of scenarios and its time-frame. He highlighted that from each scenario we could extract recommendations that could impact policy and decision makers. He explained that Scenarios are based on hypothetical decisions. He added that decisions are based on three phases; intelligence, design and choice. Examples were given on each decision phase.

Dr. Abdelrehim also highlighted that scenario is not a prediction of what the future will be, rather it is a description of how the future might unfold. Scenarios explore the possible, not just the probable, and challenge users to think beyond conventional wisdom. They support informed action by providing insights into the scope of the possible.

They also can illustrate the role of human activities in shaping the future, and the links among issues, such as consumption patterns, environmental change and human impacts. In this way, they make use of the general DPSIR framework.

Participants were given a Scenario Exercise in which they were asked to choose an environmental issue and analyze it according to three provided scenarios with the given drivers. Tasks included selecting critical uncertainties; creating a scenario framework; developing and testing the actual scenarios; undertaking the quantitative analysis, and exploring policy options.

**Group 1:** Environmental issue: air pollution from car exhaust

1<sup>st</sup> Scenario (business as usual situation): No change scenario for population growth, it is still increasing; economic development is increasing and technology in continuous progress. Increase in the diseases, increase in economic developments will increase in the infrastructure and increase Air pollution; technology will not have an impact

2<sup>nd</sup> scenario (worst case scenario): population growth will decline, economic development will decline and technology will take a curve from being stable to declining. Increase in diseases and increase in death rates, a decline in the economic development will impact the country's economic situation, decreasing the chances to solve the issues, and will lead to declined use of technologies.

3<sup>rd</sup> scenario (best case scenario): increase in population growth, increase in economic development and increase in technology. Increase in the health care and decline in the death rates, economic situation will strengthen the country's economy leading to problem solving, greater usage of technologies to limit the issues.

**Group 2:** Environmental issue: decline in Fisheries

1<sup>st</sup> scenario: with the increase in the population pressure on coastal zones will continue to increase, amount of sewage disposed in the sea will increase impacting the quality of water increasing fisheries decline. In this scenario there will be a slight increase in the economic development. Technology will still be the same and fisheries still decline for the absence of modern technologies to solve the problem.

2<sup>nd</sup> scenario: the population growth will increase which will raise the demands on resources and increase the sewage which will impact the quality of water. Economic development will decline dramatically causing decline in the fisheries for the absence of the financial flow that can conserve the degraded environmental situation. Technology will decline.

3<sup>rd</sup> scenario: population growth will increase but the increasing economic development will support to solve the issues.

**Session Outputs**

- Participants were more familiar with the different types of scenarios;
- Gained an understanding of the structure, complexity and dynamics of scenario processes;
- Understanding the steps required for the development of scenarios; and how scenarios can be used for the discussion and development of policy options.

## 6 Module VIA: Vulnerability and Impact Assessment (VIA) for Adaptation to Climate Change

Dr. Marc Levy, CU

Dr. Levy indicated that the impacts of climate change pose very serious risks for countries, vital ecosystems, and sectors including agriculture, forestry, health, local economic activities and biodiversity. In conjunction with other pressures, they could also exacerbate other serious local and regional challenges, such as poverty, poor healthcare, inequitable distribution of resources, diminishing ecological resiliency and energy insecurity.

Dr. Levy highlighted that this module builds on the IEA process and provides training on how to include vulnerability, climate change and adaptation responses in the context of other issues such as ecosystems, human well-being, capacity and long-term development in the process.

He added that the adaptation options could be developed into practical implementation plans at the sub-ministerial level. The module builds on the IEA conceptual framework and analytic methods by providing guidance for their application to the case of climate change while preserving the integrated approach. Dr. Levy also pinpointed examples of how crises turned to be worse than originally predicted.

He presented the participants with an overview on vulnerability, its characteristics, and vulnerability to climate change, the relation of vulnerability assessment and the DPSIR framework, coping and adaptive capacities, and the concept of “double exposures”, in which he cited the example of the Arab region: The Arab region is home to 5% of the world’s population but has access to only 1% of global fresh water resources.

Dr. Levy also familiarized the participants with the concept of “resilience”, which has been used to characterize a system’s ability to “bounce back” to a reference state after a disturbance, and the capacity of a system to maintain certain structures and functions despite disturbance.



**"Adaptation to climate change is an important future investment. It is the best available option"**

*Dr. Mark Levy, CU*

In this case, Dr. Levy noted that the focus of the vulnerability reduction efforts should be on helping increasing resilience both for people and ecosystems instead of only reacting to actual impacts.

**Participants were also exposed to the following concepts:**

- Principles of effective monitoring
- Criteria for Climate Change Vulnerability Assessments
- Thematic versus sectoral approaches to climate change vulnerability assessments
- The need for designing new assessments, based on self-evaluation on prior assessment activities
- Vulnerability assessment and the DPSIR framework
- Monitoring vulnerability & principles of effective monitoring
- Creating responses - prioritizing and determining adaptation options
- Developing a basic implementation plan and a communication strategy
- Mainstreaming Adaptation into the development agenda
- Adaptation prioritization and integrating the adaptation strategy into national plans
- Communicating Adaptation Options

## Discussion

In response to questions from the floor Dr. Marc Levy highlighted that there is a simple framework for deciding the distribution of climate monitoring stations, it depends on the terrain and variability of climate in the region and types of problems. He explained that it is recommended to consult with climate scientists who can optimize the climate monitoring network. He added that most countries need climate monitoring stations and it has to be tailored to the region according to its topography.

