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NEWS & NOTES

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Climate Change and Official Statistics

Authoritative scientific evidence and recent climate events have elevated the issue of climate change high up in the political agenda. There is now a broad agreement that economic and social pressures have contributed to climate change and that climate change has the potential to significantly impact the environment, the economy and the society. It is one of the many duties of the national statistical offices to support the measurement and analysis of the drivers behind, and the social, economic and environmental consequences of, climate change and related mitigation and adaptation measures, and thus better support informed policy- and decision-making.

The Statistical Commission at its thirty-ninth session had asked for a review on how official statistics can better contribute to the climate change debate. To meet that request, the Australian Bureau of Statistics was invited by the United Nations Statistics Division to carry out the review.

Statistics relevant to and necessary for the understanding of the causes and impacts of climate change and related measures cut across several, if not most, areas of official statistics. The international official statistics community presently engages the issues of climate change in an unsystematic manner. At the national level engagement varies between countries. A small number of countries engage actively, some others occasionally or on the margin, and the majority not at all. Nevertheless, national statistical offices have an important role to play in providing statistical information for climate change-related monitoring and analysis, and there are many existing official statistics that have the potential to be used in this way. There are also gaps that the official statistical community has to fill, and there are areas where national statistical offices can work with others to fill these gaps. There is also work to be done internationally to ensure that standards and methodologies best support climate change analysis, as well as in engaging with relevant international policy bodies on their statistical needs.

These matters were discussed at the Conference on Climate Change and Official Statistics held in Oslo, from 14 to 16 April 2008. The draft agenda for action that was developed during and following the Oslo Conference formed the starting point for the recommendations contained in the programme review. Since the Oslo Conference there have been subsequent discussions on the recommendations among conference participants, within the United Nations Statistics Division, by the Committee of Experts on Environmental-Economic Accounting and at the Conference on Climate Change, Development and Official Statistics in the Asia Pacific Region, held in Seoul, in December 2008. While the present recommendations were significantly informed by the consultations, they are the views of the programme reviewer.

Summary of recommendations

- Ensure that relevant international statistical standards and classifications give proper attention to climate change issues, with a particular focus on land use classifications and energy and energy use statistics.
- Strengthen the role of national statistical offices in the compilation of greenhouse gas inventories and improve the quality of greenhouse gas emission statistics as part of official statistics.
- Set up a working group with UNFCCC to look into emission statistics and related classifications.
- Develop new statistics and share best practices on advanced analysis of existing statistics to support mitigation mechanisms and measures.
- Ensure that key macroeconomic statistics take into account the implications of emission trading schemes and other mitigation mechanisms.
- Develop further and implement the System of Environmental-Economic Accounting with a focus on its applications to support climate change-related analysis.
- Share best practices on the statistical analysis of the impacts of, and vulnerability and adaptation to, climate

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change.

- Improve and promote the use of Geographic Information Systems and other spatial infrastructure for the climate change-related spatial analysis of statistics.
- Develop a framework for climate change-related statistics.
- Promote the use of indicators at the national level and provide statistical expertise for indicator development.
- Advocate the use of official statistics in climate change-related policies.
- Support the estimation of the macroeconomic impacts of climate change, mitigation and adaptation.
- Initiate a dialogue with the Intergovernmental Panel on Climate Change on the use of official statistics for scenario development and modeling in future assessments of climate change.
- Expand the mandate and membership of the United Nations Committee of Experts on Environmental-Economic Accounting to provide oversight of international statistical activities related to climate change.

To undertake the full range of work proposed would require a significant effort, both nationally and internationally, although it should be recognized that work on some of the proposed actions has already commenced. There is a need to prioritize the work. The review provides a suggested prioritization for consideration by the United Nations Statistical Commission.

The Statistical Commission will discuss the Programme Review, including the objectives of future work on climate change statistics, the proposed recommendations and actions, the proposed governance arrangements as well as the suggested timing and priorities at its fortieth session in February 2009. For the full text of the Programme Review see (http://unstats.un.org/unsd/statcom/doc09/2009-2-ProReview-E.pdf)

RECENT AND ONGOING WORK

Status of responses to the 2008 UNSD/UNEP Questionnaire on Environment Statistics

At the end of December 2008 out of the 171 countries and territories who received the questionnaire 74 countries/territories submitted data, 17 replied with no data available and 10 requested more time to complete the questionnaire.

Response rates vary significantly by region. The best response rates were found in Europe (92.9%), followed by Asia (65.2%) and the Americas (64.3%). Africa and Oceania countries have relatively low response rates.

