



**ECONOMIC AND SOCIAL  
COUNCIL**

Distr.  
LIMITED  
E/ESCWA/SCU/2007/WG.2/4  
17 July 2007  
ENGLISH  
ORIGINAL: ARABIC

**Economic and Social Commission for Western Asia (ESCWA)**

## **REPORT**

### **EXPERT GROUP MEETING ON THE PRODUCTION OF STATISTICS ON NATURAL RESOURCES AND ENVIRONMENT CAIRO, 5-7 JUNE 2007**

#### **Summary**

The United Nations Economic and Social Commission for Western Asia (ESCWA), in collaboration with the United Nations Statistics Division of the Department of Economic and Social Affairs and the United Nations Environment Programme/Regional Office for Western Asia, organized an expert group meeting on the production of statistics on natural resources and environment, which was held in Cairo from 5 to 7 June 2007. Representatives from the World Bank, the MEDSTAT programme of the Euro-Mediterranean Statistical Co-operation, national statistical offices (NSOs), ministries of environment and water authorities in ESCWA member countries, Morocco and Tunisia participated in the Meeting.

The Meeting focused on methods of producing water resource-related statistics and accounts within the framework of the System of Integrated Environmental and Economic Accounting for Water Resources (SEEAW). The discussions dealt with the definitions and methodologies of water supply and use flow accounts, emission accounts, assets accounts, expenditure related to environmental protection, natural resource management and water valuation. The Meeting also addressed methodologies for collecting SEEAW-related data and the difficulties encountered by the producers of such data. Participants agreed on the need for coordination between NSOs and the parties engaged in the production of environment and water-related data. They stressed the need to harmonize definitions and methodologies for the purpose of producing integrated environmental and economic accounting.

Participants issued a set of recommendations addressed to member countries and to ESCWA, with a view to improving the quality of statistics on environment and water and strengthening national capacities for the production of integrated environmental and economic accounting.

## CONTENTS

	<i>Paragraphs</i>	<i>Page</i>
Introduction.....	1-3	3
<i>Chapter</i>		
<b>I. RECOMMENDATIONS</b> .....	4-6	3
A. Recommendations to member countries.....	5	3
B. Recommendations to ESCWA.....	6	4
<b>II. TOPICS FOR DISCUSSION</b> .....	7-27	4
A. Session 1: Background and introduction .....	7-8	4
B. Session 2: Regional water issues and needs.....	9-10	4
C. Session 3: Integrated water resource management and System of Integrated Environmental and Economic Accounting for Water .....	11-12	5
D. Session 4: Identifying basic water-related issues and priorities.....	13-14	5
E. Session 5: Physical aspects of water .....	15-17	6
F. Session 6: Water management .....	18	6
G. Session 7: Implementing the System of Integrated Environmental and Economic Accounting for Water.....	19-20	6
H. Session 8: Plans for the implementation of the System of Integrated Environmental and Economic Accounting for Water in developing countries.....	21-22	6
I. Session 9: System of Integrated Environmental and Economic Accounting for Water – hybrid accounts and emission accounts .....	23-24	8
J. Session 10: Indicators and international reporting.....	25-26	8
K. Conclusions and way forward.....	27	8
<b>III. ORGANIZATION OF WORK</b> .....	28-34	9
A. Venue and date of the meeting.....	28	9
B. Opening of the meeting.....	29-32	9
C. Participants .....	33	9
D. Adoption of the programme of work .....	34	9
<b>ANNEXES</b>		
I. List of participants .....		12
II. Meeting assessment.....		16
III. List of documents .....		19

## **Introduction**

1. The Economic and Social Commission for Western Asia (ESCWA), in collaboration with the United Nations Statistics Division (UNSD) of the Department of Economic and Social Affairs (DESA) and the United Nations Environment Programme/Regional Office for Western Asia (UNEP-ROWA), held an expert group meeting on the production of statistics on natural resources and environment. The meeting was held in Cairo from 5 to 7 June 2007.

2. The purposes of the meeting were: (a) to provide an overview on the state of production of statistics and accounts on natural resources and environment in the ESCWA region, with particular focus on water resources; (b) to present the framework and methodologies of the System of Integrated Environmental and Economic Accounting for Water Resources (SEEAW); (c) to discuss the requirements for the implementation of SEEAW in ESCWA member countries; and (d) to make recommendations for the implementation of SEEAW according to regional priorities.

3. Discussions focused on methods of producing statistics and accounts on water resources within the framework of SEEAW, and definitions and methodologies of water supply and use flow accounts, emission accounts, asset accounts, expenditure related to environmental protection, natural resource management and water valuation.

## **I. RECOMMENDATIONS**

4. At the conclusion of the Meeting, recommendations were made to member countries and ESCWA, with a view to improving the quality of statistics on environment and water, and producing integrated economic and environmental accounting.

### **A. RECOMMENDATIONS MADE TO MEMBER COUNTRIES**

5. Meeting participants made the following recommendations to member countries:

(a) Cooperation and coordination between the relevant national parties should be enhanced, in order to improve the quality of environment and water-related data and produce integrated environmental and economic accounting;

(b) Available data on environmental accounting should be identified and collected in stages, then organized in special databases for the purpose of producing integrated environmental and economic accounting;

(c) Environmental control and water resource monitoring systems should be upgraded in order to provide basic data;

(d) Coordination should be activated by the exchange of experiences and expertise between member countries;

(e) Implementation of the 1993 System of National Accounts (SNA) and its amendments should be expedited as integral to the production of satellite accounts;

(f) Capacities should be built in all areas related to the production of integrated environmental and economic accounting.