## 7. Module 7: Creating Communication Outputs from the Assessment

### Dr. László Pintér, CEU

Dr. László's presentation focused on developing innovative communication outputs for an IEA and provided practical suggestions for dissemination. He stated that there are many techniques and products to communicate the results of an integrated environmental assessment (IEA) following the UNEP Global Environment Outlook (GEO) approach. Dr. László guided the participants through the communications processes, illustrating how to get your message to the audiences you want to reach.

He indicated that before producing the main report and other products, you need to make a series of important decisions. By identifying your target audience(s), you will be better able to shape your message and select the right content, and later, the right presentation format. By carefully considering the budget, you will be better and more able to make realistic decisions about the kind of product you feel will be most beneficial.

He highlighted that the module discusses strengths and weaknesses of different channels and how to go about approaching the media. In addition to written materials, this module provides advice on visual materials. It covered the basic principles of the cartographic process, and gives concrete suggestions about ways to express the assessment message visually. The presentation also provided advice on building long-term communication strategies.

## Discussion

In response to the questions from the floor Dr. Laszlo had highlighted that reports should be reformulated and adjusted to target and communicate with different audiences. Dr. Adel commented, as an example, that UNEP had worked on the execution of GEO for youth and GEO for children and GEO for Business which had built on the GEO core report but adjusted to impact the target groups.

DAY

4

# Day 4

Thursday 12 December, 2013

## Integrated Environmental Assessment

Workshop  
for the National Reporting Toolkit (NRT)

Presenters:

Ms. Larissa Owen, AGEDI-EAD

Dr. Marc Levy, CU



Thursday 12 DECEMBER, 2013

DAY

4

## 1. Abu Dhabi Global Environmental Data Initiative - Facilitating a sustainable future - Local to Global

**Ms. Larissa Owen, AGEDI-EAD**

In her presentation Ms. Larissa Owen presented a background on AGEDI and its partnerships. She highlighted AGEDI's projects, special initiatives and projects which AGEDI participated over the past 10 years. Ms. Larissa also noted that AGEDI is not product-driven; AGEDI is about process orientation as it facilitates information for results-driven outcomes. Ms. Owen also provided the participants with an overview on the NRT objectives and functions.



Ms. Larissa Owen, AGEDI

She presented AGEDI's various activities related to Eye on Earth summit and the topics that AGEDI has presented during the summit. She highlighted the importance AGEDI places on networking and cooperation with other organizations for knowledge-sharing and improvement of the accessibility of information towards more informed decision making.

## 2. Official Environmental Portal for the State of Kuwait

**Ms. Abeer Albari, Kuwait Environmental Public Authority**

Ms. Abeer Albari gave a presentation on Kuwait environmental monitoring information system (eMISK). She demonstrated the road map from data to decision-making. The system was implemented based on a request from

Kuwait Environmental Public Authority, to achieve the institution's objective of playing a key role in Kuwait's research and development programmes. She demonstrated the eMISK monitoring system, the GIS system, and its internal management system. She also presented the official Beatona.net environmental portal for the State of Kuwait as well as its various knowledge-base applications. Ms. Albari shared with the participants the components of the environmental monitoring information system; its methodology, strengths and weaknesses, partnerships and Awards. She also presented Kuwait's environmental vision to year 2030 and the roadmap.



Ms. Abeer Albari, EPA, Kuwait

### 3. Module 8: Monitoring, Evaluation and learning: for improvement and increased impact of the IEA process

**Dr. Marc Levy, CU**

Dr. Marc Levy explained that this module offers tools to help monitor and evaluate the effectiveness of the national or sub-national IEA, as well as a demonstration on how to develop a monitoring and evaluation plan. He highlighted that the module promotes an improvement-oriented evaluation that aims to increase the effectiveness of the national or sub-national IEA process, by including lessons learned into the next cycle. He highlighted how learning plays a central role by shaping the monitoring and evaluation process, and maintaining knowledge-creation connected with policy making.

#### Discussion

In response to the questions from the participants, Dr. Marc highlighted that the field of monitoring and evaluation is going through changes and there are new available frameworks. He highlighted that monitoring and evaluation should be conducted throughout the assessment formulation phases.

Dr. Adel Abdelkader also noted that monitoring and evaluation processes should take place throughout the whole SOE process. He highlighted that before initiating the assessment process, agencies should formulate a work plan that has definite activities, deliverables and milestones. He also recommended that monitoring should take place in short intervals of time, to ensure that the work plan is moving in the right path.

With regards to evaluation, he noted that the evaluation process doesn't have to start at the final stage of the assessment. The IEA process could take place in the accomplishment of each milestone.

## General Discussions



Participants

The final session of the workshop was dedicated to discuss the general IEA process in terms of constraints, limitations and opportunity for cooperation. General discussion highlighted the efforts that were made by the leading organizations in the field of environmental information. It had also explained methods of communication and networking between the countries and the organizations under the umbrella of the League of Arab States.

Mr. Mohamed Osman Konna, responsible for Indicators and Environmental Networks at the League of Arab States gave a background on the process and role of the indicators and networking in the Arab region. More particularly, he explained the function of the Arab Regional Environmental Information Network (AEIN). He added that the network is assisted by the Arab Indicators group which consists of experts from all Arab countries. He highlighted one of the team's main roles is to gather environmental indicators from the Arab countries. Mr. Konna commented that there is a need for greater contribution from all Arab countries to submit their indicators and information needed. Accordingly, he had stressed that an agreeable unified Arab indicators is of great value to draw the picture of environment to policy makers. Understanding the data infra-structure of Arab countries is important to cover the information gaps and formulate a database that could be useful for better assessments.

