Workshop on the Implementation of a National Quality Assurance Framework for Official Statistics in countries of the Eastern-Europe / Central Asia Region
Belgrade, Serbia, 10-13 December 2019

Session 2.1: Introduction to the UN NQAF Manual and its recommendations, Overview of UN NQAF principles, requirements and elements to be assured

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Objectives

❑ The *Manual* provides guidance for developing and implementing a national quality assurance framework (NQAF)

❑ Aims at assuring the quality of official statistics throughout the entire national statistical system (NSS)

❑ Provides guidance for the engagement with statistics producers and data providers that are outside of the NSS that cooperate with NSS members in the production of official statistics

○ The *Manual* is responding to the new data ecosystem with new data sources, data providers and statistics producers aiming at safeguarding the role of official statistics as trusted source of information in a changing environment.

○ For example, in the future, national statistical offices (NSOs) may see their role as producer of official statistics diminished while adopting a new role as curator of data and statistics produced by others.
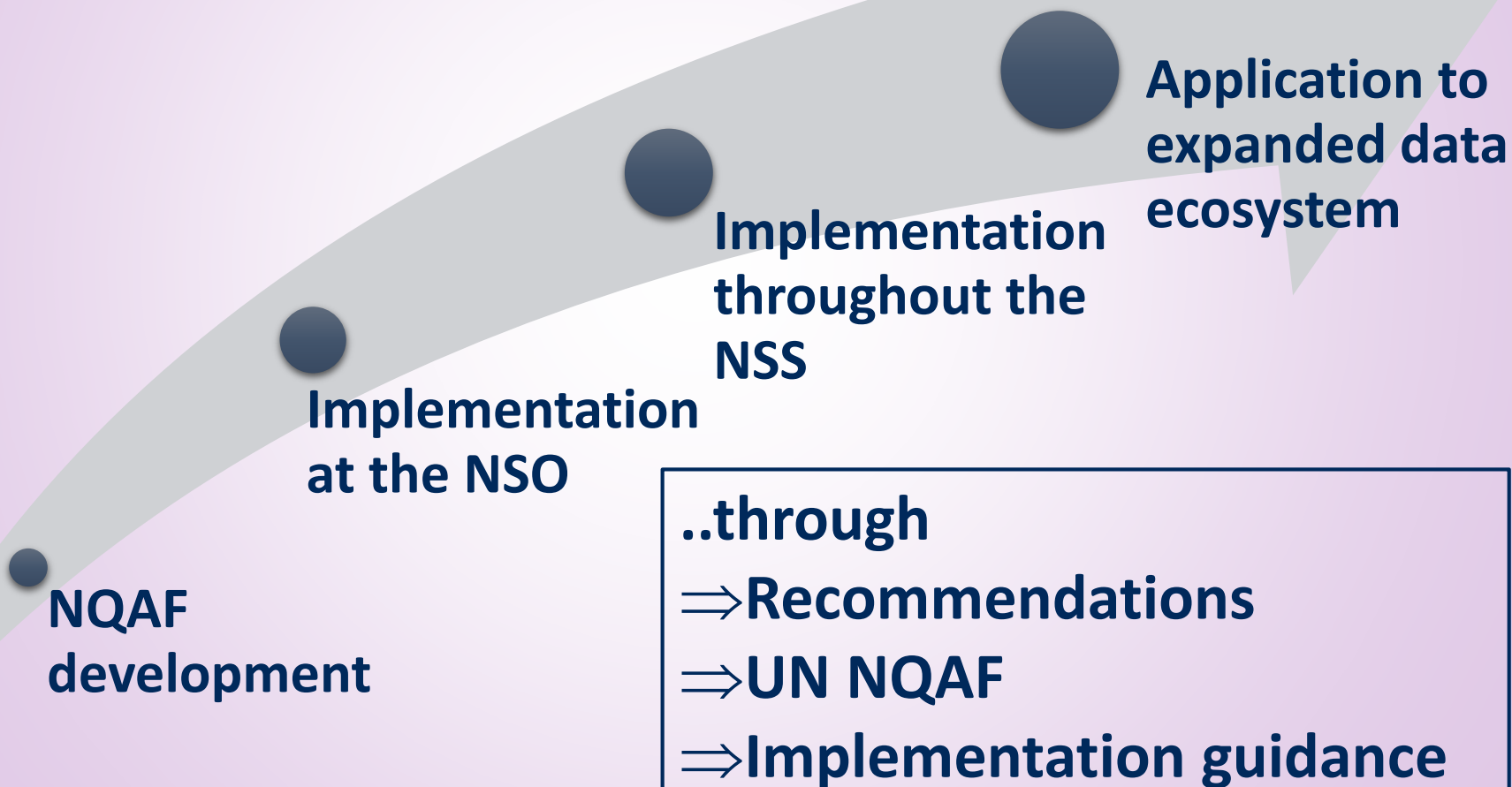
Objectives