## B. RECOMMENDATIONS MADE TO ESCWA

6. Participants made the following recommendations to ESCWA:

(a) Guidelines for implementation of SEEAW and an index in Arabic of country experiences in producing environmental and water accounts should be produced as soon as possible;

(b) National capacities should be built in coordination with regional and international organizations involved in producing environmental and water accounts;

(c) Support should be given to the question of environmental and water accounts at the highest levels.

## II. TOPICS FOR DISCUSSION

### A. SESSION 1: BACKGROUND AND INTRODUCTION

7. In this session, participants presented a number of papers on topics including the production of statistics on natural resources and environment in the ESCWA region; water resources and their uses; the need of the region for integrated environmental and economic accounts; the status of SNA in the ESCWA region and the action taken by the secretariat in that regard. A presentation was made on the System of Integrated Environmental and Economic Accounting (SEEA), covering its establishment and development and the activities of the United Nations Committee of Experts on Environmental-Economic Accounting. The presentation explained the main principles of SEEA, its structure and uses, in addition to the lessons learned from its implementation. A further presentation was made on the outcome of a comparative study on international and regional sources of environmental statistics in terms of reliability, effectiveness and applicability and the reasons for data differences between those sources. The study concluded that national source data should be adopted after the standards and methodologies of various States had been harmonized in order to ensure their consistency and appropriateness.

8. During the session, ESCWA gave details of the project for developing national capacities in environment statistics, indicators and accounts. That project, which had \$600,000 funding from the United Nations Development Account, will be jointly implemented by ESCWA and the Economic Commission for Latin America and the Caribbean.

### B. SESSION 2: REGIONAL WATER ISSUES AND NEEDS

9. At this session, a number of papers on regional water issues and needs were presented, including a paper on the requirements for and prospects of implementing environmental and water accounting in the ESCWA region, which contained case studies from selected countries. An overview presentation was made on the production of statistics on natural resources and environment in the ESCWA region and the acquisition of environmental data as a basic prerequisite for environmental accounting. The session also included a presentation of the MEDSTAT programme of the Euro-Mediterranean Statistical Co-operation and the activities organized in the context of that programme in the area of environmental accounting and statistics.

10. At the conclusion of the session, discussion took place of such other relevant issues as the need to harmonize methodologies and definitions related to statistics on water and environment and the need for practical guidelines in Arabic, particularly with regard to the production of integrated environmental and economic accounts for water. The discussions also touched the difficulties encountered by countries in the region in collecting environmental statistics.

C. SESSION 3: INTEGRATED WATER RESOURCE MANAGEMENT AND SYSTEM OF INTEGRATED ENVIRONMENTAL AND ECONOMIC ACCOUNTING FOR WATER

11. Discussions in this session addressed two issues, namely, integrated water resource management (IWRM) and SEEAW, with a presentation on the need for water accounting and the roles that should be played by the parties concerned in the context of the Global Water Partnership and IWRM. The session included also a presentation on SEEAW, showing its development, structure and main principles, in addition to the main tables and indicators contained in that System and lessons learned from its implementation in some countries. Another presentation was made on IWRM and the requirements for environmental accounting in ESCWA member countries, which was followed by a review of the national experiences of Morocco and Tunisia.

12. Several other relevant issues were also discussed at the session, including the importance of preparing national accounts on the basis of 1993 SNA and satellite accounts, including environmental accounts. Discussions also addressed the steps taken by Morocco to prepare water accounts. Participants thanked the Moroccan delegation for its contribution to the session and the information it had provided on the practical action taken by Morocco in order to prepare those accounts.

D. SESSION 4: IDENTIFYING BASIC WATER-RELATED ISSUES AND PRIORITIES

13. Participants at this session were divided into two working groups with a view to invigorating the debate and answering the following three questions put forward by the organizers of the meeting in order to orient the discussions:

- (a) What are the main water policy questions?
- (b) What data are needed to answer those questions?
- (c) How can countries best work together?

14. The two groups came up with the following answers:

- (a) The main water policy questions are:
  - (i) What are the challenges facing the countries of the region in safeguarding water resources?
  - (ii) How to balance water resource supply and demand without jeopardizing the available water?
  - (iii) How effective is water-related legislations?
- (b) The data needed to answer water policy questions cover the following:
  - (i) Local and foreign sources of water;
  - (ii) Quantity and quality of total available and produced water by source;
  - (iii) Water use by economic activity;
  - (iv) Population and geographic distribution;
  - (v) Cost of producing and distributing water;
  - (vi) Quantity of water lost, by means of loss;
- (c) The best ways in which the countries of the region can work together are:
  - (i) By exchanging information and expertise;
  - (ii) Developing common policies and concluding agreements;
  - (iii) Coordinating between producers and users of information;
  - (iv) Forming specialized steering committees and holding regular meetings.

#### E. SESSION 5: PHYSICAL ASPECTS OF WATER

15. The session started with a presentation on the structure of SEEAW and its use in physical supplies, supply and use tables and asset tables. The presentation demonstrated the importance of supply and use tables for the exchange of water between the environment and the economy and within the economy itself. The importance of those tables was stressed, because they identify the industries or economic sectors that constitute a challenge to the environment because of their water extraction, use and consumption. The presentation underlined the importance of SEEAW and data sources, noting that the implementation of SEEAW may face difficulties.

16. Presentations were also made on the experiences of Egypt, Jordan, Lebanon and Palestine in the area of statistics and accounting on environment and water.

17. At the end of the session, discussions addressed the subjects of the above-mentioned presentations, focusing mainly on the data required for preparing supply and use asset tables and ways of acquiring those data. Participants considered the lack of coordination between the parties concerned with environment and water, which causes discrepancies in the data provided. They also discussed matters related to water quality and the environment in general and agreed on the need for national legislation to include laws to curb pollution in many ways.