Interactive discussions took place between the panel and the participants. The participants recommended solutions for greater contributions from the countries in providing the information to the League of Arab States information network, including: assigning a high-level stakeholder for the task, encouraging greater focal point participation, conducting training workshops in each country to formulate indicators. Recommendations were also made with regards to improving the assessment process, data and information availability in the Arab region, as well as ways to facilitate communication between countries, challenges and needs for the capacity building processes and systems that can serve the environmental information. Developing a data sharing mechanism between Arab countries was one of the main recommendations. Agreeing on a data sharing convention similar to Aarhus Convention, under the umbrella of the Arab League, could be a plausible recommendation.

## Closing

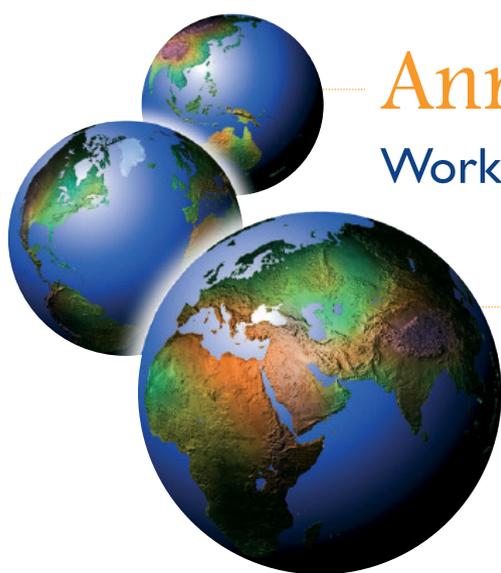


Closing remarks were given by Dr. Adel Abdel-Kader, Mr. Ahmed Baharoon, Dr. Ahmed Abdelrehim, and Dr. Asma Abahussian. All speakers thanked the various organizers, and the meeting participants, for their valuable contributions.

Following the closing speeches the participants received certificates of recognition.







# Annex I

## Workshop Evaluation

### Overall Organization



### Appropriateness to National Priorities

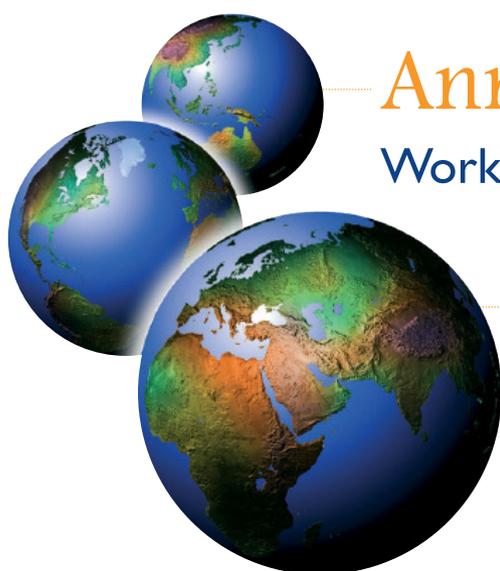


### Usefulness of Training Modules



### Efficiency of Experts





## Annex II

### Workshop Agenda



**INTEGRATED ENVIRONMENTAL ASSESSMENT**  
Workshop for the National Reporting Toolkit (NRT)  
9-12 December, 2013 - Abu Dhabi, UAE

**WORKSHOP AGENDA**

**DAY 1**

**MONDAY 9 DECEMBER, 2013**

08:30 - 09:00	Registration
09:00 - 09:20	Opening remarks <i>Mr. Ahmed Baharoon, Abu Dhabi Global Environmental Data Initiative (AGEDI-EAD)</i> <i>Dr. Adel AbdelKader, United Nations Environment Programme (UNEP-ROWA)</i> <i>Dr. Ahmed Abdelrehim, Center for Environment and Development for the Arab Region and Europe (CEDARE)</i>
09:20 - 09:30	Overview of workshop administrative issues <i>Mr. Clive Swan, AGEDI-EAD</i>
09:30 - 10:15	Introduction to the agenda and workshop objectives <i>Dr. Ahmed Abdelrehim, CEDARE</i>
10:15 - 10:30	Demonstration of the workshop online system <i>Dr. Aymen Solyman, CEDARE</i>
10:30 - 10:45	Coffee Break
10:45 - 11:45	Module 1: The GEO approach to Integrated Environmental Assessment <i>Dr. Adel AbdelKader, UNEP-ROWA</i>
11:45 - 12:00	Discussion
12:00 - 13:00	Module 2: National IEA process design and organisation <i>Dr. Asma Abahussain, Arabian Gulf University (AGU)</i>
13:00 - 14:30	Lunch
14:30 - 15:15	Using GIS and Remote Sensing for Demonstrating Environmental Change <i>Ms. Lindsey Harriman, UNEP/GRID-Sioux Falls</i>
15:15 - 15:30	Discussion
15:30 - 16:00	Coffee Break
16:00 - 16:30	National IEA process - Case Study <i>Dr. Ahmed Abdelrehim, CEDARE</i>
16:30 - 17:00	Online National SOE Reporting Process <i>Dr. Aymen Solyman, CEDARE</i>