Note:

The Manual does not aim to replace any of the existing statistical quality assurance frameworks and guidelines for official statistics.

Countries and individual producers of official statistics that are already fully engaged in quality assurance and are following one of the existing quality frameworks may view this Manual only as an additional reference point that supports what they are already doing, and a source of information on the application of quality assurance in different situations.

The *Manual* aims to support countries in..

Application to expanded data ecosystem

Implementation throughout the NSS

Implementation at the NSO

NQAF development

..through
⇒**Recommendations**
⇒**UN NQAF**
⇒**Implementation guidance**

…questions?

Structure of the *Manual*

Part	Chapter	Title
Introduction	**Chapter 1**	**Contents and use of this Manual**
Recommendations	**Chapter 2**	**Recommendations on quality assuarance for official statistics**
UN NQAF	**Chapter 3**	**The UN National Quality Assurance Framework: principles and requirements**
Implementation	**Chapter 4**	**Assessment tools and risk management**
	Chapter 5	**Development and implementation of a national quality assurance framework**
	Chapter 6	**Implementation of quality assurance within the national statistical system**
	Chapter 7	**Quality assuarance for statistics compiled from different data sources**
	Chapter 8	**Quality assuarance for SDG indicator data and statistics**
References	**Chapter 9**	**Quality assurance in the global statistical system**
UN NQAF Annex	**Annex A**	**Detailed Checklist of elements to be assured**

Uses of the *Manual*

Task	Manual part
Achieving an adequate mandate	**Chapter 2**
Developing NQAF	**Chapter 5**
Adopting or adapting framework for country needs	**Chapter 3 and Annex A**
Finding proper tools and instruments for NQAF implementation	**Chapter 4**
NQAF Implementation at the NSO	**Chapter 5**
NQAF implementation throughout the NSS	**Chapter 6**
Assuring quality for statistics from different data sources	**Chapter 7**
Addressing quality assurance for SDG indicators	**Chapter 8**
Finding references on quality assurance in the global statistical system (including the need for international comparability, especially for SDG indicators)	**Chapter 9**

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UN NQAF Annex	Annex A	Detailed Checklist of elements to be assured

All chapters of the Manual can be read independently, hereby offering different entry points

…questions?

…in addition, please note that Chapter 1 contains useful working definitions of important terms such as "data providers and statistics producers", "national statistical system" etc.

Chapter 2. United Nations Recommendations on quality assurance for official statistics

Scope

❑ The recommendations apply to the National Statistical System (NSS) comprised of the NSO and <u>other producers of official statistics</u> (other statistical agencies).

❑ However, under specific circumstances, as established by countries, the recommendations are proposed to be used by <u>other statistics producers</u> and <u>providers of data</u> that do not produce official statistics and that are not part (or frequently not considered part) of the NSS

Overarching Core Recommendations

#1 Integrate the Fundamental Principles of Offical Statistics in the legal and institutional frameworks

#2 Include the requirement for quality assurance in the statistical legislation

#3 Establish a national quality assurance framework (NQAF); all members of the national statistical system (NSS) commit to quality assurance

#4 Base or align your NQAF with international or regional quality frameworks

#5 Implement NQAF at the NSO, throughout the NSS and to data and statistics produced outside the NSS as appropriate

Recommendations that aim at the implementation of specific Fundamental Principles of Official Statistics

