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**Report of the task team on the use and convergence of
international quality assurance frameworks**

Prepared by Eurostat

1. Introduction

This document reports on the activities of the project on the use and convergence of international quality assurance frameworks since the 7th meeting of the Committee for the Coordination of Statistical Activities (CCSA) in New York 6 March 2006. The main focus is on the proposed Action Plan for the second phase of the project.

The CCSA is asked to endorse the proposed Action Plan (section 3) and to give its opinion on the outstanding issues (section 4).

2. Developments since the last CCSA meeting

- The 2nd Conference on Data Quality for International Organisations was held in Newport, UK, 27-28 April 2006. It was structured along the key areas of work of this quality assurance project and served the purposes of presenting latest developments and discussing the future directions of the work (ref. "Follow up to the Q2006 satellite conference on data quality for international organisations", <http://unstats.un.org/unsd/accsub/CDQIO-2006.htm>).
- In-depth surveys were carried out on "Quality reporting" and "Quality frameworks" activities in the international and supranational organisations (IO's). The main results were presented at the Newport conference and used as input for the proposed Action Plan.

3. Action Plan for phase II of the quality assurance frameworks project

The aim of the proposed Action Plan for the second phase of this quality assurance project is to detail the remaining activities, the deliverables and to clarify the share of the workload among the members of the project. It has been circulated to the project members for comments, which are reflected in the current version.

3.1 Quality frameworks

3.1.1 Problem statement

(i) Lack of use of quality assurance frameworks in most international organisations. The experience of several statistical offices demonstrates the usefulness of formalised quality frameworks. So far, only few international organisations have developed and used these frameworks to improve the quality of their internal production processes for collecting, processing and disseminating statistical data.

(ii) Existence of different quality frameworks and benchmarking activities for national statistics reported at the international level. International organisations have developed different (albeit overlapping) frameworks such as the UN Fundamental Principles of Official Statistics, the European Statistics Code of Practice, FAO ABCDQ, IMF DQAF and the UN Principles Governing International Statistical Activities. This may lead to different kinds of evaluation. There are needs for further harmonisation efforts in order to minimise reporting burden of national institutions, facilitate exchange of information between international organisations and make use of existing tools for collecting information.

3.1.2 Activities and results - phase I

- An in-depth survey on quality assurance frameworks in international and supra-national organisations was carried out between 22nd of February 2006 and 31st of March 2006. A questionnaire was sent out to all the members of CCSA. 12 IO's replied and the first results were presented at the Conference on Data Quality for International Organisations, 27-28 April 2006 (Newport, UK). The main results are:
 - Only 5 of the 12 IO's have quality assurance frameworks in place. One IO is currently developing an encompassing framework.
 - The coverage of the frameworks varies (the statistical processes and outputs are quite well covered but the institutional settings are only covered by two of the IO's frameworks).
 - The stated benefit of having a quality framework in place is that it provides a transparent and comprehensive framework for monitoring (identification of strengths and weaknesses) the different processes of the organisation.
 - The implementation of a quality framework eases also the development of new processes for data collection and data processing, IT and data dissemination.
 - There needs to be (enough) resources allocated to the corporate quality work covering as well implementation of process-oriented data quality management and follow up of improvement actions.
 - The IO's that do not have an explicit quality framework in place have as well many different types of quality initiatives that could contribute towards the implementation of an encompassing framework.
 - The expressed critical obstacles for not having implemented a quality assurance framework are related to time and resource constraints and the need for having a well designed quality framework for IO's that primarily reuse statistics already compiled by other IO's.
- The main conclusions, from the Newport Conference, on quality frameworks were:

"Comparisons of the different frameworks in place (for example between European Statistics Code of Practice (CoP) and the EFQM; CoP and IMF/DQAF; UN Principles governing international statistical activities and CoP) show that these frameworks are quite similar. The focus could now be to look at characteristic features (scope) and uses of quality frameworks for international organisations, the impact of quality frameworks, and cost and benefit aspects. The findings from the in-depth surveys on quality assurance frameworks and quality reporting should also be taken into account. Future work should

aim at addressing specific issues and clarifying the concepts distinguishing between quality initiatives for the international organisations and those targeting the member countries; a need for involving the latter being emphasized with a view of future acceptance of any decisions."

