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Economic and Social Commission for Western Asia (ESCWA)

REPORT

OF THE TRAINING SESSION ON THE SYSTEM OF ENVIRONMENTAL- ECONOMIC ACCOUNTING FOR WATER (SEEAW) FOR THE ARAB GULF COUNTRIES BEIRUT, LEBANON, 25-28 AUGUST 2008

Summary

A training session on the System of Environmental-Economic Accounting for Water (SEEAW) for the Arab Gulf countries was held at UN House, Beirut, on 25-28 August 2008. The session was organized jointly by the Economic and Social Commission for Western Asia (ESCWA), the United Nations Statistics Division (UNSD) and the United Nations Environment Programme (UNEP). The meeting was designed to complement the ESCWA-MESTAT subregional training session for the Arab Mashreq countries that was held in Amman, Jordan, in March 2008. Both meetings were organized under the auspices of the ESCWA project on “*Strengthening National Capacities in Environment Statistics, Indicators and Accounts in support of progress toward achieving the internationally agreed development goals in the ESCWA and ECLAC Region 2007-2009*”.

The aim of the training session was to provide participants with a sound knowledge of the compilation, practical and operational use of the SEEAW and a forum for sharing experiences. It is hoped that the training will enable pilot water accounts to be produced for a number of countries and that it will strengthen national statistical capacities and enhance subregional networking.

Discussions focused on: (a) The compilation of data required by the SEEAW; (b) the preparation of the SEEAW standard tables; and (c) Practical and operational processes and examples of applications. At the conclusion of the workshop, recommendations were made to facilitate the implementation of the SEEAW in the region.

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Introduction

1. The *System of Environmental-Economic Accounting for Water* (SEEAW)¹ was developed to address the need for information on Integrated Water Resource Management (IWRM). The SEEAW provides a much-needed conceptual framework for organizing hydrological and economic information in support of IWRM,² and was adopted as an interim international statistical standard by the United Nations Statistical Commission at its 38th Session in March 2007.
2. The SEEAW is an elaboration of the handbook on *Integrated Environmental and Economic Accounting 2003*. This handbook, commonly referred to as SEEA-2003, describes the interaction between the economy and the environment and covers the whole spectrum of natural resources and the environment. Both the SEEA-2003 and the SEEAW use the 1993 System of National Accounts (1993 SNA) as a basic framework; the 1993 SNA is the standard system for the compilation of economic statistics and derivation of economic indicators.
3. The SEEAW is a conceptual framework containing standards and supplementary tables on hydrological and economic-related issues. The framework is a tool which can be used to analyse the interaction between water and the economy, and is intended to facilitate the compilation of national accounts and obtain information which can be compared across countries and over time. A large number of indicators for policy uses can also be derived from the framework.
4. The training session on the System of Environmental-Economic Accounting for Water (SEEAW) for the Arab Gulf countries was organized jointly by the Economic and Social Commission for Western Asia (ESCWA), the United Nations Statistics Division (UNSD) and the United Nations Environment Programme (UNEP). The meeting complements the ESCWA-MESTAT subregional training session for the Arab Mashreq countries held in Amman in March 2008. Both meetings were held within the context of the ESCAP project on “*Strengthening National Capacities in Environment Statistics, Indicators and Accounts in support of progress toward achieving the internationally agreed development goals in the ESCWA and ECLAC Regions 2007-2009*”. The meeting aimed at providing knowledge on the compilation, practical and operational use of the SEEAW, as well as a forum to share experiences. It was also hoped that the training session would enable some ESCWA member countries to produce pilot water accounts, strengthen their national statistical capacities and enhance networking at the subregional level.

I. RECOMMENDATIONS

5. Workshop participants agreed on the importance of the SEEAW for the region and proposed the adoption of the following recommendations:
 - (a) Build capacity to obtain reliable, continuous and harmonious primary water data, including strengthening national statistical offices, and establishing and operating water monitoring facilities, applying standard monitoring procedures and QA/QC programmes;
 - (b) Undertake a comprehensive knowledge mapping effort to assess water and environment monitoring systems and related economic data collections in order to generate primary data on achievements, gaps, constraints, challenges, opportunities, lessons learned, best practices and coordination instruments; this exercise would build on existing studies in the region by ESCWA, UNEP and their partners;

¹ See: *System of Environmental-Economic Accounting for Water*, UNSD <http://unstats.un.org/unsd/envaccounting>.