In some countries data were available for only the water or the waste section. The development of statistical programmes for both water and waste varies across countries. Altogether, 59 countries were able to provide data for both topics while 15 countries for only one of the two.

UNSD conducted its first environmental data collection in 1999, covering all non-OECD countries. Subsequent data collections followed in 2001, 2004, 2006, and 2008. During the decade the number of responding countries increased by 60 percent and the response rate increased from 29 to 49 percent.

After the data validation for all files are completed, the finalized questionnaire files will be uploaded into a specially designed database and undergo final checks. At this stage, data are also exchanged with OECD, and the results for countries included in the OECD/EUROSTAT State of the Environment Questionnaire are merged into the database as well. Finally, the UNSD main indicators tables are compiled from the responses for the UNSD website. The online tables consist of the compilations from the UNSD/UNEP Questionnaire as well as indicators from other international sources. Also, country files, containing the complete data and footnotes received from each respondent, are uploaded to the website with password protection. Country files are available, by request, for national, regional and international organizations that are involved in the collection of environment statistics.

UNSD plans to conduct a detailed analysis of the results of the 2008 Questionnaire after the collection process is finalized. The objectives of the analysis will be to inform future and ongoing capacity building efforts in the field of environment statistics and to further improve future data collections. The next biennial UNSD environment data collection will take place in 2010.

Global Assessment of Water Statistics and Water Accounts

The *Global Assessment of Water Statistics and Water Accounts* was launched in April 2008. It was sent to 95 countries, which included all of the countries that reported earlier that they were compiling or planning to compile water statistics or water accounts. The questionnaire was sent via email and could be filled in electronically on the UNSD website. A word version was

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also available and with the assistance of countries, unofficial translations of the questionnaire were made to Russian and French.

The assessment had four objectives: (a) to obtain an in-depth understanding of country practices in the compilation of water statistics and accounts; (b) to assess the use of the *System of Environmental-Economic Accounting for Water* (SEEAW); (c) to support the preparation of the *International Recommendations of Water Statistics* (IRWS) and; (d) to assist with the development of targeted technical cooperation activities in these areas.

At the close of the survey on 30 November 2008, 64 institutions from 61 countries had responded to the assessment.

One of the main challenges in the production of water statistics and accounts is the large number of agencies and the diverse range of professional disciplines (e.g. physical water scientists, economists, statisticians) that are involved in their production. This makes the legal and institutional frameworks, coordination and cooperation among different agencies a key for the success and sustainability of the water statistics and water accounting programmes in countries.

To assess the scope of the water statistics programmes in countries, the questionnaire sought information on the collection and compilation on 99 different data items, drawn mostly from a list of data items of the draft IRWS. These data items covered hydrological and meteorological data as well as water abstracted from the environment, supply and use of water in the economy, the water supply and sewerage industries, wastewater, emissions to water, water quality; economic data on water, and population connected to piped water and sewerage services.

The NSOs have different levels of statistical activity depending on the data item. Certain data, such as the number of households connected to water supply are commonly collected by NSOs via surveys. A number of NSOs carry out specialized water surveys and regular household surveys or censuses to collect economic data related to water, such as economic variables related to the water supply industry. The hydrological and meteorological data such as precipitation or evapotranspiration are collected by other institutions and are sometimes compiled by the NSOs from these institutions.

60% of the responding countries have an average of one-year time lag between the reference period and the publication of water statistics, while 30% have a two-year, and 10% have a three-year time lag. As for the frequency of dissemination, the majority of responding countries disseminate data annually. For water statistics, more than half the responding countries (mainly from developed regions) have at least 10-20 years time series of water statistics disseminated. A few countries have 40 to 50 years time series. Countries from developing regions normally have less than 10 years time series. For water accounts, which are relatively new, the time series available for most countries are less than 10 years.

The two most common impeding factors for the compilation of both water statistics and water accounts are data availability and data quality. The lack of (i) cooperation/data sharing with other institutions, (ii) harmonized methodology within the country, (iii) compilation guidance material and (iv) harmonized classifications were identified as factors impeding water statistics and accounts.

RECENT MEETINGS

38th meeting of the OECD Working Group on Environmental Information and Outlooks (Paris, 8-9 January 2008)

The meeting's agenda included presentations on the OECD series of guidance documents on "Measuring material flows and resource productivity" and discussions of the Draft Council Recommendation on Resource Productivity, the synthesis report on material flows in OECD countries and beyond, as well as of plans for an OECD-UNEP Conference on Resource Efficiency in April 2008. Participants were informed about the review and implementation of the OECD Environment Strategy and the OECD Environmental Outlook to 2030. Under the agenda item "Environmental data collection and treatment" the meeting discussed the 2008-2009 process and data collection for the OECD agri-environmental indicators. The programme of work and budget in 2009-2010 in the areas of Environmental data and indicators and Material flows and resource productivity were also discussed.