#### F. SESSION 6: WATER MANAGEMENT

18. A presentation was made in this session on water management from an international perspective. It showed that the Middle East and North Africa regions have a real problem with respect to renewable water sources. That problem is being continuously exacerbated by rapid population growth and a probable decline in rainfall as the result of climate change. The presenter called on the parties concerned to take all the measures necessary and involve sectors not concerned with water in finding appropriate solutions. Also introduced were a number of papers that reviewed the national experiences of Iraq, Palestine, the Syrian Arab Republic and Yemen. A further paper considered the experience of Australia in that regard.

#### G. SESSION 7: IMPLEMENTATION OF THE SYSTEM OF INTEGRATED ENVIRONMENTAL AND ECONOMIC ACCOUNTING FOR WATER

19. A number of presentations were made in this session on ways and means of implementing SEEAW. The first concerned the preparation of a global implementation strategy for SEEAW, in which the presenter emphasized the need to work in regional blocs, engage in current activities and programmes and take advantage of the assistance provided by international organizations. Another presentation concerned the status of IWRM implementation in Western Asia and its implications for the implementation of SEEAW, in addition to the related challenges faced by the countries of the region. The Euro-Mediterranean Statistical Co-operation programme for the implementation of SEEAW was also introduced, as well as the national experiences of Jordan, Morocco and Tunisia in the area of preparing water accounts.

20. Discussions also focused on the technical assistance that can be provided by the United Nations to member countries in implementing SEEAW. Countries determine the nature of the assistance they require after setting priorities and devising a realistic plan of action. Participants stressed the need to formulate a list of basic indicators, and identify gaps and surveys that must to be conducted.

#### H. SESSION 8: PLANS FOR THE IMPLEMENTATION OF THE SYSTEM OF ENVIRONMENTAL AND ECONOMIC ACCOUNTING FOR WATER IN DEVELOPING COUNTRIES

21. Participants at this session were divided into two working groups with a view to invigorating the debate and answering the following three questions put forward by the organizers of the meeting in order to orient the discussions:

- (a) What are the advantages and disadvantages of SEEAW?
- (b) What are the main barriers to the implementation of SEEAW and how may they be overcome?
- (c) What are the factors that could contribute to the implementation of SEEAW and how can they be harnessed?

22. The two groups came up with the following answers:

(a) *The advantages and disadvantages of SEEAW are set forth below:*

(i) *Advantages*

- a. Provides a data base of indicators and information on water and environment-related changes, links those changes to economic changes and studies their mutual implications;
- b. Provides decision makers with the indicators needed in order to make appropriate policy decisions on water and the environment;
- c. Makes it possible to conduct international and regional comparisons;
- d. Permits coordination between information producers and users;
- e. Makes it possible to assess current and future requirements and the deficit in a precise and comprehensive manner.

(ii) *Disadvantages*

- a. Difficulty of implementation;
- b. Confusion of methodologies, definitions, frameworks and standards.

(b) *The main barriers to the implementation of SEEAW and ways in which they may be overcome are:*

(iii) *Barriers*

- a. Insufficient familiarity with the proposed system;
- b. Lack of the precise and comprehensive information required;
- c. Lack of human resources capable of operating SEEAW;
- d. 1993 SNA not being implemented;
- e. Lack of administrative units specialized in environment statistics;
- f. Poor coordination between the various local parties and States in respect of water data;
- g. Inadequate use of modern technologies for obtaining and assessing data.

(iv) *Ways of overcoming barriers*

- a. Establish administrative units specialized in environment statistics and provide the necessary financial and human resources and training programmes for staff;
- b. Include the subject as a national statistical office priority and keep the matter permanently on the agenda;

- c. Hold national symposiums and workshops for data producers and providers, in particular from government bodies, and put in place a consolidated mechanism for the provision of data;
- d. Expedite implementation of 1993 SNA;
- e. Enact laws and legislation pertaining to the environment and water.

(c) *The factors that could contribute to the implementation of SEEAW and the way in which those factors could be harnessed are as follow:*

- (i) Begin production of some accounts and tables based on the available data in order to determine gaps;
- (ii) Propose the idea of implementing SEEAW to the highest committees of such international and regional bodies as the ESCWA session, in order to review the advantages of that System and the indicators which it provides, which may benefit water policy;
- (iii) Establish links and complementarity between workers in the water and environment sector and statisticians and economists;
- (iv) Provide financial and technical assistance for the implementation of SEEAW.

#### I. SESSION 9: SYSTEM OF INTEGRATED ENVIRONMENTAL AND ECONOMIC ACCOUNTING FOR WATER - HYBRID ACCOUNTS AND EMISSION ACCOUNTS

23. In this session, presentations were made on hybrid accounts and emission accounts in the context of SEEAW. The first covered economic data and hybrid accounts, demonstrating the goal of producing such accounts and the tables and data contained therein, in addition to samples of those accounts and tables from Australia and the Netherlands. The second presentation covered emission accounts, giving the reasons for producing such accounts and ways in which they may be harnessed, the basic tables and data included in those accounts, and samples from Australia.

24. The presentations were followed by discussions on ways of compiling statistical data based on the standards and concepts which have been identified for producing those accounts. Discussions also considered ways in which such accounts can be used to formulate policies aimed at reducing pollution and assessing the economic implications of those policies.

#### J. SESSION 10: INDICATORS AND INTERNATIONAL REPORTING

25. In this session, a presentation was made on SEEAW indicators covering such important issues as the relation between the economy and the environment, the characteristics of those indicators and their users. The presentation also addressed environmental indicators as some of the MDG indicators and the relationship between producers and users of environmental indicators.