**INTEGRATED ENVIRONMENTAL ASSESSMENT**  
Workshop for the National Reporting Toolkit (NRT)  
9-12 December, 2013 - Abu Dhabi, UAE

**WORKSHOP AGENDA**

**DAY 2**

**TUESDAY 10 DECEMBER, 2013**

09:00 – 09:30	Overview of the agenda of the day <i>Dr. Asma Abahussain, AGU</i>
09:30 – 10:30	Module 3: Developing an impact strategy for your IEA <i>Presenter: Dr. Laszlo Pinter, Central European University (CEU)</i> <i>Panel: Dr. Asma Abahussain, AGU</i>
10:30 – 10:45	Coffee Break
10:45 – 12:00	Module 3 ... Continued
12:00 – 12:15	Sanaa Environmental Outlook <i>Mr. Ameen Mohammed Qaid, Environment Protection Authority, Yemen</i>
12:15 – 12:45	Module 4: Monitoring, Data and Indicators <i>Presenter: Dr. Asma Abahussain, AGU</i> <i>Panel: Dr. Laszlo Pinter, CEU</i>
12:45 – 13:00	Discussion
13:00 – 14:30	Lunch
14:30 – 15:00	National and Regional EIS <i>Dr. Aymen Solyman, CEDARE</i>
15:00 – 15:30	Emerging Trends in Indicators and Indexes <i>Dr. Ashbindu Singh, UNEP (Former)</i>
15:30 – 16:00	Coffee Break
16:00 – 16:45	Module 5: Integrated analysis of environmental trends and policies <i>Presenter: Dr. Asma Abahussain, AGU</i> <i>Panel: Dr. Adel AbdelKader, UNEP-ROWA</i> <i>Dr. Laszlo Pinter, CEU</i>
16:45 – 17:00	Discussion
19:00 – 20:00	<b>Launch</b> «Arab Region: Atlas of our Changing Environment».



**INTEGRATED ENVIRONMENTAL ASSESSMENT**  
Workshop for the National Reporting Toolkit (NRT)  
9-12 December, 2013 - Abu Dhabi, UAE

**WORKSHOP AGENDA**

**DAY 3**

WEDNESDAY 11 DECEMBER, 2013

09:00 – 09:30	Overview of the agenda of the day <i>Dr. Adel Abdelkader, UNEP-ROWA</i>
09:30 – 09:45	Introduction to National Reporting Toolkit <i>Mr. Clive Swan, AGEDI-EAD</i>
09:45 – 10:15	National Reporting Toolkit GIS tools <i>Mr. Tamer Abdulkadir, AGEDI</i>
10:15 – 10:30	National Reporting Toolkit - Next steps <i>Mr. Jonathan Smith, UNEP-WCMC</i>
10:30 – 10:45	Coffee Break
10:45 – 12:00	Module 6: Scenario development and analysis <i>Presenter: Dr. Ahmed Abdelrehim, CEDARE</i> <i>Panel: Dr. Marc Levy, CU</i> <i>Dr. Laszlo Pinter, CEU</i>
12:00 – 12:15	Discussion
12:15 – 13:00	Module VIA: Vulnerability and Impact assessment for Adaptation to Climate Change <i>Presenter: Dr. Marc Levy, CU</i> <i>Panel: Dr. Adel Abdelkader, UNEP-ROWA</i> <i>Dr. Laszlo Pinter, CEU</i>
13:00 – 14:30	Lunch
14:30 – 15:00	Module VIA ... Continued
15:00 – 15:30	Module 7: Creating communication outputs from the assessment <i>Presenter: Dr. Laszlo Pinter, CEU</i> <i>Panel: Dr. Asma Abahussain, AGU</i> <i>Dr. Marc Levy, CU</i>
15:30 – 16:00	Coffee Break
16:00 – 16:45	Module 7... Continued
16:45 – 17:00	Discussion



**INTEGRATED ENVIRONMENTAL ASSESSMENT**  
Workshop for the National Reporting Toolkit (NRT)  
9-12 December, 2013 - Abu Dhabi, UAE

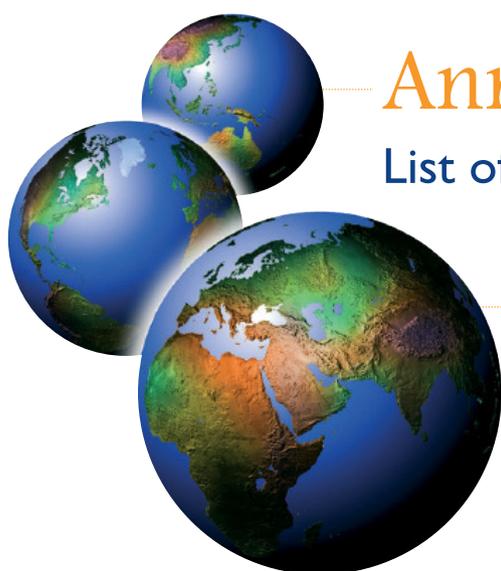
**WORKSHOP AGENDA**

**DAY 4**

**THURSDAY 12 DECEMBER, 2013**

09:00 – 09:05	Overview of the agenda of the day <i>Dr. Ahmed Abdelrehim, CEDARE</i>
09:05 - 09:15	Overview of AGEDI <i>Ms. Larissa Owen, AGEDI-EAD</i>
09:15 - 09:30	Emisk <i>Ms. Abeer Alabri, Kuwait Environmental Public Authority</i>
09:30 – 10:30	Module 8: Monitoring, evaluation and learning: For improvement and increased impact of the IEA process <i>Presenter: Dr. Marc Levy, CU</i> <i>Panel: Dr. Adel Abdelkader, UNEP-ROWA</i>
10:30 – 10:45	Coffee Break
10:45 – 11:00	Discussion
11:00 – 11:30	General Discussion
11:30 – 12:00	Distribution of workshop certificates
12:00 – 12:30	Closing





