

UNSD/ESCWA Workshop on Environmental Statistics, Indicators and Accounting

(Cairo, 1-5 November 1998)

I. ORGANIZATION OF THE WORKSHOP

1. The Workshop on Environmental Statistics, Indicators and Accounting was jointly organized by the Economic and Social Commission for Western Asia (ESCWA) and the United Nations Statistics Division (UNSD) in Cairo from 1 to 5 November 1998. The Workshop was hosted by the Ministry of State for Environmental Affairs of Egypt. The Workshop was also part of the technical activities for the celebration of the Silver Jubilee of ESCWA (1973-1998). The Workshop also addressed the topics of environmental household surveys, population and environment in the Arab countries, gender sensitive indicators for indoor and outdoor environment, and GIS and environment statistics.

2. The Workshop was coordinated by Mr. Abdullah El-Naggar, Regional Adviser, ESCWA, Mr. Peter Bartelmus, Chief, Environment, Energy and Industry Statistics Branch, UNSD, and Mr. Ahmad Hamza, Senior Advisor to the Ministry of State for Environmental Affairs, Egypt. Mr. Labeeb Abdunnur, Chief, Statistics Division of ESCWA, also participated in the Workshop. Five resource persons participated in the Workshop: Ms. Reena Shah from UNSD and four from the Ministry of State for Environmental Affairs, Egypt. They are Dr. Samia Galal Saad, Professor of Environmental Engineering and Consultant to the Minister, Mr. Mohamed El-Nazer, Consultant to the Minister, Mr. Moussa Mustafa, Egyptian Project Manager of Information System and Mr. Ali Amasha of the Egyptian Environmental Affairs Agency.

3. Twenty-eight participants from the 13 member States of ESCWA (Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syria, Yemen and the United Arab Emirates) attended the Workshop. The full list of participants is attached as Annex 1.

II. OPENING SESSION (agenda item 1)

4. Her Excellency, Ms. Nadia Makram Ebeid, Minister of the State for Environmental Affairs, Egypt, Dr. Hazem El-Beblawi, Executive Secretary of ESCWA, General Ihab Elwi, President of the Central Agency for Public Mobilization and Statistics (CAPMAS), and Mr. Peter Bartelmus, UNSD delivered statements to the opening session (Annex 2). This was followed by a plenary session in which two lectures were made by Dr. Ismail Sabri Abdallah, former Minister of Planning in Egypt, and Dr. Hazem El-Beblawi. Dr. Abdallah discussed the world environmental issues and, in particular, those related to the ESCWA region. Dr. El-Beblawi presented the role of ESCWA in the development of the region. The participants expressed their interest in and appreciation of these excellent lectures. The two lectures will be published later under separate cover.

III. ELECTION OF OFFICERS (agenda item 2)

5. It was agreed that the Workshop would be chaired jointly by UNSD and ESCWA. A technical committee consisting of Ms. Maa'ther Sawalha (Palestine), Mr. Khamis Raddad (Jordan), Mr. Marwan Moudallal (Lebanon) and Mr. Abdul Wahab Aziz Ahmed (Egypt) volunteered to assist in writing the final report of the Workshop.

IV. ADOPTION OF AGENDA AND WORK SCHEDULE (agenda item 3)

6. The agenda and work schedule were adopted by the Workshop (Annex 3). A list of documents that were presented by UNSD is attached as Annex 4.

V. INTERNATIONAL PROGRAMMES OF ENVIRONMENT STATISTICS (agenda item 4)

7. Mr. Bartelmus presented an overview of international work in the field of environmental statistics, indicators and accounting, including the activities and plans of UNSD. Mr. El-Naggar provided a description of the activities of ESCWA in the environmental field and the plans of ESCWA in environment statistics and environmental household surveys. Mr. Ala'a Sarhan of the United Nations Environment Programme (UNEP) Arab League Liaison Office described some of UNEP's activities in the region.

VI. DISCUSSION OF COUNTRY EXPERIENCES (agenda item 5)

8. Mr. El-Naggar presented a summary of country experiences and papers submitted to the Workshop on environmental household surveys. Several participants described some of their activities, and this exchange of information was found to be very useful.

VII. ENVIRONMENTAL STATISTICS AND INDICATORS (agenda item 6)

9. Ms. Reena Shah presented the major international work in environmental statistics and indicators focusing on the Framework for the Development of Environment Statistics (FDES) and related methodologies. She also described the list of environmental indicators developed by the Inter-governmental Working Group on the Advancement of Environment Statistics and approved by the Statistical Commission for international compilation by UNSD.

10. Working groups on the selection and use of indicators

The Workshop was divided into three working groups with the following country participation.

Group 1 Group 2 Group 3

Palestine Oman Bahrain

Jordan Qatar Egypt

Iraq United Arab Emirates Lebanon

Egypt Kuwait Syria

Saudi Arabia

Yemen

The task of the working groups was to consider the table on "Selection and Use of Indicators"

(Annex 5) which was provided to the workshop for discussion. Each group reported back to the plenary on their findings. A summary of these findings is presented in Annexes 7-9.

11. Working groups on indicator compilation: data availability, collection and dissemination

The same three working groups met again to discuss the indicators included in UNSD's questionnaire on environmental indicators. The discussion was based on a work sheet containing a series of questions (attached as Annex 6). Group 1 focused on water indicators, Group 2 on air/climate indicators, and Group 3 on land/soil and natural disaster indicators. The results of these working group discussions are contained in Annex 7-9.

