Session 1: Introduction: Background and current state of the art of quality assurance frameworks in international organizations and at the national level (principles, codes of practices, ongoing initiatives, existing handbooks, guidelines and other tools)

Towards a National Quality Assurance Framework:
The UN Statistical Commission Initiative

I. Introduction

Quality of official statistics is a central concern for all national statistical offices. The importance of focusing on data quality and tackling the broad range of quality concerns – the need to improve the data being produced and disseminated, to further enhance the quality of the statistics, to assess and report on their fitness-for-use, to ensure that they are of highest quality and to vouch that they’ve been produced with sound methodology, etc. – has been repeatedly mentioned during discussions in the UN Statistical Commission and other fora over the past years.

At the last (forty-first) session of the UN Statistical Commission, the topic of national quality assurance frameworks was put on the agenda as the programme review. Statistics Canada was the programme reviewer and prepared the report\(^1\) which was presented for discussion at the Commission. This paper gives a brief overview, in sections II and III, of the proposal for the development of a generic quality assurance template to be used as a guide for providing the general structure within which individual national frameworks can be developed by countries which wish to introduce or strengthen their quality management procedures. A summary of the main feedback received on both the preliminary version of the report released for comments before the Statistical Commission, and the final version presented to the Commission after the comments were taken into consideration follows, after which the paper concludes with a discussion of the next steps in advancing the development of a generic template with guidelines for national quality assurance frameworks.

II. Background on the programme review on national quality assurance frameworks for the UN Statistical Commission

At the fortieth session of the Statistical Commission in 2009, it was decided that the programme review of the 2010 Commission would cover, for the first time, the topic of quality, specifically the development of national quality assurance frameworks. The initial draft of the Statistical Commission report, which Statistics Canada agreed to produce, contained a review of international quality practices and drew on Statistics Canada’s own practical experiences. It focused on laying the groundwork to get discussions underway prior to and during the Statistical Commission in February 2010 about the benefits and feasibility of what was initially presented as the development of a “generic internationally agreed national quality assurance framework

(NQAF) which could be used by countries to systematically introduce new quality assurance procedures or to systematize their existing procedures”.

The draft report, which Statistics Canada prepared for UNSD, was sent by UNSD to the heads of all national statistical offices and international organizations for comments and suggestions. It was also requested that the national statistical offices and international organizations which had initiated quality programmes or had quality frameworks in place send information on them to UNSD as background information.

Comments on the draft report were received from a total of 23 national statistical offices and international organizations and background information on quality frameworks or other quality initiatives in place were received from 9 of them. The draft report, the comments on it, and the background information were posted as they were received during about a four-month period from September to December 2009 on a new UNSD website on quality assurance (see http://unstats.un.org/unsd/dnss/nqaf.aspx).

The written feedback was reviewed and considered by Statistics Canada and the report was revised on the basis of the comments and suggestions received. The second version of the paper became the official Statistical Commission version which was posted on the web and translated from English into the other five official UN languages (the various language versions of document E/CN.3/2010/2 are available at http://unstats.un.org/unsd/dnss/nqaf.aspx or http://unstats.un.org/unsd/statcom/sc2010.htm).

III. The report by Statistics Canada on national quality assurance frameworks

Basically Statistics Canada’s message in its report was that national statistical organizations should have a national quality assurance framework in place – or consider developing one if they have not yet done so. The objective would be to have an overarching framework, or type of umbrella, that would provide context for quality concerns, activities and initiatives, and explain the relationships between the various quality procedures and tools.

The benefits of having a framework which were noted in the report included: a) that it is very useful to have a single place to record and reference the full range of quality concepts, policies and practices; b) that it provides a systematic mechanism for ongoing identification and resolution of quality problems, thereby maximizing the interaction between staff; c) that it provides greater transparency to the processes by which quality is assured, reinforcing the image of the statistical office as a credible provider of good quality statistics; d) that it provides a basis for creating and maintaining a quality culture within the statistical office and a valuable source of reference material for training; and e) that it provides a mechanism for exchanging ideas on quality management with other producers of statistics.

It was acknowledged that many countries and international organizations have developed detailed quality concepts and procedures for quality control, and that there is in fact considerable overlap and many common elements among the various existing quality frameworks. Also recognized was the overlap and sometimes confusion over the terminology being used with respect to the topic of quality.

The report outlined the basic four components of a quality assurance framework (i.e. the set of quality concepts and the sets of procedures for quality assurance, quality assessment, and performance management and improvement), and described the usefulness of the framework. It proposed that a generic template (rather than a generic framework per se) be prepared, to be accompanied by guidelines, to help the national statistical organizations to develop their individual frameworks, and it presented three alternative proposals for a generic template, one
based on Statistics Canada’s framework, one based on IMF’s Data Quality Assessment Framework (DQAF) and one based on the European Statistics Code of Practice.

Each of the three proposals shares the same basic structure but they differ in way the quality assurance procedures are presented, as can be seen in the Annex. The report then suggested that if there was general agreement on the benefits, the formulation of the national quality assurance template and accompanying guidelines should be taken up by an expert group.

A. Comments and suggestions received by UNSD on the Statistics Canada report

As mentioned above, national statistical organizations and international organizations were invited to send their written comments and suggestions to UNSD on the preliminary version of the Statistics Canada report.

The benefits of having a national quality assurance framework were reaffirmed by all who sent comments, and the need for and crucial importance of an approach based on building connections with other quality frameworks was strongly emphasized, echoing similar concerns about the possible development of overlapping and competing approaches. (It is worth noting here that these initial concerns were in fact taken into account in the preparation of the final version of the report in which the linkage between the proposed template and the IMF’s Data Quality Assessment Framework and the European Statistics Code of Practice was expressed as highly desirable and made explicit).