26. The session concluded with a review of international surveys on the compilation of data related to environment and water statistics.

#### K. CONCLUSIONS AND WAY FORWARD

27. The discussions in this session covered the most significant conclusions of the meeting and opportunities for member countries to benefit directly from the meeting. As the outcome of the three days of discussion, participants put forward a set of recommendations that were addressed to member countries and



to the ESCWA secretariat, with a view to improving the quality of environment and water statistics and for the purpose of producing integrated environment and economic accounts.

### III. ORGANIZATION OF WORK

#### A. VENUE AND DATE OF THE MEETING

28. The meeting was held from 5 to 7 June 2007 in the Ramses-Hilton hotel in Cairo.

#### B. OPENING OF THE MEETING

29. The meeting was opened by Ms. Wafa Aboul Hosn, representing the ESCWA secretariat. She commended the cooperation between ESCWA, member countries, UNSD and UNEP, represented by its regional office for Western Asia. She thanked the Central Agency for Public Mobilization and Statistics of Egypt for its efforts to ensure the success of the meeting. Ms. Aboul Hosn underlined the importance of statistics on environment and water and the need to prepare integrated environmental and economic accounts, which are considered essential for the establishment of a comprehensive framework for policies related to environmental systems and water in the countries of the region, particularly in light of the fact that the ESCWA region, which has a wealth of other natural resources, has few sources of drinking water.

30. Ms. Iffat Choukri, representative of the Central Agency for Public Mobilization and Statistics of Egypt, made a statement in which she stressed the importance of the meeting and thanked ESCWA for its initiative.

31. Mr. Michael Vardon, representative of UNSD, made a statement in which he underlined the importance of the meeting and of cooperation with ESCWA. He reviewed the tasks undertaken by UNSD in preparing the manual on integrated environmental and economic accounting and in helping member countries through capacity-building.

32. Mr. Adel Abdel Kader, representative of UNEP, made a statement in which he noted the numerous challenges facing the Arab region in the areas of the environment and water. He stressed the importance of environmental statistics, not as a goal in themselves, but because they could be translated into information that would assist in formulating the policies needed in the region aimed at overcoming those challenges.

#### C. PARTICIPANTS

33. The meeting was attended by 46 participants, of whom 31 represented ESCWA member countries, four represented the Arab Maghreb countries and 11 represented international organizations. The list of participants constitutes Annex I of this document.

#### D. ADOPTION OF THE PROGRAMME OF WORK

34. At its first session, the meeting discussed the proposed programme of work contained in document E/ESCWA/SCU/2007/WG.2/L.1, which was adopted after the introduction of certain amendments. The programme of work was adopted in the following form:

##### **Session 1: Background and introduction**

- Introduction and opening of the meeting.
- Adoption of the agenda.
- Briefing on the United Nations Development Account project to strengthen national capacities in environmental statistics, indicators and accounts.

- Overview of the production of statistics on natural resources and the environment in the ESCWA region.
- Status of national accounts in ESCWA member countries.
- System of Integrated Environmental-Economic Accounting (SEEA).
- Comparative Study of global and regional data sets.

**Session 2: Regional water issues and needs**

- Presentation on the comprehensive global assessment of environmental statistics and accounting in the ESCWA region.
- Availability of environmental data as a prerequisite for environmental accounting in ESCWA member countries.
- Environmental accounts and water accounts in the ESCWA region: requirements and scope for implementation: case studies in selected countries.
- MEDSTAT II and environmental accounting and statistics.

**Session 3: Integrated water resource management (IWRM) and System of Integrated Environmental and Economic Accounting for Water Resources (SEEAW)**

- SEEAW.
- Status of IWRM in ESCWA member countries as a prerequisite for environmental accounting.
- Country presentations: Morocco and Tunisia.

**Session 4: Identifying basic water-related issues and priorities: discussion groups**

**Session 5: Physical aspects of water**

- Structure of SEEAW and its use in physical supplies, supply and use tables and asset tables.
- Country papers: Jordan, Lebanon and Palestine.

**Session 6: Water management**

- International experiences.
- Experience from Australia.
- Experiences from ESCWA member countries: Iraq, Palestine, Syrian Arab Republic and Yemen

**Session 7: Implementation of SEEAW**

- Towards a comprehensive implementation strategy for SEEAW.
- Regional implementation plan for SEEAW.
- MEDSTAT II implementation plan for SEEAW.
- Country presentations: Jordan, Morocco and Tunisia.

**Session 8: Implementation plans for SEEAW in developing countries: discussion groups**

**Session 9: SEEAW - hybrid accounts and emission accounts**

- Structure and uses of SEEAW hybrid accounts.
- Structure and uses of the SEEAW water quality and emission accounts.

**Session 10: Indicators and international reporting**

- Indicators from SEEAW.
- International questionnaires.

**Session 11: Conclusions and way forward.**

Annex I

**LIST OF PARTICIPANTS\***

A. ESCWA MEMBER COUNTRIES

Bahrain

Abdulla Ali Abdulla  
Head, Water Conservation Division  
Ministry of Electricity and Water  
Telephone: 973-1-7576482  
Mobile: 973-3-9676010  
E-mail: [Abdulla.Ali@mew.gov.bh](mailto:Abdulla.Ali@mew.gov.bh)

Ali Yussef Ibrahim Al-Khayat  
Director of National Accounts  
Central Informatics Organization  
Telephone: 973-1-7878156  
Mobile: 973-3-9408325  
Fax: 973-1-7878119  
E-mail: [aliyk@cio.ogov.bh](mailto:aliyk@cio.ogov.bh)