VIII. ENVIRONMENTAL ACCOUNTING (agenda item 7)

12. Mr. Bartelmus described the objectives, structure, concepts and policy uses of the System of integrated Environmental and Economic Accounting (SEEA). He also presented the worksheets contained in the draft "Operational Manual on Environmental Accounting" expected to be published by UNSD in 1999.

IX. ENVIRONMENTAL HOUSEHOLD SURVEYS (agenda item 8)

13. Mr. El-Naggar introduced the subject and described the statistical methodology to conduct environmental household surveys. In his discussion he focused on the objectives, sampling methods and items to be included in the questionnaires, as well as the tools for measuring environmental data and their compilation, analysis and dissemination. He also informed the Workshop that ESCWA will draft a technical manual on this subject and invited the member States to submit contributions to the manual.

X. OTHER ISSUES (agenda item 9)

14. Ms Samia Galal Saad, technical adviser to the Egyptian Minister of Environment, prepared a paper on "Environmental Deterioration: Gender Specific Health Indicators". Mr. Mohamed El-Nazer, technical adviser to the Egyptian Minister of Environment, presented a paper on "Population, Natural Resources and the Environment in the Arab World". Mr. Moussa Moustafa of the Egyptian Environmental Affairs Agency (EEAA), prepared a paper on Geographic Information Systems (GIS), and he and Mr. Ali Amasha of the EEAA presented an overview of GIS.

XI. CAPACITY BUILDING AND TRAINING: DEVELOPMENT OF NATIONAL AND REGIONAL PROGRAMMES OF ENVIRONMENT STATISTICS (agenda item 10)

Implementation of national programmes

15. Mr. Bartelmus and Ms. Shah described typical approaches to developing and implementing projects of environmental statistics and accounting. Mr. El-Naggar explained how to prepare a country project on environmental household surveys.

Training and technical cooperation

16. UNSD provided an overview of training courses on environment statistics carried out by statistical training institutes and other institutions. Member States could benefit from technical advisory services available from ESCWA and other international organizations in environment statistics and environmental household surveys.

XII. CLOSING SESSION (agenda item 11)

Conclusions and Recommendations

Conclusions

- (i) Sustainable development calls for an integrated approach to economic, environmental and social policies. Such policy integration requires comprehensive databases organized in and compiled through appropriate statistical frameworks and systems.
- (ii) The availability of a wide range of timely and reliable environment statistics and accounts is of utmost importance to all countries of the region.
- (iii) The Framework for the Development of Environment Statistics (FDES) presents a particularly important and useful approach to the development and organization of environment statistics. The selection of environmental indicators relevant to the environment phenomena of each country is a crucial activity in any environment statistics programme. The selection of such indicators should be the result of close collaboration between data users and producers.
- (iv) The System of integrated Environmental and Economic Accounting (SEEA) permits the assessment of the interactions between the environment and economy of a country in an integrative manner. It is a useful tool for the measurement of genuine economic performance and growth, taking environmental costs into consideration.
- (v) The role of the household in environment is frequently missing in environment statistics programmes. Its importance should be emphasized for inclusion in national programmes of environment statistics. A draft technical manual on this subject will be prepared by ESCWA.
- (vi) The statement of the Executive Secretary of ESCWA includes objectives for environment statistics and environmental household surveys, which should be considered as a directive to member States embarking on this field.

Recommendations

1. The availability and quality of environment statistics in member States should be strengthened. The use of available international statistical concepts and definitions is highly recommended. Databases on environment statistics should be established in member States.
2. Member States are invited to publish on a regular basis compendia on environment statistics based on international statistical guidelines, where appropriate, to enhance international comparability. UNSD and ESCWA should develop guidelines on the scope and coverage of such compendia.

3. Statistical training institutions in the ESCWA region in collaboration with other regional and international institutions, wherever possible, are encouraged to develop training courses in environmental statistics and accounting, and GIS in order to strengthen the capabilities of member States in these fields. UNSD and ESCWA could provide technical assistance in the preparation of such courses.
4. UNSD and ESCWA should continue to facilitate collaboration and information exchange among member States through workshops and seminars on environmental statistics, indicators and accounting.
5. ESCWA should assist member States to access sources of financial and technical support for environment statistics projects and programmes.
6. Member States are called upon to participate in the international compilation of environmental indicators carried out by UNSD and contribute to ESCWA's regional programme of data collection, and in particular to its future programme of environment statistics.
7. ESCWA should establish a regional database on environment statistics as part of ESCWA's information system to strengthen the flow of information among member States and international organizations.
8. Member States are invited to conduct environmental household surveys to identify indicators on environmental impacts of household activities and their effects on household conditions, and to assess the awareness of households of environment issues.
9. The efforts of ESCWA in establishing a regional project in environmental household surveys are strongly commended, and ESCWA is urged to assist member States in the formulation and implementation of projects.
10. ESCWA is urged to continue its efforts in producing a technical manual on environmental household surveys. Member States are encouraged to submit any material and contributions that could assist in producing such a technical manual. An Expert Group meeting should be held to discuss a draft version of this manual before publication.
11. Cooperation and exchange of environmental data and expertise between countries in the ESCWA region should be strengthened.
12. Efforts between various international and regional organizations in the field of environment statistics should be coordinated.
13. Pilot projects on environment statistics and environmental accounting in one or more country in the ESCWA region should be established as a means of encouraging other countries in the region.
14. The establishment of environment statistics units or sections in national statistical offices or environmental ministries in ESCWA's member States is strongly recommended.
15. Data producers and users are encouraged to closely collaborate in the implementation of any programme in environment statistics.
16. Member States expressed their appreciation to the United Nations for its contribution in environment statistics and asked for regular revision of guidelines and technical manuals, such as the Glossary of Environment Statistics. In this context it was recommended that

such manuals contain practical examples of how to implement the proposed methodologies.

