



**United  
Nations**

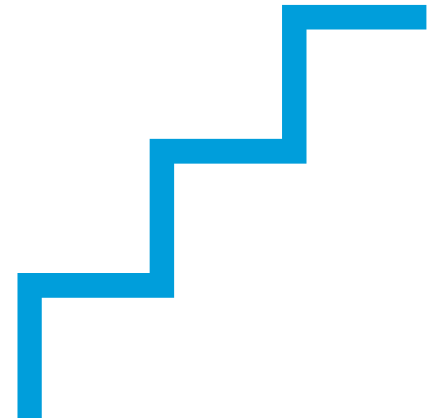
DESA  
Statistics Division

## **National Meeting on Modernizing Statistical Legislation: Strengthening Governance, Stakeholders' Engagement, and Innovation**

*23-25 April 2025, Tunis, Republic of Tunisia*

### **Quality assurance as a guide and tool for official statistics in a fast-changing data ecosystem**

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# What is quality (Definition)

- Quality is the degree to which a set of inherent characteristics of an object fulfils requirements (see International Standards Organization, ISO 9000:2015).
- In the context of statistical organizations, the object is the statistical output or product, the process, or the whole statistical system
- A simple definition of quality is **"fit for use"** or **"fit for purpose"**.

# What is quality (Definition)

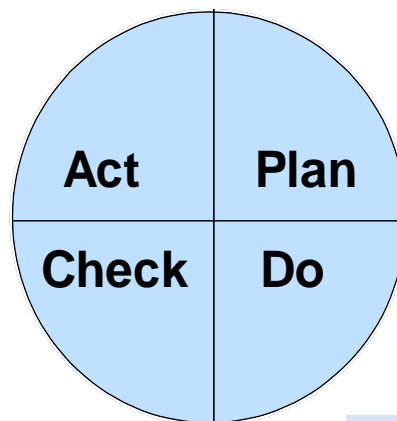
## Notes:

- It is the users' needs that define the quality.
- It is multi-dimensional. The dimensions of quality are interrelated and, there are trade-offs between some of them.
- Quality is crucial for the confidence in a statistical institution and its products.
- Quality is the responsibility of all!
- The essence of quality management is continued improvement

# What is quality assurance: continuous improvement to meet user needs (TQM)

- Standardize successful changes
- Document lessons learned
- Begin cycle again

- Identify problem/opportunity
- Analyze current processes
- Develop a plan



- Monitor results
- Compare against goals
- Analyze variances

- Implement the plan
- Document the process
- Train employees

# Quality management systems for official statistics

1. Are called quality assurance frameworks
2. **Definition:** A National Quality Assurance Framework (NQAF) is a coherent and holistic system for statistical quality management.
  - a. It is a tool for all working in official statistics
  - b. Its objective is to achieve quality improvements at the level of the statistical system, processes and statistical outputs in order to meet user needs.
  - c. It sets a standard of quality and hereby assures trust in official statistics.
3. Are all based on the UN Fundamental Principles of Official Statistics (FPOS)
4. What is specific about official statistics?
  1. Professional independence; impartiality; protection of privacy; access to all types of data requires high trust;
  2. This is reflected in laws, quality frameworks and ethical standards that go beyond the generic quality management systems

# UN NQAF and regional quality frameworks

- The UN National Quality Assurance Framework (UN NQAF) provides a generic model for national statistical offices to adopt, develop and revisit their own quality framework
- The UN NQAF consists of principles, requirements and elements to be assured.
- UN NQAF's is applicable to all countries
- UN NQAF does not replace existing quality frameworks such as the ASEAN Community Statistical System Code of Practice and other regional systems

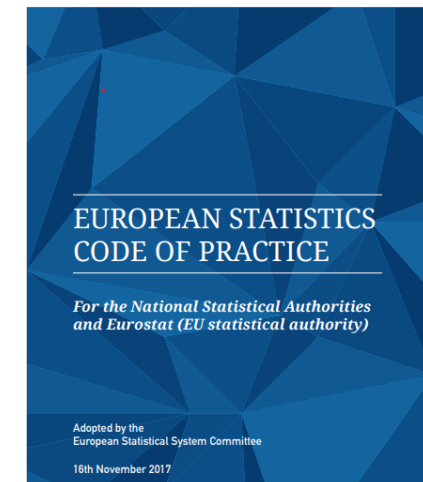
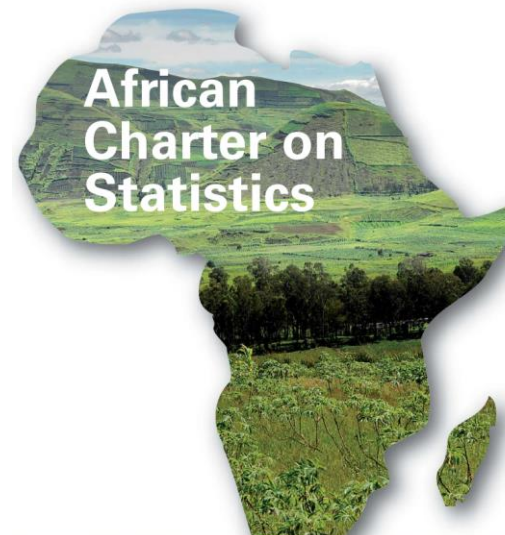