Egypt

Nadia Mahmoud Mohamad Edrees  
General Directorate, Environmental Studies and  
Research Administration  
Central Administration for Public Mobilization  
and Statistics  
P.O. Box 2086  
Telephone: 202-240242292  
Mobile: 2010-3274585  
Fax: 202-24024099  
E-mail: [nadiaadress@yahoo.com](mailto:nadiaadress@yahoo.com)

Hanan Hachem Mohamad Badwi  
Head, Water Statistics Division  
General Administration for Environment  
Central Administration for Public Mobilization  
and Statistics  
P.O. Box 2086  
Telephone: 201-27659057

Amwaj Mustapha Kamel  
First Officer, Statistical Studies and Research  
Central Administration for Public Mobilization  
and Statistics  
P.O. Box 2086

Mona Abdel Rahman Awad Tajeddine  
Second Researcher in Technical Affairs  
Central Administration for Public Mobilization  
and Statistics  
P.O. Box 2086  
Telephone: 202-4102946  
Mobile: 20161615411

Abd-Elshafi Abbas El-Ashmawi  
National Accountant  
Ministry for Economic Development  
Telephone: 202-2708435  
Mobile: 201-29625907  
Fax: 202-4024099  
E-mail: [elshafi59@yahoo.com](mailto:elshafi59@yahoo.com)

Ahmed Mohamed Fahmi Abdulla  
Joint Technical Committee for the Nile  
E-mail: [ahmedfahmy95@hotmail.com](mailto:ahmedfahmy95@hotmail.com)

Iraq

Huda Haddawi Mohammed  
Iraq Central Organisation for Statistics and  
Information Technology  
Director  
P.O. Box 8001 Baghdad  
Telephone: 964-5556364  
Mobile: 964-7901466144  
E-mail: [hudah\\_m@yahoo.com](mailto:hudah_m@yahoo.com)

Nada Hadi Zayer  
Research Assistant  
Iraq Central Organisation for Statistics and  
Information Technology  
P.O. Box 8001 Baghdad  
Mobile: 964-7901177535  
E-mail: [sami\\_abokuteef@yahoo.com](mailto:sami_abokuteef@yahoo.com)

Jordan

Sona Hilal Lutfi Abuzahra  
Research Assistant  
Department of Statistics  
P.O. Box 2015 Amman  
Telephone: 962-6-5300700  
Fax: 962-6-5300710  
E-mail: [suna@dos.gov.jo](mailto:suna@dos.gov.jo)

Mohammed K. A. Bany-Mustafa  
Director of Information Management  
Ministry of Water and Irrigation  
Telephone: 962-6-5652265  
Mobile: 962-777412905  
Fax: 962-6-5652287  
E-mail: [mkbm@mwl.gov.jo](mailto:mkbm@mwl.gov.jo)

---

\* Issued as submitted.

## Kuwait

Nouria Sager  
Director of National Economy  
Ministry of Planning  
P.O. Box 13001  
Telephone: 965-2427579  
Fax: 965-2427590  
E-mail: [nouriasager@hotmail.com](mailto:nouriasager@hotmail.com),  
[nouria@mop.gov.kw](mailto:nouria@mop.gov.kw)

Abdulaziz Jasem Mohamed AlHajeeri  
OIC, Commercial, Agriculture and Services  
Statistics Department  
Ministry of Planning  
P.O. Box 13001  
Telephone: 965-9103131  
Fax: 965-2430416  
E-mail: [aarmdan@yahoo.com](mailto:aarmdan@yahoo.com)

Samar Abdulmohsin Hamad Al-Ateeqi  
Statistical Analysis Officer  
Ministry of Planning  
P.O. Box 13001  
Telephone: 965-2442893  
Mobile: 965-9723990  
Fax: 965-2427590  
E-mail: [samarakw@hotmail.com](mailto:samarakw@hotmail.com)

## Lebanon

Ghalia Hamamy  
Economics Expert  
Central Administration for Statistics  
Council of Ministers  
Telephone: 961-1-373160  
Mobile: 961-3-804786  
Fax: 961-1-373161  
E-mail: [ghamamy@hotmail.com](mailto:ghamamy@hotmail.com)

Mona Fakih  
Chief, Technical Establishment Administration  
Ministry of Energy and Water  
Mobile: 961-3-763 936  
Fax: 961-1-565 048  
E-mail: [monafakih@hotmail.com](mailto:monafakih@hotmail.com)

## Oman

Laila Bint Habib Al-Ajmi  
Quality Control  
Ministry of National Economy  
P.O. Box 881  
Telephone: 96824604917  
Mobile: 96899318664  
Fax: 96824604718  
E-mail: [alajmilaila@hotmail.com](mailto:alajmilaila@hotmail.com)

## Palestine

Zahran Naji Ghannam Khaleef  
Chief, Inflow Water Statistics Division  
Palestinian Central Bureau of Statistics  
P.O. Box 1647  
Telephone: 970-2-2406340  
Mobile: 970-599767764  
Fax: 970-2-2406343  
E-mail: [diwan@pcbs.gov.ps](mailto:diwan@pcbs.gov.ps)

Ahmed S. M. Al-Yaqoubi  
Palestinian Water Authority  
Telephone: 970-8282 2696  
Mobile: 970-599425726  
Fax: 970-82822697  
E-mail: [ahmadyaqubi@hotmail.com](mailto:ahmadyaqubi@hotmail.com)

## Qatar

Saoud Matar Al-Shammari  
Statistics Research  
Planning Council  
P.O. Box 75327  
Mobile: 974-5554002  
E-mail: [abotalal9@yahoo.com](mailto:abotalal9@yahoo.com)

Thamer Al-Anzi  
Statistics Research  
Planning Council  
P.O. Box 1855  
Telephone: 974-4958871  
Mobile: 974-5152260  
E-mail: [talanzi@planning.gov.qa](mailto:talanzi@planning.gov.qa)