17. It was noted that the Arabic translation in United Nations documents could be improved if ESCWA services could be utilized to identify translators with technical and professional knowledge in the subject and have good command in Arabic and English.

Annex 1

List of participants

Bahrain

Dr. Khalid Abdulla
Department of Economics
College of Business Administration
University of Bahrain

Iraq

Mr. Kadhim A. Lafi
Central Statistical Organization

Mr. Jamil Toma Petrous
Planning Commission
Regional Planning Office

Jordan

Mr. Khamis Abdel Rahman Raddad
Department of Statistics

Mr. Jabur Ali Daradkah
General Corporation for the Environment Protection (GCEP)

Kuwait

Ms. Awatef Moh'd Youssef Al-Saleem
Ministry of Planning
Statistics and Information Sector
Kuwait

Lebanon

Mr. Marwan Moudallal
Ministry of Environment
Lebanon

Oman

Mr. Nabil Murtadha Al-Lawatiya
Ministry of Environment

Mr. Yacoub Khamis Sonya
Ministry of National Economy

Palestine

Ms. Maa'ther Feras Sawalha
PCBS

Mr. Mahmmd Abdel Hadi Alaramin
Palestinian Central Bureau of Statistics and Natural Resources

Mr. Anwar Nemer Shehab
Palestinian Central Bureau of Statistics and Natural Resources

Qatar

Mr. Jamal Abdulla Al-Medfa
Central Statistical Organization

Saudi Arabia

Mr. Abdulaziz A. H. Albader
Department of General Statistics

Mr. Tariq A. Ismail
Meteorology and Environmental Protection

Syria

Mr. Marwan Misky
Central Bureau of Statistics

Ms. Sawsan El-Atrash
Ministry of Environment

Yemen

Mr. Jaffar Hussein Al-Haddad
Central Statistical Organization

Mr. Abdulrhman Hassan Al-Shahary
Environment Protection Council - Sana'a

United Arab Emirates

Mr. Majid Sultan Al Ali
Ministry of Planning
Central Statistical Department

Egypt

Mr. Mahmoud Mahmoud Ibrahim
Ministry of State for Environmental Affairs of Egypt

Mr. Adel Al-Shafieh
Ministry of State for Environment Affairs of Egypt

Mr. Ahmed Mohktar Abdou
CAPMAS

Mr. Abdul Wahab Aziz Ahmed
CAPMAS

Mr. Mohamed Abdelgalil Eldesoky
CAPMAS

Cairo University

Mr. Mohamed Mostafa Hassan
ISSR - Cairo University

Cairo Demographic Centre

Mr. Ala'a Ahmed Sarhan
Cairo Demographic Centre

National Planning Institute

Ms. Azza Mohammed Hassan Yehia
National Planning Institute

United Nations Statistics Division, New York

Mr. Peter Bartelmus
Chief, Environment, Energy and Industry Statistics Branch
United Nations Statistics Division
New York

Ms. Reena Shah
Statistician, Environment Statistics Section
United Nations Statistics Division
New York

ESCWA Statistics Division

Mr. Labeeb Abdunnur, Chief
Statistics Division
Beirut

Mr. Abdullah El-Naggar
Regional Adviser on Data Processing

and Co-ordinator of Household Surveys
Beirut

Ms. Amal Nicola
Secretary
Statistics Division
Beirut

Annex 2

Speech of Her Excellency, Ms. Nadia Makram Ebeid Minister of the State for Environmental Affairs, Egypt

On behalf of myself and the Ministry of State for Environmental Affairs, I welcome you here in Egypt to this important forum which coincides with the Silver Jubilee of the United Nations Economic and Social Commission for Western Asia (ESCWA).

The importance of this forum stems from the fact that it represents a serious attempt to relate between individuals in the Arab world and the important issues in our lives which affects our future. The world around us is ever-changing, and every new development confirms the fact that the Arab world interacts with international developments and is affected by regional changes.

In this regard, I would like to note the importance of environmental studies, which provides an opportunity for active participation via the environmental information it provides through observation and collecting of information related to all sectors of development and environmental situations, in addition to the statistical processes and presenting such data in a simplified manner, which invokes everyone to face up to environmental issues with knowledge and conviction. Furthermore, environmental studies provide researchers with a documented background for environmental statistics on the local, national and regional levels, in addition to informing decision-makers of events in an impartial and factual manner, enabling them to work confidently on a factual basis.

As you know, the relationship between man and the environment is a relation of reciprocity, interaction and mutual effect. In order to interpret and reach a true understanding of such interactions, we have to follow a scientific approach in the form of conducting environmental surveys which provide true indications for existing relationships in dealing with environmental resources in order to reach positive approaches and generalize them, and at negative ones and eliminate them. The hope of every national environmental program in the world is still to make the environment a component of the everyday life of any individual.

There is no doubt that the issues included in your Workshop will provide an opportunity to exchange expertise and present new concepts, and we welcome the new expertise and the new knowledge that they represent.

The Workshop will contribute in assisting the participants in laying down policies to deal with environmental data and information, processing them with various statistical techniques together with their effects on changing the negative behavior of the individual, emphasizing the principle of self reliance and undertaking personal initiatives for solving problems which will make the individual as a source of knowledge among the others forming a public opinion and participation based on awareness, skill and dedication. We learned from our experience that prevention is not only better than treatment, but it is also less expensive. Our Workshop is a serious attempt to forecast problems and to find appropriate scientific answers in order to contain and limit their effects.