33rd session of the OECD Working Party on Environmental Performance (Paris, 9-10 January 2008)

The Working Party reviewed ongoing work in the area of environmental performance reviews including newly

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released reports, examinations, OECD missions, mid-term reviews and work in the accession and "enhanced engagement" countries. They discussed the work programme and budget for 2009-2010.

Workshop on Environmental Accounting for the MEDSTAT countries
(Luxembourg, 5-9 February 2008)

The workshop was part of the MEDSTAT II – Euro-Mediterranean Statistical Cooperation Programme. It brought together environment statisticians and national accountants from 9 Mediterranean developing countries. The purpose of the workshop was to introduce the System of integrated Environmental-Economic Accounting (SEEA) to the countries. The workshop concluded that because of the limited resources available in the MEDSTAT II countries, they could not fully implement all aspects of the SEEA and as such, they will choose from the menu of environmental accounts and start with the areas of high priority.

Thirty-ninth session of the Statistical Commission
(New York, 24-27 February 2008)

The Commission was informed about the activities and work programme of the Intersecretariat Working Group on Environment Statistics and the UN Committee of Experts on Environmental-Economic Accounting. See the full documentation of the Commission at http://unstats.un.org/unsd/statcom/commission_38th_session.htm

Fifth meeting of the Joint UNECE/Eurostat/OECD Working Group on Statistics for Sustainable Development
(Lisbon, 5-6 March 2008)

The main objective of the meeting was to discuss progress towards the preparation of the final report on Statistics for Sustainable Development to be presented for endorsement to the plenary session of the Conference of European Statisticians in June 2008. The meeting was dedicated to reviewing in detail the chapters of the revised report: (i) Introduction; (ii) Overview of existing approaches to measuring sustainable development; (iii) An analytical approach to sustainable development: the capital framework; (iv) Indicators based on the capital approach; (v) Comparison of the capital approach and other approaches; and (vi) Conclusions; recommendations to countries, and challenges for implementation.

Conference on Climate Change and Official Statistics
(Oslo, 14-16 April 2008)

The Conference organized by the United Nations Statistics Division in collaboration with the Statistical Office of the European Communities (Eurostat) and the World Bank, was held in Oslo, Norway, from 14 to 16 April 2008. The Conference was hosted by Statistics Norway and was attended by 116 participants representing 55 countries (national statistical offices and environmental ministries) and 15 organizations.

The Conference was designed as a forum for the exploration of ideas and to establish an agenda for future work, and it was built around the main aspects of climate change where official statistics can best contribute.

The presentations and the discussion showed that there is a huge demand for new, more, and better statistics to understand the driving forces, pressures, impacts of and responses to climate change. However, a lot of this demand is beyond the competence of official statistics and national statistical offices. The core competence of official statistics is to deal with the present and the past processes, not with the future. Many offices do not have the resources to deal with these issues and do not even have environment statistics programmes. On the other hand, the existence of national climate change strategies in more and more countries as well as the high interest in this conference suggest that there is a change in momentum and the countries' interest in environment statistics is increasing.

Main conclusions of the Conference:

Official statistics have to demonstrate their relevance. A lot of basic statistics are collected but more serious efforts have to be made to organize these data. This is especially true for the statistics needed for the emission calculations. Statistical offices have to understand the methodology of these calculations and contribute to its improvement by offering the potential of the use of standard statistical classifications that are applied in economic statistics.

In relation to the measurement of the impacts and vulnerability the role, competence and strength of official statistics is not so straightforward. A major task should be to gather and compile examples, good practices. There are examples of ongoing work.

There is an important role for statistical offices in the understanding of emission trading schemes and mitigation measures. This requires sophisticated,

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advanced analysis of standard tools such as the input-output tables or energy supply and use tables, the existence of which is the prerequisite to the analysis. Not many countries have the possibility for this but it is an important development work that has to be pushed forward.

Indicators are valuable tools to convey important messages for policy formulation, decision making and the general public. Indicator sets are policy driven and country specific, and they must have practical value for the countries.

The System of integrated Environmental-Economic Accounting has proven its added value in many areas of environmental-economic analysis and it has a lot of potential in the analysis of the economic aspects of greenhouse gas emissions and climate change. A stepwise approach and the development of simplified standard tables that many countries can implement is an essential part of the implementation agenda.