² See: Paragraph 8 of the “*Report of the User-producer Conference: Water Accounting for Integrated Water Resource Management*” (Voorburg, the Netherlands, 22-24 May 2006). <http://unstats.un.org/unsd/envaccounting/ceca/Plmeetings/Minutes-UserProducerConference.pdf>.

(c) Enhance coordination through an institutionalized mechanism among various national agencies generating primary data for water and environment accounting, by means of a specific action programme with the assistance of ESCWA, UNEP and UNSD;

(d) Collect the necessary information via surveys, administrative records or other means to obtain the required information for the development of water accounts according to the SEEAW international standard;

(e) Develop the information systems needed for integrated information on environment, water and economic sectors; this would build on existing initiatives in the region;

(f) For UNSD to continue to develop and provide material for the implementation of SEEAW and water statistics and in particular provide guidance on the definition of freshwater; this would allow for regional characteristics and national inputs to be taken into consideration;

(g) For ESCWA and UNEP to provide documentation on environment and water statistics, indicators and accounts in Arabic;

(h) For ESCWA, UNSD, and UNEP to provide technical support to Gulf Cooperation Countries (GCC) on mechanisms for integrating components of environmental accounting (economic and environmental);

(i) Adapt the SEEAW standard tables so that they could take into consideration the regional peculiarities of member countries by:

- (i) Distinguishing underground water resources into renewable and non-renewable water resources;
- (ii) Dividing the water supply and use into cooling water and mining water;
- (iii) Disaggregating the industry's aggregates of the standard tables to identify industries, such as mining, oil extraction, manufacturing, oil refining, hotels and cafes and construction;
- (iv) Separating the water received from other economic units into re-use wastewater to sewerage and distributed water;
- (v) Explicitly including and separately identifying desalinated water;

(j) To expand cooperation and sharing of experience with other regions, specifically with institutions and experts from the European Union, Organisation for Economic Co-operation and Development (OECD) and the World Bank.

II. DISCUSSION TOPICS

Session 1. Introduction to SEEAW, IWRM and conceptual framework

6. The session provided a general introduction on the SEEAW, its uses in support of IWRM and water policy, the overall SEEAW framework and the integrated nature of national accounts. A presentation was made on the 2008 UNSD/UNEP Questionnaire on Water and Waste Statistics and the links between the questionnaire and the water account tables, as well as the results of the United Nations Global Assessment on Water Statistics and Accounts.

7. ESCWA made a presentation on the importance of data in the implementation of integrated water resources management. Participants highlighted the importance of water pricing and private sector

involvement. Weakness of demand management is one of several challenges currently faced by ESCWA member countries.

8. A discussion took place on the high cost of monitoring and how this hinders the collection of data, especially in less developed countries. However, in the Arab Gulf countries, the cost of monitoring should not pose a problem as water management is a priority and financial resources are available to address the issue. Moreover, participants discussed the importance of setting a quality assurance/quality control system, as well as the essential role of, and need for, certified and accredited institutions in obtaining reliable information on water.

9. Participants discussed the role of standardization in enabling comparisons between countries and the importance of knowledge mapping, decision support and institutional coordination, and called on ESCWA to provide technical support. Other participants drew attention to the importance of having independent regulators and promoting public participation in the IWRM.

10. Participants discussed the problem of continuity in data collection. Data collection efforts in the ESCWA region have to date often depended on the personal interest of the officials concerned rather than on existing institutional procedures or processes. According to UNSD, a test will be conducted in November 2008 to assess the quality of collected data. UNEP also highlighted the importance of private sector inputs in the compilation of national environmental information.