3.1.3 Related activities

- The CES Rapporteur Report on Quality frameworks and the link with institutional frameworks and principles (Paris 13-15 June 2006) stressed the need to use emerging standards, e.g. ISO standard for surveys and integrate them into a single statistical framework.
- Comparisons of different frameworks (CoP-EFQM; CoP-IMF-DQAF; UN Principles-CoP).
- The mapping of the DQAF/SDMX/CoP by IMF (ref. Sketch of High Granularity SDMX Cross-Domain Referential Metadata Concepts, IMF, April 18, 2006).

3.1.4 Proposed actions - phase II

| Activity/ deliverable | Content | Input | Timetable and actors |
|--|---|--|---|
| Guidelines for implementing quality frameworks for international organisations | <ul style="list-style-type: none"> - scope and uses of quality frameworks - the impact on data quality - cost and benefits - relationships between frameworks (incl. link with national frameworks) - implementation experiences - monitoring and evaluation | <ul style="list-style-type: none"> - the comparisons of frameworks - the results from the in-depth reviews - the notes "Quality frameworks: Implementation and Impact" by M. Colledge - the Initial Framework by E. Giovannini | <ul style="list-style-type: none"> - First draft by Eurostat (November 06) - Comments and contributions by task team and consultation of some countries (December 06) - First version (end January 07) |
| Development of a process oriented self-assessment checklist for assessing the statistical data quality in IO's | <p>A tool that provides a systematic and comprehensive coverage of main aspects of process and output data quality, thereby alerting managers of statistics to aspects of quality they would not otherwise have considered. The checklist itself would be structured in a process oriented way covering the whole statistics compilation cycle, from the very early stages (decision to collect statistics) until the final steps (documentation and dissemination). It should be considered as a lightweight data quality assessment complementing more comprehensive reviews that can only be undertaken less frequently.</p> | <ul style="list-style-type: none"> - The generic checklist for systematic quality assessment of surveys in the ESS (DESAP) which was a Eurostat granted project in 2002 for the development of a self-assessment checklist for National Statistical Institutes in the European Union. The project was led by the Federal Statistical Office of Germany with the following project members: Statistics Austria, Statistics Finland, ISTAT Italy, Statistics Sweden and ONS UK. The checklist is available on the Eurostat quality website (http://europa.eu.int/comm/eurostat/quality). | <ul style="list-style-type: none"> - First draft by Eurostat (September 06) - Comments and contributions by task team (October 06) - First version (November 06) |

3.1.5 Expected outcome

A set of articulated frameworks and recommendations for the implementation and use of quality assurance frameworks by international organisations.

3.2 Quality reporting

3.2.1 Problem statement

(i) Existence of different tools and practices for collecting quality metadata from the data providers – quality aspects covered, frequency, terminology used etc. This could imply unnecessary reporting burden on data providers and makes it difficult sharing metadata on quality.

(ii) Existence of different formats to inform the users on the quality of statistics. This could create confusion for the users in particular for comparisons across countries.

3.2.2 Activities and results - phase I

- An in-depth survey on quality reporting in international and supra-national organisations was carried out between 22nd of February 2006 and 31st of March 2006. A questionnaire was sent out to all the members of CCSA. 12 international organisations replied and the first results were presented at the Conference on Data Quality for International Organisations, 27-28 April 2006 (Newport, UK). The main results are:
 - About half of the IO's cover all aspects of quality in their quality concepts. The other IO's cover at least some of the components.
 - The frequency with which the quality of the data is reported varies a lot (from approx. every five years to each time data is collected or released).
 - Almost all quality information provided is qualitative. The quantitative quality measures provided are related to response rates, data completeness, data timeliness and revisions.
 - Some IO's give overall assessments in the forms of "colour codes" or quality ratings (four grade scales).
 - The stated strengths of the quality reporting are related to the facts that the reporting allows checking compliance against international standards; monitoring of trade-offs between data quality problems and allocation of resources; and for informing the users on the quality of the statistics.
 - Some of the stated weaknesses of the current quality reporting activities are that the reporting is too decentralised (no central monitoring or coordination), the quality reporting imposes burden on the member countries, infrequent collection of the information, and that there are no standardisation of the quality metadata and rules to follow.
 - Furthermore, the ways the users are informed about the data quality are rather different (from attached notes to datasets and tables to embedded metadata updated each time statistics are disseminated).
 - Most of the IO's do not include quality constraints (such as costs, resources, and burden) in their quality concept and only 4 (out of the 12) IO's include, explicitly in their quality reports, plans for quality improvements. It was also stated that the quality reporting needs to be better embedded in the overall culture of the organisation.
- The main conclusions, from the Newport Conference on quality reporting were:

