Chapter 2
Recommendations on quality assurance for official statistics

Introduction

2.1. The recommendations presented in this chapter establish United Nations recommendations on statistical quality assurance based on the 10 Fundamental Principles of Official Statistics and related existing guidance (see table 2.1 and box 2.1). The recommendations are meant to guide and support the NSO and other members of the NS in assuring the availability and quality of official statistics produced throughout the NS by a multitude of statistics producers. Accordingly, the present chapter stresses the commitment to quality assurance by United Nations Member States and recommends concrete measures such as the adoption of a national quality assurance framework.

2.2. These recommendations can be updated and amended in the future according to changing circumstances, while the Fundamental Principles of Official Statistics are not expected to change. Countries may consider reflecting all recommendations in their national statistical laws\(^\text{18}\) and/or regulations, according to their national circumstances.

2.A. Scope of the recommendations

2.3. Who and what is subject to these recommendations. The following recommendations apply to the NS, which comprises the NSO and other producers of official statistics (other statistical agencies).\(^\text{19}\) However, under specific circumstances, as established by countries, the recommendations are proposed to be used by other statistics producers and providers of data\(^\text{20}\) that do not produce official statistics and are not part of the NS.

2.4. Members of the extended data ecosystem. Examples of other producers of statistics and providers of data that frequently are not considered to be part of the NS include:

(a) International and supranational agencies and entities;
(b) Enterprises that produce data on a regional or global scale, such as Gallup World Poll, or enterprises that provide transboundary geospatial information obtained, for example, by Earth observation;
(c) Private or public-private professional organizations, business associations or non-governmental entities;
(d) Enterprises that compile data from information generated and provided on the Internet;
(e) Scientific studies and measurements that aspire to provide statistical data;
(f) All types of citizen-generated data and statistics.\(^\text{21}\)

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19 It is the responsibility of each country to define the scope of its national statistical system and thereby widen or narrow the scope of producers of statistics to whom these recommendations apply. See section 1.C. for a definition of the term "national statistical system".

20 See section 1.C. for a definition of the terms "data providers" and "statistics producers".

21 This list is only an indicative enumeration and not a classification of other statistics producers or data providers outside of an NSS.
2.5. Specific circumstances in which the recommendations may apply to other statistics producers could include, for example: when the statistics of such producers are published with the support of a member of the NSS, when they are used for government decision-making or when members of the NSS outsource or subcontract parts of the statistical production process to public or private entities that are not part of the NSS, such as universities and research centres.

2.B. Five core recommendations and nine additional recommendations for the implementation of the Fundamental Principles of Official Statistics

2.6. Five overarching core recommendations. Recommendation 1, together with recommendations 2 to 5, form the overarching core recommendations that, if implemented, establish the basis for quality assurance for official statistics in a country. Recommendation 1 is directly derived from two existing resolutions of the General Assembly on statistics.\(^\text{22}\) Recommendations 2 to 5 are largely based on principle 1 of the Fundamental Principles of Official Statistics, which states that official statistics should meet the test of practical utility. Practical utility is defined as “fitness for use” or “fitness for purpose”, which is the definition of data quality.

**Recommendation 1:** It is recommended that, in order to be effective, the fundamental values and principles that govern the development, production and dissemination of official statistics be guaranteed by legal and institutional frameworks and be respected at all political levels and by all stakeholders in national statistical systems.

**Recommendation 2:** It is recommended that countries include the requirements of quality assurance in their national statistical legislation and other legislation mandating the production of statistics for official use (derived from principle 1 of the Fundamental Principles of Official Statistics).\(^\text{23}\)

**Recommendation 3:** It is recommended that countries establish a national quality assurance framework for official statistics and that all members of the national statistical system commit to continually assessing, improving and reporting on the quality of official statistics, as well as on the quality of data and statistics used in the production of official statistics as required\(^\text{24}\) (derived from principle 1 of the Fundamental Principles of Official Statistics).

**Recommendation 4:** It is recommended that the national quality assurance framework for official statistics be developed in consideration or in alignment with the United Nations National Quality Assurance Framework or similar existing quality assurance frameworks (derived from principles 1 and 2 of the Fundamental Principles of Official Statistics).

**Recommendation 5:** It is recommended that the national quality assurance framework be implemented at the national statistical office and throughout the entire national statistical system. Furthermore, it is recommended that the national quality assurance framework be applied to all data and statistics produced outside of the national statistical system that are disseminated with the help and support of a member of the national statistical system or that are used for government decision-making, as deemed appropriate and required (derived from principle 1 of the Fundamental Principles of Official Statistics).

