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Environment statistics

PROGRESS REPORT ON THE CO-ORDINATION OF ENVIRONMENT STATISTICS

Report of the Secretary-General*

SUMMARY

In accordance with the wishes of the Statistical Commission at its nineteenth session, the present report, which is based on papers discussed by the ACC Sub-Committee on Statistical Activities at its twelfth session, covers problems as well as progress in the co-ordination of environment statistics. It also outlines the current work and plans of the organizations concerned with the development of this new field of statistics.

The Commission may wish to (a) comment on the problems and progress in the co-ordination of environment statistics as outlined in this report; (b) consider what further action should be taken on co-ordination of environment statistics; and (c) request that another progress report on the topic be prepared for its consideration at the twenty-first session.

* The present document was prepared by the Statistical Office of the Department of Economic and Social Affairs of the United Nations, in co-operation with the United Nations Environment Programme and the statistical offices of the specialized agencies and the regional commissions.

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INTRODUCTION

1. In accordance with the wishes of the Statistical Commission at its nineteenth session, 1/ a meeting on the co-ordination of environment statistics was held during the twelfth session of the ACC Sub-Committee on Statistical Activities (held at United Nations Headquarters from 6 to 10 February 1978). Two papers were presented to the Sub-Committee, 2/ which, inter alia, included relevant aspects of co-ordination in the field of environment statistics between the United Nations Statistical Office, the United Nations Environment Programme (UNEP), the specialized agencies and the regional commissions.

2. As requested by the Commission, the present report, which is based on the papers discussed by the Sub-Committee, covers problems as well as progress in the co-ordination of environment statistics. It also outlines the current work and plans of the organizations concerned. A progress report on environment statistics (E/CN.3/521), also before the Commission at the present session, contains a detailed treatment of the programme of work of the United Nations Statistical Office in this field, including methodological and conceptual topics.

I. ACTION BY THE COMMISSION

3. The Commission may wish to comment on the progress and problems in the co-ordination of environment statistics, as outlined in the present report. It may also wish to consider what further action, if any, should be taken on the co-ordination of environment statistics and request that a further progress report on the topic be prepared for its consideration at the twenty-first session.

II. GENERAL PROBLEMS AND PROSPECTS

4. A useful framework and mechanism for the collection of environment statistics must integrate inputs of data from many disciplines and many sources into a coherent format. The outstanding characteristic is synthesis. Some statistics on environment can be derived readily from existing statistics assembled for other purposes (for example, energy consumption), but many new types of statistics will have to be developed to fill the obvious lacunae in traditional statistical activity in relation to the environment.

5. The implications of the foregoing for co-ordination of environment statistics are serious, particularly since the creation of a basic set of statistics has to be

1/ See Official Records of the Economic and Social Council, Sixty-second Session, Supplement No. 2 (E/5910), para. 115 (b).

2/ "Co-ordination of environment statistics", prepared by the Statistical Office of the United Nations (SA/12/16); and "Information handling activities of the United Nations Environment Programme", prepared by UNEP (SA/12/16/Add.1).

in phase with the ongoing work of other organizations. The GEMS/IRS/IRPTC projects of the United Nations Environment Programme (see paras. 24-25) are basically monitoring and surveillance activities, yet some of the information reported through those mechanisms is the raw material for statistics of the environment. The specialized agencies have specific thematic mandates and each agency can provide a vignette on its particular concern in the environmental field (such as that which the World Meteorological Organization provides on climate/weather). The regional commissions have a particular responsibility of a regional nature, each variation of which has to be taken into account in the elaboration of an international statistical programme.

6. In the development of a programme on the environment, care will be taken to benefit from the five years of experience accumulated since the Stockholm Conference in assembling data and establishing collection mechanisms in this field. At the same time, it is not going to be an easy task to provide an "umbrella" framework within which statistical activity already under way can be integrated into a global programme.

7. In its consideration of these points, the ACC Sub-Committee on Statistical Activities agreed that two particular problems have to be addressed: first, that of evolving as full a role as possible for the regional commissions in the development of environment statistics, in view of the regional variation in the priority issues in this field; and secondly, that of emphasizing the priorities and concerns of developing countries. These priorities include national integration of statistics of the environment, the identification of gaps in existing statistics and the types of guidelines which could be provided by the Statistical Office and the specialized agencies as part of an over-all framework and structure for such statistics.