"The high level reference metadata concepts developed within the SDMX consortium could serve as the "granules" for more streamlined quality reporting from data producers. An international data dissemination standard would improve and harmonise the ways quality information is presented for the users".

3.2.3 Related activities

- The CES Rapporteur Report on Quality frameworks and the link with institutional frameworks and principles (Paris 13-15 June 2006) stressed the needs to measure quality and informing users on the quality.

- The ongoing development of the SDMX Cross-Domain Reference Metadata Concepts.
- The FAO ABCDQ "quality colour codes".
- The Eurostat "grading" of Structural Indicators.

3.2.4 Proposed actions - phase II

It is proposed to continue with an inventory of what is actually required from countries to support, for examples the IMF SDDS and GDDS (which now use DQAF as well as the European Statistics Code of Practice) and EU regulations requiring data quality assessments. This could be done for a few domains (national accounts, production, labor market, prices, government finance statistics, environment statistics, etc.) and include a selected number of countries. One should also look at the UN/OECD joint system for collection and processing of international merchandise trade statistics and the Eurostat SODI project which is using SDMX standards for dissemination of short-term indicators on the European economy. The way the information is processed by IO's should also deserve some considerations (for example, how country reports are combined to document regional aggregates). Finally, the SDDS- like templates used by IO's should be analysed to identify possible inconsistencies, overlaps and areas where harmonisation is needed. This approach, starting from what is actually required and published, should be complemented with a top-down approach, taking benefits of the SDMX high- granularity taxonomy currently under development. The final deliverable could be a set of basic requirements ("granules") and a set of basic data elements for quality reporting linked to the granules.

| Activity/ deliverable | Content | Input | Timetable and actors |
|--|--|--|--|
| <i>Study of the burden on the member countries for reporting on the quality of data to IO's</i> | - inventory of reporting requirements - cost and burden - benefits for NSO's and IO's | - reporting requirements put on member countries - contacts with selected member countries (covering 2-3 domains) | First results by March 07. Coordinators: Eurostat and IMF ¹ but contributions expected from all IO's in the project |
| <i>Analyses of the tools/ formats in place for collecting metadata on quality from the countries</i> | - formats and tools in place - concepts and terminology used - analyses of how IO's process the quality information | - formats and tools used by IO's - reference concepts and terminology - process descriptions - UN/OECD/FAO joint system for merchandise trade statistics - SODI project - FAO CountrySTAT | First results by March 07. Coordinators: Eurostat and OECD but contributions expected from all IO's in the project |
| <i>Analyses of the SDDS like templates used by the IO's for informing the users on the quality</i> | - means and formats in place - completeness of the metadata - accessibility to the metadata - clarity of the information - conformity to standards - etc. | - metadata templates - quality reports - methodological notes | First results by May 07. Coordinators: Eurostat and ECB but contributions expected from all IO's in the project |

The findings and recommendations from the proposed studies and analyses will be used to define a 3rd phase of this key area of work covering the remaining period of the project (May 2007 - September 2007).

¹ By March 2007, all countries and territories subscribing to the SDDS, and many participating in the GDDS, will be updating metadata conforming to the 51 class 3- digit DQAF and posted on IMF's Dissemination Standards Bulletin Board.

3.2.5 Expected outcome

A list of what is required from the countries leading to a common structure for quality reporting minimising reporting burden and more harmonised and better documentation of quality for the users.

3.3 Labelling

3.3.1 Problem statement

With quality frameworks' potential leading to the establishment of quality standards, information which enables users to distinguish between statistics produced in line with these standards facilitates their orientation in the information market. At the same time, this approach of labelling or branding statistics produced in line with certain quality standards can help a statistical authority to position its products in comparison with other (non-official) data producers.