ASEAN COMMUNITY  
STATISTICAL SYSTEM  
(ACSS) CODE OF PRACTICE



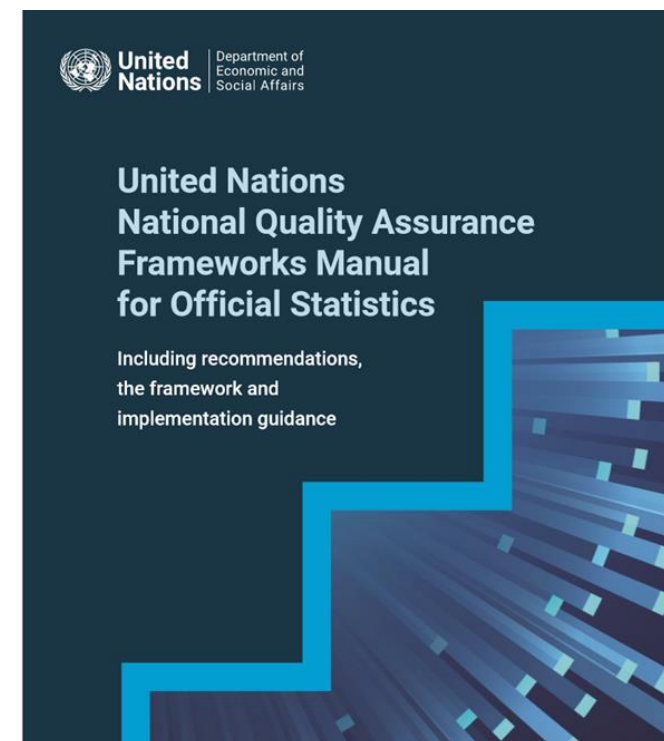
**CODE OF GOOD PRACTICE  
IN STATISTICS FOR  
LATIN AMERICA  
AND THE CARIBBEAN<sup>1</sup>**

(November 2011)



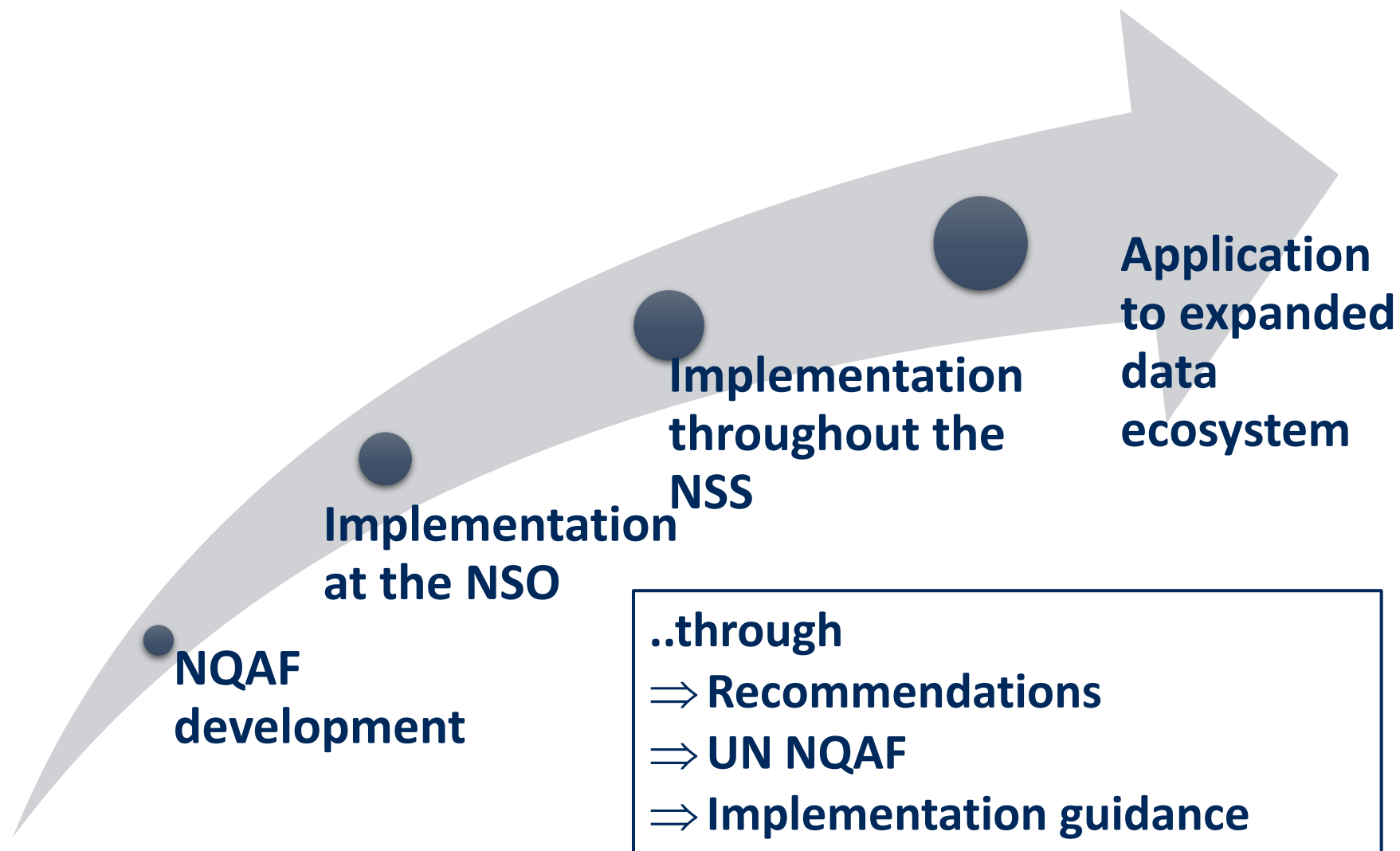
# The “Manual”