❖ **The recommendations #6 to #14 provide an interpretation of the Fundamental Principles of Official Statistics (FPOS) to facilitate their implementation and to stress their importance in the context of statistical quality assurance.**

❖ **They are directly derived from one or two FPOS or a repetition of one of its principles.**

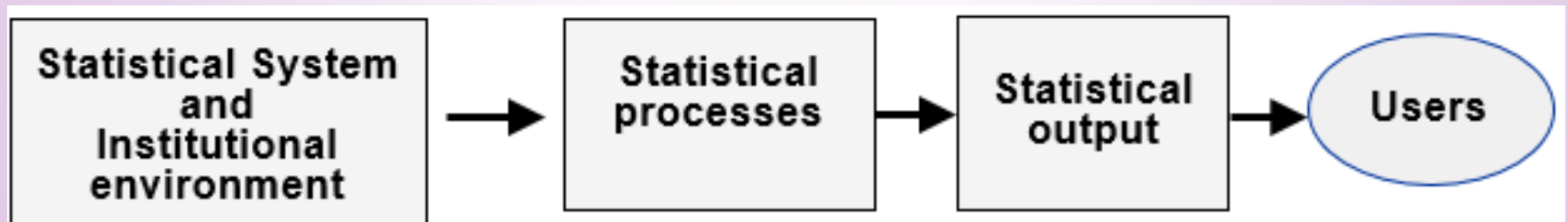# Chapter 3 and Annex: United Nations National Quality Assurance Framework (UN NQAF

UN NQAF arranges its quality principles and associated requirements into <u>four levels</u>, ranging from the over-arching institutional and cross-institutional level through the statistical production processes to the outputs:

Level A: Managing the statistical system

Level B: Managing the institutional environment

Level C: Managing statistical processes

Level D: Managing statistical outputs

Chapter 4. Assessment tools and risk management

❖Methods and tools for statistical quality assessment comprise

 ❑ quality indicators (both for products and processes)

 ❑ quality reports

 ❑ user surveys

 ❑ self and external assessments

 ❑ auditing (internal or external quality reviews), including peer reviews

 ❑labelling and certification.

❖Metadata management

❖Risk management

Chapters 5 & 6: Development and implementation of a national quality assurance framework

Chapter 5 Development and Implementation of NQAF at individual NSS members

| Phase 1: Establishing the 'basics' (5.A) (A reminder, or short introduction for newcomers) | → | Phase 2: Development and Adoption (5.B) (For readers that do not have an NQAF already) | → | Phase 3: Implementation at the NSO and other producers of official statistics (5.C) (Relevant to all readers) | → |

→ **Chapter 6 Implementation of quality assurance within the NSS** (For readers that are concerned with implementing NQAF throughout the NSS)

| Coordination of the NSS (6.A) | → | Role of the NSS-wide bodies in NQAF implementation (6.B) | → | Implementation of system-wide measures – introducing all NSS members to quality assurance (6.C) |

Chapter 7. Quality assurance for statistics compiled from different data sources

❖ This chapter highlight certain aspects of quality assurance that are specific, or are of special importance, to statistics that are produced (completely or partially) using specific data sources.

❖ This Manual distinguishes three data sources <u>according to their purpose and by the entity responsible for their compilation</u>.

❑ Statistical data sources

❑ Administrative data sources

❑ Other data sources (list included)

❖ Discusses big data, new data sources and use of multiple sources

Chapter 8: Quality assurance of SDG indicators

❖ Challenges of assuring quality of data and statistics for the SDG indicators

❖ Roles of the different entities participating in this task

❖ Requirements and elemente to be assured that are of special importance, differentiated by the four levels:

  ❑ Managing the NSS

  ❑ Managing the statistical environment

  ❑ Managing the statistical processes

  ❑ Managing statistical outputs

Chapter 9: Quality assurance in the global statistical system

❖ The <u>target audience</u> of this chapter are statisticians in countries and regional and international organizations that are interested in the relationship between national and global statistics.

❖ <u>Provides references</u> regarding the commitments and obligations of countries and international and regional organizations to jointly assure the quality of data and statistics published at the global level.