Much more has to be done on the use of geographical information systems and on the development of spatial data infrastructures. There is a great potential in the use of GIS for spatial analysis of the impacts of and vulnerability to climate change and for the integrated analysis of different types of information.

The execution and implementation of these tasks, including engaging with IPCC and UNFCCC on a more formal basis as well as the transfer of knowledge to countries will require proper governance.

It was agreed that based on the conclusions of the Conference, a detailed review of the principles and major areas of work will be prepared and circulated to the participants. This paper will be the basis for discussions at different international and regional statistical fora. The output of these discussions is expected to be a recommended roadmap for the development of official climate change statistics both at the national and the international level, to be submitted to the fortieth session of the UN Statistical Commission in March 2009.

For the full report, presentations, papers see:
http://unstats.un.org/unsd/climate_change/default.htm

OECD-UNEP Conference on Resource Efficiency
(Paris, 23-25 April 2008)

The Conference addressed how improved resource efficiency can reduce the negative environmental impacts of resource extraction, processing, use and disposal, while securing adequate supplies of materials to sustain economic activity. It reviewed: (i) knowledge and information about material flows and resource productivity and their economic and environmental implications; (ii) policies, measures and instruments that help reduce environmental impacts from the production and consumption of resources, and avoid waste of resources; and (iii) the framework conditions for markets and public policies to play their role in improving resource efficiency and ensuring sustainable resource use, considering the related development and governance aspects.

Workshop on Environment Statistics
(Abuja, Nigeria, 19-23 May 2008)

The United Nations Statistics Division, the United Nations Environment Programme (UNEP) and the Commission of the Economic Community of West African States (ECOWAS) co-organized a workshop on environment statistics that was held in Abuja, Nigeria from 19 to 23 May 2008. The Workshop trained representatives from national statistical offices and ministries of environment or equivalent institutions from the ECOWAS Member States on concepts and methods of basic environmental statistics and indicators. The Workshop brought together 49 participants from 14 countries and 10 international, regional and subregional organizations. The main objectives of the workshop were to: (a) agree and adopt a core set of environmental indicators and statistics for the ECOWAS region for national and regional reporting based on the ECA list of environmental statistics and indicators agreed upon at the UNSD/UNEP/ECA Workshop on Environment Statistics in July 2007; (b) review draft methodologies for the set of indicators agreed upon at the Workshop; (c) review the draft ECOWAS regional programme on environment statistics; and (d) train participants from national statistical offices (NSOs) and ministries/agencies responsible for environment on basic concepts, methods and best practices in environment statistics. The participants considered the Workshop as an important initiative for the continued improvement of environment statistics in the ECOWAS region.
(http://unstats.un.org/unsd/environment/UNSD_UNEP_ECOWAS%20workshop.htm)

DIMESA
(Copenhagen, 17-18 June 2008)

The Eurostat Directors Meeting on Environment Statistics and Accounts discussed the EU policy framework including plans related to the outcome and follow-up of the Beyond GDP Conference. Progress reports were made on the Shared Environmental Information System, on the Environmental Data Centres

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and on the work on environmental accounts. The draft 2009 Eurostat work programme on environment statistics and accounts was presented and discussed. The meeting was organized back-to-back with a meeting of the Management Board of the European Environment Agency, scheduled on 18 June, allowing a large participation of the representatives of the European Information and Observation Network in the DIMESA.

Third meeting of the UNCEEA
(New York, 26-27 June 2008)

The United Nations Committee of Experts on Environmental-Economic Accounting discussed: (i) the governance and mandate of the Committee to encompass environment statistics, environmental-economic accounting and statistics on climate change; (ii) the promotion of environmental-economic accounting; (iii) the application of the SEEA to issues related to climate change; (iv) energy statistics and accounting; (v) land and ecosystem accounting; (vi) Material Flow Accounting; (vii) water statistics and accounting; (viii) the revision of the SEEA; (ix) linking agriculture and environment statistics; (x) reports of the different technical groups working in the area of environmental-economic accounting and related statistics.
(http://unstats.un.org/unsd/envaccounting/ceea/meetings.asp)

UNCEEA Special Session on Climate Change
(New York, 25 June 2008)

The session was organized as a follow-up to the Conference on Climate Change and Official Statistics (Oslo, 14 -16 June 2008). The objective of the Special Session was to brainstorm on issues discussed during the climate change conference in order to identify existing initiatives and various stakeholders. It was structured according to the following themes: aftermath of Bali; compilation of emission inventories; mitigation, impacts and adaptation. Each topic was introduced by a presentation discussing existing activities both in the statistical as well as in the climate change communities. The discussion will serve as an input in the drafting of the programme review on climate change and official statistics to be discussed at the fortieth session of the Statistical Commission in February 2009.