Part	Chapter	Title
Introduction	Chapter 1	Contents and use of this Manual
Recommendations	Chapter 2	Recommendations on quality assurance 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 assurance for statistics compiled from different data sources
	Chapter 8	Quality assurance 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



See <https://unstats.un.org/unsd/methodology/dataquality/un-nqaf-manual/>

# The *Manual* aims to support countries in..





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

### Overarching Core Recommendations

- #1 Integrate the Fundamental Principles of Official 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**

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

- UN NQAF arranges its quality principles and associated requirements into four levels, 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

# Quality assurance implementation guidance and tools

**At the  
level of  
the  
statistical  
organi-  
zation**

- ➡ ☐ *The Manual* (2019)
- ➡ ☐ The UN NQAF self-assessment checklist (2019)
- ➡ ☐ The Roadmap for NQAF development and implementation (2023)
- ☐ Module for Quality Assurance when using Administrative and Other Data Sources to produce Official Statistics (2025)
- ➡ ☐ Maturity Model on Quality Culture in Official Statistics (2025)

## **Other tools**

- ☐ Generic Statistical Business Process Model (GSBPM)
- ☐ Quality indicators, Quality reports, Metadata standards, Assessments and audits (see ESS Guidelines on quality reporting)
- ➔ Next step: Define GSBPM overarching process of quality management + Integrate tools

# Quality assurance implementation guidance and tools

**At level  
of  
indivi-  
dual  
outputs**



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→ **Next step:** Define GSBPM overarching process of quality management + Integrate tools

# Self-assessment checklist

Self-assessment checklist based on the UN Quality Assurance Framework contained in the Manual

## Purpose:

1. For conducting regular and rigorous quality assessment with the objective to identify improvement actions
2. Also be used to provide an initial assessment for learning purposes or to introduce staff to quality assurance
3. Can be used to draft quality assurance framework



19 Principles  
87 Requirements  
356 Elements to be  
assured (good practices)

# Module for Quality Assurance when using Administrative and Other Data Sources

- Part 1: Conceptual approach to assure quality when using administrative and other data sources
- Part 2: List of ten critical requirements
- Annex 1: Sub-module for input data validation
- Annex 2: Glossary of working definition of relevant terms
- Annex 3: Relevant UN NQAF requirements
- Annex 4: Mapping of the Module's ten critical requirements to the conceptual approach and relevant UN NQAF requirements
- Annex 5: Link between GSBPM and the 10 critical requirements



Available at: <https://unstats.un.org/unsd/methodology/dataquality/aos>

## Part 2: List of ten critical requirements

1. The use of administrative and other data sources must be based on legal and actual access, ensure confidentiality and take user needs into consideration.
2. New data sources, data providers as well as the use of multiple data sources are proactively explored to produce or improve existing statistics or develop new statistics.
3. There is basic information about the data provider and general information about the data source.
4. The data provider and data source are assessed for their risks.
5. There are cooperation agreements with the data providers, and there is ongoing cooperation, as applicable.
6. The data provider assures the quality of its data, and a quality report (or quality declaration) is produced in cooperation with the statistical agency, as applicable.
7. The quality of the input data is systematically evaluated by the statistical agency.
8. There is comprehensive metadata about the input data.
9. Processing of input data at the statistical agency follows standards, guidelines, and best practices.
10. The special characteristics of administrative and other data sources are considered when disseminating statistical outputs.