11. UNEP presented the Indicators of Sustainable Development (ISD) for Arab Countries on water-related issues. These indicators were developed by the United Nations Commission on Sustainable Development and are consistent with the SEEAW. The GCC has adopted ISD indicators on water. However, some ESCWA member countries face problems with regard to the derivation of those indicators for existing data, as some of the environmental micro-data components are not available, while other datasets do not cover the spatial and temporal scales required.

12. In this context, UNEP included environmental information on West Asia in GEO 4 and is currently developing a regional database on environmental indicators. An important point was made by a participant regarding the crucial role of geographical information systems (GIS) in assessing natural resources in the context of climate change mitigation efforts.

13. On the issue of the UNSD/UNEP Questionnaire on Water and Waste Statistics, participants proposed that the questionnaire should include questions on the links between water flow schemes and data variables and diagrams. Some participants suggested changes and/or the introduction of additional sections within the questionnaire in order to address issues that relevant to the GCC countries. These changes are directly related to the regional context (e.g. oil production and supply) and regional conditions (e.g. aridity). Participants also enquired about certain water supply industries with both secondary and tertiary treatments and how to treat the information in the water accounts context.

14. The presentation on the questionnaire for data collection on the system of integrated environmental and economic accounting for water resources highlighted the need for: (a) the inclusion of a section on water quality; (b) water quality to be measured in all treatment plants; and (c) precipitation to be measured in volume units rather than millimeters (mm). A presentation was also made on the United Nations Global Assessment on Water Statistics and Accounts and subregional results.

15. The presentation on the International Recommendations on Water Statistics (IRWS) referred to the importance of virtual water and water pricing in the region and renewable groundwater. The emphasis with regard to groundwater should be on the lifetime of such resources and whether artificial recharging should be considered as renewable, and if so, whether these resources could be renewed within a human lifetime or within 10 years. Participants asked for IRWS guidelines to be developed on groundwater recharge. Circulating reports is very important as it promotes transparency, generates feedback, allows for coordination with other agencies, and contributes to learning from experience. Participation by Arab countries in the

international recommendations on water statistics is insufficient, even though the United Nations has sent an invitation to all countries.

Session 2. Physical supply and use tables on water

16. This session focused on the concepts, definitions, accounting rules of the physical supply and use tables (PSUT). A practical session was also organized on compiling PSUT on water, as well as some of the problems encountered in compiling this data. The expert from the United Arab Emirates shared his country's experience in water surveys and compiling water statistics.

Session 3. Compilation of the physical supply and use tables for water and recording of flows: national experiences

17. During this session, the representative from Bahrain presented a country paper. Additional practical exercises were organized on the compilation of PSUT on water and recording of flow. An explanation was provided on the adaptation of standard tables to the ESCWA region, as recommended in the ESCWA-MESTAT subregional meeting held in Amman in March 2008. The participants tried to populate the PSUT using participants' data and adapted the SEEAW tables to reflect data availability and policy concerns. Participants then discussed the results of these exercises and any remaining questions were answered.

Session 4. Emissions accounts

18. This session focused on emissions accounts and presented the concepts, definitions, accounting rules and emissions accounts indicators. It was followed by a practical session on compiling emissions accounts for water and some of the issues that may be encountered while compiling such accounts. A presentation was made on the concepts, definitions and the accounting rules adopted for emissions accounts in Austria.

19. A participant made the point that while it was possible for ESCWA member countries to develop PSUT on water, they nonetheless faced the hurdles of financial constraints and unavailability of data when compiling emissions accounts. However, this should not pose a problem for GCC countries as financial resources are available to establish emissions and other environmental accounts.

20. Participants raised a number of questions on the reasons for considering pollutants load rather than concentrations and interactions between different pollutants and other elements in the atmosphere. The expert from Austria explained that the information based on pollutants load in the emission accounts could be incomplete. The supplementary tables on quality accounts could give more information on water quality.

21. The representative from Lebanon presented a report on the progress made in the compilation of water statistics and the representative from Oman presented a country paper, including practical diagrams. Discussions followed on the problems encountered in the compilation of the accounts.