2.7. Recommendations that aim at the implementation of specific Fundamental Principles of Official Statistics. The following recommendations provide an interpreta-
Recommendations on quality assurance for official statistics

2.8. Recommendations 6 to 14 are either directly derived from one or two of the Fundamental Principles of Official Statistics or are a repetition of a specific principle. The Principles and the associated recommendations of the present chapter support specific principles contained in the UN-NQAF and give them an obligatory character (see chapter 3, which contains references to the applicable Principles).

**Recommendation 6:** In accordance with principles 1 and 2 of the Fundamental Principles of Official Statistics, it is recommended that statistics at all levels, including the local level, be planned, designed, developed, produced and disseminated on an impartial basis, and according to strictly professional considerations.

**Recommendation 7:** In accordance with principle 3 of the Fundamental Principles of Official Statistics, it is recommended that statistics and data be presented in a way that facilitates their correct interpretation, which implies that appropriate metadata, such as that relating to data sources, methods and procedures used, be made available in conjunction with the released data or statistics.

**Recommendation 8:** In accordance with principle 4 of the Fundamental Principles of Official Statistics, it is recommended that all members of the national statistical system comment on erroneous interpretation and misuse of official statistics in their respective subject-matter domain(s) of statistical production and dissemination, as required.

**Recommendation 9:** In accordance with principles 1 and 5 of the Fundamental Principles of Official Statistics, it is recommended that countries include in their statistical laws: (a) the mandate of producers of official statistics to collect needed information to compile statistics directly from respondents if it is not already available in the national statistical system and cannot be obtained from existing data; and (b) the entitlement to select data sources based on professional considerations, including “new” sources such as big data.

**Recommendation 10:** In accordance with principle 6 of the Fundamental Principles of Official Statistics, it is recommended that individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, be kept strictly confidential and used exclusively for statistical purposes.

**Recommendation 11:** In accordance with principle 7 of the Fundamental Principles of Official Statistics, it is recommended that the laws, regulations and measures under which the national statistical systems operate be made public.

**Recommendation 12:** In accordance with principle 8 of the Fundamental Principles of Official Statistics, it is recommended that the work of the national statistical system be properly coordinated to achieve consistency and efficiency, and that, therefore, the statistical law of the country: (a) clearly identifies the roles and responsibilities of the individual members within the national statistical system; and (b) establishes a body that is responsible for managing and coordinating system-wide activities, including promotion of the national quality assurance framework.
**Recommendations 13:** In accordance with principle 9 of the Fundamental Principles of Official Statistics, *it is recommended* that the national statistical office and all other members of the national statistical system, including members at the local level, use international statistical concepts, classifications and methods, thereby ensuring the consistency of official statistics and the efficiency of statistical systems at all levels.

**Recommendation 14:** In accordance with principle 10 of the Fundamental Principles of Official Statistics, *it is recommended* that countries participate in bilateral and multilateral cooperation in statistics to improve official statistics in all countries.

### Table 2.1
Origins of the recommendations on quality assurance for official statistics

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<td>#2 Include the requirement for quality assurance in the statistical legislation</td>
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<td>#3 Establish an NQAF; commit to quality assurance</td>
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<td>#4 Base or align the NQAF with international or regional quality frameworks</td>
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<td><strong>Recommendations that aim at the implementation of specific Fundamental Principles of Official Statistics</strong></td>
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<td>#8 Address erroneous interpretation and misuse</td>
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<td>#12 Take measures to ensure the proper coordination of the NSS</td>
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<td>#14 Participate in bilateral and multilateral cooperation</td>
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Box 2.1
Fundamental Principles of Official Statistics

Principle 1. Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens’ entitlement to public information.

Principle 2. To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data.

Principle 3. To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.

Principle 4. The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.

Principle 5. Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.

Principle 6. Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.

Principle 7. The laws, regulations and measures under which the statistical systems operate are to be made public.

Principle 8. Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.

Principle 9. The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels.

Principle 10. Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries.

* General Assembly resolution 68/261. The 10 Fundamental Principles of Official Statistics are not to confused be with the UN-NQAF quality principles in this Manual, which are presented in chapter 3. See table 3.1 on how the 10 Fundamental Principles of Official Statistics support the 19 UN-NQAF quality principles.