8. Concerning the first problem, i.e., an appropriate role for the regional commissions, an effective solution would be to work with the newly created regional liaison offices of UNEP towards identifying the specific statistical requirements of each region, the specific statistics which already exist within each region (and, by implication, the major gaps) and the establishment of regional task forces to develop statistics of the environment at the regional level. This approach would be commensurate with a threefold compilation of statistics in the development of a global programme, namely (a) statistics on global phenomena, such as over-all trends and problems; (b) statistics on regional phenomena, dealing with particular topics in particular regions; and (c) statistics on thematic phenomena, such as climate, resources, human settlements, or land use, where the specialized agencies would undertake a leading responsibility. Such a division of labour would ensure that neither national, regional nor global priorities are overlooked and would enable the Statistical Office to function in a co-ordinating role and, to the extent necessary, as a clearing-house in the process of compilation.

9. As far as the second problem is concerned, it is expected that the results of a survey carried out by the Statistical Office on country practices in the field of environment statistics will throw light on the priorities of developing countries.

10. The most serious general problem which affects the development of environment statistics is to provide a framework or structure which is broad enough to embrace the gamut of component elements making up the field, while at the same time providing sufficient detail within the structure in order to pursue the practical step-by-step approach endorsed by the Commission. ^{3/} The choice of starting points for the initial steps is critical. Some steps obviously will develop from, and progress in conjunction with, existing data collected by the specialized agencies (such as data on water, soils and land use collected by the Food and Agriculture Organization of the United Nations (FAO)). Other steps will attempt to cover gaps, often where no specialized agency has a specific interest or mandate. In this regard, it is vital that the existing data bases of non-governmental organizations (NGOs) in the field of environment should also be surveyed in order to incorporate such work rather than to duplicate it. Thus, an essential task is a detailed review of the current and planned activities of the specialized agencies, regional commissions and NGOs.

III. CURRENT ACTIVITIES OF THE UNITED NATIONS STATISTICAL OFFICE

11. While the work of the Statistical Office has been limited by lack of resources, some achievements can be noted. In particular, a questionnaire for the collection of information on practices in developing countries in the field of statistics of the environment was prepared and circulated to countries in July 1977, in response to the request of the Commission that such an inventory be completed as soon as possible. ^{4/} A progress report containing an analysis of the results of the inventory (E/CN.3/521) will be submitted to the Commission at its present session. It should be noted with appreciation that, in the interests of co-ordination and to reduce possible duplication of effort, extensive input was received from the Economic Commission for Europe (ECE) and the specialized agencies in the design of the questionnaire.

12. Concerning the aspects of the questionnaire which treat the problems of co-ordination specifically, in the rubric to several questions a request was included for very brief information on the type of statistics already reported to different agencies within the United Nations system or to other international organizations. It is obvious that there are three principal chains of reporting which will have to be co-ordinated in environment statistics: (a) the direct reporting of environment statistics to the United Nations; (b) the direct reporting of statistics to the specialized agencies in particular fields of relevance to environment statistics (such as climate, health or forest products); and (c) the more general environmental information reported to all bodies in which is included material of a statistical nature.

^{3/} See Official Records of the Economic and Social Council, Sixty-second Session, Supplement No. 2 (E/5910), para. 112.

^{4/} Ibid.

13. The Statistical Office has attempted to ascertain what statistical material is currently reported to the regional commissions. This is important because many environmental problems are localized or regional in nature and scope and it is anticipated that the regional commissions will be closely involved in the development of particular kinds of statistics which are of use and relevance to their regions. Such an approach reflects the diversity of environmental problems and any global statistical programme must not neglect the particular priorities of particular regions. A clear example of the differing priorities between regions is the emphasis placed on pollution aspects of environment statistics in the ECE programme, compared with the priority attached to the environmental aspects of human settlements in many developing countries. That is not to say that the developing countries are not concerned with problems of pollution or that the ECE region is not concerned with problems of human settlements. What is involved is the relative importance attached to particular issues and problems of an environmental nature within different economic and social contexts.