This gathering from various Arab states confirms the fact that links with the world are completed one after the other and that environmental pollution does not recognize geographical borders. So, I hope this forum will become an invitation to start a new era in which we work as one hand, exchanging expertise and discussing our points of views. You will find us here in Egypt active participants as we believe in the right of the next generations to life.

Thank you and I wish you all the success.

Speech of Mr. Hazem El-Beblawi
Executive Secretary, Economic and Social Commission for Western Asia

Ms. Obeid,
General Elwi,
Mr. Bartelmus,
Ladies and Gentlemen,

We are gathered here today for the opening of the Workshop on Statistics, Indicators and Accounting and Environmental Household Surveys, with the participation of 13 members of the Economic and Social Commission for Western Asia (ESCWA), which I have the honour to head.

Many compelling reasons encouraged me to take part personally in this opening ceremony, the most important of which was to express sincere thanks and appreciation to Ms. Nadia Mukarram Obeid, Minister of State for Environmental Affairs of Egypt, for her interest in having the Ministry host this workshop under her generous sponsorship and for providing the means and tools to make it a success. In addition, technical contributions to the workshop include a number of working papers by consultants and specialists of the Ministry and the Egyptian Environmental Affairs Agency, thus bringing some of Egypt's expertise, experience and penetrating vision on the subject to the attention of experts from other ESCWA members. In this way, the Ministry is helping to strengthen interaction and scientific and technological exchange among the Arab countries. For all these reasons I felt it my duty to express our thanks for this sponsorship and our gratitude to the gracious person responsible for it.

A further reason for my participation is the transcendent importance of the subject, for the environment is the world which we experience, the world we know and at the same time do not know. Its constituent elements surround us on all sides, and we ourselves are elements of it, affecting it and affected by it, both negatively and positively. We hope, within our human vision and through our strivings, to achieve our objectives and realize our aspirations, both immediate and long-range, direct and indirect, towards arriving at ecological balance through the coordination and proper utilization of those elements in such a way as to bring about continuity and renewal of the natural vital resources that the environment offers us and to ensure sustainable development to preserve human life, at least as we know it.

When we speak of ecological balance and optimum and coordinated utilization of those elements and constituents of the environment, we are indeed speaking of important matters:

- The positive and the negative;
- Subtraction and addition;
- Variations and variables;
- Environmental relationships and influences and the extent to which variables are interconnected;

- Measurement and methods of expressing by means of indicators.

In speaking of all this, we are speaking the language of the times - the language of "statistics". From this standpoint, "environmental statistics" comprises statistics of all kinds, some of them known and currently in use, for which definitions, concepts and methods of measurement and combination have been developed, while others belong to other areas, for which statistical practices and concepts have not yet been firmly established. The latter are perhaps remote from the experience and knowledge of statistical practitioners, who will find it necessary, however, to take them up and corroborate the soundness of their measurements, their proper execution, their results, and their faithful portrayal of reality.

In saying this it is surely not my intention to instill into environmental statisticians dread of the substantial tasks they will have to perform in developing statistical thinking and practice and extending them to include new areas and applications. On the contrary, I simply wish to express appreciation of their vital role and of the fact that experts in the economic and social fields and the fields of sustainable development and ecological balance will urgently need their efforts, their statistics and their indicators. We all wish them success in achieving those ambitious goals for environmental statistics.

We are sharing in this opening ceremony with you in order to support your technical efforts and reaffirm the importance of environmental statistics, in addition to the fact that we view the activities of the Workshop as part of the programme of celebrations of the silver jubilee of ESCWA, which was created by resolution 1818 of the Economic and Social Council, adopted at its fifty-fifth session on 9 August 1973, and which began its work on 1 January of that same year.

It is gratifying that the ESCWA member States have been greatly concerned, and for many years, with environmental questions and considerations, which are among the fundamental factors that must be taken into account in modern-day planning of social and economic development. Moreover, they exert considerable effort to deal with the environmental legacy of earlier development activities in which adequate attention was not devoted to the environmental aspect.

With a view to achieving these objectives, the member States have created ministries, agencies and national institutions that strive to carry out environmental policies, ensure that they are taken into account and provide for their protection by means of laws and legislation to guarantee respect for the fundamental principles of ecological balance, as well as a culture and awareness of the environment. The efforts of those ministries and institutions have, without a doubt, begun to bear fruit, and we hope they will have even greater success in performing this arduous and many-sided task between the various areas of life and the many institutions of the State.

Ladies and Gentlemen,

Sharing with us in the organization of this workshop is the United Nations Statistics Division, in New York. We thank the Division for its many efforts in this regard and for its concern and responsiveness to the invitation of ESCWA for the holding of this regional workshop. That response was in line with the note of the Secretary-General on the work of the Task Force on Environment Statistics transmitted to the United Nations Statistical Commission at its twenty-eighth session, held from 27 February to 3 March 1995. The note is concerned with basic environmental statistics, environmental indicators, environmental accounting, the establishment of the related statistical concepts and methods, methods of data collection and dissemination, technical cooperation through technical support, the issuing of specialized manuals, capacity-building through training and the implementation of national projects. In addition, the Statistical

Committee of ESCWA, in a recommendation made at its second session, held in 1997, emphasized the importance of conducting environmental household surveys and invited the United Nations bodies concerned to cooperate in the training of cadres in the field of environment.

In line with its interest in this area, ESCWA reaffirms its concern with the activities mentioned in the note of the Secretary-General and the recommendations of the Statistical Committee. It has also concerned itself since the early 1990s with the notion of environmental household surveys, which are aimed at obtaining knowledge of the ways in which households affect and are affected by environmental issues and affairs, in terms of their behaviour, their awareness and their culture, and using that knowledge to arrive at social, economic and environmental indicators to enable planners both to protect households from negative environmental effects and to strengthen and develop their contribution to environmentally sound behaviour, ecological balance and its preservation.