## Saudi Arabia

Fahad Ben Ali Al-Gazlan  
Director of Productive Sectoral  
Ministry of Economy and Planning  
P.O. Box 3735 Riad 11841  
Telephone: 966-14012132  
Mobile: 966-505409286  
Fax: 966-14014138  
E-mail: [algazlan@yahoo.com](mailto:algazlan@yahoo.com)

Ali Ben Abdulla Hamdi  
Statistics Research  
Ministry of Economy and Planning  
P.O. Box 3735 Riad 11841  
Telephone: 966-555049876  
Fax: 966-4014138 Ext.1197  
E-mail: [aa1212@hotmail.com](mailto:aa1212@hotmail.com)

Saudi Arabia (continued)

Fahad bin Ahmad Al-Baijan  
Senior Statistician  
Ministry of Water and Electricity  
Telephone: 966-1205 6666 Ext. 2859  
Mobile: 966-505203459  
Fax: 966-1205 2979  
E-mail: [Fbaijian@hotmail.com](mailto:Fbaijian@hotmail.com)

Syrian Arab Republic

Hasna Al Sameh  
Assistant Director  
Economic Statistics Directorate  
Central Bureau of Statistics  
Telephone: 963-11-3335830  
Mobile: 963-9-3386859  
Fax: 963-11-3322292  
E-mail: [cbs@scs-net.org](mailto:cbs@scs-net.org)

Mustafa Jamil Qmariah  
Water Resources Directorate  
Telephone: 963-11-2225820  
Mobile: 963-9-33847118  
E-mail: [hw-ja@aloola.sy](mailto:hw-ja@aloola.sy)

United Arab Emirates

Khalifa Ali Majed El-Hosni  
Economics Research  
Ministry of Economy  
Telephone: 971-26123232  
Mobile: 971-504922988  
E-mail: [khalifa@economy.ae](mailto:khalifa@economy.ae)

Yemen

Nadhmy Ahmed Mohamed Abdul-Rahim  
Director of Economic Statistics  
Department of National Accounts  
Central Bureau of Statistics  
P.O. Box 13434  
Mobile: 967-77-354538  
E-mail: [nadhmy@yahoo.com](mailto:nadhmy@yahoo.com)

B. ARAB COUNTRIES OTHER THAN ESCWA

Morocco

Lalia Oualkacha  
Chief of Water Service Management  
Ministry of Territory Planning Water and  
Environment  
Telephone: 212 62 05 93 27  
Fax: 212 37 20 17 36 / 212 37 77 32 17  
E-mail: [oulkacha@water.gov.ma](mailto:oulkacha@water.gov.ma)

Mostapha Afkir  
Director of National Accounts  
Telephone: 212 37 77 31 41  
Fax: 212 37 77 55 49  
E-mail: [mafkir@statistic.gov.ma](mailto:mafkir@statistic.gov.ma)  
[mafkir\\_50@yahoo.fr](mailto:mafkir_50@yahoo.fr)Tunisia

Mohamed Nejib Kachouri  
Ministry of Agriculture and Water Resources  
Telephone: +216 71 493 196  
Fax: 216 71 390 200  
E-mail: [mn\\_kachouri@yahoo.fr](mailto:mn_kachouri@yahoo.fr)

Salah Karim  
Institut national de la statistique  
Telephone: +212 71 281 123  
Fax: 216 71 792 559  
E-mail: [ins@mdcl.gov.tn](mailto:ins@mdcl.gov.tn)

C. REGIONAL AND INTERNATIONAL ORGANIZATIONS

League of Arab States

Nadia Tahar Chtioui  
Systems Analyst  
P.O. Box 267  
Telephone: 2023580088  
Mobile: 20122280022  
Fax: 2023580088  
E-mail: [nadia.chtioui@Las.int](mailto:nadia.chtioui@Las.int)

MEDSTAT

Cécile Roddier-Quefelec  
MEDSTAT II, Environment Key Expert  
24 Chemin Plan Bergier  
F-06650 Le Rouret, Bordeaux  
France  
Telephone: 33392387135  
Mobile: 33608245573  
Fax: 33 3 92 38 71 31  
E-mail: [croddierquefelec@planbleu.org](mailto:croddierquefelec@planbleu.org)

SMAP III TA

Hartwig Behnfeld  
Telephone: 2027362232/34  
Mobile: 20121104894  
Fax: 2027364684  
E-mail: [hartwig.behnfeld@ta-smap.com](mailto:hartwig.behnfeld@ta-smap.com)

United Nations Environment Programme

Adel Abdelkader  
Regional Coordinator  
P.O. Box 13434  
Telephone: 973-17812777  
Mobile: 973-77354358  
Fax: 973-17825110  
E-mail: [adel.abdelkader@unep.org.bh](mailto:adel.abdelkader@unep.org.bh)

Christine Nomicos  
Bureau Assistant Coordinator  
27 Adli Street  
Cairo  
Telephone: 202-3934046  
Mobile: 2012-2264470  
Fax: 202-3950117  
E-mail: [unep-allo@link.net](mailto:unep-allo@link.net)

United Nations Statistics Division

Michael Vardon  
Inter-regional Advisor on Environmental  
Accounting  
DC2 1532-NY 10017  
New York, United States of America  
Telephone: 212 963-4590  
Fax: +212 963-1374  
E-mail: [vardon@un.org](mailto:vardon@un.org)

World Bank

Hani El Sadani  
Senior Water Resources Engineer  
The World Bank, Middle East and North Africa  
Region  
1191 Corniche El Nil Boulac Cairo Office  
Egypt  
Telephone: 202-4730726  
Fax: 202-5741676  
E-mail: [helsadanisalem@worldbank.org](mailto:helsadanisalem@worldbank.org)

