



## What is quality in Statistics (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, the institutional environment or the whole statistical system

**A simple definition of quality is "fit for use" or "fit for purpose".**

# What is quality in Statistics (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!

**Quality Management:** Coordinated activities to direct and control an organization with regard to quality (ISO)

1. Establishing quality policies and objectives
2. Processes to achieve these objectives (planning, quality assurance, control and improvement)

**Quality management system:** Provides a coherent and holistic system as a basis for quality management

## **Quality management systems for statistics are based on quality assurance frameworks and FPOS:**

1. Quality assurance frameworks designed for official statistics are all based on the UN Fundamental Principles of Official Statistics (FPOS)
2. What is specific about (official) statistics?:  
Professional independence, impartiality, protection of privacy and access to all types of data requires high trust; This is reflected in laws, quality frameworks and ethical standards that go beyond the generic quality management systems

## Why do we need a NQAF?








A National Quality Assurance Framework (NQAF) is a coherent and holistic system for statistical quality management. It is a tool for all working in official statistics:

1. Its objective is to achieve quality improvements at the level of the statistical system, including management, coordination and institutional arrangements, processes and statistical outputs in order to meet user needs.
2. It sets a standard of quality and hereby assures trust in official statistics.

# What is the United Nations National Quality Assurance Framework (UN NQAF)?

1. UN NQAF is the generic United Nations (UN) national quality assurance framework which is contained in Chapter 3 and the Annex of the UN National Quality Assurance Frameworks Manual for Official Statistics (Manual) (available at: <https://unstats.un.org/unsd/methodology/dataquality/un-nqaf-manual/>).
2. The Manual and the recommendations contained therein were adopted by the UN Statistical Commission in March 2019. The UN NQAF consists of principles, requirements and elements to be assured.
3. The UN NQAF 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 the UN NQAF and the Manual only as an additional reference point that supports what they are already doing, and as a source of information on the application of quality assurance in different situations.

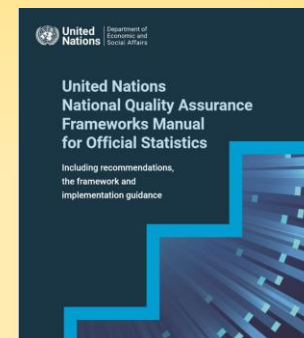
# International quality frameworks for statistics

-  [UN Fundamental Principles of Statistics \(1994, 2014\)](#)
-  [\*\*UN National Quality Assurance Framework \(NQAF 2013, 2019\)\*\*](#)
-  [European Statistics Code of Practice \(2005, 2011, 2017\)](#)
-  [African Charter on Statistics \(2009\)](#)
-  [Code of good practice in statistics for Latin America and the Caribbean \(2011\)](#)
-  [ASEAN Community Statistical System \(ASS\) Code of Practice \(2012\)](#)
-  [OECD Good Statistical Practice \(2015\)](#)

Basic principles are common



# The Manual overview



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/>

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

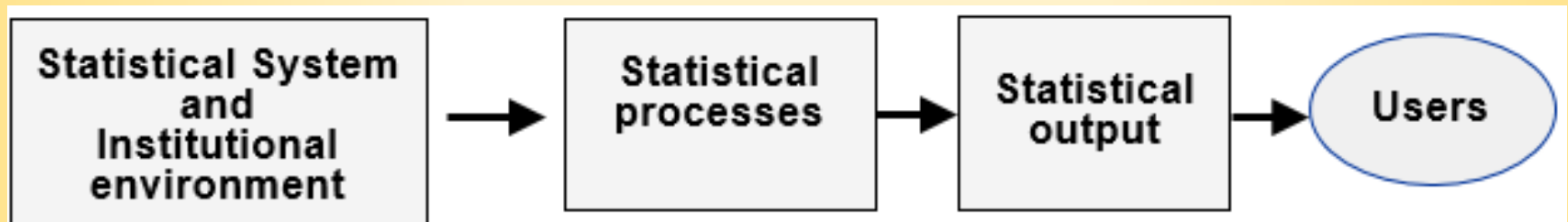
UN NQAF arranges its quality principles and associated requirements into four levels, ranging from the over-arching institutional and cross-institutional level through the statistical production processes to the outputs:

Level A: Managing the statistical system

Level B: Managing the institutional environment

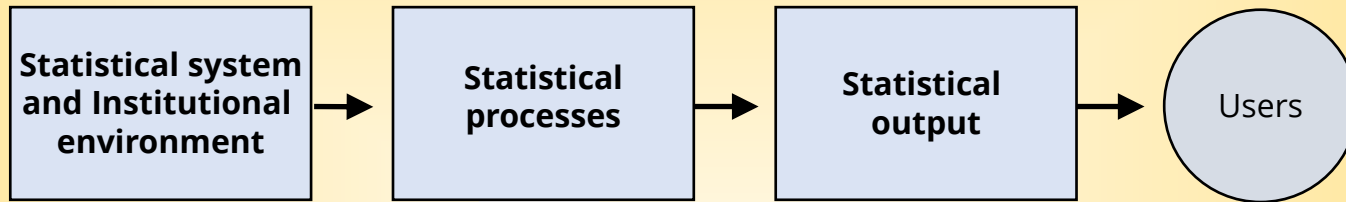
Level C: Managing statistical processes

Level D: Managing statistical outputs





# UN NQAF structure – logic



1. Coordinating the national statistical system
2. Managing relationships with data users, data providers and other stakeholders
3. Managing statistical standards
4. Assuring professional independence
5. Assuring impartiality and objectivity
6. Assuring transparency
7. Assuring statistical confidentiality and data security
8. Assuring the quality commitment
9. Assuring adequacy of resources

10. Assuring methodological soundness
11. Assuring cost effectiveness
12. Assuring appropriate statistical procedures
13. Managing the response burden

14. Assuring relevance
15. Assuring accuracy and reliability
16. Assuring timeliness and punctuality
17. Assuring accessibility and Clarity
18. Assuring coherence and comparability
19. Managing metadata

There are 19 principles, 87 requirements and 356 elements to be assured (good practices)



***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.*

# UN NQAF – principles on 4 levels

## 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**

# UN NQAF – principles on 4 levels

## 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**

# UN NQAF – principles on 4 levels

## 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**

# UN NQAF – principles on 4 levels

## 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**