# The AOS Assessment Checklist of the “Module”

1. The purpose is to identify areas of improvement when using administrative and other data sources for producing official statistics.
2. This **checklist assesses individual statistics mainly produced from a single administrative or other data source (AOS)**. If multiple data sources are used, their individual impacts must be explained.
3. This checklist corresponds **one to one** to the list of **ten critical requirements and suggested practices**.
4. The assessment checklist distinguishes suggested practices which are “**essential**” and “**additional/advanced**” to simplify the assessment and concentrate on main points. This designation can be adjusted by users.
5. **Users may adapt and amend this Module according to their specific needs or use it as a reference for their own practices.**



# The AOS Assessment Checklist of the “Module”

Please complete this part first

Statistical output: [Please complete / enter name]					Overall scores		
Data source: [Please complete / enter name]					Total [55]	Essential (good>=80)	Additional (good>=50)
Ten Critical requirements	Suggested practices	Instruction (please assess at least all essential (basic) practices [15])	Assessment: Full, partial, no compliance* (use drop down options in the cell)	Assesment: Describe your practices and possible improvement actions (possible input to quality report and improvement plan)	0%	0%	0%
<b>1. The use of administrative and other data sources must be based on legal and actual access, ensure confidentiality and take user needs into consideration.</b>  This critical requirement summarizes the preconditions of data access and user needs, and consideration of confidentiality and data security that are well reflected in UN NQAF and other commonly used quality assurance frameworks but require special attention when using administrative and other data sources. Efforts to ensure confidentiality and data security must consider that the data from administrative and other data sources is often very sensitive and access to it highly restricted. This critical requirement is reflected in the Important preconditions and Overarching Consideration 1 of the conceptual approach shown in Figure 1.	1.a. There is legal access to the data.[1]	Additional / advanced		<div>Describe your practices here</div>			
	1.b. There is actual access to the data.	Additional / advanced					
	1.c. The data source complies with existing laws and regulations (including the consent of data owners, where applicable) and its data can legally be used for producing official statistics.	Essential					
	1.d. Confidentiality of personal data and business information and data security are assured through appropriate means such as written instructions and guidelines based on best practices, staff training, and regular audits.	Essential					
	1.e. User needs are considered, and the statistical need is clearly identified.	Essential					
<b>2. New data sources, data providers as well as the use of multiple data sources are proactively explored to produce or improve existing statistics or develop new statistics.</b>	2.a. There are policies, guidelines, and practical procedures for exploring and testing the potential of new data sources for producing or improving existing statistics and the development of new statistics; this extends to the possible use of multiple data sources through data integration.[2]	Additional / advanced					

Two categories:

- Essential
- Additional/ advanced

Complete your Assessment here:

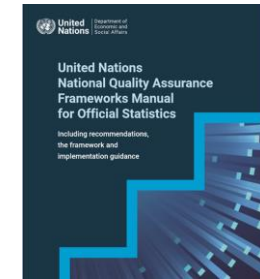
- Full Compliance
- Partial Compliance
- No Compliance

# References:

- ❑ The *Manual* (2019), available at: <https://unstats.un.org/unsd/methodology/dataquality/un-nqaf-manual/>
- ❑ The UN NQAF self-assessment checklist (2019), available at: <https://unstats.un.org/UNSDWebsite/data-quality/check-list>
- ❑ The Roadmap for NQAF development and implementation (2023), available at: <https://unstats.un.org/unsd/methodology/dataquality/roadmap/>
- ❑ Module for Quality Assurance when using Administrative and Other Data Sources to produce Official Statistics (2025), available at: <https://unstats.un.org/unsd/methodology/dataquality/aos/>
- ❑ Maturity Model on Quality Culture in Official Statistics (2025), available at: <https://unstats.un.org/unsd/methodology/dataquality/qc/>
- ❑ Generic Statistical Business Process Model (GSBPM), available at: <https://unece.org/statistics/modernstats/gsbpm>
- ❑ Quality indicators, Quality reports, Metadata standards, Assessments and audits (see ESS Guidelines on quality reporting, available at: [European Statistical System \(ESS\) handbook for quality and metadata reports — 2020 edition - Products Manuals and Guidelines - Eurostat](#))



19 Principles  
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**Thank you.**