# Annex III

## List of Participants



## INTEGRATED ENVIRONMENTAL ASSESSMENT

Workshop for the National Reporting Toolkit (NRT)

9-12 December, 2013 - Abu Dhabi, UAE

### List of Participants

#### Experts

##### 1. Mr. Adel Farid Abdelkader

Organization	UNEP Regional Office for West Asia
Job title	Regional Coordinator, West Asia UNEP Division of Early Warning and Assessment (DEWA)
Telephone	00973 17812785 – 00973 17812777 (EXT.: 785)
E-mail	adel.abdelkader@unep.org

##### 2. Mr. Ahmed Abdelrehim

Organization	Centre for Environment and Development for the Arab Region and Europe (CEDARE)
Job title	Regional Programme Manager, Knowledge Management Programme (KMP)
Telephone	00202 24513921/22/23/24 (Ext: 600)
E-mail	ahrehim@cedare.int

##### 3. Mr. Ashbindu Singh

Organization	UNEP Division of Early Warning & Assessment
Job title	Former Chief, Division of Early Warning & Assessment Regional Coordinator, Division of Early Warning & Assessment - North America
Telephone	1001 2027850465
E-mail	ashbindu.singh@unep.org

##### 4. Ms. Asma Ali Abahussain

Organization	Arabian Gulf University
Job title	Associate Professor - Earth Science/Geochemistry
Telephone	00973 17239840
Mobile No.	00973 39692291
E-mail	asma@agu.edu.bh - dr.asma.abahussain@gmail.com

## Experts

### 5. Mr. Aymen Solyman

Organization	Centre for Environment and Development for the Arab Region and Europe (CEDARE)
Job title	GIS Expert
Telephone	00202 2451 3921/22/23/24
E-mail	asolyman@cedare.int

### 6. Mr. László Pintér

Organization	Central European University / International Institute for Sustainable Development
Job title	Senior Fellow
Telephone	0036 303903354
E-mail	lpinter@iisd.ca

### 7. Ms. Lindsey Harriman

Organization	UNEP/GRID-Sioux Falls
Job title	Remote Sensing Research Scientist
Telephone	001 605 594 2529
E-mail	lharriman@usgs.gov

### 8. Mr. Marc Levy

Organization	Center for International Earth Science Information Network (CIESIN), the Earth Institute, Columbia University
Job title	Deputy Director – Adjunct Professor
Telephone	001 845 365 8922
E-mail	marc.levy@ciesin.columbia.edu

## Participants

### Country

#### Bahrain

### 9. Mr. Abdulla Khalid Abbad Ahmed

Organization	Supreme Council for Environment
Job title	Environmental Specialist
Telephone	00973 17386997
Mobile No.	00973 33318981
E-mail	aabbad@pmew.gov.bh

## Participants

### Country

#### Bahrain

##### 10. Mr. Hussain Ali Abdulnabi Ali

Organization	Supreme Council for Environment
Job title	Environmental Specialist
Telephone	00973 17386561
Mobile No.	00973 39975709
E-mail	habdulnabi@pmew.gov.bh

#### Jordan

##### 11. Mr. Abdelmajid Khabour

Organization	Ministry of Environment
Job title	Engineer
Telephone	00962 65560113
Mobile No.	00962 796695934
E-mail	akhabour1@yahoo.com

#### Kuwait

##### 12. Ms. Abeer Alabri

Organization	Environmental Public Authority
Job title	Head of Standard and follow up environment status
Mobile No.	00965 99895151
E-mail	abeer@emisk.org

##### 13. Mr. Ali Al Baz

Organization	Kuwait Institute For Scientific Research
Job title	Associate research scientist
Telephone	00965 24956376
Mobile No.	00965 99777911
E-mail	abaz@kisir.edu.kw - abu.shaheen@gmail.com

##### 14. Mrs. Kholood Saeed Al-Rifaie

Organization	Kuwait Institute For Scientific Research
Job title	Associate research scientist
Telephone	00965 24956407
E-mail	krifaie@kisir.edu.kw - kholood.al.rifaie@gmail.com

## Participants

### Country

#### Oman

##### 15. Ms. Kadhiya Al-Shammakhi

Organization	Ministry of Environment and Climate Affairs
Job title	Environmental inspector
Telephone	00968 24404257
Mobile No.	00968 92959052
E-mail	kadhiya.alshammakhi@gmail.com

##### 16. Mrs. Sakeena Al-Manji

Organization	Ministry of Environment and Climate Affairs
Job title	Environmental inspector
Telephone	00968 24404839
Mobile No.	00968 95142554
E-mail	sakeena.almanji@gmail.com

#### Saudi Arabia

##### 17. Mr. Mohammed Bukhari

Organization	Presidency of Metrology and Environment (PME)
Job title	Manager of GIS and RS Center
Telephone	00966 126536012
Mobile No.	00966 533677744
E-mail	mbukhari@pme.gov.sa