This theme is new and important and will be brought up during the workshop. We hope that knowledge and experience will continue to be gained in this area and that through national, regional and international cooperation ESCWA will be able to produce a statistical manual on environmental household surveys. ESCWA will work to prepare a regional project in this connection, for which an interest in providing financial and technical support has already been expressed by some environmental agencies.

The concern of the ESCWA Regional Household Survey Project early on with moving in the direction of environmental household surveys is in keeping with, and indeed a statistical implementation of, many of the requirements of the articles of the Arab Declaration on Environment and Development and Future Perspectives, issued by the Arab Ministerial Conference on Environment and Development held at Cairo from 10 to 12 September 1991.

What is more, this concern is thoroughly consonant with the requirements of 8 of the 27 principles contained in the Declaration adopted by the United Nations Conference on Environment and Development, held at Rio de Janeiro from 3 to 14 June 1992.

In this context, we hope that the Workshop will study and discuss this issue and arrive at fruitful recommendations.

General Elwi,

I welcome you and your participation, as Chief of the Central Agency for Public Mobilization and Statistics of Egypt, in this distinguished gathering. We appreciate your efforts in the field of statistics and the enormous and well-known role of the Egyptian Agency in promoting and developing national statistical work in the Arab countries through the large number of technical cadres working with the Agency.

We hope the Central Agency will advance and flourish, and reaffirm, as always, our strong desire for joint programmes of work with you. I should perhaps mention with appreciation your interest in the initiatives of ESCWA towards cooperation with you numerous fields. Let me cite, just as examples, the problem of dealing with deficiencies in practical experience in the field of statistical sampling and that of environmental household surveys, regarding which you offered valuable suggestions regarding statistics in late 1992. Perhaps this workshop will mark the beginning of concrete steps towards joint work in these fields.

Ladies and Gentlemen,

I thank you for attending, for your interest and for your kind attention, and I am sure you will be successful in your endeavours under the patronage of Her Excellency, the Minister of State for Environmental Affairs.

Speech of Mr. Ihab Elwi
President, Central Agency for Public Mobilization and Statistics, Egypt

Her Excellency Dr. Nadia Makram Ebeid, The Minister of State for Environmental Affairs

H.E. Dr. Hazem El-Beblawi, Executive Secretary for ESCWA

H.E. The Representative of UNSD in New York

Dear Attendants,

In my name and on behalf of the Central Agency for Public Mobilization and Statistics it is my pleasure to welcome you in the Regional Workshop on Environmental Statistics, Indicators and Accounting. We all know the importance of such meetings specially in the field of environment which is being given attention by most of the States in order to maintain it from the hazards that threaten it. Such hazards which increase with the scientific and technological progress. The UN and its agencies has given a great attention to environment through the UNEP which has been established in 1972 and through organizing meetings and workshops at both international and regional levels to discuss the topics and issues of environment and to exchange expertise in this field. The most important of such meetings was the Rio-Earth Summit in 1992.

There is a relation between the increase of population and production and consumption. The more population is, the more economic activity and accordingly more production and more consumption will be.

Statistics indicate that population in Egypt has been multiplied during the period from 1897 to 1947 where the number of population increased from 9.7 million to more than 18 million while it was increased to 59.3 million in 1996 against 48.3 in 1986.

The increase of population and in turn the economic activity had in addition to its positive effects, negative effects on environment, as the increase in the number of factories and their production lead to the contamination of the environment of surrounding areas, and as accordingly lead to environmental unbalancing. Among the causes of environmental pollution is that the cultivated area is small compared with the total area and number of population. The Central Agency for Public Mobilization and Statistics being the party responsible for providing the statistical data and information in Egypt is undertaking the following activities in the field of environmental statistics:

1. Paying attention to the statistics which serve the environment and its statistics.
2. Developing such data and statistics and making them available for researchers.
3. Conducting environmental surveys like maternity and child survey conducted in 1991 and the smoking spread research in Egypt in 1986, 1988 and 1989.
4. Cooperating with international and regional organizations in filling in the questionnaires relative to environment.

The Agency participated with researches and environmental statistics in the different conferences and workshops organized by regional or national authorities in the field of environment.

In conclusion, I would like to convey our thanks to the Statistics Divisions of the United Nations and of ESCWA for their initiative to hold this workshop in Cairo in order to exchange international and Arab expertise in the field of environmental statistics, indicators and accounting.

I wish also more prosperity and progress for the Ministry of State for Environmental Affairs of Egypt under the leadership of H.E. the Minister Nadia M. Obied and I do hope also that we can establish a unit in the Central Agency for Public Mobilization and Statistics concerning with environmental surveys.

Finally, I hope that the workshop reaches good and useful recommendations for the benefit of the entire world.

Some Environmental Indicators of Egypt

Change	Statement
1. Total cultivated area in Egypt in 1996/1997	7,558,599 acres
Individual per capita of cultivated area	0.13 acre i.e. (546m ²)
2. Gardens and landscaped area in Cairo Governorate in 1996	3,911,000 m ²
Individual per capita	0.58m ²
3. Average of population in Cairo Governorate	31,75 / person/1km ²

Speech of Mr. Peter Bartelmus **United Nations Statistics Division**

Your Excellency and former colleague (so I understand), current colleagues, ladies and gentlemen,

I wish to convey to you the greetings and best wishes for success of the Director of the United Nations Statistics Division (UNSD) in New York.