Training Course on Environment Statistics
(Bonn, 8-11 September 2008)

The InWEnt Centre for Economic, Environmental and Social Statistics organized an E-learning course on environment statistics from 14 July to 29 August 2008 as well as a related classroom session that was held in Bonn from 8-19 September 2008. The participants were from national statistical offices and ministries of environment from French speaking African countries. A staff member from UNSD participated as a resource person in New York during the E-learning course with all the participants on-line, as well as for four days (8-11 September) during the classroom session in Bonn.

Expert Group Meeting on Climate Change and Sustainable Development – the Role of Indicators
(New York, 15-16 October 2008)

The UN Division for Sustainable Development (DSD) convened the meeting to discuss ways for countries to better harness linkages between sustainable development indicators and climate change policy. Twenty-nine experts from 11 countries and five international organizations attended the meeting. All participants engaged in a rich discussion on the work on climate change and indicators of sustainable development, expressing a wide range of preferences and perspectives. Countries that integrate their sustainable development and climate change policy processes saw merit in integrating sustainable development and climate change indicators, whereas countries using separate processes also select their indicators separately.

Expert Group Meeting on the International Recommendations for Water Statistics
(New York, 4-6 November 2008)

The objectives of the meeting were to: (a) discuss the draft chapters of the IRWS; (b) identify issues that need to be resolved; (c) agree on how to address these issues; (d) discuss the proposed structure and content of compilation guidelines for water statistics and accounts; and (e) identify country experiences and practices that can be included in the compilation guidelines.

The participants discussed the key issues and questions of the draft chapter by chapter and agreed on a list of actions, responsibilities and timetable relating to the process of finalizing the IRWS. The revised draft will be circulated in the expert group again in 2009 and will be submitted for global consultation. The final draft will be discussed at the forty-first session of the Statistical Commission in 2010.
(http://unstats.un.org/unsd/envaccounting/irws/)

Conference on Climate Change, Development and Official Statistics in the Asia-Pacific Region
(Seoul, 11-12 December 2008)

The Conference was organized by the United Nations Statistics Division (UNSD) in collaboration with the

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Korea National Statistical Office (KNSO). It was attended by 216 participants representing 18 countries (national statistical offices, environmental ministries, research and academia) and five international organizations.

The objectives of the Conference were to discuss the recommendations of the Oslo Conference on Climate Change and Official Statistics (see http://unstats.un.org/unsd/climate_change/default.htm) and contribute to the finalization of a roadmap for mainstreaming climate change in official statistics. The roadmap will be submitted to the fortieth session of the UN Statistical Commission in February 2009 for further discussion.

The Conference was organized in the following five sessions: (i) setting the scope: (ii) analysis of the social, economic and environmental impacts of climate change: (iii) the economic aspects of climate change mitigation and adaptation; (iv) national greenhouse gas inventories, emission calculations and the role of national statistical offices; and (v) the way forward.

The Conference reinforced most of the Oslo recommendations. However, it agreed that a conceptual reference framework should be the starting point to define the scope and content of climate change related statistics, and to develop a set of consistent definitions, classifications, variables, tabulations and indicators. The development of such a framework should be one of the priority tasks and work should start on it as soon as possible. On the other hand, there are a number of areas where actions can and have to start (in some cases have already started) independently from the existence of a conceptual framework or parallel to development of such a framework. It was also agreed that the focus should be on those recommendations that are most useful to existing processes in reporting, policy and decision making and that are based on the core competences and strengths of official statistics and NSOs. These areas include the GHG inventories, mitigation, and the impacts of climate change and related measures. (http://unstats.un.org/unsd/climate_change/Korea/default.htm)

FORTHCOMING MEETINGS

Fortieth session of the UN Statistical Commission (New York, 24-27 February 2009)

The Commission will discuss the Programme Review of Climate Change and Official Statistics and the report of the UN Committee of Experts on Environmental-Economic Accounting. Among the side events there will be a lunchtime seminar on advances in environment statistics and a learning centre on environmental-economic accounting.

5th World Water Forum (Istanbul, 16-22 March 2009)

Within the Forum there will be a two day session on water statistics, "Data for All".

UNSD-UNECE Joint Meeting on Environmental Indicators (Chisinau, 4-6 May 2009)

The meeting will bring together statisticians and environmental specialists to discuss selected indicators for environmental reporting in the countries of Eastern Europe, Caucasus and Central Asia.

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