14. The Statistical Office has elaborated its regular questionnaires, where appropriate, to secure statistics useful for environmental purposes. For example, a section of one questionnaire now includes questions on selected environmental aspects of human settlements and some of the information received is being published. The questionnaires may be extended at an appropriate time, in co-ordination with other bodies in the field of demographic and social statistics, to include a wider range of questions pertinent to the field of environment. Similarly, in the design and implementation of a new questionnaire on energy statistics, an effort has been made to include details of the consumption of various energy commodities which will be of particular relevance to environment statistics. An important part of the programme of the Statistical Office consists of identifying those statistics already being collected which are of use, either in their present form or as aggregations or derived statistics, in the field of environment. A particular responsibility will be to find an appropriate mix of statistics from the range of items already collected which should be part of a set of statistics of the environment. Gaps in statistical collection will be identified during this process of assimilation, requiring the collection of new types of statistics.

15. With respect to some component subject areas of environment statistics, it is anticipated that environmental dimensions may be added to other programmes. An example concerns the relationship between environment statistics and the current work on the review of the System of National Accounts (SNA). As far as such elements as the costs of pollution abatement are concerned, it is proposed to extend SNA where appropriate, rather than to elaborate a system of statistics on this topic per se, to ensure that the purposes of statistics on abatement costs are integrated with similar types of statistics already in existence. Similarly, new classification work will be necessary as an underpinning for the development of environment statistics, yet such work should be closely co-ordinated with that on extension or modification of existing classifications (such as the International Standard Industrial Classification, the Standard International Trade Classification or the International Standard Classification of All Goods and Services) rather than independently of it.

16. The official approval of the project on statistics of the environment marks a

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new stage in the co-ordination of activities between the Statistical Office and the United Nations Environment Programme. The following comments are limited to the plan of action under this particular project, since it includes several of the steps called for by the Commission and is the beginning of practical co-ordination of effort.

17. The project is designed to lay the groundwork for a continuing programme of (a) guidance and assistance to countries in developing statistics of the environment; (b) international reporting and compilation of comparable data; and (c) dissemination of these data. The immediate objectives of the project are the preparation of an inventory of current national work and plans on statistics of the environment, the initiation of a selective collection of data in the light of the inventory, the preparation of initial draft guidelines for integrated concepts, definitions, classifications, methodologies and tabulations to be used by countries in the further development of their environment statistics and for international reporting and the testing of these guidelines through pilot studies in three selected countries.

18. Four substantive areas of inquiry have been identified: environmental aspects of human settlements; environmental aspects of the supplies and demands for replaceable and irreplaceable natural resources; environmental aspects of the pollutants and wastes generated by and pressing on industrial and non-industrial, governmental and household activities; and environmental aspects of the quality of media (air, water and soils). The purpose of such statistics is to monitor, assess and deal with these urgent questions in order to achieve national and international environmental management.

19. The tasks under the project have been timed until the end of April 1981, with the initial task comprising the recruitment of personnel to undertake the delineation of the programme and the substantive programme elements. Close co-ordination with UNEP is envisaged, particularly to avoid overlapping or duplication of effort with its Earthwatch, GEMS, IRS and IRPTC programmes (see paras. 24-25). By the same token, coverage of lacunae in environment data will be part of the integrated assessment of information flows in this new field of inquiry at the international level.

20. In continuation of work already initiated in environment statistics in the specific thematic area of materials/energy balances, a consultant has begun the compilation of a study, "Process classification for the industrial materials sector". Such work affects those aspects of environment statistics for which new or revised classifications will be needed. In this case it extends existing classification work towards a breakdown of certain selected industrial activities to the level of "economic process". The study is primarily concerned with those industries involving extraction, refining, reduction and synthesis of basic materials, including fuels and electricity. The work attempts to provide a general definition of an economic process (as opposed to activity or establishment classification), a rationale for the classification of processes by industry and a preliminary catalogue of process definitions.

IV. CURRENT ACTIVITIES OF THE UNITED NATIONS
ENVIRONMENT PROGRAMME (UNEP)

21. Much of the material for this section is derived from a paper presented by UNEP to the ACC Sub-Committee on Statistical Activities at its twelfth session and from subsequent discussion of it (see para. 1).