Other feedback stressed the importance and usefulness of a standard terminology along with the development and acceptance of the use of standard definitions on core terms, to be consistent with, for example, the quality-related definitions of the SDMX metadata common vocabulary; along the same lines, a harmonized glossary of terms was suggested. The importance of making references available in languages other than just English was pointed out, as was the importance of liaising with Eurostat’s Sponsorship on Quality group and involving users of the data while considering the development of a framework.

There were some questions about what the scope of the framework is supposed to be and whether it is meant to focus on countries’ national statistical offices or on their national statistical systems. Many suggestions concerned the desire to be provided with practical examples for each of the different topics and sub-topics that could be included in the framework, and there were others that pointed out the need for training programmes to be given prior to the implementation of a proposed framework.

B. Discussions during the Statistical Commission

There were some 20 interventions at the Statistical Commission after Statistics Canada presented its summary of its report. The general sentiment expressed was great appreciation for the efforts of Statistics Canada in preparing the report and for the feedback and support given to Statistics Canada by the various international and regional organizations and countries which provided useful and insightful comments and suggestions.

Support was expressed for the formulation of the generic quality assurance template, which was recognized as being highly flexible, and for the development of guidelines to accompany the template. The importance of avoiding overlap and duplication, and the recommendations to build on frameworks already developed was emphasized, as was the need to involve users and stakeholders in the discussions about the national quality frameworks. The issues of the importance of regional consultation processes and the need for training in the application of the frameworks was brought up, as was the need for training for developing countries in particular to increase their statistical capacity. In this context, the value and importance of the sharing of tools
and guidance was mentioned with the suggestion that UNSD open a web page to facilitate the exchange of information by providing links to national statistical offices’ quality tools (this had already been started at http://unstats.un.org/unsd/dnss/nqaf.aspx). Participants agreed with the proposal for the establishment of an expert group to develop a generic national quality assurance framework template and accompanying guidelines for presentation to the Statistical Commission for adoption.

IV. The next steps

Following the decision of the Statistical Commission, UNSD is in the process of forming the expert group. Several countries and international organizations have expressed their interest in participating in this work. After an initial round of consultations, terms of reference for the group are currently being drawn up for approval by the Bureau of the Statistical Commission. They focus on the following elements:

- Definition of the scope and content of the national quality assurance framework template;
- Development of the actual template taking existing frameworks into account, and establishing a mapping to them;
- Development of some guidelines regarding the application of the template in a specific national context and, in doing so, to the extent possible, formulation of a standard terminology on quality and;
- Formulation of recommendations regarding a training and knowledge transfer strategy, including guidelines with real examples drawn from national statistical offices working in different environments.

It is expected that the expert group will function in its initial stage mostly through electronic exchanges, however, it is envisaged that later this year a physical meeting would be held to allow the group to finalize its work. As in the case of drafting the Canadian Statistical Commission report, the process will be managed in a fully transparent manner, i.e. information on the work of the expert group will be posted on the UN Statistics Division website and intermediate drafts will be widely circulated for comments and inputs by experts in national statistical offices and partner agencies at the international level.

UNSD will also continue work on its quality website, which is meant to be a platform for the exchange of information and experiences. The overall main focus will be to develop practical tools that will assist countries in the formulation of their own frameworks and quality assurance strategies which are appropriate for their specific national socio-economic and institutional circumstances.
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3. Quality Assurance Procedures
- Managing user and stakeholder relationships – user satisfaction surveys, feedback mechanisms, councils.
- Coordinating the national statistical system – protocols, standards.
- Managing relevance – program review, planning process, data analysis.
- Managing accuracy – design, accuracy assessment, quality control, revision policy.
- Managing timeliness and punctuality – advanced release dates, preliminary/final releases.
- Managing accessibility – product definition, dissemination practices, search facilities.
- Managing interpretability/clarity – concepts, sources, methods, informing users of quality.
- Managing coherence and comparability – standards, harmonized concepts and methods.
- Managing output quality tradeoffs – especially relevance, accuracy and timeliness.
- Managing provider relationships – response burden measurement and reduction, response rate maintenance.
- Managing statistical infrastructure – standards, registers, policies.
- Managing metadata – relating to quality.

3. Quality Assurance Procedures
- Prerequisites of quality
  - Legal and institutional environment
  - Resources
  - Relevance
- Assurances of integrity
  - Professionalism
  - Transparency
  - Ethical standards
- Methodological soundness
  - Concepts and definitions
  - Scope
  - Classification and sectorization
  - Basis for recording
- Accuracy and reliability
  - Data sources
  - Statistical techniques
  - Assessment and validation of intermediate data and statistical outputs
  - Revision studies
- Serviceability
  - Periodicity and timeliness
  - Consistency
  - Revision policy and practice
- Accessibility
  - Data accessibility
  - Metadata accessibility
  - Assistance to users

4. Quality Assessment/Program Review (applicable to all templates)
- Quality indicators – defining, collecting, analysing, synthesizing – composite indicators, quality barometer/dashboard.
- Quality targets – setting and monitoring.

5. Quality and Performance Management and Improvement (applicable to all templates)
- Performance management – planning, cost and efficiency, sharing good practices, change management.
- Recruitment and training – resource planning, determining recruitment and training needs, developing and conducting training courses.
- Continuous improvement program – quality culture, ongoing enhancements within operating budgets.
- Governance structure - for quality and performance trade-offs and reengineering initiatives, based on results of quality assessments.

6. Conclusion (applicable to all templates)
- Summary of benefits.
- Reference to Handbook and implementation plans.