Session 5. Assets accounts

22. This session focused on the water assets accounts and presented concepts, definitions and accounting rules. Participants engaged in an exercise on the compilation of the assets accounts using the data in the diagram exercise, and were encouraged to populate the tables with national data. A discussion took place on the definition of soil water and the confined versus unconfined nature of groundwater.

Session 6. Hybrid and economic accounts

23. This session focused on hybrid and economic accounts and presented the concepts, definitions, accounting rules and indicators of these accounts. UNSD provided a comprehensive presentation and a practical exercise on hybrid accounts. Comments were made by participants during this session related to

the capacity of ESCWA countries to implement hybrid accounts, the difficulties of gathering information from the different sectors and the absence of a legal basis and financial resources for the development of accounts on environment and water.

Session 7. Tourism accounts

24. The session on tourism accounts was added given the importance of such accounts in the Arab Gulf countries. ESCWA gave a comprehensive presentation on tourism accounts and the tables of concern and how they should be completed. A discussion followed on the difficulties in conducting field surveys and the importance of performing a pilot survey before finalization and field work. The representative of Lebanon presented his country's experience in tourism accounts and highlighted some of the difficulties encountered in developing these accounts. All related satellite accounts, on tourism and on environment and water, could be linked together and matched with information in SEEA.

Session 8. Review/critique of SEEAW, IWRM and water accounting

25. This session mainly focused on a critical review of the SEEAW, summarizing the discussions and mapping the way forward in the implementation of the SEEAW in the countries participating in the training session. Participants agreed on the importance of the water accounts in their respective countries and on the need for greater commitment on the part of policymakers. They also considered that the training session had been beneficial as it had allowed them to learn more on the subjects that had been presented and because it had provided an opportunity to share experiences and information with colleagues from different parts of the ESCWA region and beyond. A set of recommendations was agreed upon by all participants at the end of the training session and certificates of attendance were distributed to the participants by UNEP, UNSD and ESCWA.

III. ORGANIZATION OF WORK

A. VENUE AND DATE

26. The training sessions on the System of Environmental-Economic Accounting for Water (SEEAW) for the Arab Gulf Countries was held in UN House, Beirut, on 25-28 August 2008.

B. OPENING

27. The meeting was opened by the representative of Lebanon and officials from ESCWA, UNSD and UNEP:

- Dr. Maral Tutelian, Director-General, Central Administration of Statistics, Lebanon;
- Mr. Mohamed Abdulrazzak, Acting Deputy Executive-Secretary, ESCWA;
- Mr. Michael Vardon, Interregional advisor on environmental accounting, UNSD;
- Mr. Adel Abdel Kader, Regional Coordinator, UNEP;
- Mr. Giovanni Savio, OIC, Statistics Division, ESCWA.

C. PARTICIPANTS

28. The training sessions was attended by 19 participants from Central Statistical Offices, water and environment authorities and other agencies in the six Arab Gulf Countries and Lebanon. Experts from the Austrian Federal Environment Agency, Lebanon and the United Arab Emirates, ESCWA, UNSD and UNEP also attended the session. A list of participants is provided in the annex.

D. AGENDA AND ORGANIZATION OF WORK

29. The agenda was adopted during the first session.

E. DOCUMENTATION

30. All presentations, papers and background documents for the training sessions are available on the ESCWA/Statistics Division's website (<http://www.escwa.un.org/divisions/main.asp?division=sd>) and the project website (<http://www.escwa.un.org/esiap/>).

F. LAUNCH OF THE ENVIRONMENT STATISTICS, INDICATORS AND ACCOUNTS (ESIA) PROJECT PORTAL

31. The meeting began with the launch of the Environment Statistics, Indicators and Accounts (ESIA) Project Portal (<http://esiap.escwa.org.lb/>). The portal has four components: (a) the main webpage of the project; (b) a database of documents on regional environment and water accounts; (c) a network of regional experts who have participated in ESCWA meetings on environment statistics and accounts; and (d) a forum that allows members to discuss documents and issues of interest. The network and database will be linked at a later stage to the Economic Commission for Latin America and the Caribbean (ECLAC) network (REDESA) to allow knowledge-sharing with Latin American partners.

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