❖ **It is recommended** to address disputes based on applicable professional standards, i.e. commitments and obligations.

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General Quality Management Framework

Definition: A Quality management framework provides a coherent and holistic system as a basis for quality management

❖TQM is the foundation of all general quality frameworks. <u>TQM is "a set of systematic activities carried out by the entire organization to effectively and efficiently achieve company objectives so as to provide products and services with a level of quality that satisfies customers, at the appropriate time and price</u>".

❖The general quality frameworks plus FPOS inspired the statistical quality frameworks which emphasizes independence, impartiality and protection of data on individuals.

Structure UN NQAF

19 Principles (commitments that guide us in achieving our quality objectives)

A principle is implemented by complying with its requirements

87 Requirements (something that is needed to ensure implementation)

In general, compliance with a requirement depends on the compliance with the elements to be assured under this requirement

357 Elements to be assured

Possible activities, methods and tools to meet the requirement, reflecting a good practice. To be followed or assured as long as they are applicable.

Principle 1: Coordinating the national statistical system

Coordination of the work of the members of the NSS is essential for improving and maintaining the quality of official statistics. Principle 1 is mainly supported by FPOS 8.

Requirement 1.1: A statistical law establishes the responsibilities of the members of the national statistical system, including its coordination. Its members are identified in a legal or formal provision.

- The coordination role of the national statistical office (NSO) or other body is defined in a statistical law.

- The statistical law specifies the requirements for official statistics and the scope of the national statistical system (NSS).

- Members of the NSS are identified in a formal document.

- Responsibilities of NSS members for the development, production and dissemination of official statistics are clearly specified in the respective laws and regulations.

United Nations National Quality Assurance Framework (UN NQAF)

Level A. Managing the statistical system

Coordination of the national statistical system and managing relations with all stakeholders is a precondition for the quality and efficient production of official statistics. Ensuring the use of common statistical standards throughout the system is an important part of this management.

❖ **Principle 1: Coordinating the national statistical system**

❖ **Principle 2: Managing relationships with data users, data providers and other stakeholders**

❖ **Principle 3: Managing statistical standards**

United Nations National Quality Assurance Framework (UN NQAF)

Level B. Managing the institutional environment

The institutional environment is one of the prerequisites to ensure the quality of statistics. Principles to be assured are professional independence, impartiality and objectivity, transparency, statistical confidentiality, quality commitment and adequacy of resources.

❖ **Principle 4: Assuring professional independence**

❖ **Principle 5: Assuring impartiality and objectivity**

❖ **Principle 6: Assuring transparency**

❖ **Principle 7: Assuring statistical confidentiality and data security**

❖ **Principle 8: Assuring the quality commitment**

❖ **Principle 9: Assuring adequacy of resources**

United Nations National Quality Assurance Framework (UN NQAF)

Level C. Managing statistical processes

International standards, guidelines and good practices are fully observed in the statistical processes used by the statistical agencies to develop, produce and disseminate official statistics, while constantly striving for innovation. The credibility of the statistics is enhanced by a reputation for good management and efficiency.

❖ **Principle 10: Assuring methodological soundness**

❖ **Principle 11: Assuring cost-effectiveness**

❖ **Principle 12: Assuring appropriate statistical procedures**

❖ **Principle 13: Managing the respondent burden**

United Nations National Quality Assurance Framework (UN NQAF)

Level D. Managing statistical outputs

Output quality is measured by the extent to which the statistics are relevant, accurate and reliable, timely and punctual, readily accessible and clear for the users, and coherent and comparable across geographical regions and over time.

❖ **Principle 14: Assuring relevance**

❖ **Principle 15: Assuring accuracy and reliability**

❖ **Principle 16: Assuring timeliness and punctuality**

❖ **Principle 17: Assuring accessibility and clarity**

❖ **Principle 18: Assuring coherence and comparability**

❖ **Principle 19: Managing metadata**

…questions?

Please note:

The United Nations National Quality Assurance Framework (UN NQAF) of Chapter 3 is descriptive. However, FPOS and the associated recommendations of Chapter 2 support specific principles and give them an obligatory character.

Thank You

Visit as at https://unstats.un.org/unsd/methodology/dataquality