Personally, it is an honour and great pleasure for me to enjoy the warm hospitality of Egypt and, together with my colleagues from ESCWA, to welcome you all to this important workshop. As you might know, this workshop is one in a series of meetings, which we in UNSD organized in all regions of the world. Their purpose is to lay the foundations for a coordinated worldwide programme of environment statistics.

The importance of this particular workshop lies in its attempt to draw the concept of sustainable development from lofty heights of rethorics and academics down to Earth - where it really applies.

Nobody doubts anymore that our small planet has its limits. However, nobody really knows how closely we have been pushed to these limits. Long is the list of books, articles and international

conferences describing evocatively the loss and degradation of vital natural resources of water, fertile soils, forests, and of mineral deposits - so important for economic development in your region. At least since the Rio Earth Summit in 1992 these losses are known to be brought about by economic activity which in turn is undermined by natural resource depletion - in other words, the long-term sustainability of economic performance is impaired.

The present workshop is to elaborate the tools with which to shed light on the elusive question of sustainability in growth and development. The tools are hard data and data-based analyses, ranging from environmental statistics and indicators to the greening of our national accounts. We will show that such data and analyses make it possible to express sustainability in quantifiable terms as the maintenance - not only of machines, buildings and roads - but also of our *natural* capital wealth.

In this manner, the vision of sustainable development is made visible, so it can become an integral part of planning and policy making in our countries.

I thank you for your interest and support in this crucial contribution to maintaining the quality of the environment and, ultimately, of life on earth.

Annex 3

Agenda

1. Opening session
2. Election of officers
3. Adoption of agenda and work schedule
4. International programmes of environment statistics
 - (a) UNSD
 - (b) ESCWA
 - (c) Others
5. Discussion of country experiences (based on country papers)
6. Environmental statistics and indicators: concepts, methods and use
 - (a) presentation by resource persons and discussion
 - (b) working groups on the selection and use of indicators
 - (c) working groups on indicator compilation: data availability, collection and dissemination
7. Environmental accounting: concepts, methods and use
 - (a) introduction to integrated environmental and economic accounting
 - (b) compilation of key modules of the SEEA
 - (c) policy use of environmental accounts
8. Environmental household surveys

- (a) introduction of the subject
- (b) discussion of statistical methodology to conduct environmental household surveys

9. Other issues

- (a) gender sensitive indicators for indoor and outdoor environment
- (b) GIS and environment statistics
- (c) population and environment in the Arab countries

10. Capacity building and training: development of national and regional programmes of environment statistics

- (a) implementation of national programmes
- (b) training and technical cooperation

11. Closing session: presentation and adoption of final report

Work Schedule

	TIME								
Day	9:00-10:00	10:00-11:00	11:00-11:30	11:30-14:00	14:00-14:30	14:30-16:00	16:00-17:15	17:15-17:45	17:45-19:00
Sunday 1/11/1998	Registration	Opening session	Coffee Break	Plenary session: Two lectures: (i) Dr. El-Beblawi (ii) Dr.	Election of Officers	LUNCH	<u>International programs of environmental statistics</u> (a) UNSD	Coffee Break	(b) ESCWA and others
Day	9:00-10:30	10:30-11:00	11:00-12:30	12:30-13:00	13:00-14:30	14:30-16:00	16:00-17:15	17:15-17:45	17:45-19:00
Monday 2/11/1998	<u>Gender Sensitive Indicators for Indoor and Outdoor Environment</u>	Coffee Break	<u>Environmental Statistics & Indicators</u> (a) Presentation & discussions: - Frameworks and system - Statistical topics & variables	Coffee Break	- From Statistics to indicators - Indicators of sustainable development	LUNCH	(b) Working groups on the selection & use of indicators	Coffee Break	(b) Presentation to Plenary
Tuesday 3/11/1998	(c) Working groups on indicators, compilation, data availability,	Coffee Break	(c) Presentation to plenary	Coffee Break	<u>GIS and Environment Statistics</u>	LUNCH	<u>Population and Environment in the Arab</u>	Coffee Break	<u>Discussion country experiences/ Env. HSLD</u>

	collection and dissemination						<u>Countries</u>		<u>surveys</u>
Wednesday 4/11/1998	<u>Environmental Accounting Concepts, Methods and Use</u> (a) Int. to integrated environmental and economic accounting	Coffee Break	(b) Compilation of Key modules of the system of integrated environmental & economic accounting a step-by-step approach	Coffee Break	(b) Continued.	LUNCH	(c) Continued	Coffee Break	<u>Discussion country experiences/ Env. HSLD surveys</u>
Thursday 5/11/1998	<u>Environmental Household Surveys</u> (a) Introduction to the subject, (b) Statistical Methodology to conduct environmental household surveys	Coffee Break	Environmental Household Surveys (continued)	Coffee Break	<u>Capacity building and training development of national and regional programs of environmental statistics</u> (a) Implementation of national programs (b) Training and technical cooperation	LUNCH	Closing session: (a) Presentation and adoption of final report (b) Distribution of Attendance Certificate of the Workshop		

Annex 4

List of Documents presented by UNSD

1. A Framework for the Development of Environment Statistics (United Nations, 1984)
2. Concepts and Methods of Environment Statistics: Human Settlements Statistics (United Nations, 1988)
3. Concepts and Methods of Environment Statistics: Statistics of the Natural Environment (United Nations, 1991)
4. Handbook of National Accounting: Integrated Environmental and Economic Accounting (United Nations, 1993)
5. A Framework for Indicators of Sustainable Development (1994)
6. Glossary of Environment Statistics (United Nations, 1996)
7. Greening the National Accounts (1998)

8. AEnvstats@: Issue 4 - newsletter of UNSD (1998)
9. "Activities in the development and collection of environmental data" – UNSD (1998)
10. Questionnaire on environmental indicators – UNSD (1998).