##### 18. Mr. Nabil Murshid

Organization	Presidency of Metrology and Environment (PME)
Job title	Engineer
Mobile No.	00966 505611430
E-mail	nabil.murshid@gmail.com

##### 19. Mr. Saleh Al Shodoukhi

Organization	Saudi Wildlife Authority
Job title	Manager of GIS and RS Center
Telephone	00966 14418700, Ext. 515
Mobile No.	00966 505478424
E-mail	srscom2000@yahoo.com

## Participants

### Country

#### Saudi Arabia

##### 20. Mr. Waleed Jomah

Organization	Presidency of Metrology and Environment (PME)
Job title	Environmental database and electronic transactions specialist
Telephone	00966 126536155
Mobile No.	00966 541657170
E-mail	wjomah@pme.gov.sa

##### 21. Mr. Zeyad Abdullah Alnowaiser

Organization	Saudi Wildlife Authority
Job title	Researching Planning
Telephone	00966 114418700 (Ext.: 145)
Mobile No.	00966 504656475
E-mail	z1.a9.n8.n5@hotmail.com

#### United Arab Emirates

##### 22. Mr. Abdullah Al Eissae

Organization	Statistics Center Abu Dhabi
Job title	Principal statistical researcher
Telephone	0971 28100507
Mobile No.	00971 507935933
E-mail	asaleissae@scad.ae

##### 23. Mr. Abdunasser Alshamsi

Organization	Ministry of Environment and Water – Dubai
Job title	Principal Expert
Telephone	00971 506445440
E-mail	aalshamsi@moew.gov.ae

##### 24. Mr. Ahmed Al-Hashmi

Organization	Ministry of Environment and Water – Dubai
Job title	Director, Biodiversity Department
Telephone	00971 507878554
E-mail	aalhashmi@moew.gov.ae



## Participants

### Country

United Arab Emirates

#### 25. Mr. Ahmed Al Husani

Organization	Abu Dhabi Sewerage Services Company ADSSC
Job title	HSEQ Engineer
Telephone	0971 28180774
Mobile No.	0971 501633551
E-mail	ahmadalhusani@hotmail.com

#### 26. Ms. Aisha Al Abdooli

Organization	Ministry of Environment and Water – Dubai
Job title	Undersecretary For Environmental Affairs Sector
Telephone	00971 42148357 - 00971 42148484
Mobile No.	00971 503443777
E-mail	amalabdooli@moew.gov.ae

#### 27. Ms. Amal AlShehhi

Organization	Ministry of Environment and Water – Dubai
Job title	Agriculture engineer
Telephone	0097142148557
Mobile No.	0097153722338
E-mail	asalshehhi@moew.gov.ae

#### 28. Ms. Amna Al Blooshi

Organization	Ministry of Environment and Water – Dubai
Job title	Administrator
Telephone	00971 42148513
Mobile No.	00971 54806060
E-mail	asalblooshi@moew.gov.ae

#### 29. Ms. Fatima Alhammadi

Organization	Ministry of Environment and Water – Dubai
Job title	Environmental coordinator
Telephone	00971 42148544
Mobile No.	00971 506100501
E-mail	fyalhammadi@moew.gov.ae

## Participants

### Country

United Arab Emirates

#### 30. Ms. Fatima AlQaydi

Organization	Ministry of Environment and Water – Dubai
Job title	Chemical engineer
Telephone	00971 42148553
Mobile No.	00971 507364296
E-mail	faalqaydi@moew.gov.ae

#### 31. Ms. Marwa Alawadhi

Organization	Ministry of Environment and Water – Dubai
Job title	Climate change coordinator
Telephone	00971 42148326
Mobile No.	00971 508880252
E-mail	maalawadhi@moew.gov.ae

#### 32. Ms. Marwa Hossny Attia

Organization	Fujairah Municipality
Job title	Environmental Chemist - Waste management and air quality monitoring
Telephone	00971 92028362
Mobile No.	00971 561599702
E-mail	marwa.hossny@fujmun.gov.ae

#### 33. Ms. Mennat Allah Mamdouh El-Zaher

Organization	Fujairah Municipality
Job title	Chemical Engineer
Telephone	00971 92028369
Mobile No.	00971 567409404
E-mail	mennat@fujmun.gov.ae

#### 34. Mr. Mohammad Alam

Organization	Ministry of Environment and Water – Dubai
Job title	Expert
Telephone	00971 42148337
Mobile No.	00971 563680993
E-mail	msalam@moew.gov.ae

## Participants

### United Arab Emirates

#### 35. Mr. Mohamed Al Mulla

Organization	Ministry of Environment and Water – Dubai
Job title	Director of Water Resources Department
Telephone	00971 42148323
Mobile No.	00971 506264032
E-mail	mmalmulla@moew.gov.ae

#### 36. Mr. Nasser Al Safari

Organization	UAE Ministry of Environment and Water
Job title	Geologist
Telephone	00971 42148444
Mobile No.	00971 57278898
E-mail	naalsafari@moew.gov.ae

#### 37. Ms. Rabaa Al Awar

Organization	Ministry of Environment and Water – Dubai
Job title	Chemical Engineer
Telephone	00971 42148547
E-mail	rialawar@moew.gov.ae

