



**United Nations Economic Commission for Europe
Statistical Division**

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United Nations Economic Commission for Europe
Statistical Division

What role for official statistics: provider of statistical services, or more?

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Results of Official Statistics (OS)

- ❖ At national level, results of OS are characterized by:
 1. They are produced and disseminated in full compliance with the UN Fundamental Principles of Official Statistics or the EU Code of Practice
 2. Conceptually, i.e. concerning definitions and classifications used, they are in compliance with internationally adopted standards of official statistics



Results of Official Statistics (ctd.)

3. Quality in terms of accuracy, timeliness etc. is ensured through applying professionally sound methodologies of data collection and processing, as well as through a regular quality assurance process
4. Elements of modelling are allowed, but all assumptions have to be verified periodically against representative statistical information, and adjusted. As a consequence, OS producers at national level have generally refrained from publishing quantitative scenarios for future developments (exception: demographic and demographically based scenarios) as results of OS proper



Statistical Services rendered by Producers of Official Statistics

- ❖ Condition 3 is the same as for results of official statistics
- ❖ Condition 2 is replaced by concepts and breakdowns defined by one single user, or for one specific purpose. The responsibility of the producer of official statistics is not engaged
- ❖ As a consequence, it may not be possible to respect some of the UN fundamental principles (condition 1; but confidentiality and transparency are not affected)
- ❖ Condition 4 is entirely left to the user



Condition 2 (Standards of OS)

- ❖ Concepts used in standards of official statistics are based on a bundling of needs expressed and/or anticipated for various user groups and the public (citizen's entitlement to information); they respond to a multi-user framework
- ❖ Concepts used in statistical services can be described as a single user or single purpose framework
- ❖ Statistical standards have to be adopted by a recognised authority of official statistics working under the umbrella of professional independence



OS and ICPP

- ❖ So far ICPP has been a specific use of statistics (not only OS), with five components:
 - Results from international official statistics taken over directly from IOs
 - Results from national OS that could be taken over directly into the national inventory
 - Substantial component of statistical services following the ICPP manual where it deviates from concepts of OS, and using unit-level data from OS
 - Some additional data collection by producers of OS for the specific purpose of the national inventory
 - Use of data sources from outside OS



OS and ICPP (ctd.)

- ❖ With the possible exception of a few countries, the results of this statistical work do not (yet) have the status of results of official statistics, neither at national nor at international level, because of the absence of standards of official statistics (and because of intensive use of modelling based on expert opinions)
- ❖ Official statistics on emissions and climate change are not the only area where there is a lack of standards of official statistics at international level; this is the case also for most other parts of environment statistics (with the exception of water), and some areas of social statistics

Can the present process of using OS for ICPP be improved?



- ❖ In certain cases (e.g. PPPs), there are more relevant elements from official statistics that could be used in the IPCC
- ❖ Use ISIC/NACE as classifications of economic activities
- ❖ Use demographic scenarios produced by national official statistics
- ❖ Take knowledge of OS producers (national and international) for aggregating national data to global or continental information (issue of weights is not trivial)
- ❖ NSOs have accumulated substantial skills in data integration and analysis; tap this source of knowledge
- ❖ Give overall responsibility to NSO (like Finland); this should include coordination of inputs from other producers of OS and from outside OS



Beyond the present cooperation model: what could OS add?

- ❖ Make statistics on emissions part of the regular production and dissemination process of official statistics at national level:
 - Spatial allocation of emissions (especially from transport) has to be based on less simplistic assumptions to become representative for national (and possibly sub-national) territory
 - Certain assumptions on conversion factors have to be backed by empirical evidence (changing technologies and different implementation speeds of cleaner technologies)
 - Results have to be disseminated like other OS (i.e. by a producer of OS as statistical product/release)

What could OS add (ctd.)?

- ❖ For their next revisions, classifications used in OS have to be assessed not only against demands in economic and social statistics, but also against environmental purposes
- ❖ In order to allow integration of data for illuminating environmentally relevant questions, systematic geo-coding should become standard in OS, especially for exhaustive sources (censuses and administrative sources)
- ❖ Surveys (especially business surveys) of OS have to be adapted/created to obtain empirical evidence for changes of key conversion factors over time. Key conversion factors may differ between countries

What could OS add? (ctd.)

- ❖ Use accounting frameworks (in physical, and where appropriate, in monetary units) for presenting statistics and indicators from different sources and about different phenomena as part of official statistics
- ❖ Supplement the flow based accounting frameworks by indicators measuring the capital (environmental, economic, human/social)
- ❖ Use the quality framework of OS also in environment statistics, with adaptations when necessary (until now mainly used in the context of social and economic statistics)



International level of OS

- ❖ National OS can benefit from international cooperation towards establishing and adopting standards for the above mentioned issues → Develop SOS (Standards of Official Statistics)
- ❖ UNCEEA work crucial
- ❖ ECE/OECD/EUROSTAT work on capital-based indicators of sustainability

Institutional issues

- ❖ Environment statistics should be officially recognised as key element of official statistics at national and international level, and be treated accordingly
- ❖ In view of the need for integrating many data sources and the many linkages to economic and social statistics, NSOs have to take the lead role in this area
- ❖ This does not imply that all data collection have to be with NSOs; like for administrative data sources, the primary data collection for many types of environmental data will remain completely outside the framework of official statistics



Institutional issues (ctd.)

- ❖ From the fundamental principles point of view, it is important to institutionally separate the production and dissemination of official statistics from advocacy functions (impartiality)
- ❖ Work on scenarios should take place under a joint institutional framework of OS agencies, researchers, and users



Limits of OS framework

- ❖ Limited to measure the now and the past
- ❖ Unit level data have to be kept confidential (but this does not mean that they cannot be used for ICPP purposes)
- ❖ Unit level data have to be grossed up from samples or partial observation to a target population, target geographical area (at least the national territory) and in most cases target period
- ❖ All results have to be disseminated simultaneously to all users



Limits of OS framework (ctd.)

- ❖ Methodologies have to be made transparent and accessible to public scrutiny
- ❖ Expert opinions cannot replace empirical evidence (excludes also e.g. subjective weighting for composite indicators)
- ❖ Conversion to monetary units is constrained by the availability of observable transaction prices (4th level of SEEA is outside OS)



Summary

- ❖ In the context of climate change, triple function for OS in the future:
 - Continue and improve its present function of statistical services
 - Develop, adopt and implement standards of OS for key components of environment statistics, and adapt standards in other areas so as to make them more relevant for use in the context of environment and climate change (**new function**)
 - Join forces with research community and users for analytical work such as scenarios and impact studies that are outside the framework of OS



THANK YOU!