22. As far as specific statistics are concerned, the only regular statistical survey undertaken by UNEP is the collection of environmental activities data for purposes of the Level One overviews. These overviews cover arid and semi-arid lands, soil loss, tropical forests and woodlands, and water quality (1975); oceans and conservation of nature, wildlife and genetic resources (1976); human settlements and habitat, health of people and of the environment, and natural disasters (1977); leading in 1978 to three principal overview elements, environmental management, environment and development, and environmental education and training. This first cycle of covering UNEP's priority subject areas will be completed in 1978. Follow-up activities have yet to be decided. For the Level One overviews, all Governments were sent a questionnaire, to which the response rate has been very low. Qualitative and budgetary information on environmental activities of Governments (as well as the United Nations system, intergovernmental and major non-governmental organizations) is collected annually on particular subjects as decided upon by the Governing Council of UNEP. The information collected is broken down by (a) dissemination of information; (b) training, (c) research, including monitoring, and (d) application of existing knowledge, including legislation. The replies vary widely. The data are published annually by UNEP as background material for Governing Council documentation. It is intended to improve the collection of environmental activities data by means of computerization and a revision of content, scope and coverage. Within UNEP, environment statistics are now one of the responsibilities of the newly created Environmental Data Unit. This Unit works closely with the United Nations Statistical Office in the development of the statistical project referred to in paragraph 16. In addition, the UNEP Regional Office for Western Asia is currently establishing files with regard to existing national organizations or governmental bodies dealing with the environment and which might be collecting environment statistics. Information from these files will be available in 1978.

23. However, the wider range of programmes of UNEP has to be analysed, beyond the narrow purview of data per se, in order to see the type of substantive projects for which data development is needed. One of UNEP's main functional tasks is environmental assessment, which has been defined as a dynamic process by which relevant environmental issues are identified and necessary data are gathered and evaluated to provide the basis of information and understanding for effective environmental management. The major component of this is Earthwatch, to which was recently added another component, Environmental Data. Earthwatch relates predominantly to the assessment of the global and regional environmental situation, whereas Environmental Data mainly covers information on national environmental issues as well as data on national and international environmental "activities".

24. The flow-chart in the annex to the present report shows the major environmental information handling activities of UNEP and actual and potential

information flows between them. They are part, in principle, either of Earthwatch or of Environmental Data. Earthwatch includes three Programme Activity Centres: the Global Environmental Monitoring System (GEMS), the International Register of Potentially Toxic Chemicals (IRPTC) and the International Referral System (IRS). Under the heading of Environmental Data, the following three activities have been initiated: (a) The development of environment statistics and indicators; (b) The collection of data on environmental activities; and (c) The assembling of facts and figures about environmental trends relevant to the assessment of the state of the environment.

25. The above activities relate to one or more of the breakdowns of data handling given in the first column of the flow-chart in the annex. Data collection activities are performed by GEMS and two UNEP internal activities compiling data on major environmental trends and on the activities of international and national environmental bodies. GEMS seeks to obtain systematic data on spatial and temporal changes and trends in key indicators of the state of various components of the environment. The monitoring activities can be broadly divided into pollutant monitoring in various media and natural resources (e.g., soils and vegetation) monitoring. The key indicators that are monitored are subject to continuous evaluation and appraisal for validity and consistency within each project in the light of both practical monitoring and research experience. It is intended in the near future to compare and evaluate data from related projects (e.g., food and water quality monitoring) using government expert groups. IRPTC has on file mammalian toxicity data on about 21,000 chemical substances known by about 60,000 synonyms, together with microfiche copies of references. The files also contain threshold limit values, recommended standards in air and aquatic toxicity data on some of the substances. The files are regularly brought up to date; they have been stored in machine-readable form at the International Computing Centre, at Geneva and are in the process of being redesigned for IRPTC use. IRPTC responds to queries on chemical substances with the assistance of these files and other publications. It is also engaged in an in-depth study of seven groups of substances chosen to test methodology.

26. For the purpose of UNEP overviews on its subject areas, qualitative and budgetary data have been collected on the environmental activities of the United Nations system, Governments, intergovernmental organizations and major non-governmental organizations since 1975. A more comprehensive systematic survey is envisaged to improve scope and coverage, response, data processing and presentation of information compiled. Finally, a new exercise to assemble facts and figures on major changes of the environmental situation ("environmental trends") has been initiated, mainly for purposes of UNEP's own environmental management.

27. Storage of data collected is envisaged for IRPTC in its own data bank for potentially toxic chemicals, for "environmental trend" data on microfiche basis and for activity data in the Common Register of Development Activities (CORE) of the Inter-Organization Board for Information Systems and Related Activities (IOB). As to the latter, the Inter-Agency Task Force on Environmental Activities Data (IATFD) is to provide guidance on the possible integration of environmental criteria into CORE.