### Yemen

#### 38. Mr. Ameen Mohammed Qaid Alhammadi

Organization	Environment Protection Authority
Job title	General manager of monitoring and evaluation (National coordinator (NRT))
Telephone	009671 207817
Mobile No.	00967 711679091
E-mail	alhmadi_albory@yahoo.com

### Organizations/Institutions

#### Arabian Gulf University

#### 39. Ms. Amal Al Kandari

Job title	Head of Health Inspectors (PhD Student)
Telephone	00965 50205154
Mobile No.	00965 55233161
E-mail	a.j.alkandari@windowslive.com

## Participants

### Organizations/Institutions

#### Arabian Gulf University

##### 40. Ms. Kholod Abou Seedo

Job title	Head of landscape Design (PhD student)
Mobile No.	00965 99845144 – 00973 32005890
E-mail	kholodfa@hotmail.com

#### League of Arab States

##### 41. Mr. Mohamed Awad Elkarim Mohamed Osman

Job title	Responsible of Indicators and Environmental Networks
Telephone	002 0225750511 (Ext.: 3608)
Mobile No.	002 01287229900
E-mail	mohamed.konna@hotmail.com

#### UNEP Regional Office for West Asia

##### 42. Mr. Matthew Broughton

Job title	Consultant - UNEP
Telephone	00973 17812782
Mobile No.	00973 39198060
E-mail	matthew.broughton@unep.org

#### UNEP – WCMC

##### 43. Mr. Jonathan Smith

Job title	Project Manager
Telephone	+44 (0) 1223 277314
E-mail	jonathan.smith@unep-wcmc.org

##### 44. Mr. Craig Mills

Job title	Head of programme
Telephone	+44 (0) 1223 277314
E-mail	craig.mills@unep-wcmc.org

##### 45. Mr. Jamie Gibson

Job title	Assistant Programme Officer
Telephone	+44 (0) 1223 277314
E-mail	jamie.gibson@unep-wcmc.org

## Organizers

### Environment Agency – Abu Dhabi

#### 46. Mr. Ahmed Abdulla Baharoon

Job title	Managing Director
Telephone	00971 24454777
E-mail	ahmed.naharoon@ead.ae

#### 47. Mr. Clive Swan

Job title	Partnership Project Manager
Telephone	00971 562179346
E-mail	clive.swan@ead.ae

#### 48. Mr. Ehab Abdel Nasser

Job title	Senior software Developer
Telephone	00971 26395999
Mobile No.	00971 527483141
E-mail	ehab.abdelnaser@khatibalami.com

#### 49. Mr. Graeme Paton

Job title	Professor Environmental Science - University of Aberdeen
Telephone	0044 1224273834
Mobile No.	0044 7713626674
E-mail	g.i.paton@abdn.ac.uk

#### 50. Mr. Hossam El Din El Al kamy

Job title	Senior Biodiversity GIS Analyst
Telephone	00971 26934731
Mobile No.	00971 504613229
E-mail	helalkamy@ead.ae - alqamy@gmail.com

#### 51. Mr. Mohamed Dawoud

Job title	Advisor, Water Resources
Telephone	00971 26934680
Mobile No.	00971 503129571
E-mail	mdawoud@ead.ae

#### 52. Ms. Mouza Al Mansouri

Job title	GIS Manager
Telephone	00971 26934532
Mobile No.	00971 502200143
E-mail	mralmansouri@ead.ae

## Organizers

### Environment Agency – Abu Dhabi

#### 53. Ms. Larissa Owen

Job title	PR & Outreach Manager
Telephone	00971 26934436
Mobile No.	00971 561271145
E-mail	larissa.owen@ead.ae

#### 54. Mr. Pritpal Singh Soorae

Job title	Unit Head, Terrestrial Assessment & Monitoring
Telephone	00971 269346560
Mobile No.	00971 506415470
E-mail	psoorae@ead.ae

#### 55. Mr. Tamer Abdulkadir

Job title	GIS Senior Consultant
Telephone	00971 26395999
Mobile No.	00971 527483141
E-mail	tamer.abdulkadir@khatibalami.com

#### 56. Mr. Yasser Othman

Job title	Manager - Environment Information & Reports – Environment Information
Telephone	00971 26934692
Mobile No.	00971 502200153
E-mail	yothman@ead.ae - yasserothman@yahoo.com

#### 57. Ms. Yassmin Naguib

Job title	GIS Data specialist
Telephone	00971 26395999
Mobile No.	002 01064661595
E-mail	yassmin.naguib@khatibalami.com

## Centre for Environment and Development for the Arab Region and Europe (CEDARE)

#### 58. Mr. Ashraf Atef

Job title	Regional Director of Finance, Administration and Human Resources
Telephone	00202 2 451-3921 / 2 / 3 / 4 (Ext: 776)
E-mail	aatef@cedare.int



## Centre for Environment and Development for the Arab Region and Europe (CEDARE)

### 59. Ms. Catherine Ghaly

Job title	Senior Regional Programme Assistant, Knowledge Management Programme (KMP)
Telephone	00202 2451 3921 / 22 / 23 / 24 (Ext: 636)
E-mail	cghaly@cedare.int

### 60. Ms. Dalia El Shamy

Job title	Senior Graphic Designer, Knowledge Management Programme (KMP)
Telephone	00202 2451 3921 / 22 / 23 / 24 (Ext.: 602)
E-mail	delshamy@cedare.int