Economic and Social Commission for Western  
Asia (ESCWA)

Wafa Aboul Hosn  
Team Leader, Sectoral Statistics  
Statistics Division  
Riad El-Solh, Beirut  
Telephone: 961-1-978519 (Direct)  
Fax: 961-1-981510  
E-mail: [aboulhosn@un.org](mailto:aboulhosn@un.org)

Nadine Chaar  
Statistics Assistant  
Statistics Division  
Riad El-Solh, Beirut  
Telephone: 961-1-978488 (Direct)  
Fax: 961-1-981510  
E-mail: [shaar@un.org](mailto:shaar@un.org)

Hosny Khordagui  
Water and Environment Team  
Riad El-Solh, Beirut  
Telephone: 961-1-978527 (Direct)  
Mobile: 961-3-240658  
Fax: 961-1-981510  
E-mail: [khordagui@un.org](mailto:khordagui@un.org)

Talal Hourani  
Statistics Assistant  
Statistics Division  
Riad El-Solh, Beirut  
Telephone: 961-1-978430 (Direct)  
Fax: 961-1-981510  
E-mail: [hourani@un.org](mailto:hourani@un.org)

D. CONSULTANT

Osama Al-Zoubi  
National Accounts  
Ministry of Economy  
United Arab Emirates  
Telephone: 971-26123267  
Mobile: 00971-50-6897611  
E-mail: [osama.zoubi@gmail.com](mailto:osama.zoubi@gmail.com)

Annex II

**MEETING ASSESSMENT**

**Participant opinions**

**Number of answers: 32**

**(Evaluations given in percentages)**

Please choose one of the following evaluations:	Very bad	Bad	Average	Good	Very good
	1	2	3	4	5
1. What is your general assessment of the workshop?			6	44	50
2. In your opinion, did the workshop attain its goal?			10	86	4
3. How do you evaluate the benefit of the workshop in terms of the following aspects:					
(a) Importance of the subject for your work/expertise				19	81
(b) Information and skills acquired in the field of your work			20	37	43
(c) Opportunity for information exchange with other participants in the workshop		3	13	28	56
(d) Opportunity for making new and useful business contacts			12	20	68
(e) Extent of harnessing information and experience exchange			13	56	31
(f) Clarity of the presentation			12	50	38
(g) Quality of material distributed to participants			6	47	47
(h) Organizational arrangements for the workshop before and during the sessions		2	13	38	47
4. The duration of the workshop should have been:	<input type="checkbox"/> Shorter (3) <input type="checkbox"/> Same (29) <input type="checkbox"/> Longer (68)				
<p>If the answer is shorter or longer, specify which sessions should have been shorter or longer.</p> <ul style="list-style-type: none"> <li>- The sessions on SEEA were short and condensed. The subject is big and more work was needed in order to set out its concepts clearly.</li> <li>- Simplified examples of hybrid accounts, water data treatment and supply/demand tables should have been added.</li> <li>- More time should have been allowed for the presentations: they were hurried because of time constraints.</li> <li>- Training and applications on the United Nations forms and the experiences of the countries that implemented the accounting system is needed.</li> <li>- A training session on environmental accounting tables is needed.</li> <li>- The sessions on explaining SEEA and SEEAW should have been longer, as should the sessions on improving the quality of water data.</li> <li>- The number of sessions per day should have been reduced.</li> <li>- A detailed presentation of SEEAW should have been given in order to fully acquaint participants with that system.</li> <li>- The data required for developing national accounts should have been identified.</li> <li>- Method and implementation plans for SEEAW in participating countries.</li> </ul>					



<ul style="list-style-type: none"> <li>- The third day session was not given enough time.</li> <li>- The short time allocated to the sessions did not allow for a thorough explanation of country papers and discussions should have lasted longer.</li> <li>- In respect of identifying environmental data required from producers of national accounts and, in particular, water accounts, more explanation/clarification was needed of the guidelines to be followed in preparing state water accounts.</li> <li>- Having only one principal lecturer for three days negatively affected the character of the meeting and its purpose.</li> <li>- Arabic should have been used more extensively, and more time should have been given to the practical exercises.</li> <li>- More detailed consideration should have been given to SEEAW. Discussions should have been more detail-oriented, and organized into multiple and longer sessions. Presentations of country experiences and discussions should have been given more time.</li> </ul>	
<p>5. Which of the following sessions is important for your work/experience? (percentages)</p>	<input type="checkbox"/> Background and introduction (19) <input type="checkbox"/> Regional water issues and needs (28) <input type="checkbox"/> IWRM and SEEAW (78) <input type="checkbox"/> Identifying basic water issues and priorities (50) <input type="checkbox"/> Physical aspects of water (31) <input type="checkbox"/> Water management (31) <input type="checkbox"/> Implementation of SEEAW (78) <input type="checkbox"/> Implementation plans for SEEAW in developing countries (75) <input type="checkbox"/> SEEAW - hybrid accounts and emission accounts (63) <input type="checkbox"/> Indicators and international reporting (50) <input type="checkbox"/> Conclusions and way forward (53)
<p>6. Are you going to be able to make use of the information acquired from the workshop in your work or transfer that information to other experts in the field of your work or in your country? (percentages)</p>	<input type="checkbox"/> To some extent (44) <input type="checkbox"/> No <input type="checkbox"/> Yes (56)
<p>7. Would you recommend that similar workshops should be organized in the future for you or other experts in your country? (percentages)</p>	<input type="checkbox"/> To some extent <input type="checkbox"/> No (3) <input type="checkbox"/> Yes (97)
<p>If the answer is "No", please specify the reasons:</p> <ul style="list-style-type: none"> <li>- The meeting was an introduction to the next stages.</li> <li>- Practical training sessions should be held.</li> <li>- The foundation has been laid for the next stage in of implementing the statistical programme.</li> </ul>	
<p>8. Did you participate in previous workshops on the same subject organized by other organizations? If the answer is "Yes", please specify: (percentages)</p>	<input type="checkbox"/> No (78) <input type="checkbox"/> Yes (2)