3.3.2 Activities and results - phase I

- A panel discussion on the topic of labelling was organised at the Newport Conference and the main conclusions were: "the panel-discussion showed a great interest among all participants for the issue of labelling of statistics, as this topic has been featuring on the "statistical agenda" for the first time. It involved e.g. to find a set of minimum quality requirements for "official statistics" or define "experimental statistics". The discussion revealed advantages and shortcomings of existing approaches and the need for a cautious timing for action at European level to allow for a clear definition of objectives, governance structure, concepts and processes, including e.g. the question whether a label can be removed. It was felt that institutional issues would hamper an application at international level."

3.3.3 Related activities

- The Statistics Sweden work on "sufficient quality".
- The development of the ISO- standard for Market, Opinion and Market Research.
- Statistics New Zealand "Tier 1".
- ONS- UK definition of "National Statistics".

3.3.4 Proposed actions - phase II

The work on labelling has to go beyond national experiences and address issues such as "certification/decertification" of the label (by whom, and through which process) at national level and as well to begin a reflection on what labelling could mean for outputs of international/ supranational statistics. The issue of processes of certification would then also have to be taken up for international outputs.

| Activity/ deliverable | Content | Input | Timetable and actors |
|---|---|--|--|
| Report on labelling of statistics | - objectives of labelling - subject of labelling - labelling in the context of quality management - labelling in IO's - different types of labels - set of principles | - Eurostat and ECB work on labelling - FAO, FAOSTAT Data Quality Stamp - Statistics Sweden, New Zealand and ONS work - ISO standards | - First version of the report by Eurostat and ECB (December 06) |

3.3.5 Expected outcome

Agreement, as far as possible on a common set of principles with regard to introducing a label of official statistics and to help the users to identify statistics elaborated according to the agreed quality framework.

3.4 Systems for reviews

3.4.1 Problem statement

Existence of different mechanisms for reviews (scopes, approaches, review processes, guidelines, and recommendations). There are needs for analysing the existing review procedures in order to increase their efficiency (costs, tools and procedures etc.) and their effectiveness (re-usability of results, monitoring of implementation of recommendations etc.).

3.4.2 Activities and results - phase I

- The main conclusions, from the Newport Conference, on reviews were: "reviews are useful tools for identifying strengths and weaknesses but quite burdensome to undertake and it was stressed that existing information from country reviews should be shared among international organisations. It was also mentioned that a calendar covering upcoming reviews could be hosted by an international organisation. One tangible output was the IMF and Eurostat joining forces with regard to reviewing member countries' compliance with the respective frameworks, Code of Practice and IMF DQAF. The ECE asked to be included in one of the Code of Practice peer reviews with a view to extending this approach to other ECE member countries".

3.4.3 Related activities

- The CES Rapporteur Report on Quality frameworks and the link with institutional frameworks and principles (Paris 13-15 June 2006) stressed the importance of having processes in place for conducting peer reviews according to a common framework.
- The CoP peer reviews that will be undertaken in 2006/2007.
- The FAO – ABCDQ "quality colour codes".
- The IMF ROSC "quality ratings".
- The Eurostat "grading" of Structural Indicators.

3.4.4 Proposed actions - phase II

Each organization that undertakes an assessment of institutional framework and statistical quality, based on information about a statistical system's practices, data sources, methodology, does so independently. The integration of a metadata framework organizing the information on which these assessments are based, as covered under sections 2 and 3, is critical when there are multiple organizations undertaking such assessments, because the independent assessments otherwise place duplicate demands for metadata on the statistical systems being assessed. However, it should be noted that there are for some of the IO's legal constraints on the degree to which they can collaborate in making statistical assessments, even on the basis of the same harmonized metadata.

