

## Chapter 9: Data Quality – Discussant notes.

### *Introduction to Chapter presented by Ms Ilaria DiMatteo.*

This chapter is based on the text adopted by the UN Statistical Commission in other fields of statistics and the recommendations contained therein.

Chapter structured around;

A – Data Quality

B – Quality Indicators and quality measures

C – Metadata

#### *A – Quality and its dimensions*

Relevancy and adequacy important. Countries are encouraged to develop data quality management programmes and make outputs from these available to users to ensure transparency.

Data quality frameworks promote standardisation of quality assessment, examples of these from IMF, OECD, and EU Statistical System (European Statistics Code of Practice).

Common dimensions of quality include;

Relevance

Credibility

Accuracy

Timeliness

Methodological soundness

Coherence (within dataset, across datasets, over time and across countries)

Accessibility

There can be trade-offs between timeliness and accuracy. Less accurate, more timely and visa versa. Recommended to produce provisional figures to improve timeliness. Could be a potential problem here as one of the measures of quality mentioned in the draft is the amount of revision between provisional and final data.

Countries are encouraged to use a system of quality measures/indicators to develop their own quality assessment frameworks.

It is recommended that a quality review of energy statistics be undertaken every four to five years or more frequently if significant methodological changes or changes in the data sources occur.

#### *B – Quality Indicators and quality measures*

These provide information on the assessment of quality. Recommendations that they should;

- 1) Cover all or part of dimension
- 2) Well established methodology
- 3) Easy to interpret.

Recommended that a balance be struck between dimensions of quality and the number of indicators and countries are encouraged to use a number of key indicators to measure policy aspects.

#### *C – Metadata*

Layered approach recommended. As a minimum segmentation, metadata at the following two levels are recommended:

- (a) Structural metadata presented as an integral part of the data tables;
- (b) Reference metadata providing details on the content and quality of data which may accompany the tables or be presented separately via the Internet or in occasional publications.

Components of metadata include;

- Data coverage
- Access
- Integrity
- Data quality
- Summary of methodology
- Dissemination formats
- Timeliness

Countries encouraged to develop and disseminate metadata as part of energy data dissemination.

The dissemination of national data and metadata using web technology and SDMX standards is recommended as a means to reduce the international reporting burden.

## **Quality Reports & Assessment of Overall Uncertainty – Discussant notes.**

Presentation by Wolfgang Bitterman focuses primarily on the *accuracy* dimension.

Uncertainty assessment request/requirement from the Environment Agency.

Quality report – TQM based.

Comprehensive assessment covering 5 error types;

- Statistical differences
  - Measurement errors – errors in metering and weighing.
  - Reporting errors
  - Statistical errors
  - Conversion factor variations – calorific values, default value assumptions etc.
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- Cumulative uncertainty.