Annex 5

Selection and Use of Indicators

KEY ISSUES	MAIN POINTS
1. What are the priority environmental issues and/or the statistical topics in your country (e.g. water quality, land degradation)?	
2. What are some of the statistical variables/indicators that reflect each of these issues/topics?	
3. Which indicators exist in your country?	
4. Are the data readily available for the selected indicators?	
5. Who are the main data users for the selected indicators?	
6. Does the IGWG list of indicators fully reflect these priority issues?	
7. Are there priority indicators for your country which are not included in the IGWG list? If yes, please include them here.	

Annex 6

Work Sheet for Environmental Indicators

1. Name of indicator
2. Unit of measurement

3. Is the definition clear?
4. Are the classifications appropriate?
5. Are the measurement methods clear?
6. Are the data available for this indicator (available, partially available, and not available)?
7. What are the data sources (national statistical service, appropriate ministry, and university, monitoring station, research institute, other)?
8. How are the data collected (censuses and surveys, administrative records, ad-hoc surveys, monitoring, remote sensing, others)?
9. What is the data coverage (global, regional, sub-national, urban, rural, other)?
10. What is the periodicity of the data collection (annual, biannual, monthly, weekly, daily, hourly)?
11. What is your assessment of the data quality (good, varies, poor)?
12. What is the relevance of the indicator to environmental policy (crucial, important, potentially important, and marginally relevant)?
13. If the data are not available for this indicator, is it feasible and cost-effective to compile these data?

Annex 7

GROUP 1

PALESTINE

JORDAN

IRAQ

EGYPT

Work Sheet for Environmental Indicators

I Water

- W1
1. Name of indicator: Renewable water resources.
 2. Unit of measurement: M3
 3. The definition is clear.

4. The classification is appropriate.
5. The measurement methods are clear.
6. The data available except Palestine.
7. The data are governmental agency.
8. The data collected by surveys, administrative records, monitoring.
9. The data coverage is global.
10. The data collection annually.
11. The data quality is varies.
12. The relevance of the indicator to environmental policy is very important.
13. The collection of this data is very expensive.

- W2
1. Name of indicator: Water abstraction.
 2. Unit of measurement: M3
 3. The definition is clear.
 4. The classification is appropriate.
 5. The measurement methods are clear.
 6. The data available except Palestine.
 7. The data are governmental agency.
 8. The data collected by surveys, administrative records, monitoring.
 9. The data coverage is global.
 10. The data collection annually.
 11. The data quality is varies.
 12. The relevance of the indicator to environmental policy is very important.
 13. The collection of this data is very expensive.

- W3
1. Name of indicator: Water supply By activity categories.
 2. Unit of measurement: M3
 3. The definition is clear.
 4. The classification is appropriate.
 5. The measurement methods are clear except Palestine.
 6. The data available in certain activity categories.
 7. The data are governmental agency.
 8. The data collected by surveys.
 9. The data coverage is global.
 10. The data collection annually.
 11. The data quality is varies.
 12. The relevance of the indicator to environmental policy is very important.
 13. The collection of this data is very expensive.
- W4
1. Name of indicator: Water quality of selected rivers suggested to be changed to water quality of drinking water.
 2. Unit of measurement: PH, ppm, number.
 3. The definition is not clear.
 4. The classification is not appropriate.
 5. The measurement methods are clear.
 6. The data available.
 7. The data are governmental agency.
 8. The data lab analysis.
 9. The data coverage is global.
 10. The data collection annually.
 11. The data quality is varies.
 12. The relevance of the indicator to environmental policy is very important.
 13. The collection of this data is very expensive.

Sustainable Development Indicators

1. Water issue is the most important one.
2. The statistical indicators which reflect this issue are:
Water abstraction, water scarcity water pollution, waste water treatment
3. Suggested indicators:-
 - Per capita of water.
 - Water budget.
 - Water quality.
 - Efficiency of waste water treatment plant.
 - Quality of treated water.
4. All of these indicators are available in region countries.
5. All the data related to the indicators are available.
6. Data users from private & public sectors and international agencies who have relation with this important sector.
7. IGWG list of indicators reflect these subjects in proper way.

Annex 8

GROUP 2

KINGDOM OF SAUDI ARABIA

KUWAIT

QATAR

UNITED ARAB EMIRATES

OMAN

YEMEN

WORKSHEET FOR ENVIRONMENTAL INDICATORS

AMBIENT CONCENTRATION

- 1- NAME OF INDICATOR SULPHUR DIOXIDE SO₂
NITROGEN DIOXIDE NO₂
- 2- UNIT OF MEASUREMENT PPM
- 3- THE DEFINITION NEEDS MORE CLARIFICATION
- 4- THE CLASSIFICATIONS ARE APPROPRIATE
- 5- THE MEASUREMENT METHODS ARE CLEAR
- 6- THE DATA ARE AVAILABLE FOR THIS INDICATOR
- 7- THE DATA CAN BE OBTAINED FROM OTHER SOURCES
(APPROPRIATE MINISTRY)
- 8- MONITORING IS THE MAIN SOURCE FOR THE DATA
COLLECTIONS
- 9- DATA COVERS URBAN AREAS
- 10- THE DATA COLLECTION PERIODICITY IS HOURLY.
- 11- THE ASSESSMENT OF THE DATA QUALITY IS GOOD.
- 12- THE RELEVANCE INDICATOR IS IMPORTANT TO
ENVIRONMENTAL POLICY DECISION MAKERS.
- 13- IF THE DATA NOT AVAILABLE FOR THIS INDICATOR, IT
IS FEASIBLE AND TIME CONSUMING AND MAY BE
COST-EFFECTIVE TO COMPILE THESE DATA.