28. The main instrument of environmental information exchange is IRS. It links the producers and users of information through a world-wide system of referral to the location (sources) of information and is already fully operational. IRS is also intended to be the mechanism through which access may be gained to all UNEP information, such as the data collection exercises, consultancy rosters, country files and so on (indicated by open-ended arrows on the chart in the annex).

29. The last category of data supply, distillation into social indicators and aggregates of environmental accounts (materials balance categories, environmental indicators, quality-of-life indicators), will be developed later. Some aspects of data aggregation are also treated by the project on guidelines for national environmental reports.

30. Data review and evaluation comprises the Earthwatch review/evaluation component and what has been called "the assessment of inner and outer limits". Inner limits deal with the satisfaction of basic human needs which should be attained on a sustainable basis without violation of social and biophysical environmental thresholds or "outer limits". On a national basis, the review and evaluation of environmental information compiled usually occurs in environmental reports, for which general guidelines, particularly for developing countries, have been developed by a UNEP project. The total of UNEP's other programme activities is indicated on the chart in the annex as a "black box" covering review and evaluation as well as environmental management.

31. Concerning relationships with environment statistics per se, the "Environmental Statistics" box in the chart largely represents the UNEP/United Nations Statistical Office project on statistics of the environment. In addition, land-use statistics, household statistics and other social, cultural and demographic statistics are also of great relevance to UNEP, which is prepared to participate in any of these activities according to its co-ordinating and catalytic role. As can be seen from the flow-chart, environmental variables monitored by GEMS could provide a raw input to statistical activities. It will be part of the statistics project to determine how and to what extent monitored data can be transformed into statistical series. Some of the data compiled from national statistical offices and similar institutions might be condensed into aggregative indices as shown by the flow from the collection to the indicator/accounting component of the project. The latter has been identified as a further potential field of UNEP involvement, particularly with regard to the assessment of the environmental component of human quality of life.

32. Other conceptual and methodological inputs may be expected from the project on national environmental reports and other UNEP activities. For example, UNEP is currently developing a general environmental classification system which to a large extent might apply to the classification of statistics, too, or at least provide the general framework for such a classification. Finally, it is hoped that statistical series and indicators will eventually help to assess and evaluate the major change in the global and regional environmental situation through the exercise of environmental data collection.

V. CURRENT ACTIVITIES OF THE SPECIALIZED AGENCIES

33. While UNEP is the lead agency in the United Nations concerning matters of the environment, many of the specialized agencies include within their thematic mandates particular aspects of the information which is likely to contribute to the building of a framework of co-ordinated environment statistics. Accordingly, the current activities of these agencies are reviewed briefly. Where a specialized agency already compiles statistics on component elements of the field of environment, the Statistical Office will not duplicate this work, but will establish co-operative programmes to ensure that the various constituent parts can be drawn together into an integrated set of international environment statistics.

34. International Labour Organisation (ILO). The ILO is primarily concerned with the working environment, as indicated in a Convention on occupational hazards, adopted by the International Labour Conference at its sixty-third session (1977). Owing to the growing concern with regard to such problems, the ILO anticipates that increased efforts at the international level to co-ordinate and improve the flow of statistical information on the working environment will be called for in the near future. The current programme of the ILO contains a project on statistical indicators concerning the working environment (see E/CN.3/491, para. 16).

35. Food and Agriculture Organization of the United Nations (FAO). FAO has three main areas of concern in environment statistics: (a) data on the current use of resources, including land and water use, grasslands, forests and fish stocks; (b) data on production related to these resources, on the health of living resources and as indicators of their state of pollution, degradation or depletion; and (c) data on activities associated with processes of degradation of the environment, such as the use of agrochemicals, the development of agro-industries, mechanization of agriculture, development of irrigation and clearing of forest lands. FAO is involved in several global inventories and assessment of natural resources, such as soils, forests, grasslands, fisheries and genetic resources, from which are being developed monitoring programmes for specific processes of environmental degradation, such as soil degradation, depletion of forest cover, endangered fish stocks and, in collaboration with WHO, food contamination. Co-operative programmes with UNEP and other specialized agencies to develop data on natural resources for food and agriculture are continuing.