### 61. Ms. Noha Ekram

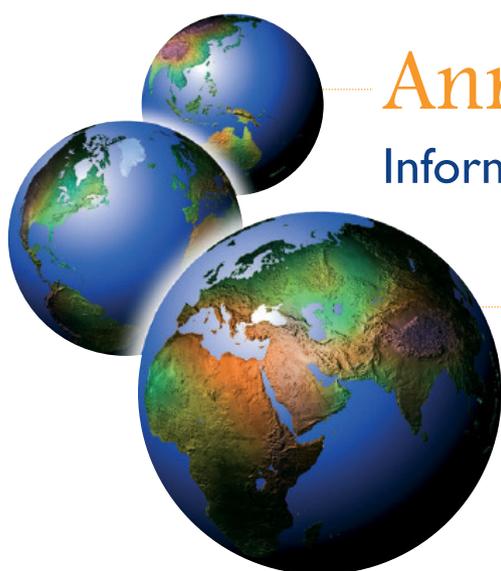
Job title	Senior Regional Programme Assistant, Knowledge Management Programme (KMP)
Telephone	00202 2451 3921 / 22 / 23 / 24
E-mail	nekram@cedare.int

### 62. Mr. Samir Sayed Mahmoud

Job title	Technical Support, Knowledge Management Programme (KMP)
Telephone	00202 2451 3921 / 22 / 23 / 24 (Ext.: 644)
E-mail	support@cedare.int

### 63. Mr. Tarek Abdel Monem

Job title	Research Assistant, Knowledge Management Programme (KMP)
Telephone	00202 2451 3921 / 22 / 23 / 24 (Ext.: 627)
E-mail	tmonem@cedare.int



# Annex IV

## Information Note



## INTEGRATED ENVIRONMENTAL ASSESSMENT

Workshop for the National Reporting Toolkit (NRT)

9-12 December, 2013 - Abu Dhabi, UAE

### Information Note for Participants

#### ORGANISERS

The meeting is being organised by Abu Dhabi Global Environment Data Initiative (AGEDI) and the Environment Agency – Abu Dhabi in collaboration with the United Nations Environment Programme Regional Office for West Asia (UNEP-ROWA), and the Centre for Environment and Development for the Arab Region and Europe (CEDARE).

#### MEETING VENUE

The meeting will take place at the **Radisson Blu Hotel**.

The contacts of the hotel are:

**Radisson Blu, Yas Island, Abu Dhabi Hotel**

Golf Plaza Yas Island

P.O. Box 93725

Abu Dhabi

United Arab Emirates

Phone: (+971) 2-656-2000

Website: <http://www.radissonblu.com/hotel-abudhabi>

#### Hotel contact person:

**Samer Alinezan**

Email: [Samer.Alinezan@RadissonBLU.com](mailto:Samer.Alinezan@RadissonBLU.com)

Tel : +971 2 656 2000

D: +971 2 656 2456

Fax: +971 2 656 2515

#### HOTEL ACCOMMODATION

All participants are booked at the Radisson Blu, Yas Island, Abu Dhabi Hotel on a half-board basis.

## AIRPORT TRANSFER

Airport pick-up and drop-off by the hotel have been arranged for all participants. For further inquiry, kindly contact Clive Swan ([clive.swan@ead.ae](mailto:clive.swan@ead.ae)). Please make sure that you have submitted your confirmed flight details.

## AGENDA AND BACKGROUND DOCUMENTS

The Agenda will be emailed to participants and will also be distributed at the meeting. Digital copies of all documents will be distributed during the registration.

## OTHER DOCUMENTS

Any participant wishing to distribute documents/publications during the meeting should kindly email them to Clive Swan ([clive.swan@ead.ae](mailto:clive.swan@ead.ae)) beforehand or hand them to the Secretariat at the meeting venue.

## PER DIEM (DSA)

Per diem will not be provided for this meeting. The meeting secretariat will cover accommodation on half-board basis and lunch will be provided during the workshop.

## VISAS

Participants who are required to apply for entry visas to United Arab Emirates should contact Clive Swan ([clive.swan@ead.ae](mailto:clive.swan@ead.ae)) as early as possible from their home country. Citizens of the GCC countries of Bahrain, Kuwait, Oman, Qatar and Saudi Arabia do not require a visa to travel to the UAE.

## CURRENCY

The Emirati Dirham AED (=0.27 US Dollars) is the currency of the United Arab Emirates. For daily exchange rates, you may refer to <http://www.xe.com/currencyconverter/convert>.

## WEATHER

The weather in Abu Dhabi in the first two weeks of December is expected to be sunny and pleasantly warm with high temperatures averaging 27 Celsius and low temperatures averaging 17 Celsius.

**All information regarding this workshop is available at: [gis.cedare.int/iea\\_uae](http://gis.cedare.int/iea_uae)**

Please direct any inquiries or comments to:

Environment Agency – Abu Dhabi  
(EAD)

Clive Swan

Partnership Project Manager

Environment Agency – Abu Dhabi

Email: [clive.swan@ead.ae](mailto:clive.swan@ead.ae)

Mobile: +971 56 217 9346

Centre for Environment & Development for the Arab  
Region and Europe (CEDARE)

Catherine Ghaly

Senior Regional Programme Assistant

Knowledge Management Programme

E-mail: [cghaly@cedare.int](mailto:cghaly@cedare.int)

Tel.: 00202 2451 3921 / 22 / 23 / 24 (Ext.: 636)

Fax: 00202 2451 3918