Name of workshop:	Venue and date:	Organizer:
<ul style="list-style-type: none"> <li>- Workshop on preparing water accounts in Om El Rabih basin of Morocco</li> <li>- Many round tables</li> <li>- Visit of statistical offices in Jordan (Department of Environment)</li> <li>- EMWIS</li> <li>- Water statistics</li> <li>- Land degradation and water</li> </ul>	<ul style="list-style-type: none"> <li>- Morocco, December 2004</li> <li>- 2002, 2004, 2005</li> <li>- Jordan, 2004</li> <li>- Many countries</li> <li>- Syrian Arab Republic, 2005</li> <li>- Jordan, 2007</li> </ul>	<ul style="list-style-type: none"> <li>- Directorate of Statistics and Directorate of Water Research and Planning in Morocco</li> <li>- French Embassy in Lebanon and the French Agency for Development</li> <li>- ESCWA</li> <li>- Euro-Mediterranean Water Information System/EU</li> <li>- The Arab Planning Institute</li> <li>- Arab Institute for Training and Research in Statistics</li> </ul>
<p>9. Do you have any other comments/suggestions?</p> <ul style="list-style-type: none"> <li>- To request member countries to send representatives from both parties concerned, namely, national accounts, and water and environment. Current representatives were only from national accounts despite the fact that there is a Ministry of Municipalities and Water Resources.</li> <li>- We thank you and wish you success.</li> <li>- More focus should be placed on practical cases and a model from a particular country should be presented at the meeting.</li> <li>- Personnel from ESCWA member countries should be trained in SEEAW, taking into account resources and needs.</li> <li>- ESCWA activities in this field should be increased because it supports the environment more than other international organizations.</li> <li>- Periodic meetings should be held in order to review implementation of SNA.</li> <li>- Country that is making good progress in implementing SEEAW should be entrusted to develop an integrated approach.</li> <li>- Organize SEEAW practice sessions supported by ESCWA.</li> <li>- More in-depths discussions are needed of the technical issues, and consideration should be given to practical experiences.</li> <li>- There should be coordination between representatives of the same country in order to ensure that only one paper is produced for each country.</li> <li>- Countries in the ESCWA region with extensive experience should cooperate in producing a "practice scenario"; experts should be assigned to working groups in order to develop particular aspects of that scenario.</li> <li>- The system proposed to countries for implementation is very important and we should move forward in the implementation process. Countries should adopt the system in calculating the economic aspects of water.</li> <li>- The issue is very important and I wish that meetings, workshops and training sessions on preparing water accounts could be held.</li> <li>- The meeting is not a goal in itself but a means to achieving the main goal. I recommend that training programmes should be developed for a specific situation, to be used as a reference for other countries.</li> <li>- The material for each session should be organized chronologically in a file.</li> <li>- It would be better to distribute documents before the presentations. Some of the printed material was insufficient.</li> </ul>		

Annex III

**LIST OF DOCUMENTS**

Symbol	Title
E/ESCWA/SCU/2007/WG.2/INF.1	Information note
E/ESCWA/SCU/2007/WG.2/L.1	Provisional agenda
No symbol	List of documents
No symbol	List of participants
E/ESCWA/SCU/2007/WG.2/2	الحسابات البيئية والمائية في منطقة الإسكوا: متطلباتها وإمكانية تطبيقها - دراسات حالة في دول مختارة
E/ESCWA/SCU/2007/WG.2/3	Overview of the production of statistics on natural resources and environment in the ESCWA region
E/ESCWA/SCU/2007/WG.2/CP.1	Country paper: Lebanon
E/ESCWA/SCU/2007/WG.2/CP.2	Country paper: Egypt
E/ESCWA/SCU/2007/WG.2/CP.3	Country paper: Jordan
E/ESCWA/SCU/2007/WG.2/CP.4	Country paper: Palestine
E/ESCWA/SCU/2007/WG.2/CP.5	Country paper: Yemen
E/ESCWA/SCU/2007/WG.2/CP.6	Country paper: Palestine
E/ESCWA/SCU/2007/WG.2/CP.7	Country paper: Jordan
E/ESCWA/SCU/2007/WG.2/CP.8	Country paper: Iraq
No symbol	Country paper: Morocco
No symbol	Country paper: Tunisia
No symbol	Report on the global assessment of environment and environmental-economic accounting - UNSD
No symbol	Global versus regional data sets: a comparative study - UNEP
No symbol	Availability of environmental data as a prerequisite for environmental accounting in ESCWA member countries - ESCWA
No symbol	MEDSTAT II and environmental accounting and statistics - MED STAT
No symbol	System of environmental-economic accounting for water - UNSD, 2007
No symbol	Status of integrated water resources management as a prerequisite for environmental accounting in ESCWA member countries - ESCWA
No symbol	Smith, R., Development and implementation of SEEA 2003, 2006
No symbol	M. Vardon et al., Water accounting in Australia, 2006
No symbol	R. Thomson et al., An experimental monetary water account for Australia 2003-04, 2007
No symbol	Towards a global implementation strategy for SEEA - UNSD
No symbol	K. Alfsen and M. Greker, From natural resources and environmental accounting to construction of indicators for sustainable development, 2001