36. United Nations Educational, Scientific and Cultural Organization (UNESCO). As far as statistics of a traditional nature are concerned, no information on the environment is collected by UNESCO and there are no plans or proposals for the collection of statistics in this field. However, the Science Sector of UNESCO has much information which relates to natural resources (for instance, geological formations, vegetation mapping etc.), ocean observation (Integrated Global Ocean Station System (IGOSS)) and marine pollution, conservation areas (i.e., biosphere reserves, representative river basins etc.) and natural disasters (including earthquakes, tsunamis, volcanic eruptions, landslides, floods).

37. Several divisions of UNESCO deal with questions of the environment, with human settlements etc., such as the Science Sector with its Man and the Biosphere (MAB) and oceanographic programmes, and the Sector of Social Science, with social aspects

of the environment. Although the latter is the only Sector which has a division with the word "environment" in its name, i.e., the Division of Human Settlements and Socio-Cultural Environment, the major part of the activities envisaged in the broad field of environment within the Medium-Term Plan (1977-1982) of UNESCO is concentrated in the Science Sector. Chapter VII of the Plan, under Problem VII, "Man and his Environment", has the following objectives which show the importance attached to knowledge relative to natural resources: (a) knowledge of mineral and energy resources; (b) knowledge of terrestrial biological resources; (c) knowledge of water resources; (d) knowledge of ocean and coastal marine systems; (e) interrelationship between the environment and the "design for living" in human settlements; (f) preservation and presentation of the cultural and natural heritage; and (g) education and information relating to the environment. Concern for the "human" aspects in these objectives stresses the improvement of knowledge of the relationships between man (human activities) and natural resources and systems. The collection of statistics on the physical environment will be as useful to UNESCO's programmes as the collection of statistics on the "social" and "cultural" environments.

38. International Civil Aviation Organization (ICAO). At the present time, ICAO is not collecting from its member States any statistics on the environment. Although some work is being done on environmental issues, in particular on aircraft noise, the main information comprises scientific and technical data on airport characteristics.

39. World Health Organization (WHO). Between 75 and 90 developing countries are reporting to WHO statistics on community water supply and excreta disposal. The information collected refers to periods of several years, the latest being 1971-1975; the statistics include population coverage as well as per capita investments. Three publications of those statistics merit attention:

(a) Data as at the year 1962, in B. H. Dieterich and J. M. Henderson, Urban Water Supply Conditions and Needs in Seventy-Five Developing Countries, Public Health Papers No. 23, WHO, Geneva, 1963;

(b) Data as at the year 1970, in Community Water Supply and Sewage Disposal in Developing Countries, World Health Statistics Report, vol. 26, No. 11, 1973;

(c) Data for 1970-1975, in Community Water Supply and Excreta Disposal in Developing Countries; Review of Progress, World Health Statistics Report, vol. 29, No. 10, 1976.

40. In addition to the above statistics, sectoral studies are being undertaken in 40 developing countries under a WHO/World Bank co-operative programme. The information collected on plans, programmes and institutions, as well as on manpower, finances and the like, in the area of water supply and excreta disposal, is available on request from the WHO Division of Environmental Health. It is envisaged that statistics on water supply and excreta disposal will continue to be collected and the next period of study will be 1976-1980.

41. The United Nations Water Conference, held in 1977, (a) proposed 1980-1990 as the International Drinking Water Supply and Sanitation Decade; (b) adopted targets to be achieved by the end of that Decade for the provision of community water supply and sanitation services; (c) adopted the Plan of Action by WHO (see resolution II of the Conference); (d) requested United Nations agencies to assist countries in carrying out a review of their needs and resources and to prepare their plans and programmes by 1980 in order that they can launch its implementation during the forthcoming decade; (e) indicated that the programmes which are ready would be reviewed in 1980 by an appropriate mechanism to be determined by the Economic and Social Council with a view to increasing development assistance; and (f) requested that member countries should co-operate with WHO in its ongoing activity on monitoring progress. Specific follow-up actions required will be reviewed by a special session of the Committee on Natural Resources in 1978. The Secretary-General of the United Nations has intimated that WHO should be the lead agency in preparing the status report for the Committee on Natural Resources at its special session and should liaise with all other concerned United Nations agencies, regional commissions, etc. WHO, in close collaboration with the World Bank and other concerned agencies, as well as with Governments, has embarked on a rapid assessment of the status and needs in the sectors of community water supply and sanitation for countries in which detailed sector study information is not available. This rapid assessment will not be an attempt to collect new data and statistics, but will pool all available existing information to give an overview for first-stage decision-making on planning and programming and the actions needed in the forthcoming decade on a country-by-country basis.