| Activity/ deliverable | Content | Input | Timetable and actors |
|--|--|--|--|
| Common website for quality assessments | Common sites with upcoming and undertaken reviews | - contributions by all IO's with planned, undertaken and published reviews - UNECE survey on adherence to Fundamental Principles of official statistics/ EU CoP in CIS and SEE countries. | - Hyper-linked review sites (December 06) |
| Methodological guidelines on reviews | - review process in place - objectives of reviews - scope - mechanisms - costs/ benefits | - the Eurostat methodological guideline for peer reviews - ... | - First version by Eurostat and IMF (March 07) |
| Harmonisation of review processes | - integrated review processes, consistent and shared assessments, reusability of information etc. | - the Eurostat and IMF joint work with regard to reviewing member countries compliance with respective frameworks | - Successively built up by Eurostat, IMF and ECE until September 07. |

3.4.5 Expected outcome

This should lead to review processes that are integrated where possible (particularly in the structure of the metadata on which quality assessments are based) leading to consistent and shared assessments of institutions and reusability of existing information (metadata) by different organisations. The costs for all parties involved in review processes should be assessed against the expected outcomes in terms of quality improvements and the importance of the statistics area.

3.5 Implementation issues

3.5.1 Problem statement

- (i) Since few IO's have quality assurances in place, there are needs to monitor the implementation of quality frameworks and the related quality work of the IO's.
- (i) Several IO's are working on the collection and dissemination of current best methods, minimum standards, and best practices. Rationalisation of the efforts, economy of scale seems possible by a better coordination of the activities.

3.5.2 Activities and results - phase I

- The main conclusions, from the Newport Conference, related to these issues, were:
 - Best practices: A "typology" for describing different kinds of "best practices" would ease the sharing of such information. UNSD should progress on the work related to identification and dissemination of "best practices".
 - Role of the CCSA: it was recommended to analyse further whether the role of the CCSA should be further formalised (creation of a CCSA Bureau) and that the "accountability" (terms of reference, reporting requirements etc.) of the CCSA should be addressed in the corresponding task force that will present the work at the September meeting of the CCSA.

3.5.3 Related activities

- Existing websites/ databases with "best practices"
- Existing publication series/ journals etc.

3.5.4 Proposed actions - phase II

| Activity/ deliverable | Content | Input | Timetable and actors |
|---|--|--|---|
| The role of the CCSA | - setting of priorities for quality initiatives at IO level - monitoring of the implementation of quality work in IO's - etc. | - the work of the CCSA task team on the role of the CCSA | ILO (September 06) CCSA |
| Report on sharing best practices for IO's | - typology for describing different kinds of "best practices" - implementation of existing best practices - development of new best practices - share of information on "best practices" | - the UNSD work on defining a "typology" for "best practices" - the existing websites with best practices | - First version by UNSD (December 06) |

3.5.5 Expected outcome

This should lead to improved monitoring of the data quality work undertaken by IO's and as well improved access to documents related to quality and create economy of scale.

4. Outstanding issues

The project team would like to draw the attention of the CCSA on the following outstanding issues, which have been identified during the development of the Action Plan:

- (1) The project covers the quality of institutional or governance frameworks for institutions and systems that produce official statistics and the quality of statistics received or disseminated (e.g. the reporting on the data received from countries and the reporting of the output from international organisations). These are the core elements of quality frameworks initially designed for national statistics and it has been proposed to go beyond these "traditional" elements and to cover also issues more specific to IO's, like methodological work in connection with the development of international statistical standards and technical cooperation activities. The CCSA is asked to comment on the need for developing instruments to assess the quality of work at international level and whether this should develop as a separate activity.
- (2) The project looks at the existing review procedures in order to increase their efficiency (costs, tools and procedures etc.) and their effectiveness (re-usability of results, monitoring of implementation of recommendations in terms of quality improvements etc.). The approach taken is to coordinate and possibly harmonise the assessments made by various organizations on specific countries so as to decrease burden on countries. Beyond this is the issue on how to assess international producers. In a way, the benchmarks for international organisations exist in the new Principles Governing International Statistical Activities but the way to progress in this respect is still undefined. The CCSA is asked to give guidance on the implementation of these Principles given that international organisations have different institutional environments, and as well the foreseen role of the CCSA for monitoring the adherence to these Principles.
- (3) The Action Plan details the content, deliverables and timetables for each of the key areas of work. In order to achieve the deliverables and to keep to the time schedule specified in

the Action Plan each responsible actor has to ensure that the necessary input is provided on time. The CCSA members are asked to confirm their commitment to undertake their work as specified in the Action Plan.