EMISSIONS OF AIR POLLUTANTS

- 1- NAME OF INDICATOR SULFUR DIOXIDE SO₂
NITROGEN DIOXIDE NO₂
- 2- UNIT OF MEASUREMENT TONS/YEAR
- 3- THE DEFINITION IS CLEAR.
- 4- THE CLASSIFICATIONS ARE APPROPRIATE, AND IT

NEEDS MORE CLARIFICATION.

5- THE MEASUREMENT METHODS ARE CLEAR, AND MAY
NEEDS MORE CLARIFICATION.

6- THE ESTIMATED DATA ARE AVAILABLE FOR THIS
INDICATOR.

7- THE DATA CAN BE COLLECTED FROM APPROPRIATE
MINISTRY.

8- MONITORING AND ESTIMATION ARE THE MAIN
SOURCES FOR THE DATA COLLECTIONS.

9- DATA COVERS URBAN AREAS.

10- THE DATA COLLECTION PERIODICITY IS ANNUAL.

11- THE ASSESSMENT OF THE DATA QUALITY IS GOOD.

12- THE RELEVANCE INDICATOR IS IMPORTANT TO THE
ENVIRONMENTAL POLICY DECISION-MAKERS.

13- IF THE DATA NOT AVAILABLE FOR THIS INDICATOR, IT
IS FEASIBLE AND TIME CONSUMING AND MAY BE
COST-EFFECTIVE TO COMPILE THESE DATA.

Annex 9

GROUP 3

BAHRAIN

EGYPT

SYRIA

LEBANON

This group discussion included the following countries as follows:

Egypt, represented by:

Dr. Alaa Ahmed Serhan
Mr. Abdel Wahab El Aziz Ahmed
Mr. Mohamed Abed El Jalil El Dasouki
Mr. Ahmed Mukhtar Abed Yousef

Bahrain, represented by:

Dr. Khaled Abdallah

Syria, represented by:

Mr. Marwan Meskeh
Ms. Sawsan El Atrash

Lebanon, represented by:

Mr. Marwan Afif El Mudalal

A discussion was made by the above mentioned representatives about the following:

I. The environmental problems of extreme importance are:

Air pollution
Water pollution
Existence of solid and hazardous waste
Agricultural soil erosion

All participants agreed upon the existence of these four problems in the above four mentioned countries.

II. Parameters and statistical indicators that reflect all these problems

III. The type of the indicators in these countries

With respect to item II and III the representatives confirmed the existence of the following:

The Availability of Environmental Detection Instruments to measure air pollution.
The availability of Specialized Laboratories
to measure Water pollution
The availability of Urban and Rural Councils the responsibility to prevent Soil Erosion and
to collect and ensure treatment of waste.

IV. The representatives agreed upon the availability of information for the previously
mentioned and selected indicators.

V. The members agreed on the identification of the major information/data users of these
selected indicators they are:

The researchers and especially those concerned with Environmental Affairs.
Politicians, decision-makers and especially those concerned with health.

The participants emphasized that the indicator list IGWG reflects in a good way the subjects that are of great importance.

VII. All members replied that there is other indicators (additional) which are of great importance for the four countries and not stated in the list Indicators " IGWG " they are as follows:

Egypt: the problem of Schistosomiasis (Bilharzia)
 Bahrain : the problem of the Gulf Water Pollution (especially after the Gulf War)

c- Syria: The problem of stealing the Golan water (by the Israeli Occupation Forces)

Lebanon: The problem of stealing the fertilized soil in South Lebanon (by The Israeli Occupation Forces) .

The major problem is that Israel did not sign the International agreement for preventing the widespreading of the Nuclear Arms.

The participants commended the efforts made in the workshop, the valuable information that was raised and discussed during the meetings as well as the publications distributed to the members.

<p style="text-align: center;">Report on The Environmental Statistics, Indicators and their computing Cairo, 1-5 Nov 1998</p>	
The Main Points	The Key Issues
<ol style="list-style-type: none"> 1. Water pollution (in the four countries) 2. Air Pollution (in the four countries) 3. Wastes and Soil Erosion (specifically in Lebanon) 	<p>What are the Environment Issues of higher priority and/or Statistical Relevant?</p>
<ul style="list-style-type: none"> - Environment observation Station (for Air) - Analysis Laboratories (for Water) - Regional and District boards (for wastes and soil erosion) 	<p>What are the Statistical variances/indicators that reflect These Issues/Subjects</p>

<p>Quantities and different kinds of pollution.</p> <p>(concentration percentage) for water, air and wastes</p>	<p>What are the available Indicators in your country?</p>
<p>yes</p>	<p>Is Information for the selected Indicators available?</p>
<p>Scientists, researchers and decision-makers that work in environment field.</p>	<p>Who are the main users of the selected indicators?</p>
<p>yes</p>	<p>Is the indicator's list (IGWG) good reflection for these subjects of higher priority?</p>
<ol style="list-style-type: none"> 1. <u>Egypt</u>: endemic diseases like schistosomiasis (Bilharzia) 2. <u>Syria</u>: Stealing of Golan water by Israel 3. <u>Lebanon</u>: Erosion of soil in South Lebanon by Israel 4. <u>Bahrain</u>: Pollution of Gulf water after the Gulf War 	<p>Are there Indicators of importance to your country that haven't been mentioned in IGWG?</p>