42. World Meteorological Organization (WMO). In general WMO does not endeavour to collect environment statistics. Rather, its role is to assist countries, institutes and individuals to obtain the statistics that they require from other countries. To this end, world-wide data in a number of environmental fields are collected by a designated national centre and are published under WMO auspices. The following is a list of such publications:

Monthly Climatic Data for the World and World Weather Records (both published by NOAA, Environmental Data Service, USA);

Climatological Normals (CLINO) for CLIMAT and CLIMAT SHIP Stations for the Period 1931-1960 (published as WMO-No. 170.TP.52, 1971);

Short Period Averages for 1951-1960 and Provisional Average Values for CLIMAT TEMP and CLIMAT TEMP SHIP Stations (published as WMO-No. 170.TP.84, 1965);

Solar Radiation and Radiation Balance Data (The World Network) and Results of Ground Observations of Atmospheric Electricity (The World Network) (both issued monthly by the Hydrometeorological Service of the USSR, Leningrad);

Ozone Data for the World (issued monthly by the Atmospheric Environment Service, Canada);

Atmospheric Turbidity and Precipitation Chemistry Data for the World (issued annually by the Environmental Data Service, National Climatic Center, USA).

A number of national publications containing environmental statistics are received by the WMO library, but as yet no attempt has been made to make the collection complete. A large amount of meteorological and climatic data about the environment is made available through the principal WMO programmes, in particular through the World Weather Watch (WWW). The land stations, satellites and other collection facilities of the WWW Global Observing System provide regular observations of the atmosphere, including measurement of pollution at the "background" level at stations remote from sources of such pollution. The WWW includes a Global Data-processing System from which data and the original observations are exchanged internationally through the Global Telecommunication System.

43. WMO has no immediate plans for major changes in the present arrangements for the collection and publication of environmental statistics.

44. Inter-Governmental Maritime Consultative Organization (IMCO). With regard to marine environmental statistics, member Governments of IMCO have been invited to submit reports on significant spillages (over 100 tons) of oil into the sea from ships (resolution A.189 (VI)). Information is also being collected on investigations into shipping casualties involving pollution of the sea. Concerning general statistics relating to the tonnage of ships (including tonnage of oil and chemical tankers) in the world fleet, it is the general practice of IMCO to refer to Lloyd's Statistical Tables. Similarly, for data relating to oil production, amount of oil and oil products transported by sea and allied statistics, reference is made to publications prepared by the oil industry, such as the British Petroleum Review.

45. IMCO itself does not carry out any specific monitoring activities relating to pollution of the sea, including ocean dumping, but co-operates closely with such organizations as the Intergovernmental Oceanographic Commission, the International Atomic Energy Agency and regional bodies in the development of programmes in this field. Data which IMCO uses at the present time which have environment applications include the tonnage and number of vessels in the world merchant fleet and their country of registry, the tonnage of types of vessels (such as oil tankers) in the world fleet and the world production of crude petroleum and chemical products, as well as the quantities of those commodities carried by sea.

46. International Atomic Energy Agency (IAEA). IAEA does not collect specific statistics on the environment. It maintains an extensive data bank on various aspects of atomic energy (ranging from data for the general assessment of energy trends to specialized data on reactors) to facilitate the preparation of codes of practice in the field of atomic energy with regard to environmental safeguards.

47. The preceding survey of activities of the specialized agencies is an overview. At an early stage in the development of environment statistics, it will be necessary to analyse in detail the types of data compiled by each agency under its thematic mandate. In the process of elaboration of the structure, framework, classifications and methodological guidelines to be used in environment statistics, it is anticipated that each agency will contribute ideas and materials based on its expertise in particular fields. In this way, duplication of effort will be avoided and a synthesis of experience in the integration of the component elements of the field of environment statistics achieved.

VI. CURRENT ACTIVITIES OF THE REGIONAL COMMISSIONS

48. As indicated in paragraphs 7 and 8, it is essential that an appropriate role be evolved for the regional commissions in the development of environment statistics, given the spatial characteristics of environmental problems. Accordingly, it is useful to review the current activities of these bodies in order to make a preliminary assessment of this role and to co-ordinate work at the global and regional levels.

49. Economic Commission for Europe (ECE). The Statistical Division of ECE does not at present collect environment statistics from national offices. However, in the subject areas of housing and energy, quite extensive statistics have been developed which may eventually be incorporated into a set of environment statistics.

50. In addition, there have been extensive discussions of concepts, classifications, methodologies and definitions in the ECE region, principally under the aegis of the Conference of European Statisticians and the Senior Advisers to ECE Governments on Environmental Problems. Following the circulation of a questionnaire on country practices, the results of which are being analysed, the Statistical Division of ECE has concentrated upon the following work:

(a) Frameworks for the co-ordination and development of environment statistics, derived from analysis of national yearbooks and related publications on the environment in the ECE member countries;

(b) Concepts, definitions and classifications for use in particular areas of environment statistics, notably concerning pollution and related quality aspects of environmental media (including land use);

(c) Selected problem areas, such as statistics on investments for environmental protection and concepts of environmental stress, as well as methodological tools for use in the collection and compilation of environment statistics.

51. ECE has pioneered much of the investigation in the field of environment statistics. It has shared its experience with the Statistical Office and a close co-ordination of work has been achieved.

52. Economic Commission for Western Asia (ECWA). The Statistics Unit of ECWA does not collect environment statistics from national offices. No programmes or proposals have been put forward for the collection of statistics in the field of environment, mainly due to an acute shortage of staff. It is anticipated that discussion of the steps needed to initiate an appropriate programme in environment statistics will be undertaken in the near future.

53. Economic Commission for Africa (ECA). The Statistics Division of ECA has no programme for the collection of environment statistics.

54. Economic Commission for Latin America (ECLA). As a result of a joint

ECLA/UNEP programming exercise in 1977, a project is being drawn up by which UNEP will support ECLA in an effort to obtain due attention to environmental matters within the United Nations system operating in the region, as well as among Latin American Governments. The project includes the collection, elaboration and dissemination of environmental indicators and statistics (to be undertaken by ECLA's Division of Statistics). For these activities, a consultant and a research assistant will be required to (a) examine the present situation of environment statistics in the region; (b) select the statistics which will constitute the permanent data file to support the work of the experts of ECLA's new Environment Unit; and (c) contribute, at the regional level, to the formulation of international guidelines for a system of environment statistics, programmed by the United Nations Statistical Office. This programme of statistical development will be fully co-ordinated with activity at the global level, with due regard to regional priorities.

55. Economic and Social Commission for Asia and the Pacific (ESCAP). The Statistics Division of ESCAP has no programme for environment statistics. However, in association with the UNEP Regional Office for Western Asia, files are being established concerning national bodies dealing with the general field of environment, which might be involved in collecting environment statistics.

56. In summary, the current work of the regional commissions reflects the difficulties of an initial assessment of national activities, as well as the problems of definition, conceptual organization and methodology at the regional level. As the United Nations Statistical Office programme develops, particular care will be taken to support statistical work on the environment at the regional level. It is envisaged that, following the analysis of national experience in environment statistics, regional programmes will be developed to reflect the particular priorities of the countries in the respective regions.

VII. CONCLUSIONS

57. In conclusion, future work in the field of environment statistics will involve two types of projects: (a) to co-ordinate the work which is already under way in the specialized agencies and regional commissions with that of the United Nations Statistical Office; and (b) to identify the thematic and regional gaps in existing data towards the development of environment statistics. At the same time, under the UNEP/United Nations Statistical Office project, when recruiting of staff has been completed, particular attention will be devoted to definition, conceptual organization, methodology and guidelines for the development of environment statistics and the initial collection of selected statistics.

58. The present progress report has not included the activities of intergovernmental or non-governmental organizations. As far as intergovernmental organizations are concerned, within ECE practical co-operation at the regional level has been achieved with the Organisation for Economic Co-operation and Development, the Council for Mutual Economic Assistance and the European Economic Community, by which the projects of each supplements those of the others. Concerning non-governmental organizations, it is anticipated that, in the next stages of the work of the United Nations Statistical Office, their activities will be reviewed and integrated into the work on the development of an over-all framework for environment statistics.

ANNEX
 RELATIONSHIP OF ENVIRONMENTAL STATISTICS AND UNEP INFORMATION ACTIVITIES

